



ECONOMIC SUSTAINABILITY AND SOCIAL EQUALITY IN THE TECHNOLOGICAL ERA

**PROCEEDINGS OF THE 3RD INTERNATIONAL CONFERENCE
ON HUMANITIES AND SOCIAL SCIENCES (ICHSSOS 2023),
30–31 AUGUST 2023, MALANG, INDONESIA**

Edited by

Dwi Irawan, Agung Prasetyo Nugroho Wicaksono,
Aviani Widyastuti, Rizki Febriani and Ali Roziqin



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ECONOMIC SUSTAINABILITY AND SOCIAL EQUALITY IN THE TECHNOLOGICAL ERA

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Economic Sustainability and Social Equality in the Technological Era

Edited by

Dwi Irawan, Agung Prasetyo Nugroho Wicaksono and
Aviani Widyastuti

*Department of Accounting Studies, Universitas Muhammadiyah Malang,
Indonesia*

Rizki Febriani

Department of Management, Universitas Muhammadiyah Malang, Indonesia

Ali Roziqin

*Department of Government Studies, Universitas Muhammadiyah Malang,
Indonesia*



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Preface

The development of human progress in the last few decades and a few epochs has been as transformative as the technological era in which we are immersed today. This era, characterized by rapid advancements in science, information technology, and connectivity, has ushered in unprecedented opportunities and challenges. At the heart of these transformations lie two paramount concerns: economic sustainability and social equality. *Economic Sustainability and Social Equality in the Technological Era* delves into the intricate interplay between these two pillars of human civilization and explores the profound implications they hold for our collective future. Within the pages of this volume, we embark on a journey of inquiry, guided by the conviction that sustainable economic growth and equitable social progress are not mere aspirations but imperatives for a thriving global society.

The economic landscape of the 21st century is marked by dynamic shifts propelled by technological innovation. Technology has become the cornerstone of modern economies, from the digital revolution to the advent of artificial intelligence and renewable energy. Yet, amidst this whirlwind of progress, questions of sustainability loom large. How can we harness the power of technology to foster economic growth that does not compromise the well-being of future generations? What role does innovation play in shaping a sustainable and resilient global economy? Simultaneously, pursuing social equality remains an enduring challenge in an era of disparities. Despite the promise of technology to level the playing field, persistent inequities persist along the lines of race, gender, income, and access. As algorithms shape our decisions and digital platforms redefine social interactions, we face pressing questions of fairness, justice, and inclusivity. How can we ensure that technological advancements promote social equality rather than exacerbate existing divides? What strategies can we employ to foster digital inclusion and empower marginalized communities in the digital age?

As a contribution from academic discourse, The Faculty of Social and Political Sciences and the Faculty of Economic and Business, University of Muhammadiyah Malang, held an international conference under the name the Third International Conference on Humanities and Social Sciences (ICH SOS) 2022 on 30–31 August 2023, in Universitas Muhammadiyah Malang, East Java, Indonesia. The conference was held hybrid (online and offline) due to the pandemic, with keynote speaker by Prof. Dr. Stephen Llyod Morgan, University of Nottingham, UK, and five main speakers Dr. Tran Thai Ha Nguyen from the Van Lang University, Vietnam, Dr. Sanju Kumar Singh, BBS, M. SM, POSTDOC from Tribhuvan University Kathmandu, Nepal, Prof. Indah Susilowati, Ph.D. from Universitas Diponegoro, Dr. Uci Yulianti, M.M and Prof. Vina Salviana Soedarwo, M.Si from Universitas Muhammadiyah Malang.

Under the “economic sustainability and social equality in the technological era” theme, the Conference gathered participants from various universities in Indonesia and other countries. The conference accepted 103 articles to be presented. There were 63 articles in the book series published by CRC Press Balkema, Taylor & Francis Group. Hopefully, the conference participants can dissect problems, find solutions, and get alternative perspectives in preventing economic sustainability and social equality.



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This book has been published. We would like to thank the Rector of Universitas Muhammadiyah Malang, who has supported this event. This event is a collaboration between the Faculty of Social and Political Sciences and the Faculty of Economics and Business. All articles in this book are the final version of the paper presented at the International Conference on Humanities and Social Sciences (ICHSOS) held on 30–31 August 2023 through an online and offline seminar. All articles in this book have passed a blind review process from the scientific committee and editorial board. On behalf of the committee, we would also like to thank all keynote speakers and reviewers for their contribution and dedication to this conference. All articles in this book have gone through the blind review process. Lastly, we would like to thank the committee, authors, participants, and all the people who have supported this conference.

Hopefully, we meet again at the next conference.

Malang, April 4, 2024
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Moch. Fuad Nasvian, S.Ikom., M. Ikom
Universitas Muhammadiyah Malang, Indonesia

Publication
Agung Prasetyo Nugroho W., S.E., M.A
Ali Roziqin, M. PA
Immanuel Mu'ammal, S.E., M.M
Universitas Muhammadiyah Malang, Indonesia



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Universitas Muhammadiyah Malang, Indonesia



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Editor Biographies

Dwi Irawan is a lecturer in the Department of Accounting Studies at Universitas Muhammadiyah Malang, Indonesia. He got his Bachelor's from the Department of Accounting, Universitas Muhammadiyah Malang, Indonesia. He got his Master's degree from Sultan Ageng Tirtayasa University, Indonesia. His research interest is in management accounting, intellectual capital, and accounting information systems.

Agung Prasetyo Nugroho Wicaksono is a lecturer in the Department of Accounting Studies at Universitas Muhammadiyah Malang, Indonesia. He got his Bachelor's from the Department of Accounting, Universitas Muhammadiyah Malang, Indonesia. He got his Master's degree from Airlangga University, Indonesia. His research interest is in intermediate financial accounting, advanced financial accounting, auditing, behavior accounting, and SDGs.

Aviani Widyastuti, Lecturer in the Department of Accounting Studies, Faculty of Economics and Business, Universitas Muhammadiyah Malang, teaches Public Sector Accounting courses. She studied Bachelor of Economics in 2005 to 2009 at the Accounting Study Program of Muhammadiyah University of Malang, professional accountant education from 2012 to 2013 at Brawijaya University Malang, and a Master of Accounting Science from 2013 to 2017 at Brawijaya University Malang with a focus on public sector accounting, especially on Risk Management in Non-Profit organizations.

Rizki Febriani, Lecturer in the Management, Faculty of Economics and Business, Universitas Muhammadiyah Malang. She studied Bachelor of Economics in 2007 at the Management Study Program of Muhammadiyah University of Malang and a Master of Management Science and doctoral at Brawijaya University Malang. Her research focuses on human resource management.

Ali Roziqin is a lecturer in the Department of Government Studies at Universitas Muhammadiyah Malang, Indonesia. He obtained his Bachelor's degree from the Department of Public Administration at Universitas Diponegoro, Indonesia. He holds a Master's degree in Public Administration from the Universitas Gadjah Mada, Indonesia. His research interests are in bureaucracy, public policy and administration, and public sector innovation.



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Stakeholders' pressures and manager awareness toward the implementation of environmental cost management accounting: Empirical evidence in Vietnam paper enterprises

Vu Ha Thanh Pham

Faculty of Finance and Accounting 1, Post and Telecommunication Institute of Technology, Hanoi, Vietnam

Thi Kim Anh Vu

Faculty of Accounting, Trade Union University, Hanoi, Vietnam

Thi Thuy Van Ha

Faculty of Accounting and Auditing, Thuong Mai University, Hanoi, Vietnam

Tran Thai Ha Nguyen

Faculty of Finance and Banking, Van Lang University, Ho Chi Minh City, Vietnam

ABSTRACT: This research explores various factors influencing the implementation of Environmental Cost Management Accounting (ECMA) in Vietnam's paper industry, including coercive pressure, normative pressure, simulation pressure, managers' perception of environmental uncertainty, and proactive environmental strategy. The study involved surveying 151 individuals in this industry from three groups: (i) business managers, (ii) accountants or management accounting staff, and (iii) production, technical, and environmental department staff or supervisors in paper manufacturing companies. Through the empirical analysis, the findings indicate that the adoption of ECMA remains relatively low, primarily influenced by coercive pressure and managers' perception, while the impact of normative pressure appears uncertain, and proactive environmental strategy has no discernible effect. Based on these results, the recommendations for guiding the implementation of ECMA are given in Vietnam's paper enterprises.

Keywords: Environmental Cost Management Accounting (ECMA), Coercive Pressure, Normative Pressure, Simulation Pressure, Proactive Environmental Strategy

1 INTRODUCTION

Green growth has emerged as a global phenomenon, emphasising the imperative of achieving sustainable economic and social development (Bui *et al.* 2023; Filho *et al.* 2018). It has become a critical policy and national strategy rather than a passing trend, ensuring long-term progress. Businesses must strike a balance between economic efficiency and environmental impact to foster sustainable growth (Tseng *et al.* 2020). This entails innovating manufacturing processes, developing eco-friendly products to meet stakeholder and customer demands, and complying with increasingly stringent environmental regulations imposed by the government and the community (Nguyen *et al.* 2023). Failing to acknowledge or accurately address these environmental costs can significantly influence business decision-making and outcomes.

Indeed, as governments tighten environmental requirements, firms now experience a substantial rise in compliance-related expenses, such as pollution control measures, environmental taxes, and so on (Barrios *et al.* 2020; Wang *et al.* 2023). Consequently, businesses have recognised environmental management's importance and incorporated it into their accounting systems, and Environmental Cost Management Accounting (ECMA) is regarded as an effective tool for managing environmental costs and facilitating business decision-making (Muralikrishna and Manickam 2017). The ECMA process involves collecting, documenting, processing, and providing environmental cost information for decision-making purposes. Although ECMA is known to address the limitations of traditional environmental accounting, it can also create cost-saving opportunities, mitigate environmental and social risks, improve performance and quality, enhance reputation, attract human resources, and enhance credibility (Jasch 2003). However, its implementation primarily remains limited to developed countries like the US, Europe, Australia, and Japan. Developing countries, including Vietnam, still face challenges in implementing ECMA effectively (Le *et al.* 2019; Nguyen 2022; Tran *et al.* 2020). The absence of specific regulations and guidelines on Environmental Accounting (EA) and Environmental Management Accounting (EMA) poses challenges for enterprises in effectively collecting, identifying, analysing, and evaluating environmental data, particularly in the context of waste management and pollution prevention.

However, EMA is still a relatively new concept in Vietnam and has not been widely adopted by many enterprises (Gale 2006; Jasch 2003). A significant number of enterprises in Vietnam have not yet implemented EMA and remain unaware of the potential benefits it offers. Moreover, the paper manufacturing industry holds significant importance for the economic and social development initiatives of countries worldwide, including Vietnam. However, it also presents environmental challenges, particularly concerning water pollution. Many Vietnam Paper Enterprises (PEs) are facing these challenges due to inadequate investment in wastewater treatment systems or the absence of such facilities, leading to the direct discharge of pollutants into rivers, lakes, and oceans, causing environmental harm. Furthermore, inefficient production processes result in raw materials and fuel waste, contributing to air pollution. These enterprises tend to focus solely on the financial benefits without recognising the environmental advantages that EMA can bring. As a result, the application of EMA in the management of production and business activities, including within the pulp and paper manufacturing sector, remains at a low level in Vietnamese enterprises. This presents a considerable difficulty and challenge for management agencies, policymakers, and businesses as they strive to achieve their development goals concerning environmental protection.

Numerous previous studies have been conducted to explore the factors influencing the implementation of EMA (Asiri *et al.* 2020; Hassab Elnaby *et al.* 2003; Jamil *et al.* 2015). However, the results of these studies remain diverse and inconsistent, largely due to variations in research conducted across different countries, fields, professions, and time periods. Additionally, as EMA is a relatively new branch of accounting, research in this area is still relatively limited, notably in developing countries (Herzig *et al.* 2012), further contributing to the lack of comprehensive understanding and consensus on the topic. Therefore, it is crucial to investigate the factors influencing the implementation of ECMA in Vietnam's paper enterprises, assess its feasibility, and propose suitable implementation guidelines. This study aims to (1) evaluate the current implementation of ECMA in PEs, (2) explore and identify factors influencing its implementation, and (3) provide recommendations to enhance the existing ECMA practices in organisations. The paper is divided into five parts: Part 2 presents an analysis of the theoretical framework, establishing hypotheses regarding the factors impacting ECMA implementation in paper enterprises. Part 3 outlines the research methodology employed. Part 4 discusses the results and analyses the research findings. Finally, Part 5 presents the study's conclusions, limitations, and future research directions.

2 LITERATURE REVIEW

2.1 *Theory framework*

ECMA is a concept that builds upon the principles of environmental management accounting (EMA) and has gained significant attention in the literature. ECMA serves as a component of environmental management accounting, offering specific accounting methods and techniques to determine environmental costs, with a focus on environmental protection costs and costs associated with material flows, such as raw materials and energy, which can be reduced through enhanced environmental protection activities (Burritt and Schaltegger 2010; Ferreira *et al.* 2010; IFAC 2005; Wendisch and Heupel 2005) to support business decision-making processes (Burritt *et al.* 2002; Wagner and Schaltegger 2004). Business management perceives ECMA as the effective management of environmental costs, with an emphasis on establishing an ECMA system that optimises resource utilisation, reduces environmental impacts, and balances material flow through the conversion of financial and management accounting data (Jasch 2003; Wagner and Schaltegger 2004). This approach aims to minimise the negative environmental impact, reduce environmental protection costs, and achieve efficient use of materials and energy (Jasch 2003).

ECMA enables the analysis and utilisation of financial and non-financial information regarding material and energy resources to support business management, facilitating the integration of environmental considerations into organisational practices through the implementation of financial policies that foster sustainable development (Burritt and Saka 2006). ECMA places particular emphasis on cost accounting and utilises specialised accounting techniques for the recognition, classification, identification, and analysis of fees (Fuadah *et al.* 2018, 2021; Mokhtar *et al.* 2016). The implementation process of ECMA involves several key steps, including the recognition and classification of environmental costs, establishment of standards and budgets, analysis of environmental costs, and provision of environmental cost information through reporting and evaluation of environmental performance. ECMA has gained prominence in the context of global sustainable development and finds application across various fields, especially in industries with significant environmental impacts (Burritt and Schaltegger 2010; Firoz and Ansari 2010; Herzig *et al.* 2012; Jasch 2003; Le *et al.* 2019; Schaltegger and Torgler 2006; Wagner and Schaltegger 2004).

Several theoretical perspectives, including institutional, legitimacy, contingency, and stakeholder theories, influence the application of Environmental and Cost Management Accounting (ECMA). The Institution theory explains how organisations are shaped by pressures from institutional structures, including coercion, mimetic, and normative pressures (Heugens and Lander 2009; Qian *et al.* 2011). The legitimacy theory emphasises voluntary actions to achieve or maintain legitimacy by complying with social values and standards (Deegan and Blomquist 2006; Hamdan and Mohammed 2011; Mahmood *et al.* 2018). Stakeholder theory underscores the importance of considering the interests of all parties interests, while contingency theory suggests that accounting management systems are contingent upon various factors (Abdel-Kader and Luther 2006; Chenhall and Moers 2007). Studies applying these theories have examined the factors influencing ECMA adoption and implementation, including societal pressure, community expectations, stakeholder needs, and specific organisational circumstances.

2.2 *Hypotheses development*

Coercive pressure refers to various external forces that exert pressure on businesses to adopt environmental and ECMA practices. These pressures originate from different entities, including the government, shareholders, professional organisations, media, the public, and customers. Government pressure manifests through laws, regulations, and penalties related to environmental issues, which businesses must comply with (Dimaggio and Powell 1983; Jamil *et al.* 2015; Nguyen *et al.* 2020). The government can play a role in helping organisations understand the significance of ECMA in internal management decisions (Mia 2005). Consequently, this

pressure can influence organisational behavior and increase the willingness to implement ECMA when compelled to adhere to legal regulations (Doorasamy 2016). Moreover, stakeholders such as shareholders, investors, customers, labor unions, and the community, all of whom hold control over organisational resources or have expectations of environmental responsibility, place demands on organisations. In order to address stakeholder concerns and alleviate their worries, businesses tend to respond to these demands (Caldera *et al.* 2017; Deegan and Blomquist 2006). This stakeholder influence significantly impacts the adoption of ECMA practices within organisations (Chang and Deegan 2008). This mechanism aligns with legal theory, providing a framework to better explain voluntary actions taken by organisations concerning environmental information disclosure or the design of environmental management systems. These actions are aimed at achieving organisational goals while ensuring compliance with legal requirements (Mousa and Hassan 2015). In light of the abovementioned factors, stakeholders are expected to substantially impact the implementation of ECMA practices within organisations (Chang and Deegan 2008; Tran *et al.* 2020). With increasing coercive pressure, manufacturing firms demonstrate a greater willingness to implement ECMA (Jamil *et al.* 2015; Latif *et al.* 2020). As a result, we present our first hypothesis as follows:

Hypothesis 1: Coercive pressure has a positive effect on the application of ECMA

Normative pressure encompasses various sources of pressure that influence the adoption of ECMA. These include (i) professional training and development initiatives aimed at enhancing the knowledge and skills of accounting personnel, (ii) accounting and auditing professional associations, and (iii) connections between the accounting department and the environment. Normative pressure can be understood through two key factors: ECMA implementation guidelines and the ability to collect and process information effectively (Ibrahim and Jaafar 2016; Lima Ribeiro *et al.* 2012). Regarding the ability to collect and process information, challenges and complexities arise from the nature of environmental cost accounts, leading to difficulties in clear classification and significantly impacting the application of ECMA within companies (Cerin and Laestadius 2005). In terms of ECMA implementation guidance, active participation in professional accounting associations and other relevant associations that foster new ideas and standards for ECMA development proves to be an effective approach. This involvement ensures access to essential concepts, theoretical frameworks, and standardised guidance documents for ECMA practices, thereby enhancing the capacity to collect and process information related to environmental costs (Berrone *et al.* 2013). Additionally, accounting personnel play a crucial role in promoting the adoption of ECMA within companies (Burritt 2002; Gray and Bebbington 2001). Therefore, an expanded professional network facilitated through education, training, and development holds greater potential for ECMA application (Latif *et al.* 2020). The utilisation of ECMA necessitates strong connections between individuals directly involved in environmental management and the functions of environmental management accounting (Chang 2007; Doorasamy 2014; Heugens and Lander 2009). This study addresses these considerations by testing the following hypothesis:

Hypothesis 2: Normative pressure has a positive effect on the application of ECMA

Simulation pressure refers to the influence exerted by (i) other companies within the same industry, (ii) leading companies in the industry, and (iii) competitive companies in shaping actions and decision-making processes. This pressure is characterised by the tendency of parties to imitate behaviours or social relationships that are widely accepted and recognised within a specific field (Dinh *et al.* 2022; Pham *et al.* 2022). Jalaludin *et al.* (2011) argued that companies engage in a competitive race to demonstrate compliance within their operational environment, often resorting to imitating the accounting practices of other firms to reduce uncertainty. When organisations have the ability to replicate the actions of closely connected or affiliated entities, the trend of emulation among organisations of similar size, type, industry, or geographical location becomes more apparent (Dimaggio and Powell 1983). Consequently, companies operating within the same industry often exhibit a tendency to

imitate each other's behaviors or replicate the practices of leading companies without necessarily considering the true value and significance of such practices. Based on these considerations, we propose the following hypothesis for investigation:

Hypothesis 3: Simulation pressure has a positive effect on the application of ECMA

Previous research has consistently highlighted the crucial role of top management's interest and support in ensuring the success of environmental management practices (Henriques and Sadosky 1999; Zhu and Sarkis 2004). The implementation of EMA within enterprises is contingent upon the capabilities of management and the level of support administrators provide. Among the important factors influencing EMA practice is the perception of management (Kokubu and Nashioka 2008), given that managers have the authority to influence policy choices and shape the environmental strategies pursued in business activities. Additionally, managers' perception of environmental uncertainty plays a crucial role in EMA practice. Environmental uncertainty encompasses understanding various factors, including changes in environmental policies, production technology, green competition in the industry, resource scarcity, and stakeholder behaviour. It refers to the instability and negative environmental changes resulting from human activities that organisations, consumers, governments, or communities must confront (Otley 2016). Managers with a clearer understanding of the uncertain attributes of the environment are more likely to process organisational information appropriately and address problems, which may involve reclassifying and modifying the existing management accounting system (Chang *et al.* 2017; Kokubu and Nashioka 2008). Thus, when managers are aware of EMA's benefits, they are more likely to adopt a proactive environmental strategy. On the other hand, the lack of environmental responsibility and active support from business managers can impede the successful implementation of EMA (Jamil *et al.* 2015; Zhu and Sarkis 2004). Therefore, we propose the following hypothesis:

Hypothesis 4: Manager's perception of environmental uncertainty

3 MODEL AND DATA

3.1 Model

Based on the theoretical background and the above hypotheses, this study's proposed theoretical research model is described as shown in Equation 1:

$$ECMA_i = \beta_1 COP_i + \beta_2 NOP_i + \beta_3 SIP_i + \beta_4 PER_i + \varepsilon_i \quad (1)$$

The dependent variable is the application of ECMA (ECMA), while Coercive pressure (COP), Normative pressure (NOP), Simulation pressure (SIP), and Manager's perception of environmental uncertainty (PER) are Independent variables. β_i is the coefficient of each variable (i from 1 to 4), and ε is the residual error. The variables in this study are described in Table A (see Appendix).

3.2 Data

This study employed a mixed-methods approach, integrating both qualitative and quantitative research methods, to investigate the factors influencing the application of environmental and cost management accounting (ECMA) in Vietnam. The research was conducted in two stages (Ishtiaq 2019).

In the first stage, a qualitative method was employed, utilising expert interviews to explore and identify the factors that affect ECMA adoption in the Vietnamese context. The qualitative research aimed to examine, screen, and establish the relationship between variables in the theoretical model, thereby proposing a research model. Moreover, it sought to refine and

adapt scales derived from previous studies to suit the specific research context in Vietnam. To accomplish the aforementioned objectives, 18 in-depth interviews were conducted using a semi-structured interview approach. The interviewees comprised experienced researchers, university lecturers, financial directors, accounting personnel from various businesses, financial accounting experts serving on the drafting committee of the Vietnamese Accounting Standards (VAS), audit experts from the Big Four accounting firms, as well as senior financial accounting experts affiliated with professional bodies such as ACCA and ICAEW. The exchange of information took place through face-to-face interviews and group discussions.

In the second stage, quantitative methods were employed. For primary data collection, a total of 195 questionnaires were distributed to participants. Out of these, 151 valid responses were collected from PEs, meeting the minimum sample size requirement for factor analysis and regression analysis. The respondents included management board members, the accounting department, and other relevant departments such as engineering, production, and environment. The survey questionnaire was administered between May 2022 and July 2022. The questionnaires were administered via various means, including online platforms like Google Drive, postal services, phone interviews, and face-to-face interviews. To assess the responses in the research model, a 5-point Likert scale was utilised. The scale ranged from 1 (indicating low agreement or strong disagreement) to 5 (indicating high agreement or strong agreement). The respondents were asked to select the appropriate response option that best reflected their views on each survey question and corresponding indicator within the four independent variables. Upon receiving the completed questionnaires, the data were processed and entered into the SPSS 22 software for analysis. The analysis involved several steps, including (1) testing the reliability of the measurement scales, (2) conducting exploratory factor analysis (EFA), (3) examining correlation coefficients, and (4) employing multivariate linear regression models.

4 FINDINGS

4.1 Reliability test (*Cronbach's alpha*)

Table 1. Reliability test.

Variables	Cronbach's Alpha
Coercive pressure (COP)	0.912
Normative pressure (NOP)	0.834
Manager's perception of environmental uncertainty (PER)	0.737
Simulation pressure (SIP)	0.721
Applying ECMA (ECMA)	0.719

Source: Author's analysis.

Table 1 presents the reliability test results of the measures used in this study. It is evident that the variables COP, NOP, PER, SIP, and ECMA exhibit satisfactory reliability, as indicated by Cronbach's alpha values exceeding 0.6. Furthermore, all items measuring these variables demonstrate total correlations above 0.3, confirming their consistency and appropriateness for the study. Consequently, the study incorporates five factors and 16 observed variables that are statistically significant (Hair *et al.* 2010).

4.2 Exploratory factor analysis (*EFA*)

In Table 2, the application of the varimax rotation method reveals that the initial set of 13 observed factors can be classified into four distinct groups. The total variance extracted, which amounts to 73.178%, surpasses the minimum threshold of 50%, indicating that these four factors effectively account for the majority of the variance. Consequently, it can be concluded that these factors satisfactorily meet the convergence and discriminant criteria during the exploratory factor analysis (EFA) process (Hair *et al.* 2010).

Table 2. Exploratory factor analysis.

Factors	Component			
	1	2	3	4
COP1	.921			
COP4	.912			
COP3	.860			
COP5	.833			
PER1		.904		
PER4		.736		
PER3		.688		
PER2		.649		
NOR2			.925	
NOR1			.857	
NOR3			.798	
SIP2				.872
SIP1				.857

Source. Author's analysis.

The data utilised for factor analysis in this study is deemed valid, as indicated by the Kaiser-MeyerOlkin (KMO) value of 0.700, which surpasses the recommended threshold of 0.5. The Bartlett's test also yields a statistically significant result of 587.731 at a 5% significance level. Furthermore, the loading factors associated with the dependent variable and the data employed for factor analysis all exceed the threshold of 0.5, demonstrating the suitability and appropriateness of the variables in Table 3.

Table 3. Factor analysis for reliability.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.700
Bartlett's Test of Sphericity	Approx. Chi-Square	587.731
	df	55
	sig.	.000

Source: Author's analysis.

4.3 Correlation matrix

The findings presented in Table 4 reveal the Pearson correlation coefficient analysis results. The analysis demonstrates that the independent variable NOP exhibits a significant value of 0.309, which is greater than the significance level of 0.05. On the other hand, the remaining three independent variables exhibit significant values that are all below 0.05. Consequently, there exists no correlation between the independent variable NOP and ECMA. This outcome aligns with the outcomes derived from the qualitative research phase. Furthermore, the remaining independent variables exhibit positive relationships with one another, as evidenced by their positive correlation coefficients. Among these variables, COP demonstrates the strongest correlation at 0.473, whereas SIP displays the weakest correlation ($r = 0.332$) with the dependent variable.

Table 4. Pearson correlation analysis.

		ECMA	COP	NOP	SIP	PER
ECMA	Pearson	1	.473**	.084	.332**	.345**
	Correlation		.000	.309	.000	.000
	Sig. (2-tailed)					
	N	151	151	151	151	151

(continued)

Table 4. Continued

		ECMA	COP	NOP	SIP	PER
COP	Pearson	.473**	1	.205*	.231**	.100
	Correlation					
	Sig. (2-tailed)	.000		.012	.004	.222
	N	150	151	151	151	151
NOP	Pearson	.084	.205*	1	.199*	.217**
	Correlation					
	Sig. (2-tailed)	.309	.012		.015	.008
	N	150	151	151	151	151
SIP	Pearson	.332**	.231**	.199*	1	.246**
	Correlation					
	Sig. (2-tailed)	.000	.004	.015		.002
	N	151	151	151	151	151
PER	Pearson	.345**	.100	.217**	.246**	1
	Correlation					
	Sig. (2-tailed)	.000	.222	.008	.002	
	N	151	151	151	151	151

** Correlation is significant at the 0.01 level (2-tailed), * Correlation is significant at the 0.05 level (2-tailed).

Source. Author's analysis.

4.4 ANOVA analysis and regression

Initially, a regression model was conducted, including all four independent variables. However, it was found necessary to exclude the NOP variable. The adjusted R-squared coefficient of 0.332 indicates that this linear regression model fits the sample data at 33.2% beyond the null hypothesis. The ANOVA analysis yielded an F-value of 19.474, with a significant value below 0.05, indicating the suitability of the linear regression model for the population. The coefficient value for the NOP variable in the Coefficients table had a significant value of 0.166. Consequently, the SIP variable was removed from the research model, leading to the rejection of Hypothesis H2. Subsequently, a regression model was performed with the remaining three independent variables. The adjusted R-squared coefficient resulted in 0.327, indicating that the regression model fits the sample data at 32.7%. The ANOVA analysis showed an F-value of 25.158, with a significance value of 0.000, which is PER than 0.05. This signifies that the built linear regression model is suitable for the population. Furthermore, the Coefficients table indicates that the independent variables COP, SIP, and PER significantly impact the dependent variable, as their significance values are below 0.05 (refer to Table 5).

Table 5. ANOVA analysis.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.723	1	2.723	42.971	.000 b
	Residual	9.379	148	.063		
	Total	12.102	149			
2	Regression	3.797	2	1.899	33.608	.000 c
	Residual	8.304	147	.056		
	Total	12.102	149			
3	Regression	4.124	3	1.375	25.158	.000 d
	Residual	7.978	146	.055		
	Total	12.102	149			

a. Dependent Variable: ECMA; b. Predictors: (Constant), COP; c. Predictors: (Constant), COP, PER; d. Predictors: (Constant), COP, PER SIP.

Source. Author's analysis.

After conducting the linear regression, we conducted a multi-collinearity test. The VIF coefficient of all independent is PEs than 2, so the model does not have multi-collinearity (Table 6).

Table 6. Regression.

Model	Unstandardized Coefficients	Standardized Coefficients	Sig.	VIF
(Constant)	1.047		.000	
COP	.141	.408	.000	1.058
SIP	.073	.174	.016	1.115
PER	.167	.260	.000	1.067

Source. Author's analysis.

4.5 Discussions

The empirical results presented in Table 6 support the acceptance of hypotheses H1, H3, and H4. Firstly, the factor COP positively influences the application of ECMA, with COP1 having the most substantial impact. This can be attributed to government coercive pressures that demand specific actions from businesses without alternative options. However, participants in the survey did not perceive such pressures, which explains the lack of ECMA implementation in the surveyed businesses. These findings align with previous studies by Dimaggio and Powell (1983), Jamil *et al.* (2015), Nguyen (2022); and Pham *et al.* (2022). Furthermore, environmental incidents reported by the media and the resulting long-term impact on an enterprise's image also create pressures for compliance with environmental regulations. Pressures from the local community are evident, as paper manufacturing plants of the surveyed paper enterprises are situated near residential areas, directly impacting water sources and air pollution. Neglecting environmental concerns may lead to community complaints, generating pressure from local authorities and the media. Interestingly, enterprise shareholders' pressures were not influential in implementing proactive environmental strategies and adopting ECMA. This contrasts with the findings of Deegan and Blomquist (2006), Chang and Deegan (2008), and Mousa and Hassan (2015).

The factor PER positively impacts the application of ECMA. When management becomes more aware of factors such as changes in environmental policies imposed by the government and the need for innovative clean production technologies, the level of ECMA implementation increases. Companies recognise the pressure to adapt their accounting systems to provide relevant environmental information in response to these changes. This result is consistent with previous research by Otley (2016) (2016), Le *et al.* (2019), and Nguyen (2022). Also, the factor of SIP positively impacts the application of ECMA. This suggests that organisations using ECMA to manage environmental costs and address environmental issues can serve as a model for others. While simulation pressure has a positive influence, it is the least impactful factor on the extent of ECMA implementation at the surveyed paper enterprises. These findings align with the research of Dimaggio and Powell (1983), Jalaludin *et al.* (2011), Le *et al.* (2019), and Nguyen (2022).

Contrary to some perspectives suggesting the impact of normative pressure on ECMA implementation in the studied enterprises, this research shows no relationship between normative pressure and the level of ECMA implementation in the paper enterprises. This is likely because accounting operations in Vietnam are governed by the Accounting Law, Vietnamese Accounting Standards, and the accounting regime issued by the Ministry of Finance. Therefore, the extent of ECMA implementation is not determined by training, professional development, or the provision of ECMA processes and practical guidelines within real enterprises.

5 CONCLUSION

Green growth has become a global phenomenon, emphasising the imperative of sustainable economic and social development. Businesses must strike a balance between economic efficiency and environmental impact to foster sustainable growth. Environmental Cost Management Accounting (ECMA) is an effective tool for managing environmental costs and facilitating business decision-making. However, Vietnam still faces challenges in implementing ECMA effectively due to a lack of regulations and guidelines on EA and EMA. The paper manufacturing industry also presents environmental challenges, particularly concerning water pollution.

This study aims to evaluate the current implementation of Environmental Management and Accounting (EMA) in Vietnam's paper enterprises, explore and identify factors influencing its implementation, and provide recommendations to enhance existing ECMA practices. Based on the quantitative research results, the study assessed the level of ECMA application at PEs as low, with most content either not being applied (level 1) or not applicable to the majority of indicators/items (level 2). Additionally, the study examined and clarified the relationships between coercive pressure and simulation pressure factors and managers' perceptions of environmental uncertainty and the application of ECMA at PEs. Based on these findings, the study proposes synchronous and context-specific business solutions.

First, regarding Coercive pressure, government regulations and environmental standards for the production process and products were found to have the strongest impact on ECMA implementation in PEs. The study suggests that government and regulatory agencies should take on a more proactive role in promoting ECMA adoption by strengthening decision-making, leadership, and the implementation of environmental laws. This can be achieved through policies, guidance documents, and industry-specific environmental management initiatives.

Second, considering the influence of external stakeholders, such as the media, public agents, and professional organisations, the study emphasises the need to address their concerns. Recommendations include empowering the general public and environmental organisations to voice their opinions against environmentally detrimental business practices. Shareholders should also play an active role by considering divestment when environmental expectations are not met and demanding the inclusion of environmental management accounting information in financial assessments. Accounting and auditing consulting organisations and training institutions can contribute by addressing knowledge gaps and supporting the use of accounting tools for environmental cost processing.

Third, the study highlights the positive impact of management awareness on ECMA utilisation. To enhance management awareness, PEs should provide opportunities for interaction and participation in conferences and workshops related to accounting, particularly ECMA. Sharing environmental management experiences among departments and within the industry is crucial. PEs are encouraged to restructure their accounting systems to incorporate real-time environmental cost information and establish a centralised accountability system. Furthermore, an environmental information exchange system should be established to facilitate collecting, processing, analysing, and reporting environmental information using tangible and monetary measures.

Fourth, regarding Simulation pressure, the study suggests that paper manufacturing companies collectively collaborate to address environmental issues. Communication programs and training initiatives on environmental responsibility should be implemented for all employees. Accounting staff should be equipped with the necessary expertise to understand production technology and ECMA, enabling them to implement ECMA effectively. Industry business managers should also enhance their awareness of environmental information and uncertainty to leverage ECMA to resolve environmental challenges.

However, it is essential to acknowledge the limitations of this study. Firstly, the availability of data was limited, preventing the comprehensive coverage of all relevant issues related to the impact of factors on the application of ECMA at PEs. Moreover, during the data processing stage, a significant amount of data provided by the enterprises was incomplete, resulting in the

exclusion of numerous observations and potentially compromising the reliability of the research findings. Secondly, the study relied on the same set of factors for ECMA application as previous studies, which may have limited the exploration of new factors that could yield significantly different results. Thus, future research could extend the study period and further investigate the impact of additional factors. Furthermore, it may be valuable to apply this research scope separately to different industry groups and types of businesses to gain more nuanced insights.

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APPENDIX

Table A. Scales used to measure independent variables.

Factor	Items	Variables
Coercive pressure (COP)	The enterprise needs to adhere to government regulations concerning environmental standards and address related environmental considerations in both the production process and the products.	COP1
	The enterprise's shareholders insist on adherence to environmental standards and engage in activities to manage, address, and safeguard the environment to prevent unnecessary losses.	COP2
	The local residents are concerned about how the enterprise manages, restores, and safeguards the environment.	COP3
	Environmental organisations, both internal and external to the business, focus on the enterprise's environmental management, mitigation, and protection efforts.	COP4
	When the media and press cover environmental incidents or express increasing concern about environmental matters, the enterprise must address these issues before they become widely known.	COP5
Normative pressure (NOP)	The enterprise regularly invests in training opportunities for accounting department employees to strengthen their knowledge of environmental management accounting and address practical environmental challenges.	NOP1
	The enterprise participates in multiple industry associations, both locally and globally and adheres to regulations and guidelines related to environmental practices.	NOP2
	The collaboration between the management accounting department and the environmental management team is closely integrated, ensuring the exchange and processing of information throughout the enterprise's operations.	NOP3
Simulation pressure (SIP)	When environmental concerns emerge, the enterprise's operations are impacted by the practices of other well-managed environmental businesses within the same industry.	SIP1
	When environmental concerns emerge, industry-leading businesses that excel in environmental management influence the enterprise's operations.	SIP2
Manager's perception of environmental uncertainty (PER)	A manager has an awareness of changes in government-issued environmental policies.	PER1
	A manager has to recognise the limited availability and evolving characteristics of the resources utilised.	PER2
	A manager has recognition of advancements in production technology and the growing emphasis on eco-friendly competition within the paper and pulp manufacturing sector.	PER3
	A manager is aware of the shifts in environmental behaviour among the organisation's associated parties.	PER4
Applying ECMA (ECMA)	Use environmental data, measurement units, and currency to determine environmental costs.	ECMA
	Utilise environmental data for management purposes, such as developing budget allocations and preparing internal management reports.	ECMA2
	Utilise environmental data, measurement units, and currency to assess the efficiency of operations.	ECMA3
	Monitor environmental expenses using comprehensive accounting records.	ECMA4
	Accounting techniques like material flow analysis, activity-based costing, and product life cycle assessment are used to evaluate environmental costs.	ECMA5
	Establish an estimate for the environmental cost.	ECMA6
	Analyse the effectiveness of material utilisation and waste recycling.	ECMA7
	Utilise environmental cost data to guide and implement management activities within the organisation.	ECMA8
	Construct environmental performance evaluation criteria.	ECMA9
	Establish environmental cost reports to implement and comply with environmental regulations.	ECMA10

Human interest photography research progress: A decade systematic literature review

Aditya Dwi Putra Bhakti, Aditya Dwi Rachmad & Rahmania Santoso

Communication Science Department, University of Muhammadiyah Malang, Malang, Indonesia

ABSTRACT: This article analyzes previous research on human interest photography using a bibliometric approach. This article reviews 79 documents sourced from the Scopus database in the last 10 years. This article uses VOSviewer which is used to generate data visualization, structure, and relevance. VOSviewer is useful for visualizing the mapping of concept findings parsed from the Scopus database. From 79 documents, 394 keywords were obtained which were divided into 20 clusters.

Keywords: Human Interest, Photography, Systematic Literature Review, Visual Communication, VOSViewer

1 INTRODUCTION

This paper aims to analyze previous research that discusses photography, especially human interest photography. Human interest photography is a photography genre that tries to explore stories from humans, who are also the main objects in photographic works (Phu 2018). This type of photo focuses on emotions that will move the viewer (Way 2014). Photographers strive to convey everyday life, be it the joys, struggles, or human complexities through powerful and meaningful images.

Human interest photography often features people from various backgrounds and cultures (Gunarti and Wardani 2020). They may describe people who face challenges, express strong emotions, or are involved in attention-grabbing situations. The results of this photo work are able to engage the audience deeply and evoke reflection and empathy (Alam *et al.* 2018). Human interest photos that attract a lot of people's attention sometimes show a striking contrast between dramatic elements and everyday reality (Biantoro Andrian *et al.* 2014). Images can highlight social differences, economic differences, or injustices in society. For example, a photographer can capture a heartfelt moment of someone struggling to support their family. As illustrated in the photo of the crater miners on Mount Ijen, Indonesia.



Picture 1. The sulfur miners of Ijen, Indonesia.

Source. Pinterest (2023).

The sulfur miners on Mount Ijen are a group of hard workers who live a difficult and dangerous life. They usually come from the surrounding villages and have inherited this job from generation to generation. In the middle of the night, when it was still dark, they departed from their hometown to the top of Mount Ijen. When arriving at the top of the mountain, the miners must pass through a steep and rocky road to the Ijen crater. In dangerous and smoky conditions, miners collect sulfur scraps. The load they carry can reach up to 100 kilograms or even more. Sulfur mining on Mount Ijen is a picture of human courage and resilience in facing challenging conditions. Even though this work is dangerous and their income is limited, the sulfur miners on Mount Ijen persist in order to provide a better life for their families in the midst of poverty.

Photos that interest people don't always convey sadness. The photo can also highlight moments of happiness, love, and friendship (Brown and Phu 2014). They feature positive and inspiring stories that demonstrate the human power to overcome obstacles and find happiness. A human-interest photo could show an older couple still in love after decades, or a young child playing with a big smile despite their flaws.

The beauty of human interest photos lies in their ability to express human complexity in each image (Munanto 2017). Photographers strive to capture genuine facial expressions, emotional gestures and unpredictable spontaneous moments. In such pictures requires more experience on the part of the photographer to capture the momentum (Brooker *et al.* 2019).

Photographers who are interested in people also often work in different environments, both physically and mentally. They can go to extreme places such as in conflict areas or remote communities to capture lives that are rarely seen by the public. Therefore, human interest photos not only reveal human diversity, but also broaden our horizons about life in society (Enrieco 2019).

Human interest photos invite us to see the world through a different lens. Presenting things that we often ignore (Soputan *et al.* 2021). We can see human life in all its complexity, feel strong emotions and understand experiences we may never have had (Dirlik 2015). Photos inspire a sense of connection and promote cross-cultural understanding and universal human values. In an increasingly connected and informative world, people's interest photos play an important role in understanding and accepting our differences (Schuhr *et al.* 2013). These photos can inspire and encourage us to care more about the condition of the people around us (Brewster and Cox 2019).

The study of human interest photography is also of interest to academics, therefore there are also many research results that examine the existence of these human interest photographs. Research on human interest photography is important because it can help us understand the techniques, approaches and contexts for capturing effective and meaningful photographs. This study covers the effective application of visual analysis, composition, use of light, and storytelling in human photography. By understanding this research, we can increase our ability to produce effective and emotional images.

On the other hand, human interest photos have the power to capture and convey the human experience with unprecedented power. Studying human photographs helps us understand the meaning and impact of each visual and narrative element of an image (Zylinska 2016). We can learn how human interest photos can influence perceptions, evoke emotions, and drive social change.

Studying human interest photography allows us to see the world from other people's perspectives (Soraya 2022). Studying this research gives us insight into life and experiences that we do not have personally. That way we can spread social awareness which will have an impact on positive changes in society. By studying this research, we can learn from examples of successful human interest photographs in arousing attention, motivating action, and changing the paradigm of society. This knowledge allows us to be more effective in using human interest photos for social purposes.

Overall, knowledge of research related to human interest photos is important because it enriches our understanding of the power of photos to tell human stories, influence public

opinion, and create social change. By studying this research, we can become more informed observers, more skilled photographers, and more active contributors in promoting understanding, empathy, and positive change in society.

Scopus indexed publications are a leading source of up-to-date research (Baas *et al.* 2020), including about human interest photo analysis. In this Scopus, research articles, books, book chapters, conference papers, and review articles are found that examine the techniques, aesthetics, and impact of human interest photos with various kinds of human stories behind them. Research articles, books, book chapters, conference papers, and Scopus indexed review articles in the field of human interest photos present a variety of research approaches which include visual analysis, narrative content, social impact, interaction between the photographer and the subject being photographed, etc. In addition, scientific writings were written by various authors from all over the world. In addition, researchers can share research methodologies, theoretical approaches, and empirical findings relevant to human interest photos. This encourages collaboration and exchange of knowledge among researchers, as well as generates new developments in the understanding and practice of human interest photography.

Access to Scopus indexed research articles, books, book chapters, conference papers and review papers on human interest photography allows professionals, academics and students to access the latest knowledge on trends, issues and innovations in human interest photography. This plays an important role in the development of professionalism and expertise in this field. Scopus indexed academic writings also provide an important venue for wider publication of human interest photography research, increasing visibility and recognition for researchers and photographers who contribute to the field. Thus, Scopus indexed research articles, books, book chapters, conference papers and review papers in the field of human interest photography have a crucial role in facilitating the latest research, exchange of knowledge, and development of human interest photography practices. Therefore, this research wants to find out the patterns and relationships from previous studies that discuss human interest photography using the Scopus database.

2 METHODOLOGY

This research uses bibliometric analysis method. Bibliometric analysis can identify the number of publications, author backgrounds and productivity trends over a certain period of time (Donthu *et al.* 2021). In addition, the bibliometric analysis makes it possible to find out collaboration networks, as well as the influence and impact of research (Noor *et al.* 2020). This analysis also includes performance analysis and scientific mapping analysis to visualize qualitative and quantitative changes in a research (Gaviria-Marin *et al.* 2018).

In this study, the authors used 79 documents sourced from the Scopus database within a period of 10 years, namely between 2012 and 2022 which were accessed on June 22, 2023 with the keywords "Human Interest Photography" and limitations of social sciences in the subject area. The 79 documents consist of research articles, books, book chapters, conference papers, and review articles. The advanced search in the Scopus database is described as follows:

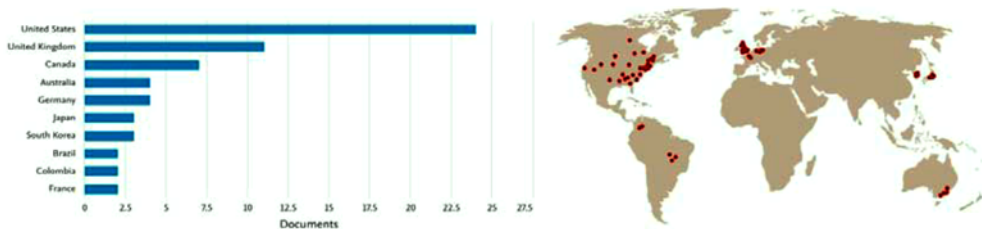
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TITLE-ABS-KEY (human AND interest AND photography) AND PUBYEAR > 2011 > AND PUBYEAR < 2023 AND (LIMIT-TO (SUBJAREA, "SOCI"))
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The data is processed using VOSviewer software to bring up visualization on bibliometric mapping. Data downloaded from Scopus is in .ris format and then processed using VOSviewer. This software displays 3 types of visualization, namely, network visualization, overlay visualization, and density visualization (Hudha *et al.* 2020).

3 RESULTS AND DISCUSSIONS

In this section, the author will describe the bibliometric analysis based on searches made in the Scopus database. Using 79 published documents. The description is as follows:

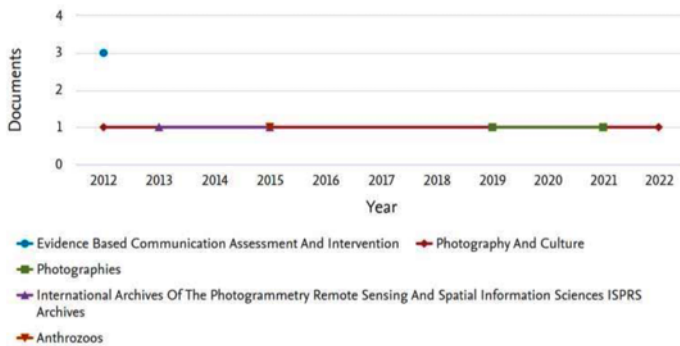
3.1 Human interest photography studies by country



Picture 2. Documents by country (top 10).
 Source. Processed results of researchers (2023).

Research on human interest photography has attracted the attention of many researchers from various countries. Figure 1 shows countries that have contributed a lot to this research based on the number of documents that have been published. The United States is the country that has contributed the most to documents discussing human interest photography, followed by the United Kingdom, Canada, Australia, Germany, Japan, South Korea, and Brazil, Colombia, and France at the bottom. Based on the distribution map of human interest photography documents above, it can be seen that North America is the continent that produces more study documents than other continents. A total of 24 documents published in the United States.

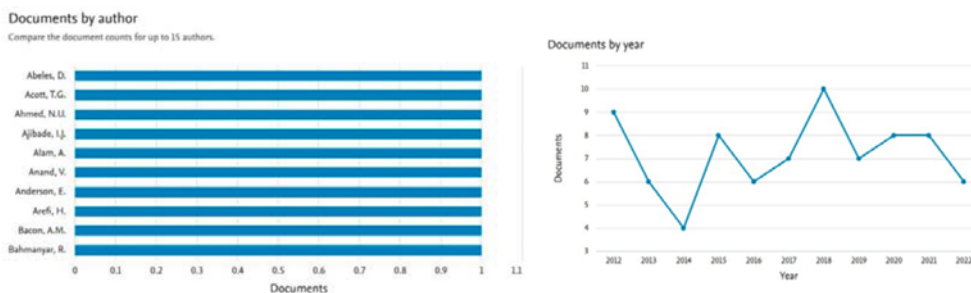
3.2 Human interest photography study based on publisher



Picture 3. Documents by publisher.
 Source. Processed results of researchers (2023).

The discussion on Human Interest Photography based on publishers is classified as static. Based on the data in Figure 2, it shows the equity of each publication. What stands out comes from the Evidence Based Communication Assessment and Intervention, which issued 3 publications in 2012. However, this did not appear in the following years. Other publications show only publishing 1 title per year. This shows that there has not been a publication that is very focused on the issue of human interest photography. This shows a gap for researchers, especially in the field of visual communication if they want to determine the topic of their research. Research in the field of human interest photography is still very rare, in the last 10 years there have only been 79 publications dominated by 54 journal articles, 8 books and 7 book chapters, the remainder divided between conference papers and review papers.

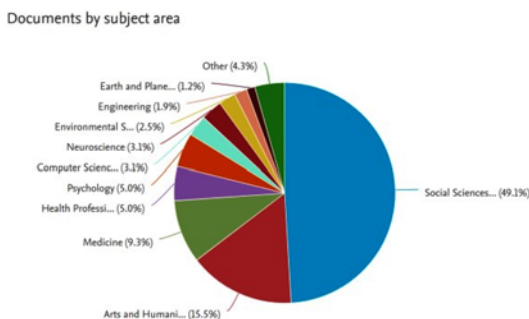
3.2.1 Human interest photography studies based on author and year



Picture 4. Documents by author and year.
Source. Processed results of researchers (2023).

Based on the authors, the study of human interest photography shows that all writers have the same contribution to the number of documents. On average, the authors only have one article related to the study of human interest photography which is indexed by Scopus. When viewed based on the year of publication, 2018 was the most productive year. In that year there were a total of 10 titles published. For a decade (2012–2022), the number of studies on human interest photography indexed by Scopus seems to have fluctuated greatly. The lowest number was in 2014 with 4 titles. At the end of 2022 the trend of studies in this field has also decreased, across 6 titles.

3.3 Study by subject area



Picture 5. Documents based on subject area.
Source. Processed results of researchers (2023).

As shown in Figure 5 above, it is known that human interest photography is most widely discussed in the field of social sciences. However, from this data we can see that human interest photography also intersects with other subject areas such as Art Humanities, Medicine, Health Professions, Psychology, etc. Human interest photography is a field that can attract the attention of many people in various disciplines. Or many scientific disciplines that can be used as objects in human interest photo works. Objects in human interest photos can come from various professional backgrounds from various fields of science (Way 2014). A human interest photographer can take pictures that highlight the daily lives of people, including workers, social activists and community leaders. Therefore, this field offers ample scope for cross-disciplinary research and collaboration between various experts and researchers.

In the field of social sciences, human interest photography is an important tool for describing human life and understanding various social aspects. Through the photos collected, researchers can analyze trends, patterns and dynamics in society. For example, human interest photographs of poverty can help reveal the realities faced by certain groups of people, inspire social change, and promote awareness of humanitarian issues.

The most subject area after Social Sciences is the subject area of Arts and Humanities. Through photographs composed with good aesthetics, human interest photographers can produce stunning and expressive works of art. These works not only reflect human life, but are also capable of conveying emotional messages with deep philosophies. Therefore, human interest photography is also a vehicle for creative expression for researchers from the subject area Arts and Humanities.

Subject area Medicine and Health Professions occupy the third and fourth positions. As we know in the medical field, human interest photography can be used as a powerful means of communication to build empathy and awareness of human suffering. Photographs featuring patients, medical personnel, and complex health situations can provide an in-depth look at the challenges and struggles in the medical world. Thus, human interest photography can influence policy changes, improve health care, and encourage community empowerment in health matters.

In the subject area of psychology, of course, photographs that depict emotions, human relationships, and emotional changes can be used as study material to understand human psychology. (Eze *et al.* 2018). Research on the effect of photos on individual thoughts and feelings can provide valuable insights into how human interest photographs can influence perceptions and social interactions.








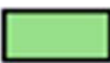



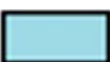
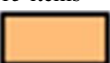
Thus, even though it is still a study that has not been widely researched in the past 10 years, from Figure 5 it is evident that human interest photography is a very interesting field to research and develop in various subject areas. Through a deep understanding of people and society, this field can make valuable contributions in solving social problems, strengthening humanity, and broadening our knowledge of various aspects of human life. Human interest photography is an important window to see and understand the world better.

3.4 *Bibliometric network analysis*

The cluster mapping of the human interest photography study concept is based on the Scopus database which is processed using VOSviewer. From the Scopus database, there are 394 keywords. Concepts that have the same color are concepts in one cluster. The more often a concept appears, the visuals of the concept cluster will also be enlarged and close to one another. On the other hand, the concept that occurs a little, the cluster will be smaller and located a little farther from each other. When searching for the word “human interest photography” you can see a variety of results consisting of 20 concept clusters. What’s interesting here is that “human interest photography” does not appear as the dominant cluster, because in the study of human interest photos, of course, it will focus more on conveying messages through the subjects that appear in a photograph.



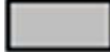
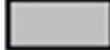
In discussing the study of human interest photography, the dominant concept clusters are the 3rd and 6th concept clusters, with the main words “change” and “child”. In the “change” cluster, we talk for example about international matters relating to refugees and immigration, to talk about generations and health issues. So if explored in more detail the network between clusters of the concept will be related to several other concept clusters such as: youth; right; health systems; regions, etc. Whereas in the “child” cluster, it describes attitude, behavior, up to the physical environment and physiological response. The “child” cluster has a network with several other concept clusters such as: attitude; program; cases; peers; and similarity.

Table 1. Continued

Cluster	Concept Item	Total Item (colors)
Cluster 4	accountability; blogger; capitalism; climate change; climate relocation; communism; consumption; contemporary society; conversation; discourse; failure; great interest; international relation; loy; mina loy; motivation; popular culture; post communist transiti; reader; revolution; self; transition; turn; violence; weight; weight loss; weight loss blog; weight loss blogger	28 items 
Cluster 5	african child; ageism; american art; crash; effectiveness; equestrian art; experimental interventic; impact; injury; intergenerational service; intersection; literature review; marketing; ngo; older adult; peer; program; publication; race; right; rlc; rlc study; united state; violation	24 items 
Cluster 6	animal; animal species; attitude; behavior; correlation; endorsement; feeling; invertebrate; kindergarten child; men; objectifying gaze; panoramas; physical environment; physiological response; preference; present study; similarity; species; validity; virtual reality; women	21 items 
Cluster 7	analysing; bloodstain; bloodstain pattern analyst; bloodstained item; bpa; description; dna analyst; dna laboratory; dna profile; dna report; event; forensic laboratory; historical cartography; item; reconstruction; rural landscape; specific type; territory; thank; vernacular construction	20 items 
Cluster 8	appraisal commentary; bronx; computer; conflict;disability; disclosure; funding; geo social pathway frame; global health; global health career; minority serving institution; mouth shape; msis; original author; preposition; research report; treatment review; undergraduate student; video self modeling; young child	20 items 
Cluster 9	death; discrimination encounter; essay; india; krishna; liberator; loss; moksha; mugabe; mumbai; nonhuman creature; pilgrimage; sexual minority woman; sheikh; social support; testimony; tyrant; vrindavan; zoo	20 items 
Cluster 10	act; care; carer; community health provider; community member; community provider; dementia; health system; health systems research; health worker; landscape care; participation; particular interest; photo competition; resident; social environment; subjectivity; sum; total; walk	20 items 
Cluster 11	3d heritage photograph; 3d imagery; 3d photograph; 3d photography; addition; category; cultural heritage; educational tool; international archive; land cover; monument; photographs location; recent research; state topic; usefulness; virtual museum purpost; volunteer	18 items 
Cluster 12	anthropology; efficacy; evaluation; fluorescent solution; hand; improvement; medical student; mistake; northern; kenya; pastoralism; paul tw baxter; region; spot; surgical; hand rub; surgical hand rub technique; survey; uv test; week	18 items 
Cluster 13	canada; covid; cultural service; ecosystem; facebook; food; health care; healthy traditional diet; lack; lockdown; newcomer; newcomer participant; pandemic; programme; qualitative data; term crisis; winnipeg	17 items 
Cluster 14	aoi; asakusa; asia; central tokyo; country; difference; distribution; example; foreign visitor; geotagged photograph; ginza; japan; poem; residence; shinjuku; sport; visitor	17 items 
Cluster 15	auc; case; control; diagnostic test; end; feet; finger; foot; ftv; havs; min; performance; re warming; roc analysis; sensitivity; specificity	16 items 
Cluster 16	behaviour; digital daily practice; dishabituatation; encoding; eye; face; facial stimuli; familiar face; habituation; individual difference; infant; self care; speed; subsequent discrimination; variance	15 items 

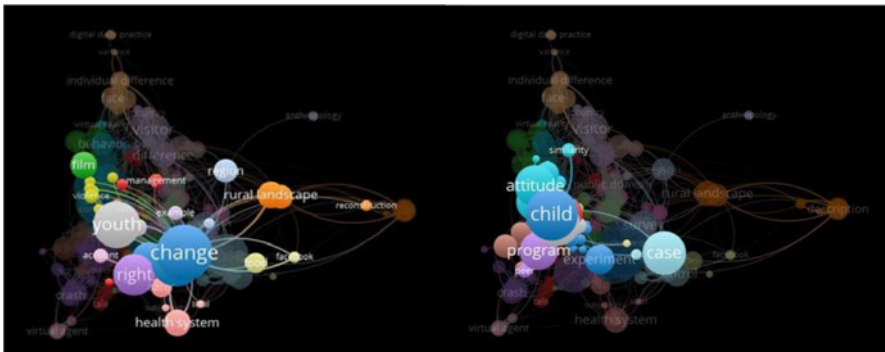
(continued)

Table 1. Continued

Cluster	Concept Item	Total Item (colors)
Cluster 17	cohesion; great barrier reef; group coherence; group member; human experience; human social relation; members experience; narrative; narrative companion; nlp; pocock; recent advance; reef; visitor encounter	14 items 
Cluster 18	account; actual user; caption; comment; emotion; instagram; like; long time; post; social medium; virtual agent	11 items 
Cluster 19	exhibition; festival; new topographics; public domain; public domain open festival; terrain; turin; united states; william jenkins	9 items 
Cluster 20	adolescent; life lesson; neurological condition; opinion; research process; summer camp; youth	7 items 

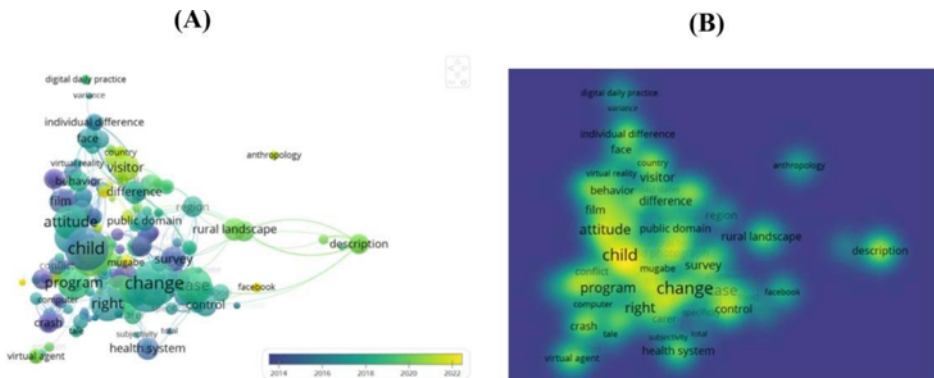
Source. Processed results of researchers (2023).

Based on the Overlay Visualization, it seems that clusters 3 and 6 are the most researched clusters. However, it is precisely clusters 13 and 14 that have been studied the most in recent years. This can be used to find novelty in future research.



Picture 7. Network between clusters concept.

Source. Processed results of researchers (2023).



Picture 8. Overlay visualization (A) and density visualization (B).

Source. Processed results of researchers (2023).

4 CONCLUSION

This analysis concludes that the Scopus database relating to human interest photography from 2012–2022 has attracted the attention of many researchers from various countries. The United States of America is the country that contributes the most. North America is the continent that produces more Scopus documents than any other continent. The discussion on human interest photography based on publishers is classified as static. There has been no publication that is very focused on the issue of human interest photography. This shows a gap for researchers, especially in the field of visual communication if they want to determine the topic of their research. Research in the field of human interest photography in the Scopus database is still very rare, it can be seen from a total of 79 documents divided over ten years.

Based on the authors, a study of human interest photography shows that all authors have the same contribution to the number of documents. For a decade, the number of Scopus indexed human interest photography studies has fluctuated greatly when viewed from the annual distribution. The topic of human interest photography is most widely discussed in the field of social sciences. However, human interest photography also intersects with other subject areas such as Art Humanities, Medicine, Health Professions, Psychology, etc. Thus, even though it is still a study that has not been widely researched in the past 10 years, it has been proven that human interest photography is a very interesting field to research and develop in various subject areas. Human interest photography is an important window to see and understand the world better.

From the Scopus database, there is a diversity of results in the form of 394 keywords which are divided into 20 concept clusters. What's interesting here is "human interest photography" does not appear as the dominant cluster, because in the study of human interest photos, of course, it will focus more on conveying messages through the subjects that appear in a photograph. In discussing the study of human interest photography, the dominant concept clusters are the 3rd and 6th concept clusters, with the main words "change" and "child". Based on the Overlay Visualization, it appears that clusters 3 and 6 are the most studied clusters. However, clusters 13 and 14 have been the most studied in recent years. Of course, this can be used to find novelty in future research.

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Spearheading corporate sustainability transformation in banking industry case study of Cimb group (Cimb Bank Malaysia and Cimb Niaga Indonesia)

Firmansyah Shidiq Wardhana & Syed Abdul Hamid Al Junid
International Centre of Education in Islamic Finance University, Malaysia

ABSTRACT: Sustainability issues, like growing inequality and the deterioration of natural livelihood make the transformation to a more sustainable economic system increasingly desirable and emerging. Moreover, the world is now dealing with unstoppable effects of global warming such as rising sea level, extreme temperature inclination, unpredictable flooding, scalable wildfire, and social economic problems such as income inequality, multidimensional poverty, difficulty in accessing basic education as well as health facilities. Thus, sustainable development calls for integration of the triple-bottom line namely environmental protection, economic empowerment and social inclusion to all sectors of society including the corporate sector and their relevant organisations, commonly phrased as corporate sustainability transformation and ESG integration.

Moreover, organisations are increasingly being reminded that their policies and practices are likely to contribute to heightened social disparity and environmental degradation. They have started to adopt and transition to fundamental elements of sustainability into their business practices either as compliance or as stewardship beyond compliance. They also understand the need to drive business change, advocate for policy shifts towards sustainability, develop fine-tuned sustainable business model innovation and exemplary ESG standards by implementing holistic corporate sustainability transformation as their core organisational strategies and guiding principles.

This study is an attempt to investigate and assess how the drivers of change theory introduced by Burke and Litwin shapes the dynamics and implementation of corporate sustainability transformation in the last four years at CIMB Group. This paper employs the case study approach to validate and verify the actual findings linked to the theories and concepts. Primary data were gathered through a series of in-depth interviews with Sustainability, ESG Integration and Islamic banking experts from both CIMB Malaysia and CIMB Niaga Indonesia. Secondary data is also undertaken to substantiate the research findings by way of employing content analysis through publicly available CIMB Group sustainability-related information.

The findings of this study shows that CIMB Group is reputedly known as one among the strong first movers of sustainability among the players in the financial service sector in South East Asia. It has incorporated sustainability to its core DNA and long-term business strategy pillar. It is also observed that the corporate sustainability transformation has been positively influenced by the Drivers for Change Model.

Keywords: Corporate Sustainability Transformation, Burke and Litwin Drivers for Change, Organisational Change, Organisational Transformation, Organisational Behaviour, Sustainable Business Model Innovation, Sustainable Organisation Sustainability Governance, Sustainability Agenda, Sustainability Integration, Sustainability Transformation, Strategic Management, ESG Integration, Sustainable Finance, Sustainability and EES Impact

1 INTRODUCTION

1.1 *Background and motivation*

Sustainability is emerging as a key issue for organisations in the 21st century. Organisations are increasingly recognising that their policies and practices contribute to social and environmental degradation and, as a result, they have started to adopt some elements of sustainability into their business practices. Nevertheless, significant doubts have been raised as to whether the current activity by organisations is enough to arrest, if not reverse, the ecological and social degradation caused by business activity.

Sustainable development calls for the integration of environmental and social issues into the decisions that shape economic and social development whether they are made by the public or private sector (Brundtland Commission 1987). Sustainability issues, like growing inequality (Piketty and Saez 2014) and the deterioration of our natural livelihood (Rockström, Steffen, and Noone 2009) make the transformation to a more sustainable economic system increasingly desirable and emerging. To realise this transition, private business is a pivotal stakeholder commanding the most resources and capabilities (Porter and Kramer 2011). However, technological advances towards sustainability are increasingly incremental, and many companies find it difficult to meet their sustainability targets. Therefore, innovation on the business model level is required to align incentives and revenue mechanisms to leverage sustainable solutions (Rashid *et al.* 2013).

World Wide Fund For Nature (WWF) as a leading Non-Governmental Organisation (NGO) in the area of environmental preservation and biodiversity conservation, has identified the finance sector as a global driver that must be engaged successfully to deliver the accelerated sustainable development agenda. It mentions the pivotal role of key institutions in the financial industry (FI) such as banks, capital markets, asset managers, insurance operators, financing institutions and financial technology to mobilize funds and financing that could drive business change, advocate for policy shifts towards sustainability, develop best practices and ESG compliance standards. More specifically, financial institutions are encouraged to design environmentally and socially responsible financial frameworks, develop sustainable financing products and mechanisms that encourage environmentally sustainable, low carbon, nature positive, socially inclusive and resource-efficient financing or investments.

These tasks require more than just commitments as numerous competencies are required besides resources to achieve effective corporate sustainability transformation. Transiting towards the sustainability culture is challenging, meticulous, tedious and complicated. Process-wise, it is considered as time-consuming involving a series of policies, strategies and actions that are to be managed and monitored especially when the world is now facing an unstoppable wave of global warming such as rising sea level, extreme temperature inclination, worldwide floods, and social disparities. The experience of CIMB in this journey has been well-rounded, multi-stakeholders-driven and challenging because sustainability requires an inter-related and multidimensional approach. This approach covers aspects of governance, stakeholder engagement, risk management, corporate strategy, product development, business process, reporting, disclosure, target setting and other elemental factors that are sector specific.

CIMB has been known as one of the leading multinational banks that kickstarted its corporate sustainability transformation journey since 2018 in the context of developing countries specifically in the South East Asia Region. CIMB has become one of the founding signatory members of the Principle of Responsible Banking (PRB) at the end of 2019. The principles defined the banking industry's role and responsibilities in shaping a sustainable future. The principles set the global standard for what it means to be a responsible bank and that will ensure that banks create value for both their shareholders and society. By committing to this framework, banks are aligning their business with the objectives of the

Sustainable Development Goals (SDGs) and the Paris Climate Agreement. Corresponding to the facts aforementioned, CIMB Group is the only indigenous Malaysian based banks that ratify the signatories of PRB. Most surprisingly, there was no full-fledge direction from Central Bank of Malaysia about adoption of Sustainability, ESG Integration and Sustainable Finance at that time. However, there was only the issuance of Value-based intermediation (VBI) for Islamic Banks in Malaysia that aims to deliver the intended outcomes of Shariah through practices, conduct and offerings that generate positive and sustainable impact to the economy, community and environment, consistent with the shareholders' sustainable returns and long-term interests.

This qualitative case study is investigating the influence of Burke and Litwin drivers of change model (DCM) to the corporate sustainability transformation (CST) at CIMB Group for both Malaysia and Indonesia context. Secondly, this study aims to investigate comprehensive external factors of DCM to the corporate sustainability transformation at CIMB Group. Thirdly, this study aims to investigate well-rounded internal factors to the implementation of corporate sustainability transformation at CIMB Group. Fourthly, this research aims to provide strategic recommendations for CIMB Group to improve its corporate sustainability transformation journey.

This paper employs a qualitative method that undertakes a case study approach to validate and verify the actual findings linked to the theories and concepts. Primary data were gathered through a series of in-depth interviews with sustainability and Islamic banking experts from both CIMB Malaysia and CIMB Niaga Indonesia.

Secondary data is also undertaken to substantiate the research findings by way of employing content analysis methods through publicly available CIMB Group sustainability-related information.

1.2 *Problem statement*

At this point of time, sustainability agenda is being discussed mainly in terms of reporting, governance, compliance, investment and risk management scope. However, there is extremely limited literature pertaining to the area of corporate sustainability transformation strategies and processes. This is especially so when the transformation involves the private sectors especially financial institutions.

Research and studies on organisational behavior in respect of validating the drivers of change (DCM) as well as why organisations are undertaking ambitious corporate sustainability transformation (CST) agenda aligned with UN Sustainable Development Goals 2030 Agenda is limited. As such it is difficult to leverage on the experiences of others when comparing with the practices of other organizations in the design, shaping, implementing, monitoring and evaluating such initiatives.

Generally, banks are aware about the basic idea of corporate sustainability transformation, but only a few understand how to kick-start the process of adopting and implementing corporate sustainability transformation journey. Hence, the reason why sustainability is not considered as core underpinning thrust in the corporate strategy and execution of the sustainability transformation agenda needs to be further investigated. One possible reason is that sustainability is extremely broad and technical. It is not only covering complex and interrelated dimensions of economic, social, environment and governance but also it needs scientific knowledge to develop science-based performance metrics to quantify, measure, benchmark and assess performance.

In a nutshell, sustainability transformation is an agenda which needs to be owned by all parties including financial institutions in Indonesia, Malaysia, South East Asia and the rest of the world. However, most of the leaders and senior executives do not really understand the gist of why they need to undertake this matter as well as operationalizing the comprehensive implementation sustainability transformation at the strategic and level-playing field to create competitive positioning for the organisation in the long run. It is therefore fitting

that the experiences of the industry champions be studied and shared with others in the hope that sustainability will be the common agenda of all financial institutions.

1.3 *Research objectives*

1. To investigate the organizational behavior aspects through drivers for change model (DCM) developed by Burke and Litwin to the adoption and implementation of corporate sustainability transformation at CIMB Group (Malaysia and Indonesia context)
 - a. To investigate how external drivers influence the implementation of corporate sustainability transformation at CIMB Group
 - b. To investigate how internal transformational drivers influence the implementation of corporate sustainability transformation at CIMB Group
 - c. To investigate how internal transactional drivers influence the implementation of corporate sustainability transformation at CIMB Group
 - d. To investigate how internal group, individual and personal drivers influence the implementation of corporate sustainability transformation at CIMB Group
2. To review the initiatives of CIMB group in its corporate sustainability transformation and propose strategic recommendation in the area of corporate sustainability transformation undertaken and implemented by CIMB Group
3. To provide some pointers or observations that can be of use by other financial institutions planning to embrace corporate sustainability transformation.

1.4 *Research questions*

1. Why does the corporate sustainability transformation happen and become one of most prioritized agenda at CIMB Group? In which CIMB Group is shifting its corporate orientation from single into triple bottom line (People, Planet & Profit).
2. What are the external and internal forces that drive the implementation of corporate sustainability transformation at CIMB Group?
3. How do external driving forces (such as regulatory frameworks, market transformation, investors' preference and shift of customer behavior) drive the implementation of corporate sustainability transformation at CIMB Group?
4. How do organizational mission and strategy drive the implementation of corporate sustainability transformation at CIMB Group?
5. How does organizational leadership drive the implementation of corporate sustainability transformation at CIMB Group?
6. How does organizational culture drive the implementation of corporate sustainability transformation at CIMB Group?
7. How does organizational structure drive the implementation of corporate sustainability transformation at CIMB Group?
8. How does management practices drive the implementation of corporate sustainability transformation at CIMB Group?
9. How do organizational system including policies and procedures drive the implementation of corporate sustainability transformation at CIMB Group?
10. How does work unit climate drive the implementation of corporate sustainability transformation at CIMB Group?
11. How does task requirement, individual skills and capacities drive the implementation of corporate sustainability transformation at CIMB Group?
12. How does group and individual motivation drive the implementation of corporate sustainability transformation at CIMB Group?

13. How does individual values and needs drive the implementation of corporate sustainability transformation at CIMB Group?
14. What are CIMB Group still lacking in term of its corporate sustainability transformation agenda at the current moment both in Indonesia and Malaysia context?
15. What kinds of improvement areas that CIMB Group are expecting to undertake to advance the implementation of its corporate sustainability transformation?

1.5 *Research scope*

The research scope focuses in the area of corporate sustainability transformation that is implemented by CIMB Group specifically by CIMB Malaysia Bank and CIMB Niaga Indonesia. The unit of analysis covers group sustainability and group Islamic banking division from both countries. Most importantly, the study focuses on the existing active CIMB Group employees who are mandated by the banks to chair and undertake the corporate sustainability transformation agenda from the sustainability and core business activities side. The scope is intentionally designed to include involvement from both technical planners of corporate sustainability transformation and the practical executors of the core business. The latter are impacted directly through the incorporation of sustainability and sustainable finance elements to CIMB Group's core DNA and main business pillars.

1.6 *Originality/novelty*

This paper is an applied business research that aims to investigate the drivers of Change Model (DCM) as well as validating the theories by employing case study of CIMB Group. The data is directly gathered primarily through intensive interviews with the bankers, sustainability and sustainable finance practitioners at CIMB Malaysia and Indonesia. It is also supported by the content analysis from publicly available sources and sustainability-related materials produced by CIMB Group.

This paper is providing a different theme and perspective in the field of corporate sustainability transformation in the area of organizational behavior. One of the factors that motivated this study is that most existing studies mainly focus on investigating how sustainable and ESG-related actions influence the financial performance of an organization. Understanding the fact that sustainability encapsulates the triple bottom line that consists of people, planet and profit, it is therefore necessary to investigate more on the people aspect specifically from organizational and individual behavior approaches.

This research focuses on drivers of change models that are mostly related to the organisational behavioural areas of leadership, organisational culture, mission and strategy, management practice, motivation and organisational structure to the implementation of corporate sustainability transformation.

1.6.1 *Academic and practical contribution*

1.6.1.1 *Academic contribution*

1. This research expects to contribute to the academic realm by connecting and linking corporate sustainability transformation journey with existing theory and model on drivers of changed model introduced by Burke and Litwin that CIMB Group has been going through within these three years period since the initial transformation journey inception in 2018.
2. This study expects to contribute to the sustainability transformation, sustainability management and sustainable organisation area of research which dives deeper on the organisational behaviour aspects covering individual, group and organizational entity as a whole.

1.6.1.2 Practical contribution

1. This study aims to provide strategic recommendation for CIMB Group to advance its corporate sustainability transformation agenda way forward
2. This applied research paper could be used as a future reference why the financial institution sectors need to embrace a full-fledged corporate sustainability transformation agenda in the long run.

2 LITERATURE REVIEW

2.1 Sustainability, sustainable development goals and triple bottom line

Sustainability is approach taken by the elite developmentalist view in which any sectors, and development objectives such as corporate core business activities, civil society organisation advocacies and governmental policies and regulations which aim to fulfil the needs of the present generation without compromising the ability of future generations to meet their own needs covering ESG aspects. Sustainability and ESG integration have become the emerging actions and strategies discussed by global stakeholders started from the signing of Paris Agreement at 2015 that launches UN SDGs 2030 as well.

United Nations Sustainable Development Agenda 2030 Goals is high-level global action master plan which was agreed and adopted by United Nations Members States in 2015 with 17 main goals and 169 targeted objectives to achieve triple bottom lines of human advancement which are (1) economic development (2) environmental sustainability, and (3) social inclusion that brings integrated value to the robust and equitable development of well-governed and civilized society. The Sustainable.

Development Goals (SDGs) were adopted by all United Nations Member States during Paris Agreement 2015.



Figure 1. Sustainable development goals by UN & SD framework by UNDP.

In the other literature sources introduced by the United Nations Development Program (UNDP) in 2015, it is mentioned that sustainable development consists of balancing aspects to achieve long-term elemental harmony within the 5Ps framework (People, Planet, Peace, Prosperity & Partnership). John Elkington also believed that aside from that 5Ps, sustainability is where no one is left behind in terms of equitable economic and human development by managing environmental preservation and social inclusion to the maximum level.



Figure 2. John Elkington integrated sustainability triple bottom line model.

Bruntland Report (1987) is often misunderstood with sustainable development envisioned more narrowly as a particular form of economic development—whereas in essence it concerns how the advancement of wealth and provisions for the health and education and other measures of social and environmental well-being can be accomplished in ways that can be sustained within the resource endowments and systems of the planet.

On top of that, in the area of finance, sustainability and ESG encapsulates the narrower concept of impact investing, sustainable finance, and socially responsible investment that have become one of the most covered topics to talk, write and discuss within scope of academic and professional discourses nowadays. As people are getting more aware regarding to the responsible actions toward environment and society through comprehensive actions that lead into the improvement of environment such as Climate Change Mitigation, Poverty Alleviation, Equitable Development and Zero Hunger. Sustainable finance is subsection of sustainability and ESG integration that refers to any form of financial service integrating environmental, social and governance (ESG) criteria into the business or investment decisions for the lasting benefit of both clients and society at large. Activities that fall under the heading of sustainable finance, to name just a few, include sustainable funds, green bonds, impact investing, microfinance, active ownership, credits for sustainable projects and development of the whole financial system in a more sustainable way (Swiss Sustainable Finance 2019).

2.2 *Organisational behaviour, organisational change and drivers for change model* by Burke Litwin

The theoretical foundation of organisational behaviour is based on the work done by Robbins and Judge (2010). They identified three levels in an organisation, the first being the organizational level consisting of organisational change, organisational structure, organisational culture, and organisational strategy. The second level is the group level that consists of the teams, communication, leadership, power, politics, conflict, and negotiations. The third is the individual level that consists of emotions, moods, personality, perception, decision-making, and motivation. Newstrom (2011) also focused on individuals and groups and

defined organisational behaviour as the systematic study and careful application of knowledge about how people – as individuals and groups – act within organisations. Robbins and Judge (2010) dealt with organisational behaviour in a comprehensive way, describing it as a field of study that investigates the impact that individuals, groups, and structure have on behaviour within organisations, for the purpose of applying such knowledge toward improving an organisation’s effectiveness.

Organisational change is known as one of fundamental aspects in the organisational behaviour that drives the continuous improvement and strategic transformation of the organisation on a long-term basis. Organisational change theory and concepts were developed by Burke Litwin model in 1992 – in order to assess the effects of internal and external factors on the performance of the organization. It provides a framework on environmental and organizational success and the impact of such framework on the performance of company. The model describes a relationship between what can be achieved in real-life scenario and what has been achieved through research and theory (Thakur 2013). Undertaking organizational phenomena may cause many complications and this model classifies important organizational dimensions that help to detect the problem (Chawane *et al.* 2003, p. 62–76).

The Burke-Litwin model shows the various drivers of change and ranks them in terms of importance. The model is expressed diagrammatically, with the most important factors featuring at the top. The lower layers become gradually less important. The model argues that all of the factors are integrated (to greater or lesser degrees). Therefore, a change in one will eventually affect all other factors. Burke-Litwin believes environmental factors to be the most important driver for change. Indeed, most change can be traced back to external drivers for change. Important elements of organisational success, such as mission and strategy, leadership and organisational culture, are often impacted by changes that originate outside the organisation. It is fundamental to understand these external changes and identify the implications for organisation in a short, medium and long-term basis.

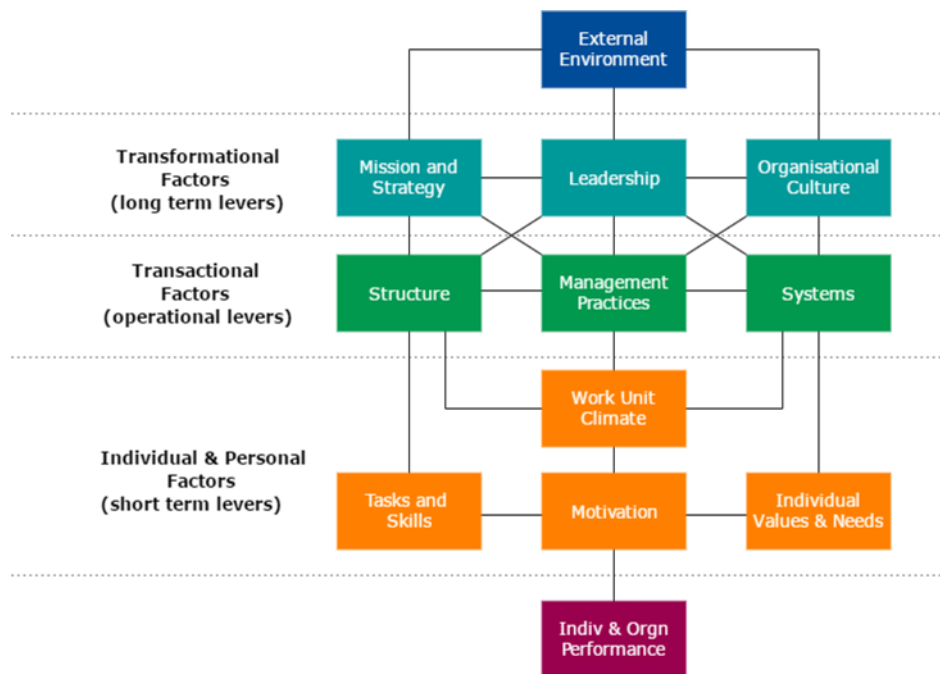


Figure 3. Burke and Litwin drivers for change model (DCM).

According to Burke Letwin, in change management there are factors that influence change management agenda and transformation programs. These factors are grouped into three, namely:

1. Transformational Factors

It is a factor of vision, mission, strategy, leadership, and organizational culture that is strategic and influential in making a change. If not supported by a clear vision, mission, and strategy for a change program or not supported by leaders who are able to bring change with all kinds of constraints and also a corporate culture that can accept a change, then the change will not materialize even in the early stages.

2. Transactional Factors

These are the factors that support the company's internal operations. Transactional factors are a reflection of the 8 factors found in the Burke-Litwin model and are simplified by adopting the dimensions of change (The Price Waterhouse Change Integration Team 1994). From the transactional factors if viewed from the context of internal changes, then these factors can be grouped into 3 main factors: organization/human resources, business processes, internal SOPs and technology.

3. Individual and Personal Factors

Those are the factors that support the daily course of a company to realize the goal of organizational change in the short term based on several aspects such as work unit climate, individual skills and capabilities, task requirements, employee motivation and individual needs and values.

2.3 *Sustainable business model innovation*

Sustainable Business Model Innovation (SBMI) is considered as the most substantive route to bring about the change and transformation required to redefine the purpose of the firm and the means to value creation. Sustainable Business model innovation (SBMI) is about innovating the value creation, delivery, and capture mechanisms of firms and organisations embedded with sustainability dimensions and purpose to be a catalyst for customers to appreciate value add and convert this into profits. SBMI is currently perceived as a key activity and core strategy for large multinational corporations (MNCs) and other smaller organisations to remain competitive in this disruptive era. SBMI is also leading to new customer offerings and revenue streams of the organizations through innovative business model reconceptualization by contributing positively to mother nature and society. In other words, SBMI shapes business to be purpose and sustainability-driven. While SBMI put equal focus on innovating and transforming the value creation, delivery, and capture mechanisms of firms, SBMI also includes a wider conception of value creation that harness holistic inclusion: from mainly focusing on the economic and profit making creation, to also include social and environmental sustainability value as its perennial focus. In addition to customer and shareholder focus, it has transcended to a multi-stakeholder perspective, including societal stakeholders such as community, local citizens, vendors, third-party actors such as NGO, and also the surrounding living biodiversity creatures such as animals, plants and the overall environmental landscape as a whole.

More importantly, SBMI expect to achieve direct business benefits such as cost savings and new revenue streams and more formless advantages by being ahead of future stakeholder concerns and regulatory forces and improving organizational resilience, strategic alignment, corporate reputation, commitment for positive impact creation, long-term clients' loyalty and employee attractiveness within its sustainability transformation journey by shifting the corporations' business operating model to SBMI. It is also well-recognized that SBMI holds infinite potential to address enduring sustainability challenges such as social and environmental uncertainty that happen on this earth.

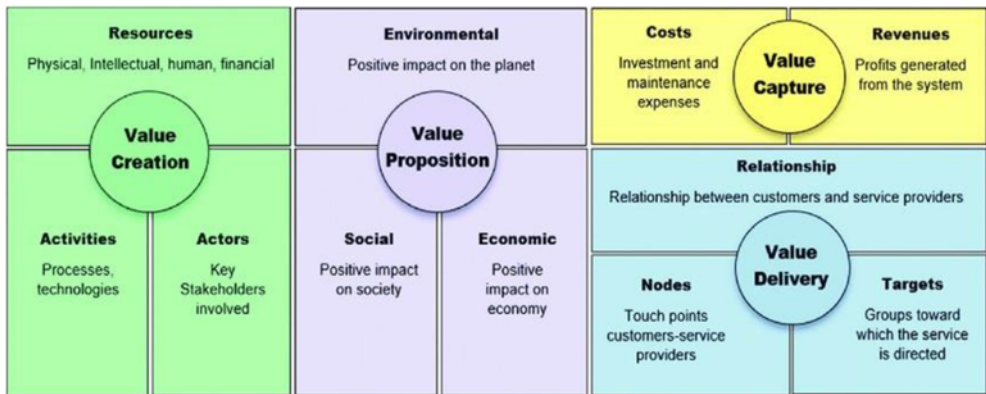


Figure 4. Sustainable business innovation model (SBMI) concept introduced by various experts as a modified result of business model canvas.

However, despite the potential and benefits provided by SBMI, organizations have yet to implement sustainable business strategies. When it comes to SBMI, many organizations lack the dynamic capabilities to innovate. Dynamic capabilities is defined as the set of capacity of an organization to “integrate, create, and reconfigure internal and external competencies to handle rapidly changing surroundings. SBMI’s dynamic capabilities are inextricably linked. At its fundamental cornerstone, dynamic capabilities is defined as repeatable patterns of action, allow corporations to continue operating their current business model while sensing (identifying, analysing and assessing the potentials), seizing (galvanizing resources to manage possibilities and value for stakeholders), and transforming (sustaining the advancement of the organizations undertaking) as dynamic capabilities enable companies to adapt, reassemble, and develop ordinary capabilities at a greater extent. Dynamic capabilities are essential for companies to design, enhance, and reinvent their business models since they are concerned with change and transformation itself.

Specifically, when the perceived financial advantages of altering and reconfiguring outweigh the costs of maintenance, businesses and organizations must reconfigure their capabilities and invest in the creation of dynamic capabilities. This can be damaging for the SBMI concept and implementation itself. First, it is not always apparent whether and how commercial organisations can create financial value through sustainability especially when there is no causal and correlational relationship among sustainability and financial metrics, objective key result and key performance indicators. Secondly, addressing and managing complex, time-consuming, meticulous vis a vis complicated sustainability transformation challenges with highly uncertain pay-offs, may require financial as well non-financial trade-offs and lengthy experimentation process of sustainability implementation with a broad range of uncertainty from both internal and external stakeholders, while corporations typically focus on short-term profit maximization that could be obtained by the corporations, thus they could be risking themselves to commit into greenwashing as one of fundamental inherent risk for commercial organisations who do not have sound sustainability governance and risk management mechanism in implementing sustainability transformation as their core guiding principle to direct the organisational journey. Third, costly efforts to innovate for sustainability may be easily imitated by other organisations regardless of whether different corporations have different ways of implementing and operationalizing its sustainability agenda which causes a result that corporations may resist the development of dynamic capabilities needed for SBMI.

Nevertheless, SBMI has become one of foremost in the existing literature in the strategic sustainability management practice as a way to reap sustainable competitive advantage for

profit-making commercial organisations while contributing to sustained positive social and environmental development. This is done by focusing on shifting and transitioning the way business is done, by incorporating into their core practices the mitigation of negative societal and environmental impacts of their operations.

2.4 Corporate sustainability transformation

Corporate sustainability can be viewed as a new and evolving corporate management paradigm. The term ‘paradigm’ is used deliberately, in that corporate sustainability is an alternative to the traditional growth and profit-maximization model. While corporate sustainability recognizes that corporate growth and profitability are important, it also requires the corporation to pursue societal goals, specifically those relating to sustainable development — environmental protection, social justice and equity, and economic development (Mel Wilson 2003).

Corporate sustainability transformation comes from the concept of “sustainable development.” The World Commission on Environment and Development, a United Nations initiative, defined that concept in 1987. Sustainable development means actions that “meet the needs of present generations without compromising the needs of future generations.” A review of the literature suggests that the concept of corporate sustainability borrows elements from four more established concepts: 1) sustainable development, 2) corporate social responsibility, 3) stakeholder theory, and 4) corporate accountability theory (Ivey Business Journal 2003). Corporate sustainability may not be simple, but it is necessary. Those companies that embrace the full complexity of sustainability ideas sooner than later will contribute to a better world and experience higher long-term profits (Tima and Devika 2018).

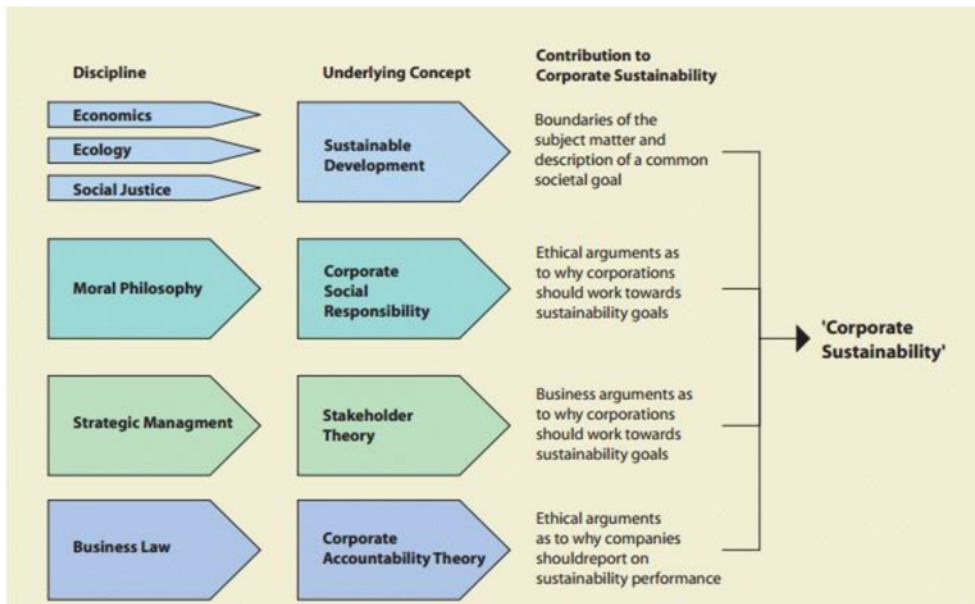


Figure 5. Corporate sustainability innovation by IVEY business journal, 2003.

2.5 Sustainability transformation Agenda in financial institution sectors (FIs)

Sustainable financial activities aim to foster economic growth, social inclusion and environmental preservation. Sustainability transformation agenda in financial institution covers several key integration points as the following:

1. Governance, Framework Building & Product Development

Within an organization's framework, governance represents policies, roles, responsibilities and decision-making that are associated with managing climate-related risks and opportunities. Governance disclosures form an organization's climate-related commitments and how it will achieve them explicitly, through explaining board's oversight and accountability as well as management's role in relation to climate risks and opportunities. Sustainability Governance has to be in place and agreeable for a longer-term time scale. Sustainability transformation approaches for more sustainable purpose organisation encourages companies to disclose sustainability and sustainable finance related information such as climate related risk, sustainable banking product development and compliance to sustainable finance international standards through a phased approach.

In the early phases, financial institutions may disclose key elements of the board's oversight of and management's role in assessing and managing climate-related issues. This is followed by disclosing how the board considers climate-related issues in reviewing major capital expenditure, acquisitions and divestitures in the phase where enhancements and additions are made. A possible path forward, after the implementation of climate-related scenario analysis, is for the board to consider climate-related issues when reviewing and developing corporate strategy agenda with real commitments and serious efforts of the organisations. This includes incorporating Sustainability and ESG linked-KPI to the board of directors and board of management related to the achievement of reduction of green-house gas emission, and improvement to ESG index such as Dow Jones Sustainability Index (DJSI)

2. Strategic Planning and Management

From sustainability transformation approach in the financial institutions, the sustainability operationalisations, purposiveness and responsible agenda must be instilled as core corporate strategies of the companies operationalised into business, functional and operational strategy level that embrace the responsible organisation commitment within ESG realms.

3. Sustainability Performance Metrics and Target-Setting

The specific metric has to be introduced to ensure that all key areas could be quantitatively and qualitatively measured such as how the organisations promote gender equality for leadership posts, how the organisations could bring more impacts to clients by advising manufacturing organisation to shift from coal and oil based fuels into clean energy as well as other metrics that how organisation could play as a role model in spearheading sustainability through its core business and service activities.

4. Risk Management

In terms of risk management, having a proper environmental and social risk management (ESRM) framework in mitigating any ESG related risk into their business derived from its own business activities or indirect activities from its clients' operations where they invest at. Hence, sustainability due diligence and risk management governance have to be in place in ensuring the responsible and purposive sustainable organisations.

2.6 *Practices of sustainability transformation in Malaysia FIs*

Malaysia has positioned itself as the hub of Islamic, inclusive and sustainable finance, offering an ecosystem for investors to raise funds. So far, it has attracted issuers from China, Japan and the Middle East. Foreign direct investment from the Middle East grew threefold from 2008 to \$3.8 billion in 2016 (Bank Negara Malaysia).

The following are sustainable finance initiatives taken up in recent years in Malaysia such as the Establishment of Malaysian Sustainable Finance Initiative (MSFI) in July 2020 by Capital Markets Malaysia (CMM). This initiative will support capacity development for Malaysia's financial sector through workshops and training courses to foster greater understanding of ESG integration and sustainable financing solutions. On top of that, the

issuance of Climate Change and Principle-based Taxonomy (CCPT) (released in May) 2021 was instrumental in serving as a guide to financial and banking sectors involved in climate change activities.

Furthermore, The Twelfth Malaysia Plan (12MP) will be aligned with the shared prosperity initiative encompassing three dimensions, namely economic empowerment, environmental sustainability and social re-engineering. Out of these three focus areas, the environment sustainability financing for green growth (i.e. economic instruments, green financing system) has been targeted as one of the strategies for the longer term.

It is notable that sustainability monitoring and enforcement in Malaysia started with the inception of Value-based Intermediation Financing and Investment Impact Assessment Framework Guidance Document (VBIAF), published by BNM in November 2019, outlining a framework for the establishment of a risk management system for financing and advisory activities related to positive economic, environmental and social outcomes. At around the same time, the SC published its 'Sustainable and Responsible Investment (SRI)' roadmap, outlining strategies to expand the range of SRI instruments, issuers, investors and ancillary services, while strengthening disclosure and governance. Last but not least, the formation of the Joint Committee on Climate Change (JC3) from financial service players, regulators, NGOs, industry associations and communities meant to create greater synergy in development of climate-related solutions for the capital and financial markets. JC3 is chaired by BNM and SC with members composed of representatives from 19 industry players. There are 4 sub-committees formed under JC3, namely risk management; governance and disclosure; product and innovation; and engagement and capacity building.

However, based on PwC 2021 Survey on ESG Readiness and Corporate Sustainability Transformation in the Malaysian Banking Sector conducted between August to October 2021, only 21% of Malaysian banks have embedded all three Sustainability, ESG and Sustainable Finance Integration Regulatory Frameworks enforced by The Central Banks of Malaysia and Global Standard. They are: (1) Climate Change and Principle Based Taxonomy (2) Value Based Intermediaries and (3) Taskforce on Climate Risk Financial Disclosure (TCFD). The minimum adoption to the corporate sustainability transformation and ESG Related Risk can be attributed to the following reasons:

- a) 64% of Malaysian banking sectors lack knowledge and competences in embedding ESG factors into risk assessment in the banks.
- b) 71% indicates limited access to counterparty ESG data and 86% cited low quality of customers' disclosures and ESG awareness. (PwC 2021 Survey on ESG Readiness in the selected 14 (Fourteen) Malaysian banking sector)
- c) Talent scarcity in the Sustainability and ESG related areas. Only 50% from 14 Malaysian banks mentioned that they hired ESG subject matter specialists to fill the gaps whenever there are no available experts in house.

2.7 Practices of sustainability transformation in Indonesia financial institutions

As a serious commitment from the Government of Republic Indonesia to achieve UN SDGs 2030, Financial Services Authority (OJK) has developed a comprehensive Sustainable Finance Roadmap, which includes 19 medium and long-term activities to be conducted between 2015 and 2024.

The Indonesia Sustainable Finance Umbrella Policy was launched and released in July 2017 as a major milestone of the Roadmap to achieve UN SDGS 2030 from active involvement of financial sector, which introduces requirements such as the preparation of a sustainable finance action plan and sustainability reporting for the largest banks OJK has also established a number of initiatives to support further adoption of sustainable practices across

the banking sector, including obligation of submitting Annual Sustainability Report, the creation of a Sustainable Finance Forum and an annual Sustainable Finance Award (Otoritas Jasa Keuangan 2018). Accordingly, OJK has made it obligatory for institutions to operationalize Indonesia's Sustainable Finance Roadmap through Decree of POJK No 51/POJK.03/2017. This decree obliges Conventional and Islamic Commercial banks both conventional and Islamic in Indonesia between 2019 and 2022 to adopt Sustainable Finance Policy Framework.

Furthermore, OJK has also released Sustainable Finance Roadmap Phase 2 for the year of 2021 to the year of 2024 to strengthen the market and industry transformation program transitioning to sustainable finance enforcing commercial banking and financial sectors in Indonesia to be at least complying with POJK 51 Year of 2017.

3 RESEARCH METHODOLOGY

This study employs a qualitative case study research method which consists of in-depth interview and secondary data collection through publicly available information with regard to CIMB corporate sustainability transformation.

Qualitative research is a research method that aims to explore and understand the meaning derived by some individuals or groups of people on matters relating to social or human problems (Creswell 2013). Qualitative case study is a research methodology that helps in exploration of a phenomenon within some particular context through various data sources, and it undertakes the exploration through a variety of lenses in order to reveal multiple facets of the phenomenon (Baxter and Jack 2008). An interview is a guided, purposeful conversation between two or more people. There are many different types of interviews. Individual or group interviews may be unstructured or structured, and conducted face to face, by telephone, or online (Sekaran and Bougie 2016).

This applied research is conducted by way of employing case study method to get comprehensive understanding the pull and push driving factors derived from drivers for change model (DCM) introduced by Burke and Litwin that drive and influence the implementation of corporate sustainability transformation agenda at CIMB Group specifically covering both CIMB Malaysia and CIMB Indonesia. Additionally, this study also aims to investigate further the potential areas and rooms for improvements of CIMB Group as a first mover of a sustainable and responsible financial institution in South East Asia Region to be used as a strategic recommendation for CIMB Group.

Moreover, the qualitative data collection is gathered through primary and secondary sourcing. This study aims to produce holistic and well-rounded research findings to find the integrated linkage among organisational behaviour (OB) specifically drivers for organisational change model and corporate sustainability transformation (CST) at CIMB Group both in Indonesia and Malaysia context.

3.1 *Proposed conceptual framework of the study*

This study is considered as an exploratory and investigative case study that aims to find the insights about corporate sustainability transformation undertaken at CIMB Group in a real time from the experts directly. A conceptual framework is proposed to answer the research problems and explore potential solutions.

There are two models used for this research. They are as follows:

- 1) Burke and Litwin Drivers of Change Model (DCM) treats as independent variables around eleven (11) external and internal driving forces to the organizational change. Also included were external driving forces, transformational forces (internal long-term levers),

transactional forces (internal operational levers) and individual and group forces (internal short-term levers).

- 2) Corporate Sustainability Transformation covers five dependent variables representing five (5) pivotal pillars of CIMB corporate sustainability transformation vis Governance and Risk, Sustainable Actions, Sustainable Business, Stakeholders Engagement and Advocacy and Corporate Social Responsibility.

The other undefined, unwritten and uncontrolled variables covered challenges, potential issues, enablers and strategic levers from existing core business strength to hinder or to support the corporate sustainability transformation at CIMB Group.

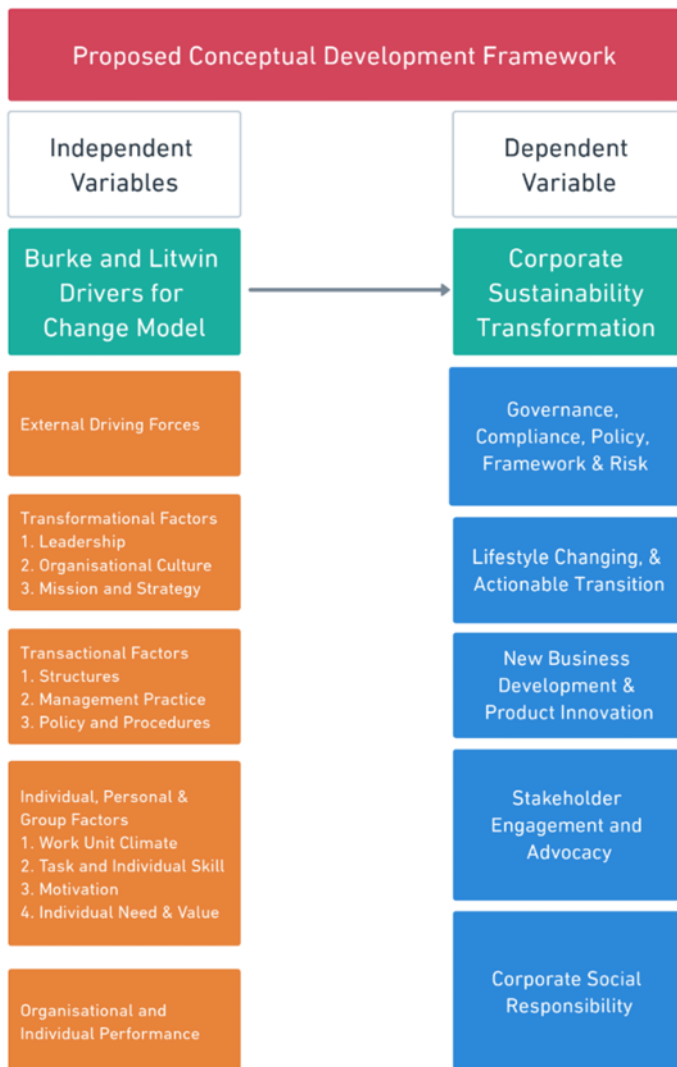


Figure 6. Proposed conceptual development framework of research.

3.2 Primary qualitative data collection – interview method

3.2.1 Interview selection

The primary data is collected through a semi-structured interview mechanism with key persons that plan, design, drive, strategize and execute the corporate sustainability transformation agenda at CIMB Group. This study aims to have balanced views and perspectives from the corporate sustainability transformation agenda and its seamless integration to the core banking business activities, specifically Islamic banking business which is considered as one of the main commercial business pillars of CIMB Group business both in Malaysia and Indonesia. The interview panels are all active employees at CIMB Group both in Malaysia and Indonesia offices. The interview was conducted through licensed Zoom video-conferencing platform within the length of 60 minutes to 90 minutes between October to November 2021. The interview sessions are always recorded with the concern of the interviewees to be submitted as research evidence as well as making an ease to transcribe the recorded sessions for the data analysis purpose.

Moreover, the interview consists of the core informants from CIMB Malaysia and CIMB Indonesia from Group Sustainability and Group Islamic Banking as the following:

Table 1. List of interviewees or respondents of the study.

No	Key Informants/ Respondents	Designation	Group
1	Nor Mohamed	Senior Vice President, Head of Business Development, Islamic Commercial and SME Banking	Group Islamic Banking, CIMB Islamic Malaysia
2	Dr Leo Mualim	Vice President of Sustainability	Group Sustainability, CIMB Niaga Indonesia
3.	Octa Ivanandy	Sustainable Business Practice Manager	Group Sustainability, CIMB Niaga Indonesia
4	Elisa Ratnawardani	Senior Vice President, Head of Islamic Wholesale and Business Banking	Group Islamic Banking, CIMB Niaga Indonesia
5	Sigit Soerya Putra	Vice President, Islamic Corporate Banking and Syndication	Group Islamic Banking, CIMB Niaga Indonesia
6	Indra Destriyana	Vice President, Islamic Corporate Banking and Multilateral Deals	Group Islamic Banking, CIMB Niaga Indonesia
7	Adilah Rashida	Manager of Sustainability Group, The Complete Bankers Graduate Program	Group Sustainability, CIMB Group Malaysia
8	Rizkiasari Joedawinata	Sustainable Finance Programme Lead, WWF Indonesia	WWF Indonesia Head Office

3.2.2 Interview questions

The semi-structured interview questions were designed to ensure that all the resourceful information would be captured throughout the interview sessions. Additionally, if all interview questions could not be answered during one-time interview sessions, the researchers will get back to the key informants asynchronously and synchronously by email, conducting another short interview session or other means of communications such as WhatsApp and Messenger Platform. However, the researcher tried to deliver all proposed questions by paraphrasing it into more oral-friendly language once the free-flowing interactive discussion took place between the interviewers and interviewee. The detailed interview questions are attached in the appendix section after the chapter 6 for further reference.

3.3 Secondary qualitative data collection – content analysis method

3.3.1 Publicly available data selections

Furthermore, this research also undertakes secondary data sourcing by gathering publicly available information related to the CIMB Group corporate sustainability transformation through the CIMB Group website, published sustainability reports, press-releases and news, publications from third parties and other documents that are available in the online world. Most importantly, the documents must be able to be evidently traced and verified in term of its content credibility, validity and reliability.

Content analysis is a research tool used to determine the presence of certain words, themes, or concepts within some given qualitative data (i.e. text). Using content analysis, researchers can quantify and analyse the presence, meanings and relationships of such certain words, themes, or concepts. As an example, researchers can evaluate language used within a news article to search for bias or partiality. Researchers can then make inferences about the messages within the texts, the writer(s), the audience, and even the culture and time of surrounding the text.

Any technique for making inferences by systematically and objectively identifying special characteristics of messages.” (Holsti 1968)

Content analysis is also known as: “An interpretive and naturalistic approach. It is both observational and narrative in nature and relies less on the experimental elements normally associated with scientific research (reliability, validity and generalizability) (Ethnography, Observational Research, and Narrative Inquiry 1994-2012).

3.3.2 Content Analysis Method

There are five sequential steps which need to be followed to process the publicly available contents related to CIMB Group corporate sustainability transformation as the following:

1. Defining the subject of the analysis by finding research questions and matching it with the application of a theory or concept-based approach from the case study
2. Defining search criteria including definition of categories used in research
3. Scanning text material line by line to find categories
4. Revisioning of the categories by adding, deducing and scanning texts again
5. Interpreting the result by summarizing it into resourceful insights reflected into the research findings

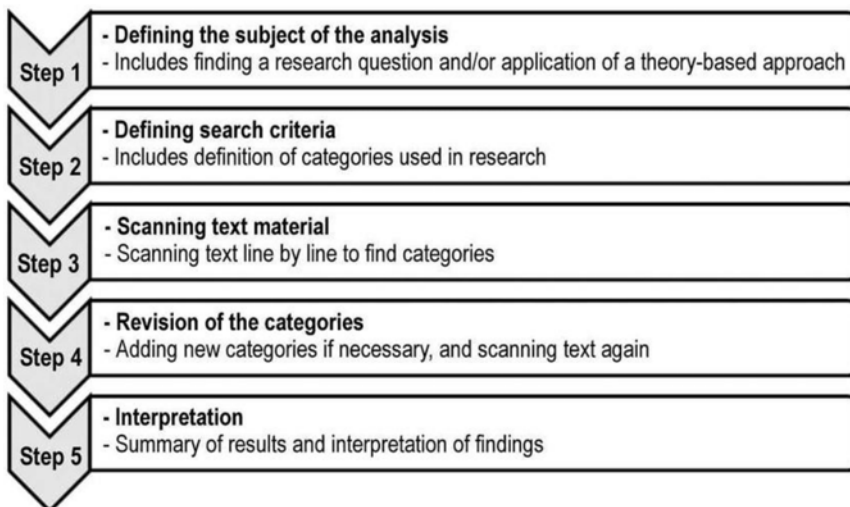


Figure 7. Process of content analysis by mayring 2015.

3.4 Relevancy, Validity and Reliability of qualitative data gathered

The problem encountered was that in comparison with quantitative data analysis, the qualitative data analysis has relatively few well-established and commonly accepted rules and guidelines (Sekaran and Bougie 2016).

Creswell (2014) proposes an analytical process that is used to analyze the qualitative data, which is defined as a process that implies steps from specific to general. The interview processes are recorded by using Zoom video conferencing platform in order to help the author to file and arrange the data. The raw data in the form of data transcript, field note, and audio are transcribed, which are coded based on the themes and descriptions. The transcripts were also compiled as a set of specific information that emphasized the corporate sustainability transformation of CIMB Group driven by the organisational change elements stipulated by the Driver for Change Model (DCM) prescribed by Burke and Litwin. Then, the data coding implies to gather and organize the data by collecting the raw materials gathered during the interview process. Thus, the theme setting was drawn, and the description of how the interviewee answers and explains the questions was emphasized (Creswell 2014). Then, the data is interpreted by implying a theory that applied in this study, which is Burke and Litwin's Drivers for Change Model comparing between the theory and the field practices to make unbiased interpretation of the data based on the themes and description. The analysis of qualitative data is not simple. The problem is in comparison with quantitative data analysis, the qualitative data analysis has relatively few well-established and commonly accepted rules and guidelines (Sekaran and Bougie 2016). . Lastly, this Creswell method proceeds with the steps of validating the information accuracy through the interview and content analysis sourcing by ensuring that all information gathered is captured from trusted source primarily or secondarily.

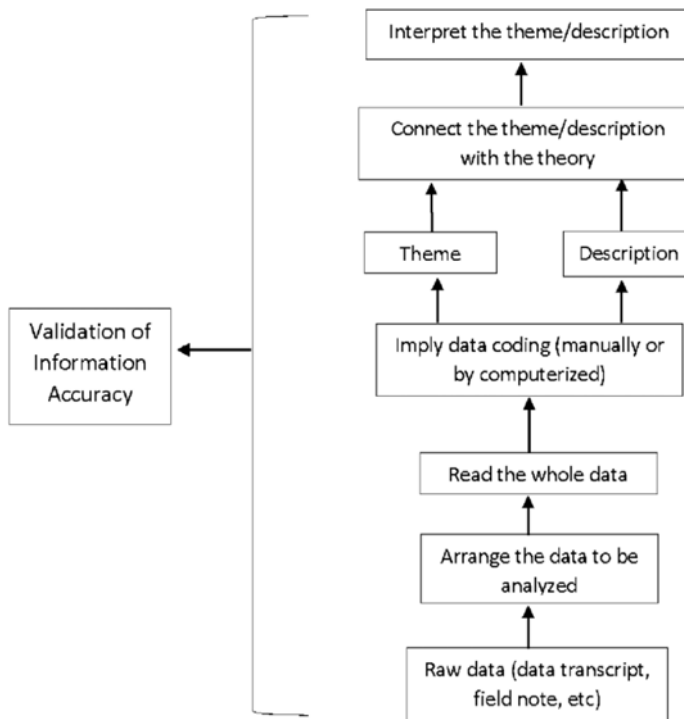


Figure 8. Validation of primary & secondary qualitative data by Creswell (2014).

3.5 Proposed qualitative data analysis plan

The proposed qualitative data analysis plan includes the data collection procedure followed by describing the data, grouping and categorizing the data into strategic themes and more generalized issues. The next step is performing comprehensive analysis by interpreting what is actually happening in the organisation and how it could fit with the proposed conceptual framework of the research. Lastly, comparing findings is an essential step to be employed between interview respondents and array of external contents.

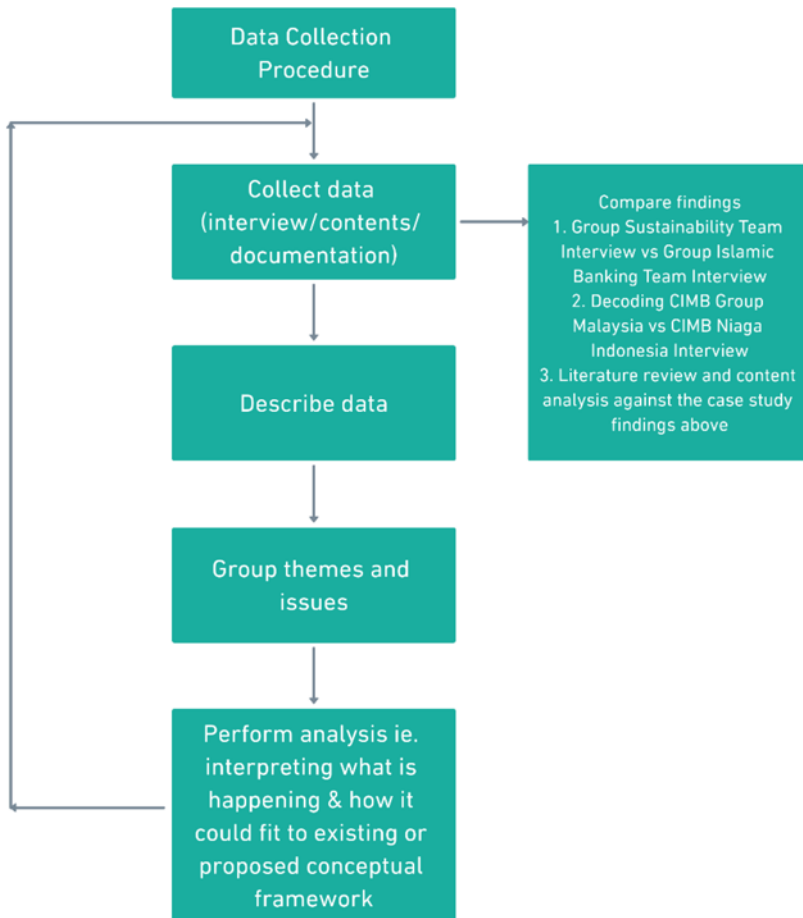


Figure 9. Qualitative data analysis process for case study type by John Biggam.

4 KEY RESEARCH FINDINGS & DISCUSSION

CIMB Group Corporate Sustainability Transformation Agenda

4.1 Findings I. Discussion the implementation of corporate sustainability transformation Agenda at CIMB group and its sustainable business model (SBM)

CIMB Group is a leading KL-headquartered ASEAN universal bank, one of the largest investment banks in Asia and one of the largest Islamic banks in the world. As the fifth

largest banking group in ASEAN, it has around 37,000 staff in 15 countries across ASEAN, Asia and beyond. CIMB Investment Bank provides market-leading conventional and Islamic financial advice for a tailored delivery of banking solutions to clients. CIMB has structured and executed award winning deals which showcase its ability to innovate and help its clients achieve their goals. CIMB also has an extensive retail banking network of around 850 branches serving more than 13.5 million customers. Beyond ASEAN, CIMB also has presence in China & Hong Kong, India, Sri Lanka, Korea, the US and the UK.

CIMB Niaga was established under the name Bank Niaga in 1955. About 92.5% of CIMB Niaga's shares (including those owned by PT Commerce Kapital by 1.02%) are owned by CIMB Group. CIMB Niaga offers a complete range of banking products and services, both conventional and Sharia, through 427 office networks as of March 31, 2021, consisting of 357 branch offices, 37 Digital Lounges and 33 Mobile Branches. CIMB Niaga has 12,655 employees (consolidated) as of March 31, 2021.

CIMB Group is the first founding bank in the ASEAN region to become a member of the core group of UNEP-FI signatory helping to develop the draft Principles of Responsible Banking. It has contributed to the implementation guidance under Principle I (Alignment) to include reference to the Islamic banking industry to spearhead the target realization of United Nations Sustainable Development Agenda 2030.

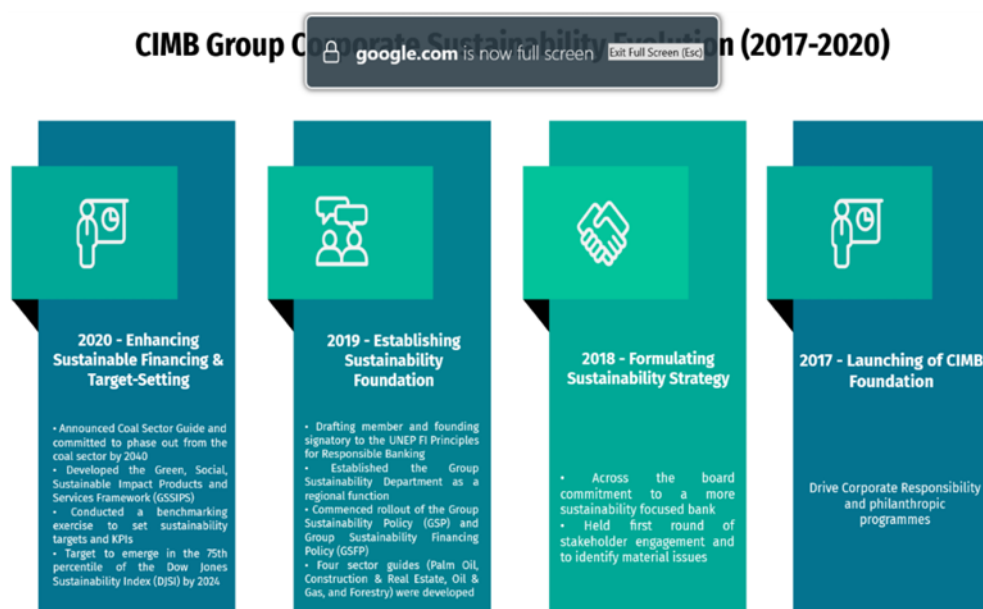


Figure 10. CIMB group corporate sustainability evolution.

As a leading financial industry in ASEAN Region, CIMB is also increasing commitments towards global initiatives and good practices such as the UNEP FI Principles for Responsible Banking by being the founding signatories back at the middle of 2018. Recently at 2020, CIMB has strengthened its commitments towards sustainable finance and climate action through positive impact finance. More importantly, CIMB Group is proud to be the first banking group in Malaysia and one of the first in ASEAN to adopt a Coal Sector Guide, where it commits to phase out coal financing from its portfolio by 2040. The Guide sets out CIMB's commitment to phase out coal from its portfolio by 2040, as part of its effort to align with the 1.5-degree Celsius goal of the Paris Climate Agreement.

Since 2018, CIMB Group has integrated sustainability and ESG as core foundational and elemental strategy toward the bank overall business strategy, operation, implementation and practice that lead CIMB to be the committed purpose-driven organisation to contribute to the ESG-linked atmosphere by making it as essential DNA of the company. As cited from the 64th Annual General Meeting of CIMB Group last April, CIMB Group will continue to strengthen its sustainability agenda as the pandemic has also shown that sustainability and resilience are a necessity for all businesses. The outperformance of Environmental, Social and Governance (“ESG”) indices and funds during this period of economic uncertainties is a testimony of the demand by stakeholders for greater business transparency, accountability and innovation. On top of that, there are main five (5) key focus and core dimensions of sustainability envisaged by CIMB that are (1) Sustainable Action (2) Sustainable Business (3) Corporate Social Responsibility (4) Governance and Risk (5) Stakeholder Engagement and Advocacy.

CIMB'S SUSTAINABILITY FOCUS FOR 2019 - 2024



Figure 11. CIMB group sustainability focus For 2019–2024.

There are several evidences that prove the successful implementation of sustainability transformation journey in CIMB such as by advocating industry-led network of regulators, financial institutions players, NGO, industry association and consumers to prioritize the UN SDGs 2030 Agenda as main anchor to align all policies for more inclusive, accessible, eco-friendly and equitable banking industry in the future.

Additionally, other evidences are such as the launching success of innovative ESG investment and sustainable financing products, creating sustainability and sustainable finance policy, following international standard-driven for sustainable reporting and disclosure as well as putting sound and scientific impact measurement and deliverables toward achieving UN SDGs 2030 Agenda dimensions within its initiative, projects, business and material topics which are deemed relevant to accelerate the aspiration of CIMB toward sustainability first company in Malaysia, Indonesia and the SEA region.

CIMB sustainability transformation journey has been considered to be one of the real successful examples for the industry players and regulators not only in Indonesia and Malaysia but also in the South East Asia Region. It made CIMB trusted to be the founding lead of Value Based Intermediaries (VBI) in Malaysia, aside from that CIMB is also the leading member of Joint Committee on Climate Change (JC3) that aims to create greater synergy in development of climate-related solutions for capital and financial markets.

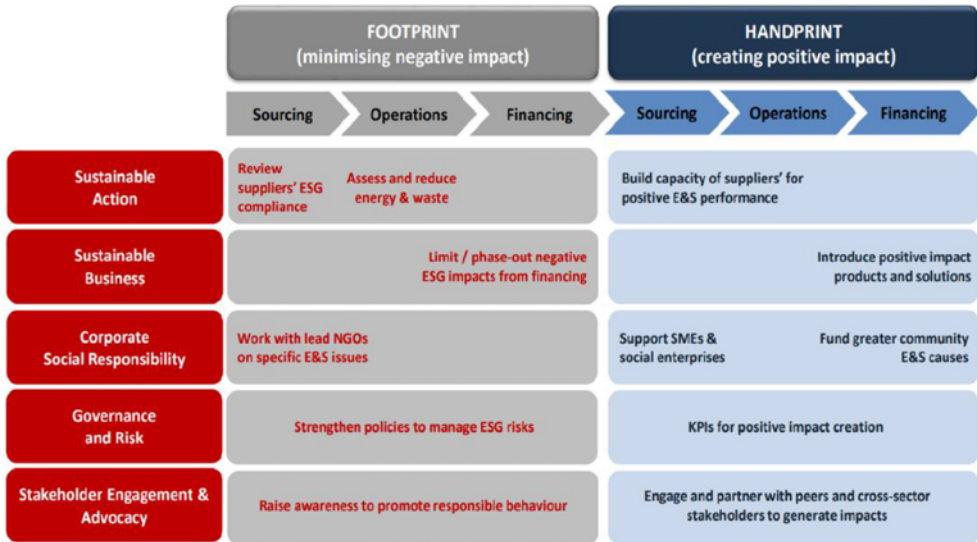


Figure 12. Sustainable finance at CIMB group.

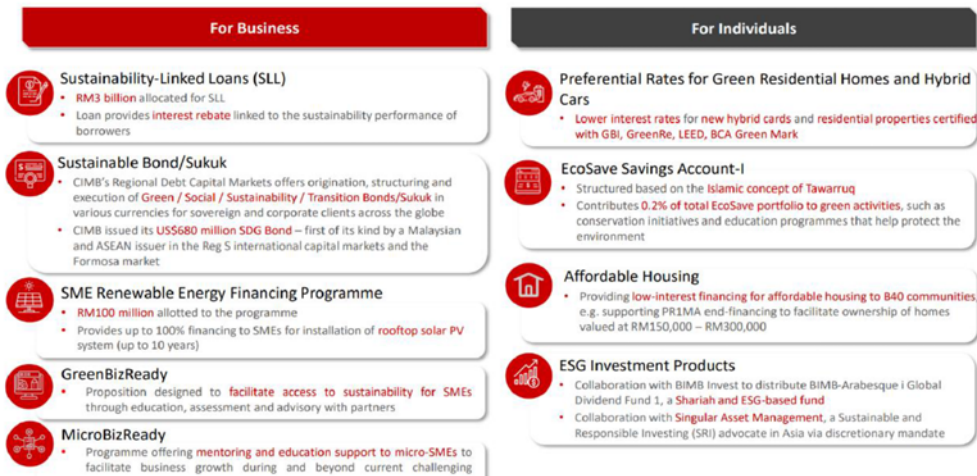


Figure 13. Sustainable banking product offerings at CIMB group.

JC3 is chaired by BNM and SC with members composed of representatives from 19 industry players. There are 4 sub-committees formed under JC3, namely risk management; governance and disclosure; product and innovation; and engagement and capacity building. Furthermore, CIMB Group is also granted some prestigious awards and accolades with regards to its serious sustainability pledge commitment and integration to its core business activities whether in local, regional and global level such as The Most Helpful Bank in ASEAN During Covid-19, Best ASEAN Sustainability SRI Sukuk, Winner of Biodiversity Developing Category and any other remarkable awards which are obtained by CIMB Group both in Malaysia and Indonesia.

Based on the analysis of CIMB Group Corporate Sustainability Transformation aforementioned, the author is wrapping it up in the form of sustainable business model canvas

and innovation that encapsulate the point of (1) key partners (2) key activities (3) key resources (4) key value propositions (5) customer relationship (6) channels (7) customers segments (8) cost structure and (9) revenue streams with further details as followings:

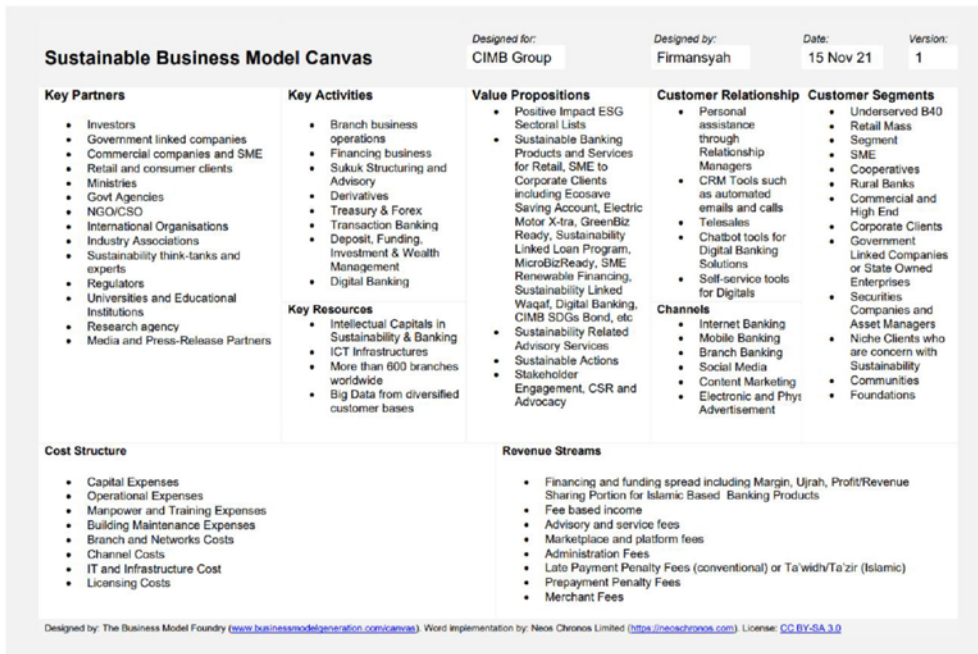


Figure 14. Sustainable business model canvas of CIMB group developed by author.

4.2 Main findings: Influence of Burke and LitwinTM drivers for change model to the implementation of corporate sustainability transformation at CIMB group

Based on the data gathered through primary and secondary data methods as explained in chapter three (3). The researcher is able to extract the information through qualitative data analysis process for a case study prescribed by John Biggam to following resourceful and insightful findings with regard to influence of drivers for change model to the implementation of corporate sustainability transformation at CIMB Group. The model consists of eleven (11) drivers for change elements as prescribed by Burke and Litwin that shape the success of sustainability transformation at CIMB Group since it was inception in 2018 until nowadays.

4.2.1 External environment drivers to CIMB sustainability transformation

Burke and Litwin mentioned that the external environment encapsulates the market, legislations, politics, consumer behaviour shift, regulatory frameworks, economy and other external pushes that are driven from the outer force of the organisations. Based on the data gathered through interview and content review sourcing, there are five substantial catalysts for change considered by CIMB Group including CIMB Bank Malaysia and CIMB Niaga Indonesia in undertaking their corporate sustainability transformation journey as the following:

- a. From CIMB Group Malaysia perspective, the corporate sustainability transformation is driven by the comprehensive Malaysia ESG and Sustainable Finance Regulatory

Framework. Malaysia has positioned itself as the hub of Islamic, inclusive and sustainable finance, offering an ecosystem for investors to raise funds regionally and internationally. So far, it has attracted issuers from China, Japan and the Middle East. Foreign direct investment from the Middle East grew threefold from 2008 to \$3.8 billion in 2016 (BNM) to support inclusive, fair and sustainable finance in Malaysia. Malaysia, in its NDC (Nationally Determined Contribution), pledged to reduce GHG emissions intensity of GDP by 45% by 2030. It is relative to the GHG emissions intensity of GDP in 2005.

The commitment represents a 35% reduction on an unconditional basis and an additional 10% with the support of climate finance, technology transfer and capacity building from developed countries (BNM CCPT, May 2021). However, projected reduction in a business-as-usual scenario will only result in 38% reduction by 2030. This project is supporting the private sector and including financial institutions to be ambitious (to support the 45% national commitment) by redirecting climate finance towards projects and companies that support a low-carbon economy. To support the NDC, the Government has introduced relevant policies and targets accelerating and spearheading sustainability, sustainable finance and ESG investment in the country.

The following are sustainable finance initiatives happening in recent years in Malaysia such as the Establishment of Malaysian Sustainable Finance Initiative (MSFI) in July 2020 by Capital Markets Malaysia (CMM). This initiative will support capacity development for Malaysia's financial sector through workshops and training courses to foster greater understanding of ESG integration and sustainable financing solutions. On top of that, the issuance of Climate Change and Principle-based Taxonomy (CCPT) which was released in May 2021 which is used to serve as a guide to identifying and classifying economic activities that could contribute to climate change objectives for financial and banking sectors.

Furthermore, The Twelfth Malaysia Plan (12MP) will be aligned with the shared prosperity initiative encompassing three dimensions, namely economic empowerment, environmental sustainability and social re-engineering. Out of its three focus areas, strengthening the environment sustainability for green growth is to establish a sustainable financing mechanism (i.e. economic instruments, green financing system) as one of its strategies in a longer term.

- b. Even though CIMB Niaga Indonesia is considered as taking direction from CIMB Group Malaysia, the holistic regulatory frameworks POJK No 51 2017 about Sustainable Finance Implementation is applicable to all Financial Institutions in Indonesia is one of the developing economies in ASEAN with a population of more than 250 million with very diverse economic profile and located among the dozens of rings of fire so that it has a very large risk associated with climate and social risk in the future.

The Indonesian government is also one of the signatories of the Paris Agreement 2015 to achieve the United Nations 2030 Sustainable Development Agenda, one of which is through the financial and banking sectors.

The Financial Services Authority (OJK Indonesia) has issued a policy related to sustainable finance set out in POJK No.51 of 2017 for the banking and finance sector as a whole to be implemented mandatory but gradually on aspects of sustainability compliance to be integrated in banking business strategy and operations.

In addition, OJK has published the Roadmap of Indonesia Sustainable Finance 2.0 for the financial year 2021-2025 which covers the strategic and technical aspects that must be adopted, integrated and implemented by the ecosystem of financial and banking actors in coordinating strategy, implementation and business operations to in line with the scope of the ESG Integration framework and UN SDGs 2030.

On top of that, special presidential decree number 7 Year 2015 about Sustainable Development of Indonesia Government (*Pepres Mengenai Tujuan Pembangunan*

Berkelanjutan) has been issued to accelerate the journey of penta-helix engagement to achieve UN SDGs 2030. In addition, the Indonesian government also strongly supports the growth of Islamic finance by establishing the National Committee on Islamic Finance and Economics (KNEKS) where they are tasked with orchestrating, accelerating and harmonizing the Islamic economic ecosystem, Islamic finance and halal industry including regulators, industry players, associations, academia and clients. in order to achieve the success of the UN SDGs Agenda 2030 too.

- c. As the only G20 member state of the Southeast Asian Region, Indonesia is expected to strengthen its leadership position in the Region and become a bridge for the collective voice of the member states in ASEAN, especially for sustainable financial implementation. Moreover, Indonesia will hold the helm of the G20 Presidency in 2022. This is a momentum for Indonesia to show Indonesia's leadership and commitment to implementing Sustainable Finance on a global scale.
 - d. Regulatory framework and internal standards on Sustainability, Sustainable Banking, Sustainable Finance and ESG Integration such as UNEP-FI Principle of Responsible Banking, BNM Climate Change Principle Based Taxonomy (CCPT), BNM Value Based Intermediations (VBIs) and also OJK Regulation No 51 in the year of 2017 about Sustainable Finance Implementations for Financial Services Sectors in Indonesia.
 - e. Investors', clients and stakeholder demand that drives CIMB Group and CIMB Niaga to be the early movers of corporate sustainability transformation in South East Asia.
 - f. Sustainability is going beyond compliance. For the sakes of doing good and impactful actions contributing to long-term positive impact to the environment, society, economy and the next generation ahead.
 - g. New business opportunities to be captured by venturing into the corporate sustainability transformation agenda.
 - h. Push from civil society organisations (CSO)/ non-governmental organisation (NGO) to embrace full-fledged sustainability transformation agenda such phasing out and exiting from coal sectors by 2040 and adopting NDPE (No Deforestation, Peat and Exploitation) to the palm oil sectors by 2030.
 - i. Trend, market shaping, market transformation and globally urged agenda about ESG Integration and Corporate Sustainability Transformation Agenda
 - j. Early movers and initiators to provide unique value proposition in a niche market capturing commercial benefits while generating positive impacts from ESG and EES realm.
1. The explanations above could be evidenced by the interview data gathering which were employed to substantiate the research as the followings:

CIMB Niaga Sustainability Expert mentioned that CIMB Niaga has to undertake corporate sustainability transformation as a result of designed regulatory framework from OJK (Financial Authority of Indonesia) from POJK 51 Year of 2017 about Sustainable Finance Implementation for Financial Institutions in Indonesia. CIMB Niaga is considered as early movers of the sustainable finance in the IKBI (Association of Sustainable Financial Institutions in Indonesia) where OJK also always consults CIMB Niaga wherever they are about to publish new working guidelines and regulatory operationalisation on Sustainable Finance in Indonesia.

2. Secondly the evidence gathered from CIMB Group Malaysia interview session with regard to the external driving forces that shape the corporate sustainability transformation agenda of CIMB as the followings:

CIMB Group has embraced its sustainability transformation agenda as a result of push from the investors that demand us to embrace full-fledge sustainability transformation and comprehensive ESG integration through our direct and indirect footprints of our core business activities and ancillary services.

3. The third interview from Programme Lead of Sustainable Finance from one of worldwide leading conservation NGO mentioned as the following:

CIMB Niaga is operationalizing the corporate sustainability transformation due to their ambition to be proactive contributor for Sustainable Finance market transformation agenda in Indonesia. CIMB Niaga sees this as a nascent opportunity that could leverage the bank's unique value proposition and profitability while making positive impact for society, environment and economic empowerment growth.

4.2.2 Transformational factors / long-term levers

Based on the theory of drivers of new change model (DCM), one of fundamental factors that drives organisational change namely transformational factors that are also considered as long-term levers spurring the success of organisational transformation agenda. There are several transformational factors such as mission and strategy, leadership and commitment and also organisational culture which will be discussed thoroughly how these contribute as essential drivers to the CIMB Group corporate sustainability transformation agenda.

4.2.2.1 Mission and strategy

Organizational mission is the goal or reason for the existence of an organization. It tells about the organization's contribution to society. A good mission statement can define the main objectives of the organization, differentiate them from other organizations and identify the scope of the organization's output. Whereby the strategy sets and undertakes workable actions to execute and future-proof the missions that organisations aim to achieve in a short, medium and long term basis.

Based on the data gathered through this qualitative study by conducting interview and employing content analysis to the publicly available materials on CIMB Group and CIMB Niaga Sustainability journey.

At CIMB, sustainability is one of the strategic themes and pivotal pillars of the CIMB Group bank wide FORWARD23+ strategy. Most importantly, CIMB is committed, in intent and by design, to demonstrate sustainability leadership while balancing overarching growth targets in a responsible manner.

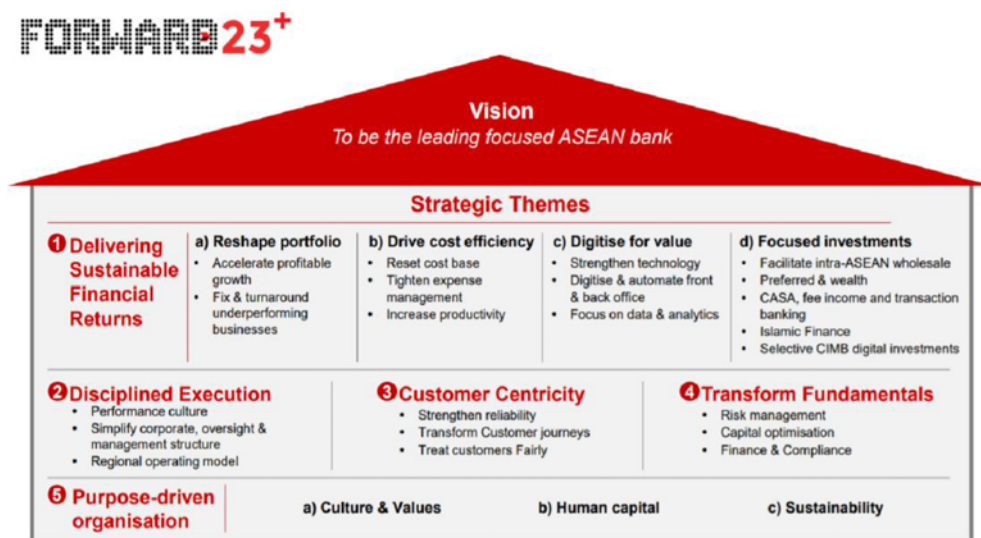


Figure 15. Strategic direction of CIMB group forward 23+.

As a leading universal bank, CIMB groups aim to integrate environmental, economic, and social (EES) considerations into all aspects of our business. They also invest resources and work with their stakeholders to create net positive impact on society and environment. As a leading ASEAN bank, their greater purpose is to advance customers and society towards a sustainable future. In line with this, CIMB integrates economic, environmental and social (EES) considerations into all aspects of core and ancillary business.

CIMB Sustainability strategy is two-pronged. They commit to investing resources and influencing networks to reduce negative EES impacts. They also aspire to create a net positive impact through their business activities. Sustainability as one of the key elements of their strategic theme to become a purpose-driven organisation. As they strive to be a top quartile bank in ASEAN under our Forward23+ strategy, they target to achieve the 75th percentile of the Dow Jones Sustainability Index (DJSI) ranking by 2024 as per shown in the official website and sustainability report of CIMB Group.

More importantly, based on the interview result with CIMB Group Sustainability experts, they put greater emphasis on the ambitious mission and strategy toward advancing corporate sustainability transformation at CIMB Group.

CIMB Group Malaysia sustainability expert explained that CIMB has also set an overarching mission and target to be **net-zero in the year of 2030**. Furthermore, they also would like to commit to enforce No Deforestation, Peat and Exploitation (NDPE) policy to the oil palm sectors in which they are providing the financing too. The target is very ambitious but it is great to set the bar in the financial industry especially in the South East Asia region to race toward achieving nature positive economy and zero carbon economy in the nearest future aligned with Principle of Responsible Banking (PRB), Science Based Target Initiatives (SBTi) and Local-based Climate Finance Regulatory Frameworks such as CCPT (Climate Change and Principle Based Taxonomy).

4.2.2.2 Leadership and commitment

Leadership commitment is known as the tone from the top and executive behavior that provides direction and encourages others to take necessary action. For the purpose of collecting data this includes perceptions of executive practices in leading and shaping noble values in an organization such as triple bottom line integration (ESG and EES that cover Profit, People and Planet). Leadership covers the area of best practice ingrained by senior management. CIMB started to venture and evolve their CSR to be radically transitioned into corporate sustainability transformation back at the year of 2018. The bank was developed. CIMB Niaga Sustainability Expert mentioned that the corporate sustainability transformation was started in 2018 as a top-down direction from CIMB Group. As CIMB Niaga is part of CIMB Group Commercial Franchise. Once CIMB Group has announced that sustainability is one of the essential underpinning element to the CIMB Group 5 Years Long-Term Strategy.

In addition, the other sustainability experts mentioned that this corporate sustainability transformation focus of CIMB Group is one of long-term consequences of CIMB commitment toward Principle of Responsible Banking of UNEP-FI which was pledged by the CIMB Group leaders in 2018. More importantly, the country directors from Indonesia Office are also very much aligned and supportive to this transformation agenda. It is evidenced by the specially designated sustainability team to CIMB Niaga Indonesia and also proactive involvement of CIMB Niaga as a founding member of ISFA (Indonesia Sustainable Finance Association) chaired by Indonesia Financial Authority (OJK).

Furthermore, leadership is a fundamental aspect that drives CIMB Group to move aggressively and initiate corporate sustainability transformation since 2018. It was the time when sustainability and ESG are still considered extremely nascent and yet industry leaders are even not aware at all. CIMB leaders have been successful not only to drive organisational transformation but also market transformation toward ESG compliance and sustainability driven in the South East Asia Region specifically for Malaysia, Indonesia and Singapore.

Based on the sources acquired from CIMB Press Release Room at CIMB Official Website, the following can be confirmed: The former Group CEO of CIMB Group – YB Tengku Datuk Sri Zafrul Aziz - whom is currently known as Minister of Finance, Malaysia mentioned that CIMB has pledged the commitment of responsible and sustainable bank by being the founding signatory member of Principle of Responsible Banking (PRB), United Nations Environmental Program Financial Institutions (UNEP-FI).

Tengku Datuk Sri Zafrul Aziz stipulated that as a leading universal bank in ASEAN, we have always perceived our role as going beyond providing great financial products and services. As such, we are pleased to play a more active and meaningful role in shaping our planet's sustainable future by championing responsible banking globally. CIMB is fully committed to achieve UNEP-FI's objectives to help transform global banking practices to ensure the industry creates a positive impact not just economically, but also socially and environmentally. Our membership of the UNEP-FI also complements Bank Negara Malaysia's Value-Based Intermediation strategy for the Islamic banking industry, as well as CIMB's own ongoing initiative to embed sustainability into all aspects of our operations Group-wide, which will be a key focus area in our next mid-term growth plan."

CIMB Group was the only founding member of this responsible and sustainable banking initiative from Malaysia and South East Asia Region together with other twenty six (26) leading banks from five continents and nineteen (19) countries on a worldwide basis. Most importantly, the core UNEP-FI group, made up of 27 member banks, will help redefine the global banking industry's role and responsibilities in shaping a more sustainable future by:

- directing efforts to align with society's goals as expressed in the UN's Sustainable Development Goals, the Paris Agreement, as well as national and regional frameworks
- setting the global benchmark for sustainable banking
- driving ambition by requiring signatory banks to set goals for and report on their contribution to national and international social, environmental and economic targets to ensure accountability and transparency on banks' impacts
- challenging the banking industry to play a leading role in creating a more sustainable future

4.2.2.3 Organisational culture

Organisational culture is known as one of the transformational levers that play a pivotal role to succeed the implementation of corporate sustainability transformation at CIMB Group.

All individual employee values are integrated into one organisational culture at the organisational level. Thus, corporate values are very strategic for improving company performance. Corporate value is a certain condition that has been achieved by a company as a reflection of public trust in the company after going through the business process and corporate journey for several years. These activities are from the time the company was founded to its current condition. The maximum adoption and operationalisation of core corporate value is an achievement, which is in accordance with the wishes of the shareholders and stakeholders, because with the increase within scope of adoption and operationalisation in corporate value, the welfare and performance of related stakeholders and shareholders will also increase.

The core values of the company are the values within the company that can motivate senior leaders, employees and related stakeholders to achieve the CIMB Group corporate sustainability transformation agenda as well as other CIMB Group strategic goals. The company's value can be seen from the company's vision and mission and its achievement of that vision and mission. The corporate values are defined by top level management and are designed to achieve the overall goals of the company. Corporate value is the company's responsibility in creating customer or client satisfaction, quality and quality excellence, asset return, use of technology for market domination, and corporate citizenship. This means that corporate value is closely related to employee empowerment and performance within a company.

As per interview conducted with the sustainability experts from CIMB Group and CIMB Niaga, it was mentioned that the culture of CHIDA (Customer Obsessed, High Performance, Integrity, Diversity and Inclusion, and Agility) has contributed much to the corporate sustainability transformation of CIMB Group. The reflection of CIMB corporate values and culture are actualized on how CIMB Group considers this sustainability transformation agenda as a platform to be a high-performing organisation aligned with United Nations Sustainable Development Goals 2030.

However, we understood that CIMB is yet to have sustainability-centric culture embedded at its CHIDA core corporate value aside from incorporating sustainability in the organisational strategy policy paper. This detailed part will be disclosed as part of recommendation later in the following chapter.

4.2.3 Transactional factors/ operational levers

4.2.3.1 Organisational structure

Organisational structure is one of the key essential roles as a operational lever to drive organisational change as conceptualised by Burke and Litwin. Organisational structure helps the formalisation of roles, accountability, responsibility and support to drive transformation agenda in the organisation. Without having proper and well-governed organisational structure, shifting the organisation to the more impactful direction is just a utopia.

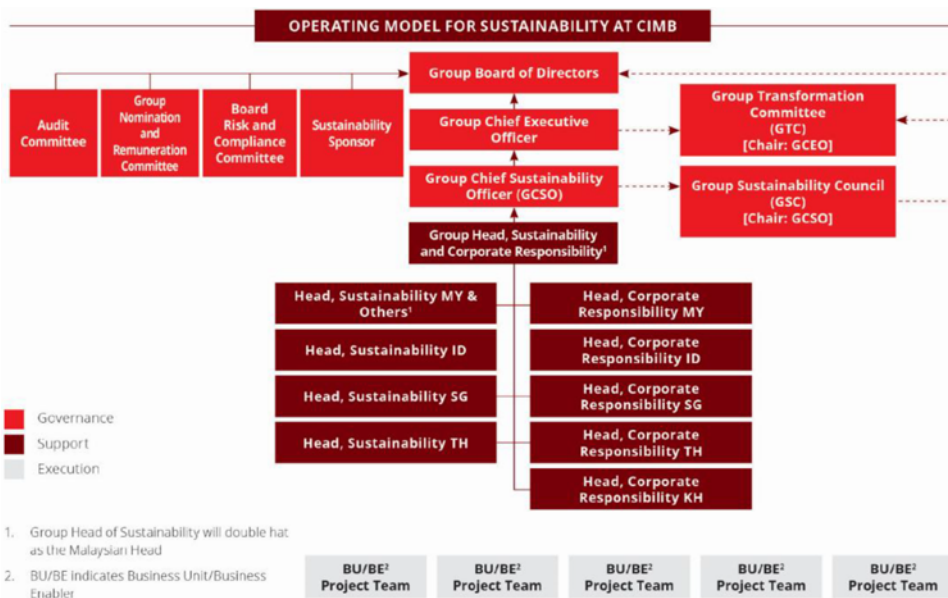


Figure 16. Operating model & sustainability governance at CIMB.

At CIMB Group, the corporate sustainability transformation agenda is strongly substantiated and supported by the organisational structure formalisation through CIMB Sustainability Operating model (SOM). This both applies to both Malaysia and Indonesia offices.

Furthermore, CIMB Group sustainability agenda is championed at the Group-level, to cover all businesses in its key operating markets ranging from South East Asia, Asian and European Office. The Group Sustainability department and Group Sustainability Council are responsible for implementing the Sustainability Operating Model (SOM). While the

CIMB Group Board is responsible for our sustainability performance, meanwhile the Sustainability Sponsor has to provide guidance to the Board as well as the Management to continuously evolve and strengthen CIMB Group sustainability strategies and implementation.

Most importantly, based on our interview with the Islamic Banking and Sustainability experts from CIMB Group including both CIMB Bank Malaysia and CIMB Niaga Indonesia. It was mentioned that having properly well-designed and well-governed organisation structure that oversees the CIMB Group corporate sustainability transformation agenda at CIMB Group is considered as a one of key ingredients that enables CIMB Group to be the successful early movers and pioneers in the financial institutions specifically multinational commercial banking sectors in developing countries.

4.2.3.2 Management practice and systems (Internal policies and procedures)

Management practice is one of the most effective way how they ensure the collective actions of organisations toward achieving overarching goals such as corporate sustainability transformation. Management practice is linked to how the senior leaders and executives are producing policies as well as reflecting their attitude and aptitude into the corporate strategy and organisational value. If the management is serious enough to drive the organisational change on a long-term basis, they will ensure that all layers of the staff are understanding the foundational reasons why the change needs to take place and how they can have a sense of belonging toward achieving that ambitious result through the transformation process.

In the interview process with Islamic Banking core business experts from CIMB Group, it is mentioned that the corporate sustainability transformation could be implemented and actualised in CIMB Group because the management practices are synergized to ensure that each directorates are helping each other.

In the case of CIMB Niaga Indonesia for instance, even though the one that oversees overall corporate sustainability transformation is under the Directorate of Compliance, Legal, Corporate Affairs, Sustainability and Good Corporate Governance. However, due to the management collective commitment and sound coordination, the Directorate of Islamic Banking is lending its team's hands to implement and succeed the corporate sustainability transformation initiative by integrating it with advancement of Islamic banking products, services and strategy. For instance integrating the Waqf Business Solution and Islamic Commercial Financing Products to be incorporated with ESG related metrics and commitment for the clients.

Additionally, the interviewee mentioned that CIMB Niaga is not adopting a silo minded paradigm which is used to fragment each works and business matters based on each divisions or directorates. Thus, this really influence the success of corporate sustainability transformation adoption at CIMB Group as a whole.

Hence, It could be seen that this is the result from collective management practice where the corporate sustainability transformation is the agenda of everyone in the bank wide level regionally in Indonesia, Malaysia and South East Asia.

System is known as the most effective way to enforce organisational change. In the banking industry perspective, the system is closely interlinked with governance itself. In this case, CIMB Group ensures its corporate sustainability transformation to be well-governed within appropriate policies, procedures and established frameworks. Based on the content analysis which have been collated during the research, there are three main internal policies and procedures that take place in CIMB Group such as the followings:

- a. Group Sustainability Policy (GSP)
- b. Sustainability Risk Management Framework (SRMF)
- c. Sustainability Operating Mode (SOM)
- d. Corporate Governance and Policy

From the interview, it could be taken as a point that the group sustainability policy is something that CIMB really prioritizes and focuses at the current moment. As CIMB Group is in the midst of harnessing sustainability as part of CIMB Group core DNA in terms of its risk management, product development, business expansion, stakeholder engagement and strategic management.

4.2.4 *Group, individual and personal factors/ short-term levers*

Last but not least, Burke and Litwin also include group, individual and personal factors as short-term levers that intrigue transformation and change in the organisation. In the case of CIMB Group (CIMB Bank Malaysia and CIMB Niaga Indonesia), these elements are difficultly found through the content analysis and literature review. However, the interview successfully captured several points with regards to these aspects as the followings:

4.2.4.1 *Work unit climate*

Work unit climate is considered as one of strategic short-term levers that boost the execution of corporate sustainability transformation at CIMB Group. Work unit climate drives how working atmosphere and conduciveness from a team and division could be achieved regardless of background, education, perspective and other attributed differences. Team cohesion and collective collaboration are two perennial elements to foster and emphasize to drive organisational change and corporate transformation in the organisation especially when it has quite numbers of organisational divisions and functions in its organisation.

Based on the interview conducted with sustainability expert in CIMB Group, they mentioned that work unit climate is an essential driver to undertake and implement corporate sustainability transformation agenda. The work unit climate is a progressive result of solid teamwork, aligned vision and mission, shared responsibility and accountability as well as culminated inherent values to contribute positively to the corporations, human-beings, mother earth (environments) and other living creatures. In which it is achieved by strengthening and fine-tuning corporate sustainability transformation agenda at CIMB Group from time to time.

Another interview result which was transcribed during the data collection process with one of Islamic Banking expert from CIMB Group whom is also currently becoming Sustainability Champion mentioned that work unit climate is not only important intra division or in the core team members within same division, but also it is considered extremely important to have cohesive work unit climate inter-divisions or inter-directorate within organisation specifically multinational corporation. The reason being is because most of important decisions covering key core strategic directions and operational actions are undertaken by some strategic divisions within the organisation.

Understanding the explanations aforementioned, it could be concluded that work unit climate is considered as one of salient lever which will affect teams' emotion and psychology to ensure the sustainability of organisational transformation agenda. As the work unit climate is also interdependent with the people development, organisational cultures and behavior that shape the journey of the organisation to achieve its overarching and noble goals.

4.2.4.2 *Task requirement, individual skills and capabilities*

Task requirements, individual skills and capabilities are essential to drive corporate sustainability transformation agenda at CIMB Group.

Task requirement was not discussed in a specific manner throughout the interview processes as there were no key informants mentioning about that. Yet, when authors are seeking the data through secondary sourcing through Job Vacancy Portals of LinkedIn and Job Street looking for Sustainability expert at CIMB Group, there are several experiences, tasks, roles, responsibilities and accountabilities required to be performed to excel the role as sustainability or sustainable finance expert at CIMB Group.

Meanwhile, individual skills and capabilities were discussed intensively by one of Sustainability Expert from CIMB Niaga Indonesia mentioned that in order for financial institutions to excel and ace in its sustainability transformation agenda, they need to set up and establish dedicated sustainability and ESG divisions to spearhead overall comprehensive sustainability transformation strategies, implementations, monitoring and evaluations in a structured and governed manner. Moreover, he also mentioned that there is a need to have sustainability experts whom have specific ESG and Sustainability skill-sets from the other industry (non-finance) such as from manufacturing, palm oil, FMCG, mining, energy and other real economy sectors where sustainability is already their main prioritized concern before it has come to the financial institutions sectors since the early of 2017.

Moreover, based on our interview with one of the sustainable financial experts from leading civil society organisations in Indonesia which focuses on the conservation and sustainable finance in a worldwide basis said that there is a need to have specific individual skill-sets who have good array of knowledge and working experience in the sustainability management and ESG-compliant investment.

But there is an urgent need to have sustainability expert with strong scientific background on quantifying and proving the evidences on how sustainability transformation and ESG integration would be very instrumental to the organisational sustainability not only in the coverage of the profit-making activities but also how it could manage their talents, resources, capacities as well as tough competition in this disruptive world.

By having science-based sustainability experts hired by the leading regional banks such as CIMB Group, it would create a balance from the perspective of bankers and sustainability management experts who are mostly focusing in the corporate transformation, management and business development aspects. While science based sustainability experts would be essential addition to the team by providing why the banks need to embrace net zero by 2030 such as by employing science-based target initiatives (SBTi) to reduce its green-house gas emissions scientifically by putting it in the quantifiable accounting methodology through sectoral decarbonisation approach within the next three to ten years to mitigate the climate and physical risks exposed to the banks.

4.2.4.3 Motivation, individual needs and performance

Motivation is known as fundamental aspect of organisational behavior driver how corporate sustainability transformation could be harnessed and ingrained within organisation. The motivation is also followed with the embedded individual, group and organisational values.

One of the interview result with sustainability expert from CIMB Group mentioned that the employees and people motivation to embrace sustainability in increasing significantly especially once the unprecedented covid-19 pandemic coming worldwide since the beginning of 2021. He also added that this is also a motivational catalyst for top management leaders of financial institutions including senior bankers shift their paradigm and view that black swan events could change everything directly so needs to shift the view from short termism to long termism through sustainability transformation and ESG integration.

Individual needs and performance is meant to be essential drives of the employees to operationalise and implement organisational transformation. The transformation is actualized in the form of meaningful business results. Results with the identification of efforts and achievements. Indicators can include productivity, customer or staff satisfaction, profitability, and service quality which are measured in form of Objective Key Result (OKR) and Key Performance Indicator (KPI). Aside from the result, the individual needs that encapsulate employees wellbeing, aspiration, and contribution in a well-rounded manners that generate positive impact for the society and environment.

Based on the interview with respective sustainability practitioners from CIMB Group, he mentioned that the corporate sustainability transformation is one of key focus that CIMB is currently implementing and undertaking. Starting from June 2021, the management has imposed corporate sustainability transformation embedded into the OKR and KPI of the

board of directors, senior management teams, senior leaders, managers and staffs from all layers in CIMB Group both in Malaysia and Indonesia Office.

In the case of CIMB Group, the employees needs encapsulate how they are treated well by the organisation in term of the contribution to the companies, involvement to corporate transformation initiatives, leaves and financial or non-financial incentives for the employees.

Based on the interview with one of the Sustainability Expert at CIMB Group, he mentioned that the CIMB employees are entitled for flexible work arrangement (FWA) which is considered as the underpinning pillars of employee welfare and wellbeing. Furthermore, CIMB also introduces uncouncted social work or voluntary work leaves where the employees are going for social work, volunteerism, environmental preservation such as river cleaning, trees planting and other activities that bring positive impact to the society and environment. Hence, this arrangement is considered as an essential instrument to instill and ingrain sustainability DNA to the employees of CIMB Group at the individual level.

On top of that, CIMB Group has incorporated corporate sustainability transformation in the organisation through KPI formalisation since the beginning of this year. The KPI includes several matters such as the followings:

1. Training Hours in Corporate Sustainability Transformation and Sustainable Finance
2. Number of Employees Volunteers Hours Inside and Outside CIMB Group in relation to the Environmental Preservation, Corporate Social Responsibility and Other Activities that Generate Positive ESG/EES Impact
3. Number of Clients or Financing Portfolio Disbursement Volume. For clients whom are using Any Sustainability Linked Financing Products such as GreenBiz Ready, Sustainability Linked Loan and SME Renewable Energy Financing that generate positive impacts for environment and society offered by CIMB
4. Number of Funding Portfolio Average Balance Volume. Funding or deposit clients whom are using Sustainable Linked Deposit Products such as Eco-Save Saving Account

5 RECOMMENDATION & CONCLUSION

5.1 *Recommendation*

5.1.1 *Embedding sustainability culture as pivotal element to substantiate sustainability strategy as part of cimb group corporate sustainability transformation journey*

As per discussed with the key informants from Sustainability and Islamic Banking directorate both from CIMB Malaysia and CIMB Niaga Indonesia, one of the challenging elements within the corporate sustainability transformation agenda at CIMB Group is to have same level of awareness, understanding and real actions in undertaking sustainability transformation agenda. The management does not want this sustainability agenda to be something exclusive who can be discussed and enjoyed at the higher level only without touching the level-playing field employees. Moreover, the customers' buy-in are also another foundational challenge where most of the clients who are having strong sustainability understanding and awareness are coming from high net worth segments and institutions in the level of corporate and senior banking. Thus, we believe that one of the recommended actions to be proposed to CIMB Group is to incorporate sustainability as part of the corporate core value of CIMB aside from embedding it into the CIMB core strategic direction as per discussed at Chapter 4.

The recommendation is substantiated with the formulation of CIMB Group Sustainability culture transformation program (SCTP) which aims to strengthen existing implementation of the corporate sustainability transformation agenda at CIMB Group.

Based on the researches undertaken by author, many corporate organisations publicize their core corporate values on tangible corporate marketing collateral and identity such as

corporate symbols, T-shirts and coffee mugs, but the most effective mechanisms are far simpler and less expensive - constantly reminds employees of its core corporate value of the organization delivered to customers and related stakeholders (Lencioni 2002). A strong corporate culture always makes the core values of the company alive and dominates the individual values of each employee throughout the organization. The stronger the company's values affect employees, the stronger the corporate culture will be in building a solid cultural foundation. In this way, the spirit of work, ethics and integrity of the organization will be created which also brings goodness and benefit to society in a life system.

This is where the corporate culture internalization program is needed as a means for employees to be able to buy in to the organizational values. Not only cognitively (knowledge) but also effective (emotionally), so that they own it and practice it in their daily professional behavior. A corporate culture encompasses belief, value-set, behavior and collective approach to achieve corporate goals and strategies, vision and mission as well as internalizing the values toward the overall organizational system of the company. SRW Consulting has recommended several steps on how to internalize corporate culture, core values and behaviors such as through process, internal program design, embedding into organizational structure, symbols and routines.



Figure 17. SRW corporate culture establishment and internalization methodology by SRW consultant (TM), 2017.

Some researchers, award-winning corporates and professional consultants have shown that core value and behaviors internalization will bring significant impact toward a sound and ethical corporate culture. There are several stages and methods which could be adopted by CIMB Group that will be elaborated below.

5.1.2 Stages and method of designing effective organizational corporate culture program to strengthen CIMB group corporate sustainability transformation Agenda

The core values should be foregrounded within the CIMB Group initiative to further accentuate a harmonious, professional and collaborative working environment between employees and the Top Management alike. The five core values of CIMB Group are a) Customer Obsessed, b) High Performance, c) Integrity, d) Diversity and Inclusion, e) Agility.

Thus, researcher is proposing to add sustainability-centric as one of other core values to be embedded in CIMB Group core values in the way forward. We are also coming with set of recommendation on designing innovative sustainability culture transformation program (SCTP) to accelerate and expedite core values and behaviors adoption at CIMB Group illustrated and explained as below:

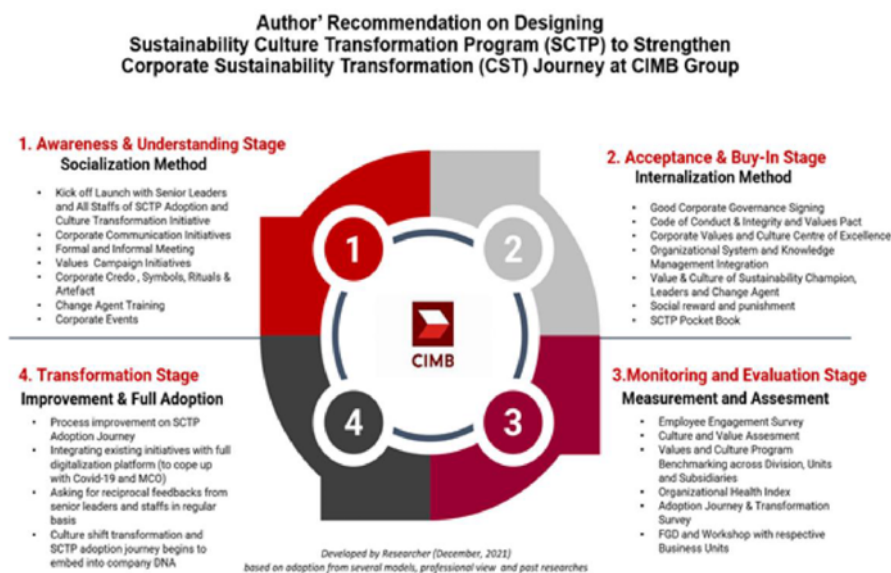


Figure 18. Recommendation on culture transformation program at cimb group to strengthen its corporate sustainability transformation journey.

- a. **Awareness and understanding stage** through socialization and communication which encompass online and offline methods that embed communication, dissemination and socialization programs such as through by means of any corporate credo such as corporate songs, corporate logo, corporate symbols, corporate mascots and corporate tagline to promote the core values and behaviors embedded into the corporate culture. So CIMB Group troops will be able to remind all those core values specifically sustainability-centric behavior to be translated into their professional and personal life. Simultaneously, company should also emphasize on the implementation of campaigns and initiatives that nurture employees with the core values that are aligned with the CIMB Group Strategy that already incorporates sustainability as one of underpinning pillars. Moreover, those core and shared values could be socialized and campaigned through values and corporate culture campaign initiatives, corporate desktop wallpaper, screensaver, internal newsletter campaign about core values adoption, running text pop ups in corporate websites, online communication platforms and products for internal and external purpose.

Furthermore, offline based socialisation method could be undertaken such as to induce the understanding and adoption of core corporate values to its employees during onboarding induction training for new employees, town hall meeting, internal meeting, external meeting, overall corporate events and ethical leadership development programme for current employees. For example, one of the CIMB Group's core values adopted by CIMB Group is integrity in which it focuses on upholding the highest ethical standards and doing what is right, all the time among employees and clients.

CIMB Group may embark into an integrity campaign where each employee can participate in the new culture of quality work that is fair, honest and transparent. This campaign is targeted to emphasize the employees to prevent defection and it is advantageous to detect defection as it is cost effective. In other words, prevention is better than cure. Additionally, the CIMB Group initiatives should also focus on motivating employees to be transparent and honest in performing tasks as this will invoke a sense of diligence and trust between the employees and clients.

More importantly, in the context of sustainability-centric newly introduced culture, CIMB Group could ingrained the sustainable and responsible actions of committee by maximally reducing the use of papers for office purpose as well as energy saving enforcement through the shifting to the digital communication channels. The awareness process could be established through internal campaign programs through internal digital channels where the reaches are able to cover all CIMB Group employees in Malaysia and Indonesia.

- b. **Implementation stage through internalization** which is also known as the way of working from internal organisational leaders and followers. This implementation stage is essential as this could be succeeded by internalizing core corporate values through formalization of core values embodiment and commitment through Integrity Act, SOP and Ethical Code of Conduct, GCG (Good Corporate Governance) Signing, CoC Commitment, Champion and Change Agent Exemplary Role Model, Recognition of Work Outcome, Social Reward and Punishment, Values Benchmarking across Business Units, Corporate Values Pocket Book and Mascots, Organizational System and Design Development.

In this stage, taking CIMB Group second core value is focusing on the sense of collaboration between one another in a working environment. The CIMB Group initiatives should highlight the importance of teamwork in completing work-related matters. With a proper implementation of the communicative training sessions between employees, CIMB Group initiative could be seen as a stepping stone in building a cooperative working environment that ensures the improved reliability among employees, which leads to a unified working culture that could potentially increase the productivity and efficiency of the company including the acceleration of corporate sustainability transformation agenda at CIMB Group.

Uta K. Bindl and Sharon K. Parker (2010) mention that the individual proactivity is directed towards one's individual job, team proactivity is directed towards helping the team and other team members (e.g., making improvement to the way the team works), and organization-member productivity is directed towards changing wider organisation systems or practices (e.g., improving systems for knowledge management across the organisation). Figure 4 below shows a model that integrates existing research on the antecedents, motivational processes, outcomes, and underpinning processes of proactive behaviour proposed by Uta K. Bindl and Sharon K. Parker (2010).

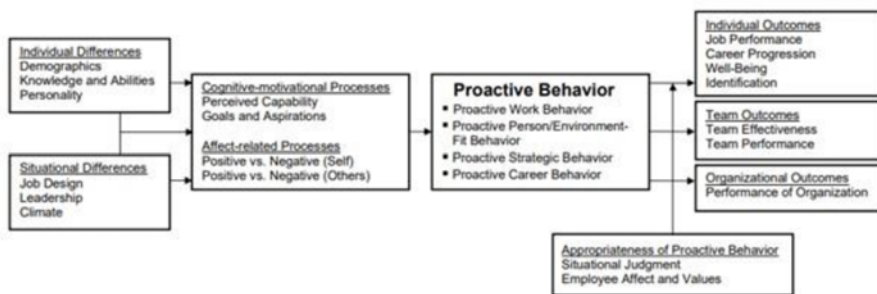


Figure 19. Model of individual-level proactive behavior.

In addition, being the third core value, employees should be taught on how to maintain the level of professionalism by carrying out work duties with full discipline. The CIMB Group initiatives should focus on training the employees in different work environments to ensure that they are able to maintain professionalism in different levels of the working ethics. This will help employees to remain result-focused and consistent in demonstrating excellent performance and productivity in carrying out their duties specifically on sustainability related matters that are considered nascent for most of the employees.

The fourth core value is equally important in realising a better working environment through the implementation of the CIMB Group Sustainability Culture Transformation initiatives. In a corporate setting, the customer comes first. By centralising on understanding their customers, corporate employees will be able to find the proper ways to accommodate their needs in a responsible and sustainable manner. The CIMB Group initiatives should emphasise on guiding employees to think like their customers in order to comprehend them. By doing so, employees are able to build trust with customers and are always one step ahead in providing the best services according to their needs complied with the principle of responsible and sustainable banking. CIMB Group is also able to provide comprehensive and resourceful advisory with regards to sustainable business practice to foster sustainability paradigm shifting and awareness are disseminated and ingrained to the clients level too.

High Performance and agility are essential core values according to the CIMB GROUP. The CIMB Group initiatives should consider implementing a proper training course to aid employees in manifesting more innovative and futuristic ideologies in ensuring the sustainability of the company in a multitude of aspects. Correspondingly, by having a more forward-thinking mentality, employees are able to make informed decisions and are able to positively change by learning from their past mistakes.

Finally, the sixth core value deals with customers-driven orientation in striving the company towards success. By administering a proper motivational course to employees, they will be able to be more empathetic, respectful and compassionate to the customers and able to effectively adhere to their needs. Driven by the sense of protection over the wellbeing of the people, the employees will be able to uphold the company's prestige by portraying the necessary qualities in carrying out their duties.

In term of the newly proposed sustainability-centric value, CIMB Group has to strengthen its sustainability champion program to the next level by empowering the employees with sustainability and sustainable finance knowledge which they can disseminate further to their internal teams, clients, families and surroundings. Hence, they could generate multiplier effect of sustainability culture in a faster time.

- c. **Measurement, Monitoring and Evaluation Stage** that includes Transformation Program Survey on Qualitative and Quantitative Basis, Employee Engagement Survey, Organizational Health Survey, Core Values and Behaviors Assessment.

According to the interview statement conducted with CIMB Group bankers, all core corporate values are already in practice and always be the focus in day-to-day interaction prior to the launch of CIMB GROUP Corporate Sustainability Transformation journey. However, as we are proposing sustainability-centric to be included as a separate value to be adopted by CIMB Group in the near future. There is a need to foster a more practical and comprehensive monitoring platform to ensure that CIMB Group employees really embrace the value of sustainability-centricity into their daily professional life. Thus, it is important to measure, monitor and evaluate the adoption and implementation journey of corporate core values.

One of the forms that is commonly used in adhering to the measurement of core values is by using a survey instrument. Typically, the results of applying this approach are merely academic, but they can provide less threatening ways to address difficult circumstances and can lead to a positive change in CIMB Group especially its direction

toward leading game-changer of sustainability pioneer at the financial institution sector in South East Asia Region mainly in Malaysia, Indonesia, Singapore, and Thailand.

According to Edgeman and Scherer (1999), he suggests that core values are “rivets in human history, having played pre-eminently in the rise and fall of corporations, economies, and nations,” but that core values that are not measured are generally not used.

- d. **Improvement and Advancement Stage** that consist of process improvement process to advance and transform the core values and behaviors adoption into the next level to bring company to the new heights such as by developing special taskforce that handle initiative and projects, full transformation into digital platform for cultural program, asking for reciprocal and mutual feedbacks from senior leaders and staffs to improve existing transformation program undertaken by CIMB Group and also asking for feedbacks and insights from Group CIMB GROUP in regards of their journey to maximize positive impacts resulted by full adoption and implementation of corporate sustainability transformation agenda at CIMB Group.

5.2 *Research implications*

This research is expected to contribute to the advancement of the corporate sustainability transformation agenda from an academic and industry practice perspective.

5.3 *Research limitation and suggestion for future studies*

The research is having several constraints and limitations which can be refined and fine tuned by the future research. It is suggested that to advance the corporate sustainability transformation agenda of dual banking banks (who are doing conventional and Islamic at the same time). They could leverage and advance its corporate sustainability transformation agenda by deepening the underpinning thrust of Islamic Banking such as Social Philanthropy Products and Halal Industry Ecosystem Development. This could substantiate lack of academic resources and industry practice experience in undertaking the social sustainability and community empowerment as an inseparable part of corporate sustainability transformation journey of organisations, specifically financial institutions.

5.4 *Appendices*

The interview questions are contextualized into two main parts reflecting the prominent research themes with stipulated details as following:

Table 2. List of interview questions employed to the study.

Themes	Proposed Interview Questions
Drivers of Change Model by Burke and Litwin toward-Sustainability Transformation at CIMB Group	<ol style="list-style-type: none"> 1. Knowing that CIMB Group is considered as the sustainability leader and sustainable finance early mover in the South East Asia Region specifically in Malaysia and Indonesia, why does the corporate sustainability transformation and change happen? 2. How does the corporate sustainability transformation agenda accelerate the shift from single bottom line into triple bottom line underpinning thrust incorporated into CIMB core strategy (Forward23+) reflected into its sustainability business model, related actions and activities? 3. Why does the corporate sustainability transformation happen and become one of the most prioritized agenda at CIMB Group? In which CIMB Group

(continued)

Table 2. Continued

Themes	Proposed Interview Questions
<p>CIMB Group Corporate Sustainability Transformation Journey & Strategic Recommendation</p>	<p>is shifting its corporate orientation from single into triple bottom line (People, Planet & Profit).</p> <ol style="list-style-type: none"> 4. What are the external and internal forces that drive the implementation of corporate sustainability transformation at CIMB Group? 5. How do external driving forces (such as regulatory frameworks, market transformation, investors' preference and shift of customer behavior) drive the implementation of corporate sustainability transformation at CIMB Group? 6. How do organizational mission and strategy drive the implementation of corporate sustainability transformation at CIMB Group? 7. How does organizational leadership drive the implementation of corporate sustainability transformation at CIMB Group? 8. How does organizational culture drive the implementation of corporate sustainability transformation at CIMB Group? 9. How does organizational structure drive the implementation of corporate sustainability transformation at CIMB Group? 10. How does management practices drive the implementation of corporate sustainability transformation at CIMB Group? 11. How do organizational system including policies and procedures drive the implementation of corporate sustainability transformation at CIMB Group? 12. How does work unit climate drive the implementation of corporate sustainability transformation at CIMB Group? 13. How does task requirement, individual skills and capacities drive the implementation of corporate sustainability transformation at CIMB Group? 14. How does group and individual motivation drive the implementation of corporate sustainability transformation at CIMB Group? 15. How does individual values and needs drive the implementation of corporate sustainability transformation at CIMB Group?
	<ol style="list-style-type: none"> 1. What is already good about CIMB corporate sustainability transformation? And what needs to be finetuned and improved further? What are the key distinguishing aspects from CIMB Group corporate sustainability transformation journey? 2. What are the future corporate sustainability transformation agendas and targets that CIMB Group ambitiously aim to achieve? 3. How does CIMB Group make this sustainability transformation agenda to be more well-rounded, advanced, future-proof as well as regarded as one of the unique value propositional strategies for CIMB Group Business to stay competitive in the market amidst this prolonged covid-19 pandemic?

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Corporate social responsibility disclosure and environmental performance on corporate profitability with green innovation as an intervening variable (Empirical study of mining sector companies listed on the Indonesia Stock Exchange in 2019–2021)

Driana Leniwati, Nadila Fitri Handayani & Faris Afrizal

Faculty of Economics and Business, University of Muhammadiyah Malang, Malang, Indonesia

ABSTRACT: This research aims to analyze and empirically prove the effect of corporate social responsibility disclosure and environmental performance on company profitability with green innovation as an intervening variable. This study uses a purposive sampling method conducted on 20 company samples with 60 research populations in mining companies listed on the Indonesia Stock Exchange in 2019–2021. The data analysis technique in this study used Panel Data Regression with the StataMP13 statistical tool. The results in this study indicate that Corporate Social Responsibility Disclosure has an effect on company profitability, Environmental Performance has no effect on company profitability, Green Innovation is able to mediate the relationship between Corporate Social Responsibility Disclosure and company profitability, and Green Innovation is unable to mediate the relationship between Environmental Performance and company profitability.

Keywords: Corporate Social Responsibility Disclosure, Environmental Performance, Profitability, Green Innovation

1 INTRODUCTION

Profitability is one of the indexes that included in the company's long-term performance data. The financial performance can be seen by analyzing the financial statements. The profitability level is used as a basis for measuring the company's financial performance, this is done considering that business attractiveness is an important indicators in inter-companies competition, so that the attractiveness of a company can be measured through company profitability such as ROA.

In a company, financial statements are the main reference for investors and stakeholders for evaluating the company performance. However, in completing the decision-making process, sustainability reporting is needed which contains corporate social responsibility (CSR) disclosure. (Rahmah) Mentioned that one of the benefits of CSR disclosure is to improve the company's reputation. This is because the companies that implement CSR programs are given credibility and responsibility to manage the impact of their operations. With the increasing reputation of the company, the sales rates and market share of the company will also generate profits (profitability). So it can be concluded that the implementation of CSR programs can increase company profitability.

Global warming has become a major problem and it is one of the factor that affect the climate change that should not be underestimated. This thing is already known to the people of Indonesia. The amount of carbon dioxide (CO₂) produced, lead to an increase in earth surface temperature, resulting in the greenhouse effect. Climate change and extreme weather

conditions are becoming an alarming threat, and this concern is exacerbated by the fact that climate change has become a global problem, not just a national risk.

According to a 2021 Asian Development Bank (ADB) report, Indonesia is listed as one of three countries at high risk of environmental disasters, especially extreme floods and droughts. ADB also predict in 2050, the temperature in Indonesia will rise in range around 0.80–1.40°C. The same thing is also predicted by NASA Goddard Institute for Space Studies. Based on these data, global temperatures have increased significantly over the past 7 years.

The business world is also must contribute in addressing climate change. According to Carbon Disclosure Project (CDP) report in 2017, 70 percent of the world's carbon emissions are produced by only 100 companies. Some of the large companies included in the “Top 100” list of carbon emitters are ExxonMobil, Shell, BHP Billiton, and Gazprom. The CDP report also calls on consumers to be more efficient in their energy consumption. At the country level, climate change conferences have been held since 1998 with the Kyoto Protocol agreement. This conference is still continue in 2021 through the organization of COP-26. This indicates the seriousness of the governments of countries in the world in handling the climate change.

Research about Corporate Social Responsibility Disclosure on Profitability was conducted by (Wulandari 2020) the results showed that Corporate Social Responsibility disclosure has a positive and significant effect on projecting company profitability. But in contrast to research by (Shahnia and Davianti 2021) that the disclosure of economic aspects and environmental aspects of Corporate Social Responsibility partially has no significant effect and has a negative relationship with company profitability. There are studies that have made observations about Green Innovation as a mediator of the influence of Corporate Social Responsibility Disclosure and Environmental Performance on Profitability. Among them are research by (Kraus *et al.* 2020) has proven that Green Innovation significantly mediates between CSR and Environmental Performance.

2 LITERATURE REVIEW

2.1 *Stakeholder theory*

According to (Velando 2017) in the Stakeholder theory, there is a relationship between shareholders and stakeholders in improving Corporate Social Responsibility. According to this theory, there is no company that acts only in its own interests, but the company must be able to generate benefits for the stakeholders. Therefore, in stakeholder theory, the outside world is always seen from the perspective of management.

Stakeholder theory emphasizes that the company's business units must use the company's stakeholders. Stakeholders are parties that determine the existence and the survival of the company in the future. The survival of a company depends on the support it receives from stakeholders, so the company must always strive to build harmonious relationships with stakeholders. Environmental management is the company's effort to actualize stakeholder concern and responsibility for environmental impacts caused by inefficient company operations. If the company's environmental management is good, it can motivate stakeholders to provide full support and is expected to increase the company's value. (Mardiana and Wuryani 2019).

2.2 *Legitimacy theory*

According to (Laily 2016) Legitimacy theory is a “social contract” between a company and the society in where the company operates and uses the economic resources. The company works with a social contract so that the community can later see what is the company's social responsibility to the environment looks like, and receive financial benefits commensurate with the effort it puts to build influence in the local community.

(Mardiana and Wuryani 2019) Mentioning that legitimacy is one aspect that must be considered by an organization, because the limitations contained in standards and regulations can provide motivation for the importance of environmental management. Pursuing environmental management is a form of company concern for society and the environment, which aims to obtain the rights from the community.

2.3 *The effect of corporate social responsibility disclosure on profitability*

Corporate Social Responsibility Disclosure provides information to the stakeholders about the company's performance in relation to its responsibilities. Because stakeholders play a very important role in the development of the company's sustainability. Activities that can be carried out by the company are such as explaining the rights of employees, providing benefits to employees, providing assistance in the event of a disaster, as well as providing information about products or services correctly to consumers. By disclosing social activities, companies can reduce unfavorable responses to the impacts of their operations. The company can also increase the community trust in utilizing products or services from the company, so that sales and stock value increase. This will increase the trust level of investor on the company so that the level of profitability of the company also increases. (Shahniah and Davianti 2021). Research (Wulandari 2020) Shows that CSR disclosure has a positive and significant effect on projecting profitability proxied by the ROA ratio. Thus the hypothesis used is:

H₁ : Corporate Social Responsibility Disclosure has a positive and significant effect on Profitability.

2.4 *The effect of environmental performance on profitability*

Companies that care about the environment and stakeholders can improve the company's financial performance. Stakeholders are more likely to invest, finance or buy products when the products produced by the company that also involve corporate waste management. The increased sales of company products by customers lead to increased company profitability (Vivianita and Nafasati 2018). Based on previous research (Tunggal and Fachrurrozie 2014; Tunggal and Fachrurrozie 2014) states that environmental performance has a significant positive effect on financial performance. But there is research that states that environmental performance does not have a positive effect on profitability. (Asjuwita and Agustin 2020). Based on previous research, the second hypothesis in this study is:

H₂ : Environmental Performance has a positive and significant effect on Profitability

2.5 *The effect of green innovation mediates corporate social responsibility disclosure on profitability*

Companies need strategies to maximize profits. Green innovation develops products or processes that are environmentally friendly and efficient. Green innovation focuses on reducing resources or energy to minimize costs and increase the company's profits, which affects financial performance. Green innovation is an important mediator between corporate CSR and profitability. Results from research (Kraus *et al.* 2020) showed that CSR has no direct effect, but has an indirect effect on environmental protection with the mediating variable of green innovation. Based on previous research, the third hypothesis in this study is:

H₃ : Green Innovation mediates the relationship between Corporate Social Responsibility Disclosure and Profitability.

2.6 *The effect of green innovation mediates environmental performance on profitability*

Based on legitimacy theory, the influence of the wider community can determine the allocation of financial and economic resources. Companies usually use environmental performance and

disclosure of environmental information to justify or legitimize the level of environmental protection and financial performance. When there is a discrepancy between the company's value system and society's value system, the company may lose its legitimacy, thus affecting the company's viability. Therefore, the company's environmental performance affects the company's financial results and profitability, which is reflected in the company's annual return compared to the industry return. Businesses need a strategy to maximize business profits, specifically through Green Innovation which can develop products or processes that are environmentally friendly and efficient. Green Innovation can reduce the use of resources or energy to minimize costs and increase company profits. So the fourth hypothesis in this study is:

H₄ : Green Innovation mediates the relationship between Environmental Performance and Profitability.

3 RESEARCH METHODOLOGY

The type of research used in this study is associative research. Using mining sector companies listed on the Indonesia Stock Exchange (IDX) in 2019–2021 as a population. And using Purposive Sampling technique, where the sample selection uses the criteria determined by the author.

The data used in this study are secondary data. The data source used comes from audited annual financial reports, and annual reporting, mining sector companies listed on the IDX in 2019–2021. The information needed in this research was obtained from the website of each company and from the Indonesia Stock Exchange (IDX) website, i.e. (www.idx.co.id).

The data analysis technique used in this research is panel data regression analysis technique. This research is using StataMP13 software in conducting data testing. The stages of data analysis are as follows: (1) Tabulating research data; (2) Descriptive Statistical Analysis; (3) Determination of Panel Data Regression Estimation Methods; (4) Classical Assumption Test; (5) Hypothesis Testing

4 RESULT/FINDING AND DISCUSSION

4.1 *Descriptive statistics*

Table 1. Descriptive statistics.

Variable	Obs	Mean	Std. Dev.	Min	Max
ROA	60	0,0733148	0,1086346	-0,0983946	0,4712983
CSR	60	0,3968864	0,1376561	0,1318681	0,7252747
EP	60	3,766667	0,7672682	3	5
GI	60	0,4395833	0,1729781	0,125	0,875

Source. StataMP13 output data.

4.1.1 *Corporate social responsibility disclosure*

The maximum value of the corporate social responsibility disclosure variable is 0.725274, the minimum value is 0.1318681, the mean value of the CSR value is 0.3968864 while the standard deviation value is 0.1376561. The standard deviation value which is smaller than the mean indicates that the data has a low level of variation and the data distribution is evenly distributed.

4.1.2 *Environmental performance*

The maximum value of the environmental performance variable is 5, the minimum value is 3, the mean value of the environmental performance value is 3.766667, and the standard deviation value obtained is 0.7672682. It can be seen that the standard deviation value is

smaller than the mean value, it shows that the data has a low level of variation and the data distribution is evenly distributed.

4.1.3 Profitability (ROA)

The maximum value of the profitability variable is 0.471298, the minimum value is 0.0983946, the mean value is 0.0733148, and the standard deviation value is 0.1086346. The standard deviation value is greater than the mean value, it means that the data has a high level of data variation and uneven data distribution.

4.1.4 Green innovation

The maximum value of the green innovation variable is 0.875, the minimum value is 0.125, the mean value is 0.4395833, and the standard deviation value obtained is 0.1729781. The standard deviation value is smaller than the mean value, it shows that the data has a low level of variation and even distribution of data.

4.2 Determination of panel data regression estimation method

4.2.1 Chow test

Table 2. Chow test results.

Prob > F	= 0,0002
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Source. StataMP13 output data.

Based on the chow test results above, it can be seen that the probability value is 0.0002 < 0.05. This means that H_0 is rejected, namely Polled Least Square and H_1 is accepted, namely the Fixed Effect Model (FEM). so it can be concluded that the model that can be used is the Fixed Effect Model (FEM).

4.2.2 Hausman test

Table 3. Hausman test results.

	fe	Re	Difference	S.E.
CSRD	0.3110422	0.2215529	0.0894893	0.0492044
EP	-0.0185525	0.0127785	-0.031331	0.022318
GI	-0.2692041	-0.2482312	-0.0209729	0.0561044
Chi2 (3)	= (b-B)'[(V_b-V_B)^(-1)](b-B) = 8.05			
Prob>chi2	= 0.0450			

Source. StataMP13 output data.

Based on the results of the hausman test, it can be seen that the chi2 probability value is 0.0450 < 0.05. This means that H_0 is rejected, namely the Random Effect Model and H_1 is accepted, namely the Fixed Effect Model. So it can be concluded that the model that can be used is the Fixed Effect Model.

4.2.3 Lagrange multiplier test

Based on the lagrange multiplier data test, it can be concluded that the probability value is 0.0008 < 0.05. meaning that H_0 is rejected, namely Poolest Least Square and H_1 is accepted, namely the Random Effect Model (REM). So that the model that can be used is the Random Effect Model (REM).

Table 4. Lagrange multiplier test results.

	Var	sd = sqrt (Var)
ROA	0.0118015	0.1086346
e	0.0054194	0.0736165
u	0.004198	0.0647922
	Test: Var (u)	= 0
	Chibar2 (01)	= 9.94
	Prob > chibar2	= 0.0008

Source. StataMP13 output data.

4.2.4 Results of estimation model determination

The selected panel data regression analysis estimation model is the Fixed Effect Model (FEM) with the following results:

Table 5. Results of estimation model determination.

ROA	Coef.	R-sq = 0.3676 Std. Err.	t	p> t	Prob>F = 0.00007 [95% Conf. Interval]	
CSR	0.3110422	0.1018863	3.05	0.004	0.1046009	0.5174835
EP	-0.0185525	0.0292024	-0.64	0.529	-0.0777222	0.0406171
GI	-0.2692041	0.0916751	-2.94	0.006	-0.4549554	-0.0834527
_cons	0.1380852	0.1207051	1.14	0.260	-0.1064865	0.3826569

Source. StataMP13 data output.

4.3 Classical assumption test

Table 6. Multicollinearity test results

	CSR	EP	EP	GI
ROA	1.0000			
CSR	0.0890	1.0000		
EP	0.1627	0.3838	1.0000	
GI	-0.2439	0.3084	0.2911	1.0000

Source. StataMP13 output data.

4.3.1 Multicollinearity test

Based on the results of the multicollinearity test, the value above shows the correlation between variables, such as between the CSR variable and EP, the correlation value is 0.3838. It is declared to accept H0 or there is no multicollinearity problem if the correlation value between variables is not more than 0.75.

4.3.2 Heteroscedasticity test

Table 7. Heteroscedasticity test results

Chi2	=	14.89
Prob > chi2	=	0.0939

Source. StataMP13 output data.

Based on the results of the heteroscedasticity test, it can be seen that the chi-square probability value is greater than α , which is $(0.0939 > 0.05)$. So it can be concluded that the chi-square probability value fulfills the assumption of homoscedasticity.

4.3.3 Hypothesis test

4.3.3.1 Test coefficient of determination (R^2)

Based on the results of the Fixed Effect Model (FEM) data processing in Table 5. shows that the R-square value is 0.3676, which means that this model can explain 36% of the variation in the dependent variable explained by the independent variable.

4.3.3.2 Simultaneous significance test (F)

Based on the results of the Fixed Effect Model (FEM) data processing in Table 5. shows the value ($\text{Prob} > \chi^2$) of $0.0007 < 0.05$, which means that simultaneously all independent variables affect the dependent variable.

4.3.3.3 Partial test (t -test)

1. Based on the Fixed Effect Model (FEM) output in Table 5. produces a $p > |t|$ value on the CSR variable of $0.004 < 0.05$, which means that Corporate Social Responsibility Disclosure has a significant effect on ROA.
2. Based on the Fixed Effect Model (FEM) output in Table 5. produces a $p > |t|$ value on the EP variable of $0.529 > 0.05$, which means that Environmental Performance has no effect on ROA.

4.4 Hypothesis testing 3 and 4

4.4.1 $X_1 \rightarrow Y$, with Z as intervening variable

Based on the calculation of the sobel test equation manually, the z value is $2.058134918 > 1.96$ (absolute value of the mediating variable). from the sobel test results it can be concluded that Green Innovation can mediate the relationship between Corporate Social Responsibility Disclosure and Profitability.

4.4.2 $X_2 \rightarrow Y$, with Z as intervening variable

Based on the calculation of the sobel test equation manually, the z value is $1.40065966 < 1.96$ (absolute value of the mediating variable). From the sobel test results it can be concluded that Green Innovation cannot mediate the relationship between Environmental Performance and Profitability.

5 DISCUSSION

5.1 The effect of corporate social responsibility disclosure on profitability

Based on the results of panel data regression testing conducted, it results that Corporate Social Responsibility Disclosure has a regression coefficient value of 0.3110422 with a positive direction. The positive coefficient result explains that Corporate Social Responsibility Disclosure has an influence on Profitability and has a probability value of $0.004 > 0.05$, so it has an influence between variables. The conclusion in the regression test results found that Corporate Social Responsibility Disclosure has a significant effect on company profitability. Thus, the first hypothesis (H1) is accepted. This study supports legitimacy theory which states that CSR is a medium used by companies to fulfill the wishes of society. So that the company avoids social sanctions and gains the trust of the community.

5.2 *The effect of environmental performance on profitability*

Based on the results of panel data regression testing that has been carried out, it shows that Environmental Performance (X2) has a regression coefficient of -0.0185525 with a negative direction. The negative coefficient results indicate that Environmental Performance has no effect on company profitability and has a probability of $0.529 > 0.05$, so it can be concluded that Environmental Performance has no significant effect on company profitability. Thus, the second hypothesis in this study is rejected. The results of this study support stakeholder theory. The ranking will improve the company's reputation for stakeholders and users of financial statements, because the company is considered to have cared about the environment, which will have a good influence on economic performance. The reputation obtained by the company will be good, and form a positive signal obtained by the company so that annual report users such as stakeholders will respond favorably.

5.3 *The effect of corporate social responsibility disclosure on profitability through green innovation*

Based on the results of the sobel test calculation above, it can be concluded that H3 is accepted, the z value is $2.058134918 > 1.96$ (absolute value of the mediating variable). Which means that Green Innovation can mediate the relationship between Corporate Social Responsibility Disclosure on Profitability (ROA). This indicates that Green innovation can support CSR disclosure in terms of increasing company profitability. The results of this study also show that the maximum management of Green Innovation is able to provide positive results on CSR in the form of corporate financial growth. This is a special attraction for stakeholders, especially investors to invest in the company, especially investor interest in making investment decisions is still influenced by the financial benefits resulting from innovation in terms of products, processes and the application of environmental technology, especially in ASEAN countries.

5.4 *The effect of environmental performance on profitability through green innovation*

Based on the results of the manual sobel test calculation above, it can be concluded that H4 is rejected, the Z value is $1.40065966 < 1.96$ (absolute value of the mediating variable). from the results of the sobel test it can be concluded that Green Innovation cannot mediate the relationship between Environmental Performance to Profitability. This indicates that Green Innovation is not able to mediate the influence between Environmental Performance on company profitability. This happens because there are still many mining sector companies listed on the Indonesia Stock Exchange that have not implemented PROPER. PROPER is a manifestation of transparency and democracy in environmental management in Indonesia. Because there is still a low level of company compliance related to environmental management.

6 CONCLUSION AND RECOMMENDATION

Based on the results of data analysis that has been carried out on Mining sector companies listed on the Indonesia Stock Exchange (BEI) in 2019–2021, it can be concluded: Corporate Social Responsibility Disclosure has an influence on company profitability. Environmental Performance has no significant effect on company profitability. Green Innovation can mediate the relationship between Corporate Social Responsibility Disclosure and Profitability (ROA). Green Innovation cannot mediate the relationship between Environmental Performance on Profitability (ROA).

This research has several limitations that can be a reference in further research, like: mining companies listed on the Indonesia Stock Exchange that participate in PROPER are still relatively few, mining companies listed on the Indonesia Stock Exchange that make CSR reports are still relatively few, many mining companies listed on the Indonesia Stock Exchange have not made annual reports.

Further researchers are expected to add variables that can affect Corporate Social Responsibility Disclosure, Environmental Performance, Profitability, and Green Innovation, Further researchers are expected to use research samples other than mining companies. Future researchers are expected to take other measurements besides those used in this study.

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Health services through home care viewed from the perspective of urban governance in the city of Denpasar

I. Wayan Astawa, Cok Gde Agung Kusuma Putra & Sri Sulandari
Faculty of Social Sciences and Humanities Ngurah Rai University, Denpasar

ABSTRACT: The aims of this research are (1) to analyze urban governance through home care services in Denpasar City; and (2) to analyze the obstacles to the implementation of home care services in Denpasar City. The results of the study show that (1) the implementation of urban governance through home care services in Denpasar City has been carried out quite effectively in terms of equity, accountability, transparency and civic engagement aspects; and (2) obstacles to the implementation of home care services in Denpasar City, including lack of knowledge so that services that should be intended for all parties regardless of social status become difficult to reach for people who are included in the poor category and there are people who do not understand the main function of home care services which does not serve all public health constraints in the sense that it is limited to urgent health services.

Keywords: Urban Governance, Health Services, Home Care

1 BACKGROUND

The concept of urban governance is an important matter to observe in line with the rapid development of urban development so that an organized pattern of urban planning determines the direction of urban development based on the paradigm of good governance or good governance which guarantees fairness, participation, accountability and transparency of urban governance. or Urban Governance to support the lives of all components of society living in urban areas (Lange 2020).

The cities of the future in Indonesia are directed in line with the 2015–2045 National Urban Development Policy and Strategy, namely sustainable and competitive cities for the welfare of society. Because the concept of urban governance is the right way to respond to problems faced in urban governance or urban governance. The demand in urban governance is to be able to use human resources, social capital, and modern telecommunication infrastructure to realize sustainable economic growth and a high quality of life, with wise resource management through community participation-based governance (Caragliu dalam Schaffers 2018).

An important aspect of urban governance is Infrastructure and Service Management or Infrastructure and Service Management. The infrastructure or technology used is an important component that cannot be separated from an urban area. The most important thing in this aspect is the technical facilities needed to carry out public services.

Urban Governance is related to modern public services utilizing digital technology and information. One model of service that utilizes technology in its operationalization, namely Home Care, is a service that suits the needs of patients, individuals and families, planned, coordinated and provided, by service providers, who are organized to provide home services. This Home Care is carried out comprehensively and continuously for individuals and families where they live, equipped with telemedicine technology that allows specialist doctors to make diagnoses from anywhere via gadgets.

One of the good public services to the community is health services. The problem that is often faced by the bureaucracy in health services is the limited human resources, funds, infrastructure and time. The demand for urban services encourages the government to provide better, more effective and efficient public services by utilizing existing technology. To achieve quality public services, of course, quality resources are needed so that health equity programs and strategies by utilizing all existing potentials including technology can support optimal health services (Mahsyar 2015).

This aspect of managing health services requires urban management that is smart in covering health problems experienced by urban communities, such as in a number of areas in Denpasar City which are known for their unequal population density with the large capacity of hospital and puskesmas services where the number of patients is not evenly distributed in every existing health facility. in Denpasar City. Therefore, effective urban management is needed to actualize smart living health services in Denpasar City.

The epidemiological transition causes changes in disease patterns from communicable diseases to degenerative diseases such as cardiovascular diseases and cancer and requires long-term treatment at high costs. Most hospitals in Denpasar City focus on services that are acute care rather than chronic care, so it is important to develop services to capture these potential patients. Home care services are one of the efforts to capture these potential patients (Zang 2004).

One of the hospitals in Denpasar City that provides home care health services is Wangaya Hospital. One of Wangaya Hospital's missions is to provide friendly, professional service, to establish close and harmonious relationships on an ongoing basis with patients and their families. One of the superior services of the hospital is the service of cancer as a chronic disease that requires long treatment and high costs. Chemotherapy is the most common service for this cancer. The management of the hospital provides convenience and additional facilities for treating these cancer patients and other patients with home care services.

The problem faced by RSUD Wangaya is that there is still a lack of socialization regarding home care services so that people still rely on taking patients directly to the hospital so that in the emergency room they pile up to get services even though through home care services one can get home care medical treatment equipped with a number of drugs, tools other medical supplies and oxygen cylinders. It is even equipped with a patient condition monitoring device that connects directly to specialist doctors through home care.

This article intends to discuss health services through home care from the perspective of urban governance in the city of Denpasar.

2 PROBLEM FORMULATION

Based on the background described above, the formulation of the problem in this paper can be stated in the form of research questions as follows:

1. How is the Implementation of Urban Governance through Home Care Services in Denpasar City?
2. What are the Barriers to the Implementation of Home Care Services in the City of Denpasar?

3 CONCEPTUAL FRAMEWORK

3.1 *Urban governance concept*

The concept of Urban Governance refers to how governments (local, regional or national) and stakeholders decide how to plan, finance and manage urban areas. It involves an ongoing process of negotiation and contestation over the allocation of social and material resources and political power. It is therefore highly political, influenced by the creation and operation of political institutions, the capacity of governments to make and implement decisions and the degree to which these decisions recognize and respond to the interests of the poor. It includes a number of economic, social forces, institutions and relationships. These include markets for labour, goods and services; household, family and social relations; and basic infrastructure, land, services and public safety (Devas *et al.* 2004).

Lea dan Courtney (Nurmandi 2006) distinguished two approaches to urban management, namely the technocratic problem-oriented approach and the structural political economy approach. The first approach focuses more on improving the performance of existing institutions and solving urban problems. While the second approach focuses more on the roots of urban problems in the context of national and international political economy.

The ultimate goal of urban governance according to Latifa (2013), is the achievement of Good Urban Governance which is an effort to respond to various problems in the development of urban areas effectively and efficiently organized by an accountable government and together with elements of society.

Further stated by Lange (2020) there are principles that are used as indicators to explore the role of government in the implementation of Good Urban Governance namely (1) sustainability; (2) subsidiarity; (3) equity; (4) efficiency; (5) transparency and accountability; (6) civic engagement; and (7) Security.

3.2 *Home care concept*

The emergence of Home Care is the result of a combination of human capital (eg an educated workforce), infrastructure capital (eg hightech communication facilities), social capital (eg open community networks). A strong and trustworthy government accompanied by creative and open-minded people will increase the productivity of a city's services based on technology and human resource excellence (Caragliu *et al.* 2019).

The progress of home care services is getting better so that many people know about Home Care and try to use home care services provided by both government and private hospitals. Currently there are many cases of degenerative diseases that require relatively long treatment, such as cases of post-stroke patients who experience complications from paralysis and require rehabilitation services that require a relatively long time (Diamond 2019).

4 RESULTS AND DISCUSSION

4.1 *Implementation of urban governance through home care services in Denpasar city*

This research is based on the concept of urban governance, which refers to the way governments and stakeholders decide about planning, financing and managing urban areas. This involves an ongoing process of negotiation and contestation including the allocation of social and material resources. The implementation of Urban Governance can be observed through the smart living program which is oriented towards the health sector which is one of the factors for the advancement of urban management.

This study refers to indicators of the implementation of good governance which include: equity, civic engagement or citizenship, accountability, and transparency.

4.1.1 *Equity*

This aspect examines the existence of a sense of justice given to the community in the arrangement of urban services, especially those related to home care programs. The perspective of justice in question is that the scope of services is sought to be as wide as possible with an even distribution for all levels of society regardless of gender, ethnicity, race and social level in society.

From the aspect of justice traced from the point of view of the community and officers, it can be understood that the services provided through the hospital's home care program are provided to all groups regardless of the social status served. Officers came with doctors and nurses to the house. This home care health service pays attention to aspects of justice in health services that are oriented towards effective and of course reliable health services for all people in need.

4.1.2 *Civic engagement*

Civic engagement, namely the scope of community involvement in city government service programs, especially the Home Care program. In the Taini Home care program, it has covered almost all areas in Denpasar City. Based on the research results, it can be seen that community involvement in home care programs needs to be strengthened by outreach and understanding to the community that certain conditions such as heart disease, unconsciousness, paralysis, pregnant women, and the elderly are prioritized so that not all symptoms of illness must use home care. to come home.

4.1.3 *Accountability*

This aspect sees the role of the city government in distributing good services to the community, especially Home Care health services.

Based on the results of the study it can be stated that the role of the Denpasar City government in implementing home care is oriented towards direct service to people's homes who need health services for certain conditions of patients who cannot get up, elderly patients, postoperative patients, and post chemotherapy. The service is available 24 hours provided by a medical team in each village. The Home Care Team will also provide patient care, after the hospital has informed the Denpasar Health Office which will then proceed to the nearest health center.

4.1.4 *Transparency*

Transparency, related to openness in implementing city government programs, especially those related to health services. Home care services are carried out openly for various groups, transparent in terms of service information, and are responsible to the community for the health services provided. Based on the results of the study it can be stated that access to services is very open for the people of Denpasar City without any differences in treatment, besides that the responsibility of home care focuses on patients who suddenly faint, have a stroke, or are paralyzed instantly, as well as for the elderly but this information is still not well understood by the public that this service is an emergency, not all diseases can use mobile home care.

Overall the implementation of urban governance which is observed in the aspects of equity, civic engagement, accountability, and transparency shows that all aspects are running although there are a number of weaknesses that still need to be addressed such as the community's understanding of home care services at Wangaya Hospital which still requires socialization and also the effectiveness of managing health equipment as budget accountability in providing home care facilities.

4.2 *Barriers to implementation of home care services in Denpasar city*

The description of the results of the research on the obstacles to the implementation of Home Care Services in Denpasar City is presented based on the findings of the Good Urban

Governance indicators including equity, civic engagement or citizenship, accountability and transparency. Based on the research results, it can be stated that obstacles to the aspect of justice can occur due to a lack of knowledge so that services that should be intended for all parties regardless of social status become difficult to reach for people who are included in the poor category due to the problem of having minimal knowledge about the function of home care services.

In the aspect of community involvement, it shows that the home care health service area has been connected at a number of points. However, based on research, it can be stated that there are people who do not understand the main function of home care services which do not serve all public health problems in the sense that they are limited to urgent health services such as stroke, or sudden paralysis, and fainting.

Another obstacle found in the aspect of accountability can be stated that the number of units to carry out home care is still minimal. Therefore, the additional fleet and the number of home care personnel need to be increased in terms of quantity. Furthermore, obstacles in terms of transparency show that access to services is very open for the people of Denpasar City without any differences in treatment. In addition, home care responsibility focuses on patients who suddenly faint, have a stroke, or are paralyzed instantly, as well as for the elderly, but more creative information is still needed by outreach to the wider community through social media. The use of the application will make it easier to carry out services because so far the service information obtained by officers is mostly from the Banjar.

Overall, the obstacles to the implementation of Home Care Services at Wangaya Hospital in Denpasar City indicate a lack of knowledge so that services that should be intended for all parties regardless of social status become difficult to reach for people who are included in the poor category due to the problem of having minimal knowledge about the function of home care services.

There are people who do not understand the main function of home care which does not serve all public health problems in the sense that it is limited to urgent health services such as stroke, or sudden paralysis, and fainting. The number of units serving home care is considered to be minimal considering that the number of people using home care facilities has increased. Therefore the addition of the fleet and the number of personnel need to be increased in terms of quantity. More extensive information is needed to the public regarding home care services through social media and the use of applications in order to further provide satisfying urban service conveniences for the people of Denpasar City.

Urban Governance has links with modern public services utilizing technology and digital information based on views Lange (2020) and Amri (2017). In addition, service models that utilize technology in their operations, namely services that suit the needs of patients, individuals and families, are planned, coordinated, and provided, by service providers, who are organized to provide home services, which is a feature of urban services that are put forward in terms of complex urban services.

5 CONCLUSION AND RECOMMENDATION

5.1 *Conclusion*

Based on the results of the discussion described above, it can be concluded as follows:

- a. The implementation of urban governance through home care services in Denpasar City has been quite effective. This is based on the results of research showing the equity aspects of services provided to all groups regardless of the social status served. The accountability aspect shows that the use of a high budget in the home care program is dominated by the procurement of health equipment which must be optimized for use as the responsibility of this program. The transparency aspect shows that access to

services is very open for all Denpasar city residents. This is supported by the role of IT in creating integrated, centralized access. While the aspect of community involvement (civic engagement) shows that the coverage area of home care services touches all regional points in Denpasar City.

- b. The obstacle to the implementation of home care services in Denpasar City is a lack of knowledge so that services that should be intended for all parties regardless of social status become difficult to reach for people who are included in the poor category due to the problem of having minimal knowledge about the function of home care services. There are people who do not understand the main function of home care services which do not serve all public health problems in the sense that they are limited to urgent health services such as strokes, or sudden paralysis, and fainting. The next obstacle is that the number of service units is considered to be minimal considering that people using home care facilities have increased.

5.2 Recommendation

The suggestions that can be described as follows:

- a. Socialization is needed for the Denpasar City home care program because based on research results there are still people who do not understand the main function of home care so that requests for services that are not appropriate by the community can be minimized.
- b. It is necessary to add units to the home care service fleet considering the data presented in the results of this study show that every year patients using home care services are increasing significantly. Therefore the addition of fleet units and medical devices is a logical consequence of this service.

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Urgency of digital-based public service innovation policies to anticipate in the future of a pandemi

Gede Wirata

Postgraduate at Ngurah Rai University, Denpasar, Bali, Indonesia

Cokorda Putra Indrayana & I. Nyoman Suargita

Faculty of Social Sciences and Humanities Ngurah Rai University, Denpasar

ABSTRACT: The purpose of this study is to analyze (1) the urgency of digital-based public service innovation policies to anticipate future pandemics; and (2) obstacles and challenges in implementing digital-based public services to anticipate future pandemics. The research method used in this study is descriptive qualitative. The results of the study show that (1) the urgency of digital-based public service innovation policies to anticipate future pandemics is urgent considering that the use and utilization of digital-based public services in Indonesia has begun to be able to change the pattern of interaction between the government and the community; and (2) the obstacles and challenges in implementing digital-based public services to anticipate future pandemics still cannot be avoided which include technical problems, server damage, websites that are not updated, limited human resources (HR), lack of infrastructure and budget, as well as the provision of online services which in fact still require people to come to the service location physically.

Keywords: Innovation, public service, digital

1 BACKGROUND

It is a mandatory duty for the government to be able to provide quality public services for its citizens. The Covid-19 pandemic tested and increased the use of information technology in the implementation of public services during a pandemic. As explained by Mustafa and Deodatus (2021) that the development of digital public services produces and helps disseminate information and strengthens existence. This means that digital public services will help the implementation of public services become more effective, and also increase the existence of government in its implementation. Living in an all-digital way, being able to push people's lives towards changes that continue to demand that their needs can be answered in a more effective and efficient way in accordance with existing developments. That way, utilizing the field of information and technology to facilitate public service activities and make them more effective and efficient.

Meanwhile, e-government is one of the information technologies that has a significant share in the Indonesian government in implementing public services. As a form of adaptation to changes and developments in world information technology, it has strengthened the Indonesian government to participate in creating a digital system that will assist and facilitate the implementation of government into the future. Previously, Presidential Instruction No. 3 of 2003 concerning the National Policy and Strategy for the Development of EGovernment had also been issued, in which it was also explained regarding the administration of the

country with e-Government which is also evidence of the Indonesian Government's efforts to improve the quality of public services by implementing e-Government. According to Kusnadi and Ma'ruf (2017) explained that e-Government is the use of information technology by the government that can enable the government to transform relations with the public, private sector, and also parties with interests. The use of this information technology can be in the form of the internet, mobile, computer, or others. This system was formed as a distribution of services formed by the government in digital form. The form of effort from the government to increase the progress of implementing e-government occurred in April 2004, where the government began submitting an application for all Indonesian citizens, driver's licenses, tax numbers, even passports using one identification number (SIN) (Shafira *et al.* 2021). According to (Sosiawan 2018) the use of e-Government in Indonesia is due to fundamental changes in the life of the nation and state, from an authoritarian and central government system to a democratic government system and establishes central authority and autonomous regions. The change in question is a change in which the government is required to be a government that is transparent, clean and can answer demands properly.

The development of information and communication technology that continues to occur increasingly encourages activities to continue to make changes. Government in implementing e-Government as one of the stages taken in dealing with changes that occur in implementing public services for the community. A form of service whose utilization becomes more flexible and also increases the satisfaction of its users or the people and the government itself who feel it. The services provided in the e-Government system will make a service operation and government process more transparent and also more effective for the public and companies, and also provide many benefits for the community such as less service time needed, and also citizens can get government information easily (Mustafa *et al.* 2021).

Given how the implementation or implementation of e-Government is already growing rapidly in Indonesia compared to the initial implementation period. E-Government is a good mechanism for interaction between the government and the public, the private sector, or even between the government itself. Services are made in such a way by utilizing information and communication technology in order to create satisfaction for its users. This article intends to examine the urgency of digital-based public service innovation policies to anticipate future pandemics.

2 PROBLEM FORMULATION

Based on the background of the problems that have been stated above, the formulation of the problem in this article is presented in the form of questions as follows:

- (1) What is the urgency of digital-based public service innovation policies to anticipate if a pandemic occurs in the future?
- (2) What are the obstacles and challenges in implementing digital-based public services in anticipation of a future pandemic?

3 RESEARCH METHODS

This study uses a qualitative descriptive research type and approach. Qualitative research is essentially observing people in their environment, interacting with them, trying to understand their language and interpretation of the world around them, related to issues of digital-based public service innovation policies to anticipate in the event of a pandemic in the future. Descriptive techniques are used to collect actual data, while the purpose of descriptive research is to make a systematic, factual and accurate description or painting of the facts, characteristics and relationships between the phenomena investigated (Bungin 2011).

Furthermore, this study used qualitative data analysis techniques with interactive models, namely the components of data reduction and data presentation were carried out together with data collection, then after the data was collected, the three components interacted and if conclusions were felt to be lacking, verification and research was needed to collect field data again (Miles and Huberman 2014).

4 RESULTS AND DISCUSSION

4.1 *The urgency of a digital-based public service innovation policy to anticipate a pandemic in the future*

Prior to the Covid-19 pandemic, it was no longer a new thing if advances in information and communication technology could promise efficiency, speed of information delivery, affordability, and transparency, including the government. Moreover, in the current era of regional autonomy it is necessary to realize good governance by using information and communication technology or commonly called e-government. Also through e-government, improvement of public services can be realized. As stated by Holle (2011). that the government bureaucracy can develop the use of information and communication technology (ICT) in the implementation of government activities, facilitate interaction with the public, and promote accountability and transparency of public service providers.

To avoid contacts that can transmit Covid-19, according to President Joko Widodo's instructions, alternative work from home (WFH) can be used to improve public services. WFH will not become an obstacle to productivity, especially for public service providers and/or implementers. This is due to the support of technological sophistication and can be seen by the many media that feature electronic-based meetings (teleconferences) and so on.

WFH can be seen as part of e-government which aims to increase effectiveness and efficiency, transparency, convenience, and accessibility in public services. Therefore, even though WFH is actually a public service, it can still run optimally.

Also through WFH, improvements in public services can be realized. As stated by Holle (2011) that the government bureaucracy can develop the use of digital-based information and communication technology (ICT) in implementing government activities, facilitating interaction with the community, and encouraging accountability and transparency of public service providers. In Article 4 of Law Number 25 of 2009 concerning Public Services, it is explained about the principles of public service delivery which are closely related to the implementation of digital-based public services, especially in the embodiment of the principle of letter f, which is participatory, letter h is about openness, letter I is about accountability, letter k, namely timeliness, and letter l concerning speed, convenience, and affordability.

The benefits of digital-based WFH are firstly reducing costs, the reason being that through an online system, administrative costs and so on will be reduced. Second, increase transparency and accountability because the public can easily access and see how far government activities have been carried out. Third, improving public services because it will be easier for the public to access (information disclosure and participation) public services without having to physically come to the office of a particular government agency.

The existence of a website/application made by the government has one of the main functions, namely to communicate with the public. There are 3 (three) classes of e-government development through public aspiration services, namely publish, interact and transact. Publish is the most important thing that must be used as the first step in the development of e-government (Lestari *et al.* 2019). This is because all existing information must be published to the public at large. Next, namely the interact which is an important point that must involve the community. This is due to the importance of interaction between the government and the community in a website/application. The government will provide a forum where the public can hold discussions with interested units, either directly (chat) or indirectly (e-mail). Lastly, transactions, in this case the application must have a good

security system for security in terms of money transfers and the privacy rights of the public as transacting parties can be properly protected.

The aspect of citizen support must also be able to guarantee that the services on the website/application used by the community can provide assistance to the community if needed. According to Utama (2020) government websites must have a helpdesk system to deal with community problems, if you have difficulty accessing features on the website. Service providers have an important role in this aspect, they must provide a good response to problems raised by the community. The interaction that takes place between service providers and the community is one of the determinants of the success of e-government in Indonesia. However, sometimes a slow response to complaints on the website still occurs. The existence of a helpdesk feature that is only used as decoration is also a major problem that must be addressed better by the government. Nonetheless, it can be seen that the use of the website helps encourage community participation in the decision-making process, even though the flow of information still tends to be one-way (Rumimpunu *et al.* 2021).

Based on the discussion above, it can be stated that digital-based public service policies are urgent considering that the use and utilization of digital-based public services in Indonesia has begun to be able to change the pattern of interaction between the government and the community. Services that were originally oriented to a queuing system (in line) in front of the desk and depended on working hours are now starting to turn into online services that can be accessed 24 hours a day. The existence of the term “don’t stay in line get online” according to Holmes (2001) is considered suitable for a government situation when it has to face a future pandemic as is the case with the Covid-19 pandemic. In addition, it is also important for responding to changes in the strategic environment that demand efficient, effective, public-oriented, transparent and accountable state administration.

4.2 *Obstacles and challenges implementing digital-based public services to anticipate if a pandemic occurs in the future*

During the pandemic, Indonesia imposed all activities from home such as school from home, lectures from home, and working from home was no exception, both private and government. All of this had to be done in order to reduce the spread of the Covid-19 virus. Of course, bureaucratic services must also make a strategy to make it easier for people to use public services. The State Civil Apparatus (ASN) must continue to work effectively and efficiently in serving the community even though it is remote or not face to face. In addition, data and information regarding public services must remain transparent and quick to obtain.

Government system based on E-government is the answer to the problems above. According to Sukarno *et al.* (2021) that to support the performance of a government bureaucracy requires the use of information systems and technology such as the internet and the web so that the services provided are more responsive and efficient. Before the pandemic, Indonesia had actually implemented a hybrid system, in which people accessed digital-based online services to register so they wouldn’t queue again after coming to the location to submit data or physical files. After the Covid-19 virus spread, it was required that the public service system be in a total (online) network. However, it is not as easy as imagined. There are many limitations, obstacles, and challenges in the implementation of e-government in Indonesia.

Currently, many public services in Indonesia are digital-based and have a web that can be accessed via the Internet. However, in reality the web is not functioning properly because there are still services that cannot be used or accessed. The website only introduces the public organization but the services provided do not exist. Apart from that, there are still local government websites that only display the front page or homepage with sober news content. In the end, these sites are only for decoration and show that the local government has e-government, when in reality it is not working as the people want.

Furthermore, another obstacle is that both the Central Government and several Regional Governments and Provincial Governments do not yet have adequate human resources (HR)

in managing the sites created. It is like forcing things that cannot be done by human resources. Human resources only make the site without maintaining and improving the quality of existing sites. The unavailability of human resources will have a worse impact than the technological problem. Inadequate human resources are also caused by a lack of training and understanding to process existing information and technology systems.

This obstacle also causes the government's unpreparedness to implement the demands of e-government, especially digital-based public services. Given that digital-based public services are a new system, both the Central Government, Provincial Governments and Regional Governments are still in the process of studying and exploring digitalbased public services to be implemented in the event of another pandemic in the future. The government seemed slow in handling its digital-based public services during the past Covid-19 pandemic. This shows that government support for improving existing sites is still lacking. The pace of this government is a major obstacle in implementing e-government in Indonesia during this pandemic.

The next inhibiting factors are social factors and technological factors (Al-Shboul 2014). The digital divide where there are still many people who do not have internet access so they will not benefit from the e-government system, especially digital-based public services. Not all regions in Indonesia have telecommunications or electricity networks because there are still many remote and isolated areas that are difficult to reach, resulting in a digital divide. This causes difficulties in accessing information for the surrounding community even though the internet is the main thing needed for the implementation of digital-based public services. In addition, good technology standards are also needed to expedite the implementation of this system. This is due to the high cost of facilities and infrastructure in implementing information systems and technology. It is undeniable that the implementation of digital-based public services requires a large budget, such as for computers, networks, outreach to the community, human resource training, and much more. The budget is also not only used for facilities and infrastructure, there is a budget for maintaining and improving the quality of digital-based public services themselves.

Furthermore, another obstacle is the uneven distribution of public knowledge about the use of e-government for use as digital-based public services because many people are still from the lower middle class and it could also be the age factor. As it is known that knowledge about technology and information or digital systems has only developed nowadays and has developed even more during the past pandemic, therefore elderly people cannot get education about technology and information systems because in ancient times education on technology and information systems was still very limited.

The essence of the uneven distribution of knowledge about digitalbased public services is caused by a lack of income, skills from the people themselves, or internet access. In addition, there is a lack of socialization by the government in using digital-based public services for people in remote and isolated areas. Even though socialization is very important because not all people have internet and good skills, so socialization about digital-based public services will really help people to understand what digital-based public services are and how to use them.

5 CONCLUSION AND RECOMMENDATION

5.1 *Conclusion*

Based on the results of the discussion described above, it can be concluded as follows:

- (a) The urgency of a digital-based public service innovation policy to anticipate a future pandemic is urgent considering that the use and utilization of digital-based public services in Indonesia has begun to be able to change the pattern of interaction between the government and the community. Services that were originally oriented to a queuing system (in line) in front of the desk and depended on working hours are now starting to turn into online services that can be accessed 24 hours a day. Digital-based public

services are considered suitable for government situations when they have to deal with future pandemics such as the Covid-19 pandemic. In addition, it is also important for responding to changes in the strategic environment that demand efficient, effective, public-oriented, transparent and accountable state administration.

- (b) Obstacles and challenges in implementing digital-based public services to anticipate future pandemics still cannot be avoided, because e-government in Indonesia is still struggling with technical problems such as local government websites not functioning properly, server damage, websites that don't work properly. updates include matters such as limited human resources (HR), a government that is not ready to face change, a lack of infrastructure and budget, and the provision of online services which in fact still require people to come to a service location physically.

5.2 Recommendation

The suggestions that can be described as follows:

- (a) It is suggested that in order to build trust or a sense of public trust regarding this digital-based public service, continuous and ongoing outreach from the government is required.
- (b) It is recommended to increase the ability of human resources (agency employees and so on) needed in the process of implementing digitalbased public services.

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Accounting urgency in household financial management

Maulia Gading Nabilah, Masiyah Kholmi, Tri Wahyu Oktavendi & Adi Prasetyo
University of Muhammadiyah Malang, Malang, Indonesia

ABSTRACT: This study aims to analyze the use of accounting for household financial reporting by looking at planning, recording, decision making, and long-term financial planning. The object of this research is accounting lecturers at Islamic universities in Malang City. The sample used is to ask for approval from the university and was chosen intentionally by that party. Data analysis techniques in this study are data collection, data reduction, data presentation, and drawing conclusions from the results of interviews. The results of this study are the use of planning is used by looking at the history of the past month, the use of recording is not used in household finances, decision making is carried out by deliberation, the use of long-term financial planning is carried out after setting aside the use of priorities and short-term finance.

Keywords: financial management, planning, record keeping, decision making, long term financial planning

1 INTRODUCTION

Financial management is a crucial aspect of household life, as it is essential for the livelihood of a family. Households face various daily challenges, ranging from personal issues to concerns that affect the entire family. One of the significant concerns is financial problems, such as higher expenses than income, leading to difficulties in finding funds during emergencies. Insufficient income often necessitates seeking additional jobs, while poor financial management results from inadequate planning. Recording and budgeting can help households avoid the risk of bankruptcy, which can threaten the emotional and mental well-being of family members as a risk management solution (Suarni and Sawal 2020a).

The application of accounting principles can aid in addressing financial reporting issues accurately. Four categories of household accounting practices are recording, budgeting, decision-making, and long-term financial planning (Sidharta 2016). Effective financial management contributes positively to meeting future needs and improving income patterns as the primary point of family expenditure. Over time, accounting practices have evolved from being used solely for financial information disclosure in business or other enterprises to also helping manage even the smallest organizations. While money may not be the most crucial aspect of family life, acquiring it is not easy. Thus, proper financial planning is necessary (Wibawa 2002).

Manurung and Sinton (2013) assessed the role of accounting in households using a phenomenological study, which revealed that household accounting served as a scheme to avoid debt, emphasizing the importance of prioritizing essential family needs. The best form of recording involves clarifying through evidence, such as receipts, invoices, and receipts. Suarni and Sawal (2020) explained how housewives used accounting for household purposes in an Islamic context during the COVID-19 pandemic. Hatidjah *et al.* (2017) further explained financial management, highlighting that each household used accounting

principles differently. The variation in outcomes indicated that not all households employed all accounting roles in financial management. Pratama (2017) emphasized that the role of accounting was primarily employed for family finance, involving money storage and recording family finances.

Based on this background, the researcher is interested in studying the role of accounting in household financial management through four stages. This research differs from previous studies, as prior research focused only on accounting in budget planning and did not explore other stages (recording, decision-making, long-term financial planning). The research question in the previous study was not sufficiently clarified, resulting in an unclear research objective for practical application. This study aims to comprehensively discuss how the various stages of accounting contribute to household financial management.

Finance is one of the essential aspects of household life, as it constitutes a process of sustaining family livelihood. Households inevitably encounter daily challenges, ranging from personal issues to matters concerning the well-being of all family members. One significant concern is the complaint about financial problems, particularly excessive spending compared to income, leading to difficulties in sourcing funds during urgent situations. The income often falls short of meeting the needs, prompting family members to seek additional jobs without properly managing their finances, which becomes the root cause of poor financial management. Proper record-keeping and budgeting can help protect families from the risk of bankruptcy, which can pose emotional and mental disruptions within the family, serving as a risk management solution for financial management (Suarni and Sawal 2020). The application of accounting knowledge can aid in addressing financial reporting issues accurately. The four categories of household accounting practices are record-keeping, budgeting, decision-making, and long-term financial planning (Sidharta 2016). Successful financial management provides positive value for future needs and can improve income patterns as the primary focus of family expenditures. While it is recognized that money is not the most essential aspect of family life, in reality, obtaining money is not an easy task, thus necessitating good financial management (Wibawa 2002). A household is a collection of individuals and at the same time represents the smallest manifestation or depiction of society (Wibawa 2002).

Based on this background, the researcher is interested in examining the role of accounting in household financial management using four stages. The difference between this study and previous research lies in the fact that previous research focused on explaining the role of accounting in budgeting planning without considering other stages (record-keeping, decision-making, long-term financial planning). The research question has not been adequately formulated in previous studies, leading to a lack of clarity in the research objectives for use as research outcomes. This study will comprehensively explore how accounting plays a role in each stage of household financial management.

2 METHODOLOGY RESEARCH LOCATION

According to Suliyanto (2017), there are two types of research locations: the first is applicative, where problems will be solved, and the second is theoretical, where concepts will be tested. The selection of the research location is a place that has been tested and chosen for data collection in the study. The choice of location serves as the object and the communication of the research objectives to facilitate the study. This research takes place at Islamic Universities in Malang City, namely Muhammadiyah University of Malang, Maulana Malik Ibrahim State Islamic University of Malang, and Islamic University of Malang. The research is conducted by the researcher using descriptive qualitative research. The use of qualitative research with a case study on household financial management allows the exploration of informants' responses to be unearthed and provides results based on interviews and evidence, such as documentation.

Informants are sources of data related to third parties and data on institutionalized matters or common phenomena (Agusta 2003). The selection of informants is deliberately based on research criteria. The chosen informants have knowledge of the research issues. The criteria for selecting accounting lecturers as informants are as follows:

- (1) Working as accounting lecturers at Islamic universities in Malang.
- (2) Married for a minimum of five years.
- (3) Have at least one child.

Table 1. Research informants.

No.	Name	Sex	Institution
1.	MI	L	UMM
2.	MA	P	UMM
3.	MN	P	UMM
4.	IF	P	UIN Malang
5.	IN	P	UIN Malang
6.	ID	P	UIN Malang
7.	NR	P	UNISMA
8.	NH	L	UNISMA
9.	NA	L	UNISMA

Note. Initials are used for names.

In this study, the researcher used primary data sources obtained through direct interviews with informants, and secondary data in the form of photo documentation from the recorded data done by the informants. The data collection took place at specific times and were agreed upon beforehand to ensure the effectiveness of the research. The data sources for this study were the direct interviews with 9 lecturers, specifically 3 accounting lecturers at Islamic universities in Malang. Data collection techniques included interviews and documentation. Data analysis involved the stages of data collection, data reduction, data presentation, and drawing conclusions.

3 RESULTS AND DISCUSSION

3.1 *Importance of accounting in household financial management*

3.1.1 *Budget planning*

Earning a living should be done according to the teachings of Allah SWT, as the income obtained reflects how a believer will receive blessings and Allah's mercy. Prayer and trust in Allah are essential in seeking blessed and halal income. Budget planning is the first step in household accounting and serves as a foundation to determine how the income will be utilized. Generally, budget planning is done by wives, who manage household finances. However, perspectives may differ, allowing husbands to participate in managing family finances. Budget planning sometimes requires consensus and discussion between partners to minimize future obstacles.

Budget planning can be done by allocating funds to various needs, making clear the amount and order of expenditures. Careful consideration is crucial, as planning that does not align with actual needs can lead to poor financial management at the end of the month. Additionally, previous month's expenditure records can help estimate future expenses. Analyzing historical data benefits subsequent budgeting, streamlining the planning process. Prioritization of needs is another aspect of budget planning for each informant. This form of budgeting, considering benefits and drawbacks, helps prevent wasteful spending. Joint decisions are essential for significant expenses and handling unexpected events.

Decision-making is a vital aspect at every stage of household financial management and contributes to effective communication and conflict resolution.

3.1.2 *Recording*

Effective recording is structured and systematic, providing useful information for everyday economic life. Recording in households involves documenting every transaction and event to generate household financial reports as informative tools. Recording can be done using various media, such as notebooks or digital tools like Excel. The data obtained from recording can be analyzed periodically and evaluated to plan for future expenditures. Recording is particularly helpful in Long Distance Marriage (LDM) situations, as it keeps both partners informed about individual activities. While recording may seem challenging, some informants mentioned that simple recording methods, such as single-entry two or three-column systems, were sufficient.

Yuliana *et al.* (2020) also emphasized the significance of recording, as it provides valuable insights into income and expense fluctuations. Well-organized financial management involves listing regular monthly expenses, such as electricity, telephone, and fuel bills, to facilitate budget planning (Fitriyah *et al.* 2020).

3.2 *Decision-making*

Both spouses must support each other to create a harmonious family. Decision-making by both parties is an indicator of successful financial management. Knowing and participating in household income and expenditure is crucial for spouses. Joint decision-making through consultation is necessary, especially for significant expenses.

Creating a *sakinah* finance requires prioritizing and striking a balance between worldly and spiritual needs. Such prioritization reflects how Islamic households avoid improper and prohibited economic activities. Financial management should align with daily activities, particularly for well-established family units. Decisions should be made through consensus, involving trust and caution to handle significant expenses. Joint decision-making builds trust and strengthens the marital bond. Roles between spouses should be well-defined, with the wife managing the household and the husband as the head of the family. Problems that arise should be discussed, avoiding prolonged conflicts that could negatively affect the family's future. Long-term financial planning serves as a supplementary aspect of household accounting. While some informants did not prioritize longterm planning, it becomes essential when facing significant expenses or unforeseen circumstances. Long-term planning can involve setting aside funds in separate accounts for savings or specific purposes. Emergency needs can be addressed through savings. Long-term financial planning considers both benefits and urgent requirements, helping manage significant expenditures (Sidharta 2016). Long-term planning also serves as an investment in the future, making it a form of financial planning itself (Yuliani *et al.* 2020).

3.2.1 *Long-term financial planning*

Long-term financial planning is a supplementary role to household accounting activities. The use of long-term planning, as agreed upon in the interviews, was not implemented by the informants, who cited that long-term planning was only done through setting aside funds from the surplus of essential needs or from other accounts, such as savings accounts. Long-term financial planning is only employed when there are findings of large expenses and activities beyond essential needs. In essence, short-term planning already covers medium and long-term needs. As the initial income is received, households indirectly classify the funds for previously adjusted needs. Long-term financial management, in fact, represents an alternative option outside regular household financial management, making this stage an optional choice within households. The informants manage long-term financial needs by segregating funds, separating short-term and long-term requirements.

On the other hand, addressing urgent needs also requires attention to ensure sound financial management. Urgent needs can be addressed through various means, such as

utilizing savings, withdrawing from sources other than essential needs, or exploring alternative options. Drawing from savings is one way to address urgent needs. While long-term financial planning may be set aside in household accounting, on other occasions, this stage can help anticipate significant expenses (Sidharta 2016). Long-term financial planning is also a form of preparation for the future, with saving activities representing an embodiment of such planning. Long-term financial planning is valuable in managing finances positively and working towards achieving the household's financial goals in the future (Yuliani *et al.* 2020).

3.3 *Portrait of simple accounting practices in household*

Household accounting serves as a form of information that is useful for daily activities. From this perspective, simple accounting requires adjustments in understanding and capabilities to be applied in the internal activities of the household. The practical use of accounting, as highlighted in the interview results, is emphasized in terms of planning and recording. The informants found that the use of simple planning resulted in better-planned activities for the following month. Meanwhile, recording was beneficial as it provided a simple and understandable way to evaluate financial management. Accounting is a process of identifying, measuring, and reporting economic information, facilitating assessment and decision-making. Family economic activities stem from the process of identifying, recording, and communicating household economic events. An Islamic family is one that embodies the attributes of *sakinah* (tranquility), *mawadah* (love), and *waramah* (affection). Household accounting involves the process of recording to understand income, expenses, and cash flow within the household.

The use of budget planning in households involves allocating resources in balance between worldly and spiritual needs. This reflects how Islamic households avoid improper and prohibited economic activities. The management of household finances is aligned with daily activities, especially for well-established family units. The use of simple recording forms tailored to specific needs allows for flexibility, where certain roles can be omitted if deemed burdensome. Decision-making should be based on mutual trust to avoid suspicion between partners. Mutual trust is fundamental in a marital relationship, and the roles of wife as a homemaker and husband as the head of the household should not lead to conflicts over household matters. Problems that arise should be discussed through consultation to prevent prolonged conflicts and negative effects on the family's future. Simple long-term financial planning should be evaluated based on its benefits and prospects for urgent needs. Islam does not forbid borrowing but emphasizes avoiding usury.

The implementation of accounting is beneficial in terms of knowledge and useful for practical application. The role of the wife as a homemaker strengthens household activities alongside the husband, who serves as the head of the household, to seek sustenance. Even though the wife is responsible for managing the household, she can also contribute to the family's economy by working. The explanation of financial management is reinforced by the importance of planning, making simple accounting necessary.

4 CONCLUSION

Household accounting is closely related to how families manage their finances, starting from allocating income to expenses. The informants in this study agree that careful planning and considering historical data from the previous month are essential for budget planning. However, practical challenges may arise in adhering to the plan, leading to the need for monthly evaluations to minimize similar occurrences in the future.

The second phase of household accounting is recording, which many informants in the study do not use in managing family finances. Despite appearing more complex, some informants mentioned that recording can help determine the percentage of expenses to be used. Simple recording methods, such as debit and credit, can be one approach. The third role of accounting is decision-making, where both husband and wife should be aware of and

participate in household income and expenses. Without consultation in financial matters, family harmony may be disrupted. Significant expenditures involving trust and caution should be agreed upon jointly. The fourth role is long-term financial planning, which, although secondary in household accounting, is essential for consideration. This role can be particularly helpful for long-term financial needs, urgent requirements, and substantial financial purposes. Informants in this study mentioned that using separate accounts can aid long-term planning, especially for saving purposes.

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Community perceptions of Taba Penanjungan Village, Central Bengkulu Regency regarding the socio-economic impact of Bengkulu provincial government in supporting sustainable development in Indonesia

Sussy Nofita Sari, Nyoman Diah Utari Dewi & Ida Ayu Putu Sri Widnyani
Ngurah Rai University

ABSTRACT: The purpose of this study was to find out the Perceptions of the Community of Taba Penanjungan Village, Central Bengkulu Regency regarding the socio-economic impact of the Bengkulu provincial government in supporting sustainable development in Indonesia. By using descriptive qualitative analysis research method. The results obtained from the research are that with the President's direction, the Perception of the Community of Taba Penanjungan Village, Central Bengkulu Regency regarding the socio-economic impact of the Bengkulu provincial government in supporting sustainable development in Indonesia by: (1) strengthening economic resilience for growth and change in quality regional autonomy and justice by increasing innovation and quality Investment is the main capital to encourage higher, sustainable and prosperous economic growth in a fair and equitable manner. (2) Developing Regions to Reduce Inequalities and Ensure Equity through Regional development is aimed at increasing economic growth and fulfillment of basic services by harmonizing development plans and spatial use. (3) Improving Quality and Competitive Human Resources, because Humans are the main capital of national development towards inclusive and equitable development in all regions. Improving the quality and competitiveness of human resources, namely human beings who are healthy and intelligent, adaptive, innovative, skilled, and have character for the nation's future successors.

Keywords: Perceptions of the community of Taba Penanjungan village, Central Bengkulu Regency, socio-economic impacts, and sustainable development in Indonesia

1 INTRODUCTION

In dealing with global concerns such as poverty, natural disasters, climate change, and financial crises, the subject of the Taba Penanjungan Village Community in Central Bengkulu Regency is regarding the socio-economic impact of the Bengkulu provincial government in supporting sustainable development in Indonesia. So sustainable development, which emphasizes the combination of economic development, social and environmental protection, is a difficult challenge for policy makers in all countries, especially Indonesia. Without the world's commitment to changing traditional development patterns, exploration of natural resources and the environment will increase. Natural resource-based economic development that does not include environmental sustainability will ultimately have a detrimental effect on the environment itself, because natural resources and ecosystems have limited carrying capacity. In other words, economic development that ignores the potential of natural resources and the environment will bring future development challenges. (Ery 2018) One of the big problems facing economic progress is how to carry out and enjoy

this development continuously or sustainably. That is, economic activities must be able to coexist with the environment to achieve ecological balance.

Indonesia has enacted laws to limit the movement of people and goods, which have been regulated by the Central Government in Government Regulation Number 21 of 2020, with detailed implementation regulated in Regulation of the Minister of Health of the Republic of Indonesia Number 9 of 2020. There has also been a shift in the environmental component, with health which takes precedence. To make a development plan based on the concept of sustainable development, it is important to first understand what aspects are needed for sustainable development, as well as what variables and instruments are needed. Thus, Law Number 32 of 2009 concerning Environmental Protection and Management has really detailed what components are needed in the implementation of sustainable development, both at the national and regional (provincial, district and city) development levels. (Suparmoko 2020)

The 2020–2024 National Medium-Term Development Plan (RPJMN) is an important stage of the 2005–2025 National Long-Term Development Plan (RPJPN) because it will affect the achievement of development targets in the RPJPN. At that time, Indonesia's per capita income is estimated to have entered the group of upper-middle income countries that have better infrastructure, quality human resources, public services, and people's welfare.

In accordance with the directives of the 2005–2025 RPJPN, the 2020–2024 medium-term development target is to realize an Indonesian society that is self-sufficient, advanced, just and prosperous through accelerating development in various fields by emphasizing the building of a solid economic structure based on competitive advantage in various regions supported by natural resources, qualified and competitive human resources.

Based on this description, the researcher is interested in conducting research entitled "Perceptions of the Community of Taba Penanjung Village, Central Bengkulu Regency regarding the socio-economic impact of the Bengkulu provincial government in supporting sustainable development in Indonesia."

2 THEORETICAL BASIS

Sustainable comes from the words "sustain" (continue) and "able" (able). In simple terms, the meaning of these two terms is the ability to continue. In other words, sustainability is the ability to conserve resources through controlling the use, development and conservation of natural and physical resources. Development (Development) according to Bryant and White in (Suryono 2010) is an effort to increase the ability of people to control their own future. has five major implications:

- (1) Development requires the growth of human capacity ideally, both individually and as a community (Capacity).
- (2) Development requires fostering the growth of unity, equality of ideals, and wealth (equity)
- (3) Development requires the formation of public trust to help individuals grow according to their potential (Employment).
- (4) Development requires the ability to produce independently (Sustainability)
- (5) Development requires reducing the dependence of one country on another (Interdependence)

In its global conservation strategy, the International Union for Conservation of Nature and Natural Resources (IUCN) (1980) states that to be sustainable development, development must consider environmental, social and economic factors based on biological resources, as well as both long-term advantages and disadvantages. Alternative courses of action may be long or short term.

Meanwhile, according to the United States Environmental Protection Agency (USEPA), sustainable development is a development method that can increase economic levels, maintain environmental sustainability, and social conditions for the benefit of present and future generations.

Meanwhile, in the Environmental Protection and Management Law Number 32 of 2009, sustainable development is defined as a conscious and planned effort that integrates environmental, social and economic aspects into a development strategy to ensure environmental integrity as well as safety, capability, welfare, and the quality of life of present and future generations. Based on the above understandings, the development paradigm which initially focused on economic interests has now transitioned into a development paradigm that recognizes the environmental and social sectors as essential.

Sustainable development consists of three dimensions: economic, social and environmental. In the economic component, various objectives must be met, including steps to encourage economic development, fight poverty, and divert production and consumption to a more balanced direction. Meanwhile, the social component is related to overcoming population problems, improving community services, and improving the quality of education. Target the environmental dimension includes efforts to reduce and avoid pollution, waste management, and conservation/preservation of natural resources. Thus, the goal of sustainable development is focused on the three dimensions mentioned above: the sustainability of high economic growth rates, the sustainability of just and equitable social welfare (social progress), the implementation of Sustainable Development in Indonesia, and the sustainability of a harmonious and ecologically balanced living system. (ecological equilibrium). (Pertiwi 2017)

3 RESEARCH METHODS

The study in writing a paper entitled Perceptions of the Community of Taba Penanjungan Village, Central Bengkulu Regency regarding the socio-economic impact of the Bengkulu provincial government in supporting sustainable development in Indonesia. using descriptive qualitative analysis techniques. This study was carried out by describing facts, situations or circumstances, phenomena, factors, and conditions that occurred during the research conducted and showing the actual findings. The data collected is secondary data, obtained from literature, journals, newspapers, and the Central Bureau of Statistics (BPS).

4 RESULTS AND DISCUSSION

Monitoring and comparing poverty rates internationally is critical to achieving the Goal of the Community of Taba Penanjungan Village, Central Bengkulu District regarding the socio-economic impact of the Bengkulu provincial government in supporting sustainable development in Indonesia. Then Sustainable Development A Poverty Free World. To determine the severity of poverty in a country, use the indicator the proportion of the population living below the international poverty line, which is defined as the proportion of the population living on less than \$1.90 per day at international prices. At current international prices, the “international poverty line” is set at \$1.90 per day.



Figure 1. International poverty line.

Based on Susenas findings, the percentage of poor people in Taba Penanjung Village, Central Bengkulu Regency, Bengkulu Province has been decreasing from year to year. The percentage of residents of Taba Penanjung Village, Central Bengkulu Regency, Bengkulu Province living below the poverty line was 8.49 percent in March 2022. This achievement still leaves jobs for the local government, because the North Sumatra Provincial Medium-Term Development Plan (RPJMD) 2018–2023 sets targets poverty rate of 7.39 percent. Therefore, the government and other stakeholders of Taba Penanjung Village, Central Bengkulu Regency, Bengkulu Province, will continue to run various programs in an effort to alleviate poverty in order to achieve the Community Goals of Taba Penanjung Village, Central Bengkulu Regency, regarding the socio-economic impact of the Bengkulu provincial government in supporting sustainable development in Indonesia (TPB) 2030 thoroughly, namely realizing poverty-free.

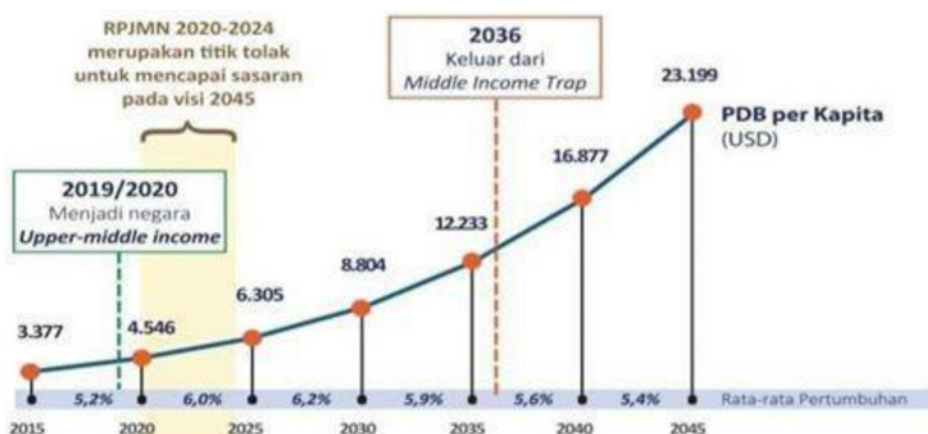


Figure 2. Economic growth targets towards a developed Indonesia.

The Presidential Vision and Mission for 2020–2024 was prepared based on the directives of the 2020–2025 RPJPN. The 2020–2024 RPJMN was carried out during the leadership period of President Joko Widodo and Vice President K.H. Ma’ruf Amin with the vision “The Realization of an Advanced Indonesia that is Sovereign, Independent, and Has a Personality Based on Mutual Cooperation”. This vision is realized through 9 (nine) Missions known as the Second Nawacita.

The 2020–2024 RPJMN has mainstreamed the Sustainable Development Goals (SDGs). The targets of the 17 Sustainable Development Goals (SDGs) and their indicators have become an integral part of Indonesia’s 7 development agendas going forward.

The President established 5 (five) main directives as a strategy in implementing the Nawacita mission and achieving the goals of the 2045 Indonesia Vision. The five directives cover several aspects, namely:

- (1) Development of Human Resources
Building dynamic, productive, skilled, hardworking human resources who master science and technology supported by industrial cooperation and global talent.
- (2) Infrastructure Development
Continuing infrastructure development to connect production areas with distribution areas, facilitating access to the area tourism, boosting new jobs, and accelerating the increase in added value to the people’s economy.
- (3) Simplification of Regulations
Simplifying all forms of regulation with the Omnibus Law approach, especially issuing 2 laws. First, the Job Creation Law. Second, the MSME Empowerment Law

- (4) Simplification of Bureaucracy
Prioritizing investment for job creation, cutting lengthy procedures and bureaucracy, and simplifying echelonization
- (5) Economic Transformation
Transforming the economy from dependence on natural resources to manufacturing competitiveness and modern services that have high added value for the prosperity of the nation for the sake of social justice for all Indonesian people.

With the main direction as a strategy in implementing the Nawacita mission and achieving the goals of the Indonesian Vision 2045 conveyed by the president, the strategic role of the government of Taba Penanjung Village, Central Bengkulu Regency, Bengkulu Province in supporting sustainable development in Indonesia, by carrying out: (Republic of Indonesia 2020)

- (1) Strengthening Economic Resilience for Quality and Equitable Growth
Increasing innovation and investment quality is the main capital to encourage higher, sustainable and prosperous economic growth in a fair and equitable manner. Economic development will be encouraged to grow higher, inclusive and competitive through.
 - (a) Management of economic resources which includes the fulfillment of food and agriculture as well as management of maritime affairs, marine affairs and fisheries, water resources, energy resources, and forestry.
 - (b) Acceleration of increasing the added value of agriculture and fisheries, maritime affairs, energy, industry, tourism, as well as the creative and digital economy.
- (2) Developing Regions to Reduce Gaps and Ensure Equity
Regional development is aimed at increasing economic growth and fulfillment of basic services by harmonizing development plans and spatial use. Regional development capable of creating sustainability and inclusiveness through:
 - (a) Development of leading sectors/commodities/activities in the regions.
 - (b) Deployment of growth centers to undeveloped areas.
 - (c) Strengthening human resources and science and technology capabilities based on regional excellence.
 - (d) Improving infrastructure and basic services evenly.
 - (e) Increasing the carrying capacity of the environment as well as resilience to disasters and climate change.
- (3) Improving Quality and Competitive Human Resources
Humans are the main capital of national development towards inclusive and equitable development in all regions. Improving the quality and competitiveness of human resources, namely human beings who are healthy and intelligent, adaptive, innovative, skilled and with character, through:
 - (a) Population control and strengthening population management.
 - (b) Strengthening the implementation of social protection.
 - (c) Improving health services towards universal health coverage.
 - (d) Increasing equity in quality education services.
 - (e) Improving the quality of children, women and youth.
 - (f) Poverty alleviation.
 - (g) Increased productivity and competitiveness.
- (4) Mental Revolution and Cultural Development
The mental revolution as a cultural movement has an important position and plays a central role in development to change perspectives, attitudes, behaviors that are oriented towards progress and modernity. The mental revolution and cultural development are carried out in an integrated manner through:
 - (a) Mental revolution and Pancasila ideology development.
 - (b) Promotion and preservation of culture.

- (c) Religious moderation.
- (d) Strengthening the culture of literacy, innovation, and creativity.

5 CONCLUSION

So it can be concluded in this paper that the purpose of the Perception of the Community of Taba Penanjung Village, Central Bengkulu Regency regarding the socio-economic impact of the Bengkulu provincial government in supporting sustainable development in Indonesia is focused on the three dimensions mentioned above: sustainability of high economic growth rates, sustainability of fair and equitable social welfare (social progress), the implementation of Sustainable Development in Indonesia, and the sustainability of a harmonious and ecologically balanced living system.

The Presidential Vision and Mission for 2020–2024 was prepared based on the directives of the 2020–2025 RPJPN which has mainstreamed the Sustainable Development Goals (SDGs). The President established 5 (five) main directives as a strategy in implementing the Nawacita mission and achieving the goals of the Indonesia Vision 2045. The five directives include human resource development, infrastructure development, simplification of regulations, simplification of the bureaucracy, and economic transformation.

With this directive, the Perception of the Community of Taba Penanjung Village, Central Bengkulu Regency regarding the socio-economic impact of the Bengkulu provincial government in supporting sustainable development in Indonesia. By strengthening economic resilience for quality and just growth, developing regions to reduce inequality and ensure equity, increasing quality and competitive human resources, mental revolution and cultural development.

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Embracing digital parenting: Interactivity and emotional engagement on @Tentanganakofficial Instagram

Shalwa Rosalinda, Moch Fuad Nasvian & Airlangga Daniswara

Communication Science Department, University of Muhammadiyah Malang, Malang, Indonesia

ABSTRACT: Millennial mothers in Indonesia, 93.70%, seek parenting information through the internet rather than relying on family, seminars, books, or local communities. The Instagram account @tentanganakofficial is the only parenting education platform in Indonesia that collaborates with official partners such as the Ministry of Health, the Ministry of Education and Culture, the Agency for Research and Technology, and the National Population and Family Planning Board (BKKBN). @tentanganakofficial is the most attractive parenting education service on Instagram in Indonesia as of April 2023. This study explores the interactivity of parenting education on social media in Indonesia, using the Instagram account @tentanganakofficial as a case study for content posted in November 2022. The research is based on the concepts of Interactivity Dimension, Message Interactivity, and Six Basic Human Emotions. The findings reveal that netizens have a strong sense of presence, share personal experiences with a happy tone, show a willingness to connect and exchange insights related to the discussed topics. However, it is also noted that 11.31% of netizens express concerns and engage in discussions that evoke fear, possibly due to increased awareness about arsenic contamination in rice and the re-emergence of polio in Indonesia during November 2022.

Keywords: Instagram interactivity, Parenting, Social media, Thematic Analysis

1 INTRODUCTION

The internet in Indonesia serves as a means of seeking information and a platform for verbal and nonverbal interactions through social media (Putri 2018). The Association of Internet Service Providers in Indonesia (APJII) reports that a significant 98.02% of Indonesian people use the Internet primarily to access social media (APJII 2022). This trend is supported by data showing a notable increase in active social media users in Indonesia, with an additional 21 million users compared to the previous year. As of February 2022, there were approximately 191.4 million active social media users, accounting for 68.9% of the population (Datareportal 2022).

Using social media as a tool for seeking guidance and educational information is a growing phenomenon (Datareportal 2022). It has become increasingly prevalent among both the younger and older generations in Indonesia. Therefore, parents should possess adequate parenting knowledge to nurture better and support their children's growth and development. The lack of parenting knowledge and skills could lead to higher chances of inappropriate treatment of children (Baker *et al.* 2017). Millennial parents' utilization of social media as an educational platform is closely tied to the advancement of information and communication technology, specifically the Internet. The internet serves as a medium for millennial parents to access parenting-related information through social media. Research findings (Setyastuti 2019) show that among millennial parents in Indonesia, a high percentage (93.70%) of millennial mothers seek parenting information through the Internet compared to other sources such as family, seminars, books, or community. Furthermore,

Instagram is one of the social media platforms frequently used by millennial parents, with 82.80% utilizing it for parenting information (Setyastuti 2019).

The Instagram account @tentanganakofficial is an example of a parenting education service that effectively utilizes the social media platform to disseminate parenting information and education in Indonesia. This account provides comprehensive information focusing on the health, growth, and psychological well-being of children during their first 1,000 days, including their time in the womb. The @tentanganakofficial Instagram account stands out with the highest engagement rate compared to ten other parenting Instagram accounts identified by researchers in Indonesia. With the vision of providing easy access for all people to learn how to meet the needs of their children for optimal growth and development, @tentanganakofficial collaborates with over 20 pediatricians and child psychologists to offer parenting education in Indonesia. Moreover, it is the only parenting education account in Indonesia that partners with official institutions such as the Ministry of Health (KEMENKES RI), Ministry of Education and Culture (KEMDIKBUD RI), and the National Population and Family Planning Board (BKKBN).

Considering the various advantages of the @tentanganakofficial account as an interactive and responsive parenting information and education platform, this research aims to investigate the interactivity of parenting social media in Indonesia on the @tentanganakofficial Instagram account. The study seeks to understand if the information shared through this account is well-received and beneficial to the public. Given the information and phenomena outlined, the researcher is interested in examining the interactivity of parenting education social media in Indonesia through the @tentanganakofficial Instagram account.

Table 1. Content classification of 115 posts, other classification under 5% are excluded.

No	Content Classification	Σ Theme (115 Postingan)	Percentage
1.	Edukasi kesehatan, pertumbuhan dan psikologis anak berupa gambar.	40	34.8%
2.	Cuplikan <i>live streaming</i> atau webinar.	14	12.2%
3.	Informasi <i>live streaming</i> atau webinar di berbagai platform.	13	11.3%
4.	Informasi promosi produk.	7	6.1%

Source: Researcher (11 April 2023).

This research using the Interactivity Dimension concept (Quiring and Schweiger 2008), Message interactivity (Nedumkallel 2020) and Six Basic Emotion (Ekman 2004). The Interactivity Dimension concept is defined as “the process of inter-human communication via technical means”. They proposed a framework for analyzing interactivity, which includes three dimensions : sensory, semantic, and behavioral (Quiring and Schweiger 2008). Message interactivity (Nedumkallel 2020) refers to the extent to which a system or media channel allows users to exchange messages back and forth. It has been demonstrated by many researchers through the concept of message exchange or 2-way communication. The action of message interactivity is performed through the principle of contingency, which means that a given message is contingent upon user reception of the previous message and the ones preceding that. If a system or media channel allows users to have back-and-forth interaction in a highly logical flow, the system or the channel is seen as having high message interactivity. Six Basic Emotion (Ekman 2004), According to Paul Ekman, there are six basic emotions: anger, disgust, happiness, sadness, fear, and surprise. However, in the past, Ekman proposed seven basic emotions, which included contempt instead of happiness, but he later changed his theory to include happiness instead of contempt. A recent study found that disgust and anger share similar facial expressions, and fear and surprise share raised eyebrows. While there are differing views among experts, most emotion scientists agree that there are at least five core emotions. Ekman’s research shows the strongest evidence to date of seven universal facial expressions of emotions.

2 METHODOLOGY

This research employs thematic analysis (Braun and Clarke 2006) to examine the interactivity in the comment section of the Instagram account @tentanganakofficial during the November 2022 posts, coinciding with World Children’s Day on November 20th. In November 2022, there were 115 posts with various content classifications. However, the focus was narrowed down to 40 posts categorized under health, growth, and psychological education for children (Table 1). This specific content classification was chosen as it comprised the highest number of posts, totaling 40 posts (34.8%) out of 22 other classifications. These content classifications contain in-depth parenting educational information, with each topic consisting of more than 5 content slides.

Table 2. Table theme of research.

No	Content	Caption	Dimension of Interactivity	Message Interactivity		
				Message Relatedness	Response	Reactance
1.						
433.						

Source: Researcher (2023)

The data presented in this study is based on a dataset of 2,345 instagram comments from 40 posts of @tentanganakofficial, collected over a period November 2022. The comments were analyzed by using Thematic Analysis. The labeling code process in this study (Table 2) uses the Interactivity Dimension concept of (Quiring and Schweiger 2008), Six Basic Emotion (Ekman 2004), Message interactivity (Nedumkallel 2020).

The data limitation for this study involved gathering 100 comments from each of the 40 posts on the Instagram account @tentanganakofficial. This data collection was done using the scraping technique from <https://exportcomments.com/> (Ayani *et al.* 2019). The study obtained a total of 2,345 comments from the 40 posts related to health, growth, and psychological education for children. In the second phase, sentiment analysis (Kurniawan *et al.* 2019) was employed as a filtering mechanism to focus the research. Sentiment analysis helped pinpoint the most significant moments in the data, identifying the highest and lowest sentiment points among the 40 posts on the @tentanganakofficial Instagram account (as seen in Figure 1). Based on this sentiment analysis, the research then narrowed its focus to 10 posts, consisting of 5 posts with the highest sentiment points and 5 posts with the lowest sentiment points. These 10 posts were further analyzed, along with 433 comments, using thematic analysis.

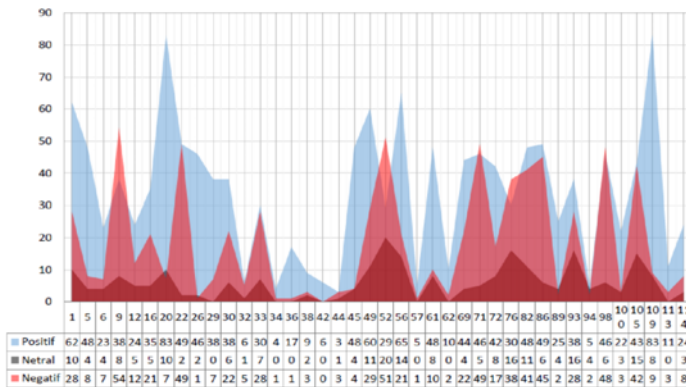


Figure 1. Graph of sentiment analysis results on 40 posts.

Source: Researcher (30 Mei 2023).

Table 3. Sentiment of posts @tentanganakofficial in november 2022.

Rank	Positive Sentiment		Negative Statement	
	Content Title	Σ	Content Title	Σ
1	Waspada Bahaya Arsenik Dalam Beras. Studi: Kandungannya Bisa Menurun dengan Tepat Memasaknya.	50	Anak Sempat Kejang Demam? Studi: Kurangnya Asupan Zinc Dapat Berkaitan.	54
2	Hindari Berikan Anak Snack Kemasan >1 Kali/Hari Studi 2022: Pengaruh Keoptimalan Tumbuh Kembang.	38	Si Kecil Terluka? Jangan Salah Pilih Plester Agar Luka Cepat Sembuh!	51
3	Khawatir Anak Kesulitan Bernapas Saat Pilek? Studi: Cuci Hidung Terbukti Bermanfaat.	34	Studi Terbaru: Masalah Toilet Training Berhubungan dengan Risiko Mengumpul di Masa Depan.	49
4	Studi: Kenaikan BB Anak Berkaitan dengan Jadwal Makan Bersama Ayah yang Rutin.	33	Kabar Terbaru! KEMENKES RI Umum-kan Kejadian Luar Biasa Polio di Indonesia.	49
5	Anak Jadi Mudah Tantrum? Yuk Rutin Isi Tangki Cintanya dengan Rumus 8-1-9.	27	Hindari Membiasakan Anak Makan Sambil Nonton/Digendong, Studi: Berisiko Mengganggu Sinyal Lapar & Kenyang.	48
Σ komentar 10 postingan			433 komentar	

The data processing involves five stages, including (1) familiarization, (2) generating initial codes, (3) searching for themes, (4) reviewing themes, (5) defining and naming themes, and (6) finalizing the analysis (Braun and Clarke 2022). This process is illustrated in Figure 2. In the first stage of data processing, familiarization, the researcher re-reads the 433 comments from the 10 posts about health, growth, and psychological education for children on the Instagram account @tentanganakofficial in November 2022. This step aims to gain a comprehensive understanding of the comments in each post and to identify relevant concepts and theories for data processing.

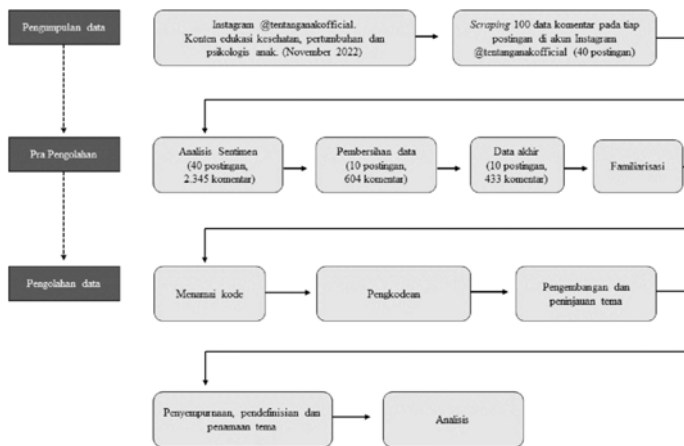


Figure 2. Data analysis mapping.

Source: Researcher (2023).

3 RESULT

Based on the provided text, it appears that your academic paper is conducting research using data from 433 comments on 10 Instagram posts categorized under health, growth, and

psychological topics related to children from the account @tentanganakofficial. The data was collected between April and June 2023. The coding process in the study involves using the concepts of interactivity dimensions (Quiring & Schweiger, 2008), message interactivity (Nedumkallel 2020), and the theory of six basic emotions (Ekman 2004), which can be further explored in Table 3. The data of the comments is then analyzed using thematic analysis.

Table 4. Summary of Instagram comment findings @tentanganakofficial 14 Mei – 22 Juni 2023.

Characteristic	Classification (433 Comments)	Σ %
Interactivity of Dimension		
<i>Playfulness</i>	39	9.01%
<i>Connectedness</i>	173	39.95%
<i>Sense of Presence</i>	179	41.34%
<i>Immersion</i>	42	9.70%
Message Relatedness		
<i>Linear</i>	389	89.84%
<i>Non linear</i>	44	10.16%
Responsive		
<i>Insight and Information</i>	173	39.95%
<i>Personal Experience</i>	186	42.96%
<i>Opposing Opinion</i>	33	7.62%
<i>Willingness to Participate in the Call to Action</i>	41	9.47%
Reactance		
<i>Sadness</i>	62	14.32%
<i>Happiness</i>	223	51.50%
<i>Fear</i>	105	24.25%
<i>Anger</i>	37	8.55%
<i>Surprise</i>	4	0.92%
<i>Disgust</i>	2	0.46%

Source: Researcher (22 Juni 2023).

Based on the results presented in Table 4, the research findings indicate that netizens who commented on the Instagram posts of @tentanganakofficial demonstrate a high level of interactivity. Out of the 433 comments, 179 comments show a strong sense of presence, indicating enthusiasm and active engagement in the comment discussions. Additionally, 173 comments indicate a high level of connectedness, suggesting that netizens not only receive messages but also actively share information, making them both message recipients and message givers. 42 comments are considered emotional, as they evoke various emotions in readers. Lastly, 39 comments show that netizens continue to comment even if their comments do not directly relate to the post or ongoing discussion, which can be termed as reflexive comments.

Regarding message relevance, 389 comments are found to be linear with the posts, meaning netizens actively comment with relevant responses. However, there are 44 non-linear comments, indicating that some netizens deviate from the content of the posts.

In the responsive section, 186 comments involve sharing personal experiences in the comments section, indicating that most of the comments reflect experiences related to the content. Additionally, 173 comments demonstrate sharing insights and information, suggesting that netizens are willing to share their knowledge with others. Furthermore, 41 comments indicate a willingness to participate in calls to action related to the post's topic. Lastly, 33 comments express opposing opinions, indicating that individuals have diverse perspectives and viewpoints.

In the analysis of emotional reactions, 223 comments reflect happiness, indicating that netizens feel assisted by the information and education provided in the posts. 105 comments show fear, reflecting concerns of netizens about their children, particularly in posts related to disease education. Furthermore, 62 comments express sadness, indicating emotional responses to the posts and comments. Additionally, 37 comments express anger, showing netizens' anger towards content or comments that deviate from facts. Moreover, 4 comments reflect surprise, suggesting netizens' reactions to specific parts of the content or comments from others. Finally, 2 comments express disgust, indicating negative emotions towards certain content or comments.

4 DISCUSSION

Table 5. Combination of the top three themes of Instagram comments @tentanganakofficial 14 May –22 June 2023.

Rank	Dimension of Interactivity	Message Relatedness	Response	Reactance	Σ
1.	Sense of Presence	Linear	Personal Experience	Happiness	92
2.	Connectedness	Linear	Insight and Information	Happiness	63
3.	Connectedness	Linear	Insight and Information	Fear	49

Source: Researcher (2023).

Based on the text you provided, your academic paper discusses an analysis of data from the Instagram account @tentanganakofficial during November 2022. The main focus of the content on this account is on educating the audience about children's health, growth, and psychological aspects. In Table 5, the first rank in the dimension of interactivity for this theme is at the third level out of four levels. This indicates that netizens interacting with @tentanganakofficial want to create a strong sense of presence and contribute to a supportive online community in the comment section. This is further supported by the responses, which are at the second level, where netizens share personal experiences related to the discussed topics and convey these experiences with a happy emotion. This indicates that the audience feels validated in their parenting practices when relevant content aligns with their own experiences.

The paper contrasts these findings with the opinions of Nego & Mondolu, who argue that parenting styles should be based on various factors, including personality, needs, child development stage, and cultural and religious values (Nego and Mondolu 2020). Furthermore, not all social media accounts, like @tentanganakofficial, provide information curated by doctors and child psychologists. Social media platforms can sometimes promote unrealistic or harmful parenting practices, so it's important for netizens to approach social media content critically and consult trusted experts or professionals (Wijanarko and Afrianto 2020). In the end, parents should prioritize their children's well-being and seek resources and support that align with their family values and goals (Isnaini 2019).

The second rank explores the dimension of interactivity in the second theme, which is at the second level out of four levels. This indicates that netizens interacting with the account desire to connect with other netizens. This is reinforced by the responses at the first level, where netizens share insights and information, help correct inaccurate statements about parenting topics, and ask questions related to parenting. These interactions are accompanied by happy emotions, which signifies that the close relationship between netizens is built on the shared experiences of raising their children.

Additionally, the paper mentions research on parenting in challenging circumstances, such as when children face health threats. Sharing parenting experiences can create stronger bonds and support among netizens who are parents. The study highlights the importance of

support systems and facilities, including digital environments, in parenting research (Jasem *et al.* 2023).

Another study focuses on an interdisciplinary family intervention program for parents of children with disabilities 2. This program emphasizes the partnership between families and professionals, acknowledging their mutual resources and competencies. Through this partnership, families and professionals can adapt and modify their experiences. The study highlights the importance of a close relationship between research and clinical practice in developing family intervention practices.

Another study with a family intervention program in the context of parents of children with disabilities states that through this partnership, families and professionals can adapt and modify their experiences. The Instagram account @tentanganakofficial, developed by doctors and child psychologists, indicates the desire of netizens to share their experiences and communicate with experts (Pelchat 2010).

The third rank presents a theme that bears similarities to the second theme. The dimension of interactivity for this theme is also at the second level out of four levels, indicating the netizens' desire to connect with each other. This is supported by the responses at the first level, where netizens provide insights, correct misconceptions, and ask relevant questions related to parenting. However, these interactions are accompanied by fear emotions, stemming from educational content that poses health threats or risks to their children. Some comments express fear through questions, anger towards opinions that do not align with their child's safety, and insights related to opinions opposing polio vaccinations.

The paper emphasizes the importance of validating the fears and concerns of parents about their children's safety. Creating a safe space for open communication can help address these fears (Watson *et al.* 2021).

In the context of the theories used, Instagram functions as a communication platform that enables interactions, emotions, and interactivity between @tentanganakofficial and its audience. The content provided offers added value by providing valuable and in-depth information related to parenting.

5 CONCLUSION

This study found that netizens have a strong sense of presence and are eager to share personal experiences related to the discussed topics. They convey this information with a happy tone, and the audience appears willing to connect and share insights and information relevant to the subject matter, also in a joyful tone. However, it was also observed that 11.31% of netizens express worry and engage in discussions with a fearful tone. This was due to the data collection period coinciding with the emergence of cases concerning the dangers of arsenic in rice and the re-emergence of polio in Indonesia after being polio-free since 2014, which posed threats to the health and even lives of their children. Consequently, netizens expressed concerns about the possibility of these issues affecting their families.

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Modern Teba as an organic waste management system in Cemenggaon traditional village, Sukawati district in supporting the implementation of zero waste

Desak Made Trisna Juliantari Dewi, Nyoman Diah Utari Dewi & Ida Ayu Putu Sri Widnyani

Master of Public Administration, Postgraduate Program, Ngurah Rai University

ABSTRACT: Waste is a crucial problem to be addressed immediately. Landfill if left unchecked will have an impact on the health, environmental, and even socio-economic sectors. Waste management needs to be done from each household. Household waste is among the most sources of waste produced. The need for a household waste management system so as not to pollute the environment. The system that can be done for organic waste management is Teba Modern. Teba Modern is an innovation in processing organic waste by making biopore holes as a garbage reservoir so that later it can be decomposed by micro-organisms in the soil. The purpose of this study is to provide knowledge related to the application of Modern Teba in Cemenggaon Village, Sukawati District as an organic waste management system towards zero waste. The research method used is a qualitative descriptive method with data collection techniques through observation, interviews and literature studies. The result of this research is the application of Modern Teba in Cemenggaon Traditional Village, Sukawati District, has been carried out in each household with the manufacture of 2 Modern Teba in each house and now there are 350 units of Modern Teba in Cemenggaon Traditional Village. Because of this success, Cemenggaon Traditional Village was able to reduce the amount of waste to landfill and received awards from the Minister of Home Affairs and MURI Records.

Keywords: garbage, modern teba, zero waste

1 INTRODUCTION

The waste problem is not a new phenomenon found in Indonesia, especially on the island of Bali. Although Bali Province is one of the tourist destinations visited by many tourists both domestic and foreign, this is actually one of the drivers of the large amount of waste production produced every day due to the high consumption activities of the community and tourists. Based on data from the Ministry of Environment and Forestry (KLHK), Bali Province throughout 2021 produced 915.5 thousand tons of landfill. The amount of waste produced makes Bali Province the 8th largest waste producer in Indonesia. The resulting landfill is produced by districts / cities in Bali Province, with the following details:

With the amount of waste produced in each district / city in Bali Province, it certainly affects the existing environmental and community work systems. Landfills that overflow will affect other environmental problems such as floods, river and sea pollution, soil pollution, and air pollution. This will also have an impact on public health because it can cause diseases

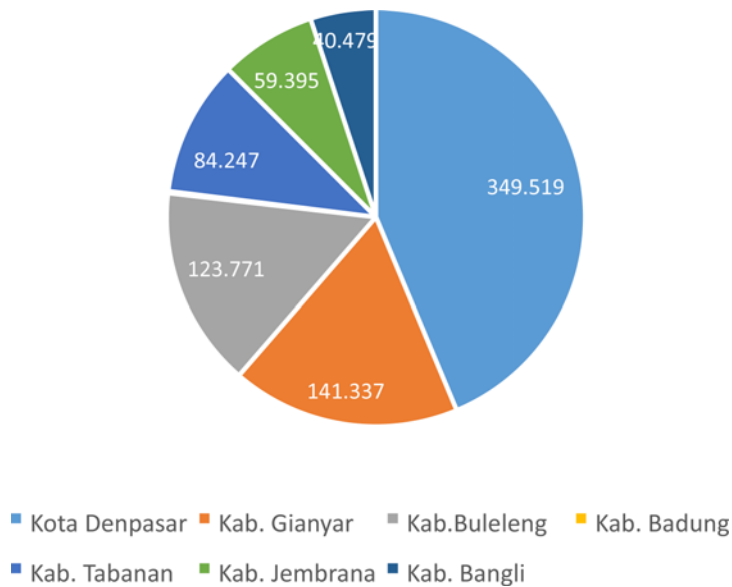


Figure 1. Waste production data per regency/city in Bali province.
 Source. Katadata media network.

such as muntaber, diarrhea, skin diseases and others. In addition to environmental and health problems, waste also has an impact on social and economic conditions because if not addressed it can cause unexpected costs such as medical costs caused by viruses or bacteria derived from the waste. The importance of waste management is one of the government's concerns to minimize the problems that can be caused. As a tourism area, this waste is one of the problems that must be handled with full attention by the Bali Provincial government. This is not only because waste will have an impact on the environment, but also because tourist destinations in Bali Province mostly rely on their natural potential so that if waste management is not taken into account it can cause pollution in many existing tourist destinations. Because of the importance of nature as one of the tourism supports in Bali, efforts are needed to deal with the waste problem. The government has long promoted waste management policies in order to reduce waste in the community. The application of the 3R method (reduce, reuse, recycle) is one of the efforts in good waste management. To support the 3R (reduce, reuse, recycle) method, the government also provides TPS3R technology, namely the Reduce, Reuse, Recycle Waste Management Site which is a waste management system with innovative waste shredding and compost sieving technology that is effective and efficient.

The Bali Provincial Government in supporting and implementing the 3R method (reduce, reuse, and recycle) issued a policy banning single-use plastic bags, plastic straws, and plastic polystyrene through Bali Provincial Governor Regulation Number 97 of 2018 concerning Restrictions on the Generation of Single-Use Plastic Waste which began to be implemented on July 1, 2019. This policy of limiting the generation of single-use plastic waste is not without reason, this is because according to Katadata Media Network in 2021, plastic waste is the second largest type of waste, which has a percentage of 18.25%. This plastic waste restriction policy is also directly implemented in all regencies/cities in Bali Province with the use of shopping bags required in shopping areas. Although the use of single-use plastics has been disciplined since the issuance of this regional regulation, since the emergence of Covid19 in Indonesia, especially Bali, people have increasingly massively used plastic waste.

In addition to plastic waste, the use of Styrofoam is also increasing because it is considered more practical to pack food ordered through online applications. When viewed in the field, the current condition is that supermarkets and supermarkets are still disciplined not to use single-use plastic, but traders such as small stalls and market traders still use single-use plastic. This condition makes it sad because the government has implemented policies for waste management, but the community is not disciplined in implementing these policies. Landfill in Bali Province when viewed from the source mostly comes from household activities with a percentage reaching 40.58%. Followed by waste from business activities by 18.22% and the market by 17%. This large percentage is due to the lack of waste management in households. It is undeniable that currently there is still very little waste sorting carried out from the smallest unit in the community, namely households. In fact, according to Law Number 18 of 2008 concerning Waste Management, it is stated that one of the waste that must be managed is household waste. Household waste management consists of waste reduction and waste handling.

However, the reality is that now there are not many people, especially in their respective households, who carry out waste management through waste reduction and handling. Actually, one of the efforts that can be done for waste management in households is to sort waste. Waste sorting that can be done is to group waste into three categories, namely organic waste, inorganic waste, and residual waste. Organic waste can be processed into compost which can later be used to fertilize plants. Inorganic waste can be sold to the Waste Bank available in the neighborhood. Residual waste that cannot be managed by yourself at home can be channeled to landfill. Waste sorting carried out in households has a major impact in reducing waste brought to landfill so as to reduce landfill.

Cemenggaon Traditional Village is one of the banjars or traditional villages located in the Perbekelan area of Celuk Village located in Sukawati District, Gianyar Regency. Cemenggaon Traditional Village is one of the traditional villages that has more attention in the field of waste management. In this Customary Village, the community is required to sort waste ranging from organic, non-organic, and residual waste. This waste management is carried out because the community is concerned about seeing worsening environmental conditions. From this concern emerged innovations made in efforts to handle waste so that it can be useful again for the community and not pollute the environment worse.

Teba Modern is an innovation carried out by Cemenggaon Traditional Village which is transformed into a place for organic waste management in homes. Teba Modern was initiated by Mr. I Wayan Balik Mustiana as one of the people who feel concerned about the current environmental conditions. Teba Modern is a step to provide a place in the form of a yard behind the house which is transformed into a place to process organic waste into compost. In the history of Balinese people, teba is a kind of yard that must be owned by every house as a place to plant plants that are beneficial to the family. A long time ago before the advent of plastic, household waste was directly thrown into teba which could be directly used as fertilizer for plants grown in the house. As the times go by, the existence of teba is increasingly eroded and began to be eliminated by the community, so that there are few green fields in each household. Because of the erosion of the existence of teba, Mr. I Wayan Balik Mustiana innovated to restore the position of teba as before. Teba Modern is a hole made as a shelter for organic waste resulting from the waste of each household. This hole is made in all houses in Cemenggaon Traditional Village as their personal waste management site. Teba Modern is one of the efforts of the Cemenggaon Traditional Village community in implementing zero waste.

Zero Waste according to Zero Waste Indonesia is a philosophy that is used as a lifestyle to encourage people to be wise in consuming and maximizing the life cycle of existing resources so that used products can be reused. Zero waste is a lifestyle that minimizes the use of disposable objects to raise awareness about its dangers in the future. According to the Zero Waste International Alliance, zero waste is the conservation of all resources by means of production, consumption, reuse and recovery of products, packaging without burning and

without disposal into water, soil, or air that can threaten the environment or human health itself. In simple terms, zero waste can be interpreted as a movement not to produce waste by reducing needs, recycling, even making compost itself. Zero waste uses the principles that gave birth to the 5R method, namely Refuse, Reuse, Reduce, Recycle, and Repair.

Based on this, researchers are interested in researching Modern Teba which is used as an organic waste management system in Cemenggaon Traditional Village, Sukawati District, in supporting the implementation of zero waste. This research aims to provide knowledge related to the application of Modern Teba in Cemenggaon Village, Sukawati District as an organic waste management system towards zero waste.

1.1 Literature review

Research that discusses the processing of organic waste has been carried out by several previous studies. Research on organic waste processing is to analyze the application of organic waste processing in an area, as well as provide knowledge to the public about organic waste processing technology so that it can be used and utilized as useful goods. From the literature study that researchers conducted, it can be seen that research on waste processing is carried out with various different methods and approaches. The difference between this study and previous studies lies in the way of management, methods and theories used.

Table 1. Review of past research.

Previous Research	Metode	Research Results
Design and Build Contemporary Teba in Penebel Village, Penebel District, Tabanan Regency (I Made Pinka Dwipayana <i>et al.</i> 2022)	The method of analyzing the situation of the community is carried out by observing the location that is used as a pilot project for making contemporary teba. Furthermore, making a design build from modern teba, continued with the physical development of contemporary teba and ended with socialization to residents related to the function of contemporary teba.	Teba is now an alternative to organic waste management, so that people know how to process organic waste in their homes. After the socialization was carried out, the community knew how to use the backyard for processing organic waste and making it compost.
Application of Zero Waste-Based Organic Waste Treatment Technology with Economic Value in West Sumatra (Deni Novia <i>et al.</i> 2022)	The main methods of implementation: (1) Counseling, socialization (2) Training to model (3) Assistance as an aspect of controlling the implementation of activities (4) Business consulting to increase the selling value of the products produced and expand marketing.	The study concluded : (1) Partners need assistance to solve waste problems in each household. (2) The zero waste assistance webinar activity was carried out with the zoom application on September 20, 2021 which was attended by speakers and practitioners on the topic of eco enzyme and local microorganism (MOL) (3) Participants were impressed and asked for a follow-up from the webinar (4) Eco enzyme, MOL, and compost training activities were held on October 4, 2021 offline and a visit to Minagot on October 9, 2021

(continued)

Table 1. Continued

Previous Research	Metode	Research Results
Application of Organic Waste Treatment Technology with Contemporary Teba in Preserving Nature (I Wayan Dikse Pancane <i>et al.</i> 2023)	Community service activities with data collection techniques through observation and interviews, as well as obtaining data from books, research journals, official websites, and news articles. The stages carried out are: (1) Observation (2) Implementation	The result of this study is to increase the awareness of Penebel Village residents in preserving the natural environment by processing waste. The results of making contemporary teba are one of the efforts to minimize the impact of environmental pollution that occurs by managing waste to improve the efficiency of environmental management.
Processing Organic Waste into Compost to Support Pro-Climate Villages (Normela Rachmawati <i>et al.</i> 2019)	The method of devotion is applied in several stages: (1) Early socialization (2) Training on making compost from household organic waste. (3) Composting activities (4) Mentoring (5) Monitoring and evaluation	Results obtained from this study: (1) Socialization and counseling The target attendance is 100% and their previous knowledge is very minimal, so this counseling material is very well understood and shows the success of the activity. (1) Training The training activities went smoothly. Participants master almost 80% of the skills provided. (1) Mentoring The mentoring activity went smoothly, every week the service team helped participants check the composting process by flipping the litter and giving water if it felt dry. (1) Monitoring and evaluation There is an increase in public awareness in waste disposal and management.
Training and Counseling on Zero Waste-Based Organic and Inorganic Waste Treatment (Chika Raichany Tama <i>et al.</i> 2023)	The methods applied are: (1) Community education (2) Training	This research produces stages of activities carried out by the community, such as: (1) Socialization activities on how to sort organic and inorganic waste were carried out on February 20, 2022 (2) Eco enzymes and ecobricking training and practices were held on February 27, 2022 (3) Evaluation and monitoring of eco enzymes and ecobricks was carried out on March 3, 2022.

1.2 *Theoretical foundation*

1.2.1 *Garbage*

Garbage is solid or semi-solid waste or discharges that are byproducts of the life cycle of humans, animals or plants. According to Law No. 18 of 2008, waste is the rest of human daily activities and/or natural processes in solid form. Specific waste is waste that due to its nature, concentration, and/or volume requires special management. According to PP No. 81 of 2012, household waste is waste originating from daily activities in the household that does not include feces and specific waste. Based on several definitions of waste, it can be concluded that waste is waste material created from the results of human, animal and plant activities that can no longer be used and if left unchecked can affect the environment. Litter can be distinguished from its types, namely:

- (a) **Organic waste**
Organic waste is waste derived from biological materials that can be decomposed by microorganisms through natural processes.
- (b) **Inorganic waste**
Inorganic waste is waste produced from non-biological materials. Inorganic waste cannot be decomposed directly by microorganisms so that the processing stage is needed from humans.
- (c) **Hazardous and toxic waste (B3)**
This type of waste is a waste that is dangerous to humans, animals and the environment. Sampah
- (d) **Paper**
Paper waste is waste that is specially sorted because it is useful to facilitate the paper recycling process.
- (e) **Residual litter**
Residual waste is waste that cannot be processed by households themselves so it must be taken to the landfill.

1.2.2 *Zero waste*

Zero waste is a lifestyle associated with the application of minimal life and even zero waste. Zero waste thinking is the application of waste processing systems and technologies based on individual scale and regional scale in an integrated manner with the aim of reducing the volume of waste to a minimum. The implementation of zero waste means eliminating all waste disposal into land, water and air that poses a threat to the environment. The principles of zero waste consist of the 5Rs, namely:

- (a) **Refuse**
Refuse means refusing and avoiding the use of products that can potentially become waste.
- (b) **Reduce**
Reduce means efforts made with the aim of reducing the amount of product waste or goods that have the potential to become waste.
- (c) **Reuse**
Reuse is an attitude that has reused items that can be used repeatedly rather than disposable items with the same function.
- (d) **Recycle**
Recycle is an effort made to reuse the waste that has been generated so that it becomes an item that can be useful so that it does not pollute the environment.
- (e) **Rot**
Rot is an activity that aims to make organic waste into compost. After sorting, then this stage can be carried out.

The benefits of implementing zero waste are:

- (1) Save money
With the implementation of zero waste, individuals will reduce the frequency of purchasing products and prioritize making their own goods.
- (2) Focus on durable products
The implementation of zero waste makes individuals focus on changing when it comes to shopping. In shopping unconsciously we will immediately choose items that have a longer service life or are durable, so this will have an impact on saving expenses.
- (3) No leftovers
The implementation of zero waste makes no more food waste wasted in the household.
- (4) Improves health and weight loss
By buying enough food, the type of food purchased will not be arbitrary and pay more attention to the nutritional value in each type of food.
- (5) Support efforts to overcome global warming
By implementing zero waste, society helps reduce the impact of global warming. According to the Environmental Protection Agency in the United States, fast food contributes 42% to the total greenhouse gas emissions in the world.
- (6) Increase creativity
Applying several zero waste principles, namely reuse and recycle, makes individuals hone their skills in processing inorganic waste into new products that are useful and have selling value.
- (7) Have better planning skills
The implementation of zero waste is one way to hone planning and managerial skills in managing family needs.

1.2.3 *Teba modern*

Modern teba is one of the innovations used in organic waste management. Modern teba is a tool or place that is used as a container for processing organic waste into compost. Modern Teba actually adapts the garbage disposal system from antiquity by the ancestors of the Balinese people. Teba is defined as a large hole dug from the ground for garbage collection, which in ancient times was usually in the backyard of each house. In ancient times, if the garbage in the pit was full, then the community would dig the hole back for garbage disposal. So it can be concluded that in a community yard, there is not only one hole / teba but there are several teba that are used as organic waste shelters. Because this continues to be done by the community in the past, it is not surprising that the lands in Bali have a high fertility rate and are good in agriculture and plantations. This is caused by the management of organic waste that is directly processed into compost with the help of microorganisms naturally without the need to involve chemicals.

Over time, this teba tradition began to be abandoned by the community. In addition to the increasingly dense population, causing the land and houses of residents to be narrower, other causes also come from the rarity of houses that have large yards. This causes a lack of community space in processing organic waste from their households.

This modern Teba is present as one of the innovations in organic waste management that can be done in each house even with narrow land. The thing that must be done in making Modern Teba is to make biopore holes with a depth that can be adjusted to the needs and availability of land in each house. The size recommended by the Teba Modern initiator is the size of a hole with a diameter of 80cm with a depth of 2 to 3 meters. So that the hole is strong and the soil is not eroded by water when it rains, a concrete buis is needed complete with a modified cover. The concrete lid is attached with a rope so that it can be opened and closed to enter organic waste and collect waste if it has become compost.

Later as much as 60–70% of organic waste in the form of food waste, vegetables, rotten fruit can be put into the Teba Modern pit so that it can be decomposed into compost. This

Modern Teba utilizes bacteria to speed up the decomposition of waste that is inserted into the hole. The determination of the depth size of the Modern Teba hole is not without reason but if the hole is made deeper than that, it is feared that microbes cannot live in the soil so that the process of decomposition and destruction of waste cannot run optimally.

The benefit of applying Modern Teba is that organic waste collected in the pit can be harvested for 6 months to 1 year depending on the size of the hole diameter and depth. From these harvests, organic waste that has turned into compost can be used alone or sold. In addition, if the seasonal conditions change to the rainy season and there is continuous rain, then there is no need to worry about waterlogging because the biopore hole used as Modern Teba will directly absorb the water so that water will enter the soil and can become a water reserve in the ground. This water can also help moisten the soil temperature so that waste-decomposing microorganisms can continue to live.

2 RESEARCH METHODS

This research is a descriptive research using a qualitative approach. Descriptive research is a problem formulation that guides researchers in exploring the social situation under study more deeply and thoroughly. A qualitative approach is a research procedure that produces descriptive explanations of data obtained from words, writing, and oral behavior of the people observed. The use of this type of descriptive research with a qualitative approach is intended because this researcher describes the situation being observed in the field in more depth, specific, and transparent based on existing conditions. This research was conducted in Cemenggaon Traditional Village, Sukawati District. The choice of this location is because Cemenggaon Traditional Village is the pioneer of the implementation of Modern Teba and in each house the community already has approximately 1–2 Modern Teba so researchers are interested in seeing the application of Modern Teba as an effort to support the zero waste management movement. The type of data used is qualitative data because qualitative data is data that approaches or characterizes a phenomenon. The data sources used in this study came from two sources, namely primary data sources and secondary data sources. Primary data sources are resources obtained directly from the original source. In this study, researchers went directly to the field to obtain data from resource persons. Secondary data sources are resources obtained indirectly, can be through media in the form of evidence, records, and official documents related to the object of research. Data collection in this study will be carried out on July 17-July 26, 2023.

The data collection method is carried out through observation, interviews, and literature studies. Observation is a systematic observation of symptoms in the object of study. In this study, researchers made direct observations with data to Cemenggaon Traditional Village, Sukawati District, to see the application of Modern Teba in the village environment. An interview is a conversation conducted to exchange information with the aim of obtaining the information needed. The researcher conducted a direct interview with Mr. I Wayan Balik Mustiana as the originator of Modern Teba innovation in Cemenggaon Traditional Village. Literature Study is a collection of data carried out by looking for references that are relevant to the problem under study. This research took data sources from the internet in the form of journals and news. The data analysis technique used in this study is the analysis model from Miles and Huberman. Dalan Satori and Komariah (2014: 247) mentioned that the analysis model of Miles and Huberman consists of:

(1) Data reduction

Reducing data means selecting and sorting and summarizing the main things that are important points needed in research. The reduced data can provide a clearer picture so that it can make it easier for researchers to collect data and can be easily searched when data is needed.

(2) Data presentation

The presentation of data is intended to make it easier for researchers to understand what happened, as well as to plan the next research steps based on what has been understood from the data obtained. The data obtained are collected and conclusions are made so that they can be narrated and easily understood.

(3) Conclusion drawing

The conclusion is an unprecedented new finding. The resulting findings can be in the form of a description or description of the object of research that was previously still dimly lit and after that the red thread of the research is visible. Any data that supports the results of the research must be clarified back to the informant. If the results are found that are not in accordance with conditions in the field, then data collection must be ready to stop. The initial hypothesis in the study may change if later different findings are found in the field. The data obtained in the study will strengthen or change the hypothesis submitted by the author. But if the findings in the field are in accordance with the initial hypothesis put forward by the author, then the resulting conclusion is a credible conclusion.

3 RESEARCH AND DISCUSSION RESULTS OVERVIEW OF CEMENGGAON TRADITIONAL VILLAGE

Banjar or Cemenggaon Traditional Village in history was a residential area inhabited by the Arya Cameng family. But a long time ago for some reason they moved to the Peguyangan area, Badung Regency. This abandoned area was then named Cemenggaon which in Balinese “Cameng” means the name of Arya Cameng and “Mekaon” which means to move. Banjar or Cemenggaon Traditional Village is a coercion area from Guwang Village around the 1960s. Banjar or Cemenggaon Traditional Village consists of the tasks of the tempekan area, namely:

- (1) Tempekan Mengaling
- (2) Tempekan Tangluk Mas
- (3) Tempekan Cakra

In Cemenggaon Traditional Village, a maestro was born who was very engaged in translating Wariga Literature which was then printed into the calendar which is currently known as the Balinese Calendar. The Balinese calendar is not only a series of numbers that show time shifts, but in the calendar there are a number of ceremonies in temples, Hindu holy days, both bad time, and important notes related to Balinese Hindu traditions. This elaborate calendar is the intellectual work of I Ketut Bambang Gde Rawi which was first printed in the 1950s.

3.1 *Application of modern Teba in Cemenggaon Traditional village*

Source-based waste management organized by Cemenggaon Traditional Village combines the local wisdom of Indigenous Village and Hindu philosophy, namely Tri Hita Karana. Tri Hita Karana are the three causes of happiness. In Hinduism, the concept of Tri Hita Karana consists of:

- (1) Parahyangan
The harmonious relationship between humans and their creator, Ida Sang Hyang Widhi Wasa,
- (2) Pawongan
The harmonious relationship of man with other human beings.
- (3) Palemahan
The harmonious relationship between humans and their natural environment.

The concept of Tri Hita Karana has been applied from the ancestors of the Balinese people. The application of this concept aims to maintain a harmonious relationship between humans and their creators, with others, and with their environment. This is the guideline for Balinese people to always have peace of mind and happiness.

The pattern of implementing the integration of Indigenous Villages and the Tri Hita Karana Concept held in Cemenggaon Traditional Village is poured into Perarem or decisions produced through paruman or traditional meetings. This pattern is implemented through the Pede Message Pattern (Rural Independent Waste Management) which began to be held in 2020 and was inaugurated by the Regent of Gianyar in 2021.

Pede's message is a pattern implemented by managing organic and inorganic waste through sorting waste in each household. The types of waste sorting carried out by Cemenggaon Traditional Village are sorting based on the type of waste and where it should be allocated. Cemenggaon Traditional Village allocates its organic waste to be processed directly in their respective homes by putting the waste into a hole called Teba Modern. For the allocation of inorganic waste, the community allocates it to the existing Waste Bank in Banjar or Cemenggaon Traditional Village which is also named the Sami Asri Waste Bank. Both types of waste can be channeled to the right processing container in order to reduce the accumulation of waste in the household. The remaining waste that cannot be processed by the community is diverted to the landfill (Landfill). Examples of waste distributed to landfill are residual waste such as sanitary pads and used diapers.

The organic waste processing system in Cemenggaon Traditional Village has attracted so much attention because of its innovation that combines traditional traditions and the philosophy of harmony of life applied by Hinduism. Modern Teba is a tool or place that is used as a container for processing organic waste into compost. Teba Modern adopts a garbage disposal system in the ancient Balinese Ancestral era which disposed of organic waste into its yard. Teba Modern is a hole measuring 80cm in diameter with a depth of 2 to 3 meters with a simple modification concept. To strengthen the top of the hole, a concrete buis is added which is also equipped with a modified cover with the addition of a rope to make it easier to open the hole lid.



Figure 2. Modern Teba Replica.
Source. Researcher documentation, 2023.

Through the application of Teba Modern, the people of Cemenggaon Traditional Village have the awareness to process organic waste from their own household activities at home and later can be used as compost for plant fertility or can be sold and produce economic

value. Each house in Cemenggaon Traditional Village currently has approximately 1 to 2 biopore holes called Teba Modern as organic waste processing holes. As of 2021, the number of Teba Modern units that have been installed is 350 units in all residents' homes. With a total of 120 Heads of Families, each house already has 2 Modern Teba placed both inside the yard and outside the yard. Placement inside and outside the yard is not a problem because this type of Modern Teba is a hole that is designed simply with modifications according to the needs and availability of the owner's land.

Through the implementation of Teba Modern, the people of Cemenggaon Traditional Village no longer distribute their organic waste to the existing landfill. Coupled with the availability of waste banks that can accommodate their inorganic waste and can be exchanged into savings or useful goods. Through the implementation of this pattern, the people of Cemenggaon Traditional Village have succeeded in reducing their waste by 1.2 tons per day to the Temesi landfill. All organic and inorganic waste has been allocated to their respective processing sites. Only residual waste is distributed to the landfill and even then it is only transported 1 time a week by pickup car.

The large-scale and significant waste reduction that continues to be carried out by Cemenggaon Traditional Village and its organic waste management that has received the attention of many parties has made Cemenggaon Traditional Village get various appreciations and awards from various parties. One of them is the award from MURI for its record as an Indigenous Village in Source-Based Waste Management with the Pesan-Pede System (Rural Independent Waste Management). This award was given in December 2022. In addition, Cemenggaon Traditional Village also received an award from the Minister of Home Affairs for its achievements in source-based waste management "Zero Waste Village" which was given directly by the Minister of Home Affairs Muhammad Tito Karnavian in April 2022.



Figure 3. MURI's record as an Indigenous village in source-based waste management with the Pesan-Pede system (rural independent waste management).
Source. Researcher documentation, 2023.



Figure 4. Modern teba in cemenggaon traditional village environment.
Source. Researcher documentation, 2023.

4 CONCLUSION

Teba Modern is an innovative program in handling and processing organic waste originating from households. The implementation of Modern Teba in Cemenggaon Traditional Village, Sukawati District, has been carried out by every existing Family Head with a total of 350 Modern Teba units. This number also shows that 120 families in Cemenggaon Traditional

Village have provided 2 Modern Teba each in their respective homes. Based on the findings, Teba Modern is one of the factors that encourage the reduction of waste disposal from Cemenggaon Traditional Village to Temesi Landfill. This significant decrease in the amount shows how effective this organic waste treatment system is. The success of Teba Modern also received a lot of public attention with the acquisition of awards from the Minister of Home Affairs and MURI's Record as an Indigenous Village in Resource-Based Waste Management of the Message-Pede System.

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Analysis of service quality, price and promotion with social media on customer satisfaction

Adi Teguh Suprpto, Agung Sudjatmoko, Anton Tanuwijaya Hilman & Paquita Zamira Irwandy

Management Program, Management Study Program, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia

Tata Qurrota Ayun, Yulhendri & Delvia Safitri

Education in Economics, Padang State University, West Sumatra, Indonesia

ABSTRACT: Technology that is increasing in the field of education has resulted in many emerging learning media that can be done remotely, such as the Bahaso application. Bahaso is a company engaged in Online Learning that offers foreign language learning services through applications. This study analyzes Service Quality, Price and Promotion through social media on consumer satisfaction in Bahaso application users. This study uses a quantitative approach. This data was obtained through a questionnaire to 176 respondents using the Purposive Sampling method for users of the Bahaso application who have used the application and are at least 14 years old. The analysis technique used in this study uses the Smartpls software version 3.37. The results of this study indicate that Service Quality has a positive and significant effect on Consumer Satisfaction, Price has a positive and significant impact on Consumer Satisfaction, and Promotion has a positive and significant effect on Consumer Satisfaction.

1 INTRODUCTION

Development of the times that occurs at this time with the rapid advancement of information technology, consumers are increasingly easy to carry out various activities to fulfill their needs. The presence of this technology has a significant impact on smartphone users [1]. The development of smartphone technology has an impact on increasing productivity, efficiency, effectiveness, and performance for users [1]. Based on the above conditions, technology is one of the driving factors for accelerating economic growth and cultural change. Technology is a tool humans create that facilitates human work [2]. The dynamics of community life in the economic, social and cultural fields have changed. This dynamic is supported by proliferating technology, including information technology [3]. Information technology is not only computer technology but also software and hardware that can process, process, and store information [3,4]. This includes information technology which functions as a tool that helps communication between everyone, including business people. Information technology helps solve problems related to communication. Communication is a science to make it easier to solve problems or efforts to achieve a standard view between individuals or groups. Information technology that develops towards digital technology can help consumers more easily meet their needs [5].

The community can utilize the use of information technology that is currently developing to improve the quality of learning, work effectiveness, get information, and increase

productivity [6,7]. Information technology in education has changed the learning system from offline to online. Online learning can be more effective and efficient because students can learn anytime and anywhere [8]. The Bahaso application that has been developed is widely used by students and the general public in Indonesia. The Bahaso application has complete learning facilities such as General English, Bahaso Talk, and TOEFL / ELTS Preparation, arranged online and user-friendly [9].

Everyone using only a smartphone can quickly communicate in this digital age. With smartphones, users can find information and communicate efficiently. Further development of digital technology in smartphones is equipped with various applications, including learning applications [10]. Based on data from Data Reports, there are 274.9 million people in Indonesia. Then there are as many as 345.3 cellular connection users. Then there are 202.6 million people who actively use the internet, and as many as 170 million actively use social media. Therefore, Indonesians will more often use information searches through social media. Using a smartphone is not only used for unimportant things but can be used as an information and communication tool, which is helpful in the world of education.

The Bahaso application is a free application found on cell phones to learn English which has a level of learning. With the English learning application, consumers can quickly get materials for learning English [11]. Based on data on program users in Bahaso from January 1, 2019, to December 30, 2021, the most active users are in the General English program with 51,552 active users, and the second is the Quiz program which is a type of free program in the Bahaso application to train the skills of Bahaso application users. As of December 2021, the number of active users of the Bahaso application is 96,189 users. Users expect everything they want from the service provider/provider. Therefore, the company wants a different quality of service from applications in general.

User satisfaction is the leading indicator of the standard of a facility provided to users as a benchmark in the services provided [15–17]. User or consumer satisfaction can be achieved through the best performance in providing services; the best service occurs if the company can maintain or improve the quality of services or services provided to users or consumers [18]. Therefore, companies must pay attention to what users or consumers need. To achieve maximum user satisfaction. So, the authors are interested in using the Servqual method to improve service quality at PT Bahaso Intermedia Cakrawala. This method can analyze the level of user satisfaction, improve service quality in the service sector, and reduce user dissatisfaction. The Servqual method only requires a questionnaire as a measuring tool to analyze the level of user satisfaction. The Servqual method is a method that is often used to measure service quality using a questionnaire that has two answers on a Likert scale.

Based on the description above, from the results of research conducted on the Bahaso application, there are approximately 10 thousand users, and no one has conducted research to measure user satisfaction levels. Therefore, as researchers and writers, we want to examine the Bahaso application more deeply to provide feedback to the company concerned. Therefore the authors are interested in raising the title “Analysis of Service Quality, Price and Promotion Through Social Media on Consumer Satisfaction Case Study of PT Bahaso Intermedia Cakrawala.”

2 MATERIAL AND METHODS

In the research “Analysis of Service Quality, Price and Promotion with social media on customer satisfaction case study at PT Bahaso Intermedia Cakrawala,” the authors use a type of quantitative research with a causal associative research approach [37]. The quantitative research method is a scientific approach that aims to make a decision correctly and precisely [37]. This quantitative method is a procedure for collecting, analyzing, and

interpreting the results to receive information and conclusions and make decisions [37]. The method used in this research is a survey. The unit of analysis in this study was individuals at PT Bahaso Intermedia Cakrawala. Questionnaire data is collected once in a certain period, so the time horizon is cross-sectional. The data collection technique used by the authors in this study is the online electronic questionnaire distribution technique in the form of Google Forms. The questionnaire is a data collection technique that gives respondents a series of questions or written statements to answer. In this study, the purposive sampling technique was the technique used.

The purposive sampling technique is a nonrandom sampling technique where the person conducting the research ensures that the illustrative quote through a method to determine identity that matches the purpose of the research being carried out so that the research will respond to the case of the research. Respondents who will fill in the questionnaire data are users of the Bahaso application who have subscribed-determination of the number of samples from the population in this study using the Slovin formula. The number of samples taken for this stage was 100, obtained with an error limit of 10%. This study uses the Smart Partial Least (SmartPLS) method to analyze the data to be obtained. The research data analysis method this study applies is SEM with the SmartPLS approach using SmartPLS 3.37 software.

3 RESULTS AND DISCUSSION

Table 1. Indicators of each variable.

Variable	Indicator	Variable	Indicator	Variable	Indicator	Variable	Indicator
Quality of Service (X ₁)	Tangible	Price (X ₂)	Product quality	Promotion (X ₃)	Advertising	Customer Satisfaction (Y)	Quality of service produced
	Assurance		Level of competition		Personal Selling		Quality of service provided
	Reliability			Sales Promotion	Service price		
	Empathy			Public Relations	Ease of accessing services		
	Responsive				Direct Marketing		

Source. SmartPLS.

The results of the first data processing show that most of the indicators in each variable have a loading factor value of > 0.70 where which can be said to be valid. However, there are two indicators of Promotions that have a loading factor value < 0.70 P6 with a value of 0.645 and P8 with a value of 0.584. Then, invalid indicators will be removed from the model, and will conduct running repeat. in the first run, 2 indicators have a loading factor value < 0.70 so the indicator is said to be invalid and will be removed from the model and will be rerun. From the results of the second run, there is still 1 indicator that has a loading factor value of < 0.70 , it will be re-run on the invalid indicator and the indicator will be removed from the model. Furthermore, the results of running show that most indicators in each variable have a loading factor value of > 0.70 , so it can be said to be valid. The results of a cross-loading

show that the correlation value of the construct and the intended indicator is greater than the other constructs. So, from all existing constructs that meet good discriminant validity, it can be seen that each construct indicator value is greater than the other indicators. Then, there are results from composite reliability where each variable has met a value of > 0.70

Table 2. R-square.

	<i>R Square</i>
Y (KK)	0.824

Source. SmartPLS.

Based on the table above, it shows that consumer satisfaction is influenced by service quality, price, and promotion as much as 82.4% and the remaining 17.6% which is influenced by other factors not included in the model.

Table 3. Path coefficient.

Variable	X1 (QP)	X2 (P)	X3 (P)	Y (CS)
X1 (KP)				0.524
X2 (H)				0.120
X3 (P)				0.325
Y (KK)				

Source. SmartPLS.

Based on Table 3 shows that the path coefficient value of the variable X 1 to Y of 0.524 can be interpreted as if Y increases in one unit then X 1 can increase by 52.4 percent of customer satisfaction. The direct effect of variable X 2 on Y of 0.120 can be interpreted as if Y increases in one unit then X 2 can increase by 12.0 percent of customer satisfaction. And the direct effect of variable X 3 on Y of 0.325 can be interpreted as if Y increases in one unit then X 3 can increase by 32.5 percent of consumer satisfaction.

Table 4. Hypothesis testing.

Variable	<i>Original Sample (O)</i>	<i>Sample mean (M)</i>	<i>Standard Deviation (STDEV)</i>	<i>T-Statistics (O/STDEV)</i>	<i>P Values</i>
X1 (KP) -> Y (KK)	0.524	0.524	0.082	6.355	0.000
X2 (H) -> Y (KK)	0.120	0.129	0.060	2.010	0.045
X3 (P) -> Y (KK)	0.325	0.317	0.077	4.240	0.000

Source. SmartPLS.

There is a significant effect of Service Quality on Consumer Satisfaction with a t-statistics value of 6.355 and a p-value of 0.000. Where the value of t-statistics is more than 1.96 and the p-value <0.05. In Hypothesis 2 there is an effect of price on consumer satisfaction with a t-statistics value of 2.010 and a p-value of 0.045. Where the value of t-statistics is more than

1.96 and the p-value <0.05 . Then in Hypothesis 3, there is the effect of Promotion on Service Quality with a t-statistics value of 4.240 and a p-value of 0.000. Where the value of t-statistics is more than 1.96 and the p-value <0.05 .

3.1 *The effect of service quality on customer satisfaction*

Based on Table 4, service quality affects customer satisfaction with a t-statistics value of 6.355 and a p-value of 0.000. Where the t-statistics value is more than 1.96 and the p-value <0.05 . It can be concluded that Service Quality (X1) has a positive and significant effect on the Consumer Satisfaction variable (Y), so H_0 is rejected H_a is accepted. Service quality has a positive and significant effect on customer satisfaction, meaning that the higher the quality of service in serving sales, the higher the customer satisfaction. If the quality of service provided by PT Bahaso Intermedia Cakrawala is good and meets consumer expectations, it will lead to satisfaction. Service quality also affects customer satisfaction [2]. Service quality has a positive effect on customer satisfaction. Customer satisfaction will be created if the quality of service provided follows consumer expectations or exceeds consumer expectations. If the service received does not match or is below consumer expectations, then the service can be considered poor quality and disappointing. This is relevant to the results of research conducted by [3–5,21,38]. It is known that service quality has a positive and significant effect on customer satisfaction.

3.2 *The effect of price on customer satisfaction*

Based on Table 4, Price affects Customer Satisfaction with a t-statistics value of 2.010 and a p-value of 0.045. Where the t-statistics value is more than 1.96 and the p-value <0.05 . It can be concluded that Price (X2) positively and significantly affects the Consumer Satisfaction variable (Y), so H_0 is rejected, and H_a is accepted. Customer satisfaction is also influenced by price. Price has a positive effect on customer satisfaction [2]. Consumers often use price as an indicator of value if the price is associated with the perceived benefits of a good or service [16]. Value is the ratio between perceived usefulness and price. Suppose the company sets a price. PT Bahaso Intermedia Cakrawala needs to follow the product's benefits, so the level of customer satisfaction may decrease, and vice versa. If PT Bahaso Intermedia Cakrawala sets the price following the benefits received, it will increase customer satisfaction. So, the value will also increase if the perceived benefits increase at a certain level. The higher the value consumers perceive, the more customer satisfaction will be created. This is relevant to the results of research [26,39,40] that price has no positive and significant effect on customer satisfaction.

3.3 *The effect of promotion on customer satisfaction*

Based on Table 4, Promotion has an effect on Service Quality with a t-statistics value of 4.240 and a p-value of 0.000. Where the t-statistics value is more than 1.96 and the p-value <0.05 . It can be concluded that Promotion (X3) significantly affects the Consumer Satisfaction variable (Y), so H_0 is rejected H_a is accepted. Promotion is also one of the factors that affect customer satisfaction. The promotion has a positive effect on customer satisfaction [32]. If the advertisement provided by a company is attractive, it will lead to customer satisfaction. Vice versa, if PT. Bahaso Intermedia Cakrawala provides these advertisements. If PT Bahaso Intermedia Cakrawala does not follow what consumers expect, it will cause dissatisfaction. Customer satisfaction will be created if the Promotion follows consumer expectations or exceeds user expectations. If the Promotion is not excellent and attractive, the increase will not positively impact the company. This is relevant to the results of research conducted by [33,40–43]. It is known that Promotion has a positive and significant effect on customer satisfaction.

4 CONCLUSIONS AND SUGGESTIONS

Thus, the quality of Bahasa services can improve the application's features and maintain application security so that quality is maintained. In addition, the Bahasa application can provide prices that match the quality of the products offered so that consumers will be interested in experiencing the applications offered by the company. And it is hoped that the Bahasa application can maintain Promotion through social media and provide free trials to attract consumers.

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The effect of product quality, price, and brand image on customer loyalty of samsung smartphone in Bekasi city

Agung Sudjatmoko, Muhammad Hafiz Ridho, Teti Rohayati & Jenri M.P. Panjaitan
Management Program, Management Study Program, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia

Delvia Safitri
Education in Economics, Padang State University, West Sumatra, Indonesia

ABSTRACT: This study aims to determine the effect of product quality, price, and brand image on Samsung smartphone customer loyalty in the millennial generation in Bekasi. This research is quantitative with a purposive sampling technique, and the sample population is 100 respondents. This data collection technique is by distributing questionnaires. In this study, the population is smartphone users who have or are currently using the Samsung brand and include the millennial generation group. This research data processing using IBM SPSS version 22. The results of this study found that product quality and brand image have a significant effect on customer loyalty to Samsung smartphones. At the same time, the price does not substantially affect the commitment of Samsung smartphone customers in Bekasi.

1 INTRODUCTION

In the era of globalization, especially in the technology field, technological advances have developed, especially electronic devices that humans always use in modern times. We often encounter electronic devices: desktops, tablets, consoles, and smartphones. Based on data from Statcounter, the most electronic device users in Indonesia are smartphone devices, 68.8% [1]. Smartphones are usually used for activities, namely social needs, such as replying to messages with social media applications and communicating directly via phone calls [1]. However, with the development of high and increasing communication needs, making business in the smartphone industry is increasingly stringent, which is supported by using smartphones with the most users [1]. This is in line with the increasing needs of Indonesian people who use smartphones, making smartphone companies increasingly try to offer their products through innovations that provide more value products [2]. Based on data from Katadata. Co.id, Indonesia ranks fourth in the world in smartphone use, with as many as 170.4 million smartphone users, and this number is predicted to increase every year [2].

Smartphone companies are becoming companies that compete with each other so that their brands will always be in the minds of consumers. Because the company must maintain the brand, consumer loyalty to the brand is strengthened by the minds of consumers [3]. Various smartphone brands are made by companies that want their products to be widely known by consumers so that companies can compete in the Indonesian market and that their brands are remembered in the minds of consumers [4]. There are various smartphone brands sold in the Indonesian market, such as Samsung, Oppo, Xiaomi, Asus, Vivo, Apple, and

other brands sold in Indonesia. Based on data from Statcounter regarding the percentage of smartphone brand market share in Indonesia, Samsung got first place with 21.89%, followed by Oppo brand with 21.7%, Xiaomi with 19.92%, and Vivo with 12.87% [1]. Then based on the methodology Institute from Top Brand regarding the choice of smartphone brands in Indonesia, Samsung got first place with a percentage of 33.0%, followed by the Oppo brand with a total of 20.6%, iPhone with a total of 12.0%, Xiaomi with a total of 11.2 %, and Vivo with 9.7% [1].

From these two data sources, it can be concluded that Samsung remains in the first rank, which makes the Samsung brand the consumer's choice. The Samsung brand has quality products and varied product prices that make consumers choose Samsung products [5]. So that consumers who use the Samsung brand have loyalty to Samsung products. Samsung is also a superior brand because its products have the best technology and product durability, which makes Samsung the best quality [6]. Samsung also has official outlets that are affordable to Samsung customers, which means Samsung wants to maintain its brand image by providing services to Samsung customers [1]. Samsung products have affordable prices for all middle to upper or middle-class people, which makes them the products with the most users in Indonesia [1]. From the research results from [9], Samsung smartphones have become the brand of choice for smartphone users because these products provide more product value to consumers who are supported in terms of price and quality. This is what makes Samsung maintain customer loyalty.

Based on research conducted [7] on product quality on customer loyalty, there is a significant influence between product quality on customer loyalty because the results show that product quality affects customer attitudes to foster customer loyalty. Then based on research from [7] about price on customer loyalty, it shows that there is a significant influence between cost and customer loyalty because the price given is appropriate by the customer so that customers become loyal to the product. This means that based on the two studies and linked by research from [8], customers have loyalty to Samsung because of product quality and price, coupled with Samsung's brand image, which has been proven to be a Top Brand in Indonesia. Then based on research from [9], the brand image on customer loyalty shows a significant influence between brand image and customer loyalty, and the results show that brand image affects customers when choosing products. From the statement above, product quality, price, and brand image are essential and affect customer loyalty, which makes the variables in this study.

Based on the results of research from [9] regarding the effect of product quality on customer loyalty, it is proven that product quality significantly influences customer loyalty. Because when product quality meets qualified quality standards, appropriate specifications, and product functions that can meet customers, it can increase customer loyalty. It is then based on the results of research from [10], proving that there is a significant positive effect between product quality and customer loyalty. Because when customers have an understanding and perception of good product quality, customers can feel product quality which can increase customer loyalty.

The results of research from [11] regarding the effect of price on customer loyalty prove that there is a significant positive effect. This is because the price has an essential role in marketing strategy. If the pricing strategy is right in the market, it can give customers the ability to buy products or services. Then also, pricing must be able to make customers comfortable using the product because the price must be under the product's value. Therefore, the cost can increase customer loyalty. It is then based on the results of research from [11], proving that price has a significant positive effect on customer loyalty. This is because if the price set is affordable and commensurate with the product's value, it can increase customer loyalty. Customers are happy to buy the product repeatedly and provide recommendations to other customers to purchase the product related to the value of the product. In addition, the research results [12] prove that price has no significant effect on

customer loyalty. Because the price is not a factor in buying the product, but the quality of the product offered is as desired, the cost is less a factor in customer loyalty.

Based on the research results from [12] regarding the effect of brand image on customer loyalty, it has a positive impact because a brand image has a significant role. Also, brand image makes the difference between companies. Brand image is also used as a marketing strategy by the company so that the brand can be implanted in the minds of customers and can create customer loyalty. If customers have a good perception of the brand image, it can increase customer loyalty. It is then based on research from Al, proving that brand image significantly influences customer loyalty. Because if the customer has a good experience in terms of service quality and product quality, it can foster customer loyalty. Customers must also help and support the company to improve the quality of the product or product in the form of criticism and suggestions used by the company to describe a better brand image.

Based on the results of research from [12] regarding the effect of product quality, price, and brand image on customer loyalty, it significantly influences customer loyalty. This is because the product quality in durability has an excellent value to customers. In addition, the price is given according to the customer because there is a reasonable price. For brand image, the company has a good reputation so that customers believe in the product or service that is made so that from these results, there is a good response by customers. In this aspect, it can increase customer loyalty.

Smartphone users cannot be separated from the age of the people who use them. Smartphone users in Indonesia are between the ages of 25-34 years which is grouped by age group. That age is categorized as the millennial group [1]. The millennial generation plays an active role in using smartphones for social media purposes and is the generation with the largest population in Indonesia [13]. According to [13] millennials are born between 1981 and 1997. The millennial generation is also a generation that can adapt to technology, especially smartphones [13].

With this in mind, this research focuses on the city of Bekasi in West Java, Indonesia. The population of Bekasi City, based on [1] records that the population of Bekasi City is 2.54 million people, with a productive age in the age range of 15-64 years, as much as 72.56%. Meanwhile, based on generation groupings in Bekasi City, there are 27.67% millennials with the highest percentage compared to other generations. According to data from the National Socio-Economic Survey (Susenas) regarding the ownership of mobile phones in big cities, it was noted that mobile phone users in Bekasi City were 82% of the population, which makes mobile phone users the highest compared to other big cities [14].

Based on the descriptions above, this study will examine product quality, price, and brand image on Samsung smartphone customer loyalty. There is a conclusion that Samsung smartphones have a significant market share in Indonesia, then the Samsung brand has become Indonesia's Top Brand. Samsung smartphones are also supported by good product quality, price, and brand image, so there is an influence on customer loyalty. Based on the age of smartphone users in Indonesia is dominated by the millennial generation, including residents of Bekasi City. Therefore, whether the millennial generation in Bekasi City is Samsung users and has loyalty to Samsung. Are product quality, price, and brand image the main factors in maintaining customer loyalty, which is the purpose of this study.

2 MATERIAL AND METHODS

method of collecting data through a set of questions to find answers from respondents who are contained in the form of numbers. To process the numerical data, the method of analysis in this study is to use descriptive statistical methods. Because the data collected is data that will be presented in the form of numbers, and the data is converted into data in the form of information so that the data that has been processed can be explained briefly (Sekaran and

Bougie 2019). To find out the data that will be formed in the information, the data collection technique in this study used a survey method by distributing questionnaires in the form of questions about respondents' responses to product quality, price, brand image, and customer loyalty. The questionnaire will be distributed to the Bekasi City area with criteria for millennials and smartphone users who have or are currently using the Samsung brand as a unit of analysis. The questionnaire will contain answers using a Likert scale measured at intervals of 1-5 points, and the time of data collection in a cross-sectional manner where data are collected in a few days or months or months to answer the research [15].

In compiling this research, the population and research samples are sources of data needed through the answers from respondents to fulfill this research. The people in this study are smartphone users who have used or used the Samsung brand in the millennial generation in Bekasi City. For the research sample, the sampling technique in this study uses purposive sampling, which is a sampling technique that is limited to specific people or people who meet several criteria that have been determined by the researcher [15]. To determine the number of samples using the solving formula, the number of samples must be selected or represented to calculate the research results [16]. The sample members in this study were 100 people who represented the population to fulfill the research.

To analyze the data, perform statistical data processing using the help of IBM SPSS Statistic 22 software. In testing the data, several data testing instruments were carried out. These tests include a validity test to test whether or not a question is valid from a questionnaire distributed to respondents, a reliability test to find out how consistent the instrument is in measuring respondents' answers, and a multicollinearity test to find out whether the regression model in the data distribution has a high correlation, normality test to find out whether the tested data is typically distributed or free, and the last is heteroscedasticity test to find out whether the regression model has data variance inequality.

3 RESULTS AND DISCUSSION

Table 1. Indicators of each variable.

Variable	Indicator	Variable	Indicator	Variable	Indicator	Variable	Indicator
Product quality (X ₁)	Performance	Price (X ₂)	Price affordability	Brand Image (X ₃)	Personality	Customer loyalty (Y)	<i>Cognitive Loyalty</i>
	Feature		Price match		Identity		<i>Affective Loyalty</i>
	Suitability					<i>Conative Loyalty</i>	
	Reliability				Association	<i>Action Loyalty</i>	
	Durability				Attitude and behavior		
	Aesthetics		Price competitiveness		Benefits and Advantages		
Prespsi quality		Appropriateness of price and benefits					
Dimensions of convenience							

Source. SPSS version 22 data processing.

From Table 1 it can be explained that for the product quality variable, there are eight indicators and 16 statement items. It can be said that the results of the validity test of each question for each variable have r count $>$ from the r table. Then the question item that the examiner declared is valid. Furthermore, there are four indicators on the price variable, and there are 8 statement items. It can be said that the results of the validity test of each question for each variable have r count $>$ from the r table. Then the question item that the examiner declared is valid. There are five indicators and 10 statement items in the brand image variable. It can be said that the results of the validity test of each question for each variable have r count $>$ from the r table. Then the question item that the examiner declared is valid. In the loyalty variable, there are four indicators and 8 statement items. It can be said that the results of the validity test of each question for each variable have r count $>$ from the r table. Then the question item that the examiner declared is valid.

Table 2. Reliability test.

Variable	Items	<i>Cronbach Alpha</i>	Status
Product quality	16	0.931	Reliable
Price	8	0.916	Reliable
Brand Image	10	0.927	Reliable
Customer loyalty	8	0.940	Reliable

Source. SPSS version 22 data processing.

Table 2 explains that the variable is declared reliable if the Cronbach Alpha value is $>$ 0.7. Based on the results of the processed data in this study, it is announced reliable, so it can be concluded that all variables have high consistency.

Table 3. Normality test.

Information	Score
Total Data (N)	100
Monte Carlo Sig. (2-tailed)	0.065

Source. SPSS version 22 data processing.

Based on the results of the SPSS output from the normality test, the monte Carlo sig value of 0.065 is obtained, which is greater than the alpha value of 0.05, so it can be concluded that the residual data is typically distributed.

Table 4. Multicollinearity test.

Variable	<i>Collinearity Statistics</i>		Status
	<i>Tolerance</i>	VIF	
Product quality	0.305	3.277	Multicollinearity does not occur
Price	0.426	2.346	
Brand Image	0.299	3.339	

Source. SPSS version 22 data processing.

Based on the results of the SPSS output from the Multicollinearity Test of the product quality, price, and brand image variables, the tolerance values obtained are 0.305, 0.426, and 0.299, which are more significant than 0.10 and are supported by VIF values of 3.277, 2.346, and 3.339 which is smaller than 10, it can be concluded that there is no multicollinearity.

Table 5. Heteroscedasticity test.

Variable	Sig.	Status
Product quality	0.566	There is no heteroscedasticity
Price	0.557	
Brand Image	0.881	

Source. SPSS version 22 data processing.

Based on the results of the SPSS output from the heteroscedasticity test, the sig value obtained for the product quality variable is 0.566, the price is 0.557, and the brand image is 0.881, which is greater than the alpha value of 0.05, so it can be concluded that there is no heteroscedasticity.

Table 6. Coefficient of determination test.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.842	.709	.700	3.22128

a. Predictors: (Constant), Total CM, Total H, Total KP

Source. SPSS version 22 data processing.

Based on the results of SPSS output, the R Square value is 0.709 or equal to 70.9%. This shows that customer loyalty is influenced by product quality, price, and brand image by 70.9%, while the remaining 29.1% is influenced by other variables not examined in this study.

Table 7. Partial significance test (t-test).

Model		Coefficients				Sig.
		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	
1	(Constant)	-2.950	2.410		-1.224	.224
	Total Kp	.277	.063	.441	4.423	.000
	Total H	.044	.087	.042	.499	.619
	Total Cm	.385	.095	.410	4069	.000

A. Dependent Variable : Total Lp

Source. SPSS version 22 data processing.

Based on the results of SPSS output on the product quality variable, the sig value of 0.000 is obtained, which is smaller than the alpha value of 0.05 and is supported by the t-count value of 4.423, which is greater than the t-table value of 1.66. So it can be concluded that product quality significantly influences customer loyalty. Furthermore, on the price variable, a sig value of 0.619 is obtained, which is greater than the alpha value of 0.05 and is supported by a t-count value of 0.499, which is smaller than the t-table value of 1.66. So it can be concluded that the price does not significantly affect customer loyalty. In the brand image variable, the sig value is 0.000, which is smaller than the alpha value of 0.05 and is supported by the t-count value of 4.069, which is greater than the t-table value of 1.66. So it can be concluded that brand image has a significant influence on customer loyalty.

Table 8. Partial significance test (t-test).

		ANOVA				
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2424,679	3	808,226	77.889	.000
	Residual	996.161	96	10.377		
	Total	3420,840	99			

a. Dependent Variable : Total_LP

b. Predictors: (Constant), Total CM, Total H, Total KP

Source. SPSS version 22 data processing.

Based on the results of SPSS output, obtained a sig value of 0.000 which is smaller than the alpha value of 0.05 and is supported by a calculated F value of 77.889, which is greater than the F table value of 2.70. So it can be concluded that there is a significant simultaneous effect between the independent variables on the dependent variable.

3.1 *Effect of product quality on customer loyalty*

Based on the results of hypothesis testing, it shows that product quality partially and significantly influences customer loyalty to Samsung smartphone users in Bekasi City. These findings are in line with research by [9], where product quality significantly affects customer loyalty. The results of this study indicate that Samsung smartphones are under customer needs. Samsung smartphone customers view performance, features, reliability, durability, and repair services as good. It can be further explained that Samsung smartphones are easy to use, provide satisfaction with features that suit their needs, and can be used and function in the long term. In addition, the quality of Samsung products is under product standards and can be trusted so that customers have loyalty. Product quality may have a significant influence on customer loyalty [18]. [19], have examined the link between product quality and customer loyalty. This study found that product quality is a significant precursor of customer loyalty. Meanwhile, [20], studied the relationship between product quality and commitment. In addition, [21], also revealed that service quality has a direct and indirect positive relationship with customer loyalty.

3.2 *The effect of price on customer loyalty*

Based on the results of hypothesis testing, it shows that the price partially has no effect and is significant on customer loyalty to Samsung smartphone users in Bekasi City. These findings differ from the research conducted by [22], where price significantly affects customer loyalty. In comparison, the results of this study are in line with research by [23], where price has no significant effect on customer loyalty. The results of this study indicate that although the cost

of Samsung products is affordable, varied, and appropriate to customers, it is not a factor that influences repeat purchases. This can be seen based on the type of respondent's smartphone product, most of which is the Galaxy A type. This product's features, specifications, and functions are affordable under the set price. In addition, customers are more concerned with the quality of the products provided by Samsung. It's just that Samsung needs to fix giving customers product price discounts so they are interested in the values provided and can compete with other smartphone brands. The results of research conducted by [24], explain that price does not affect customer loyalty.

3.3 *The effect of brand image on customer loyalty*

Based on the results of hypothesis testing, it shows that brand image partially and significantly influences customer loyalty to Samsung smartphone users in Bekasi City. These findings align with research conducted by [25], where brand image significantly affects customer loyalty. The results of this study indicate that respondents are very knowledgeable about the Samsung brand in terms of logo, product type, and easy-to-remember smartphone user interface. In addition, Samsung's marketing activities facilitate the introduction of smartphone products through advertisements and stores, and customers have trusted Samsung because of the products' quality. Respondents also have a positive impression of a good and trusted company image, so they have loyalty.

Based on the results of hypothesis testing, it shows that product quality, price, and brand image simultaneously have a significant and significant effect on customer loyalty to Samsung smartphone users in Bekasi City. These findings align with research [26], where product quality, price, and brand image significantly affect customer loyalty. The results of this study indicate that the brand image variable strongly influences product quality and brand image variables. Because the brand image is an identity that is formed and remembered by consumers, Samsung smartphone customers remember the brand and also have a good impression when using Samsung products. Therefore, customers will remember the Samsung brand and affect loyalty. An empirical study proves that brand image can influence customer purchasing decisions [27]. Stated that brand image significantly affects buying behavior [28].

4 CONCLUSION

Based on the results of research and discussions that researchers have compiled, some conclusions are under the formulation of the problem in this study, namely the results of this study are product quality and brand image partially have a significant effect on customer loyalty for Samsung smartphones in Bekasi City. Meanwhile, only the price variable has no significant impact on the commitment of Samsung smartphone customers in Bekasi City. In addition, product quality, price, and brand image significantly affect customer loyalty. From this study's results, three out of four hypotheses have a significant effect, while only one theory on the price variable is not proven to have a substantial impact.

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What is the strategy in SMEs: Financial literacy, financial technology, financial inclusion on SME business performance in Malang

Erna Retno Rahadjeng, Chalimatuz Sa'diyah & Widhiyo Sudiyono
Departement of Management, Malang Muhammadiyah University, Indonesia

ABSTRACT: The purpose of this study is to determine the relationship between financial literacy, financial technology and financial inclusion in the business performance of SMEs in Malang Raya, Indonesia. The analysis in this study used bibliometrics and SEM. Where bibliometrics is used to find relationships that will later become a novelty. So fintech was found as a novelty between financial literacy and financial inclusion. The second analysis examines the influence between financial literacy, financial technology and, financial inclusion on SME business performance. The results of this study using SEM-PLS show that financial literacy has a positive and significant effect on SME business performance. Financial technology does not affect SME business performance and lastly, financial inclusion has a positive and significant effect on SME business performance.

Keywords: Financial Literacy, Financial Technology, Financial Inclusion, Business Performance, SMEs

1 INTRODUCTION

Performance is a company's effort in achieving goals that have been set and formalized. A metric is needed to measure performance such as the level of success or achievement of a business. The measurement used is *Key Performance Indicators* which include a series of business processes with realistic goals, quantitative and qualitative measurement of results, and investigation of factors that affect the objectives of the objectives to achieve the objectives Know the company's strategy. Following the company's vision and mission (Moeheriono 2014). Therefore, good performance in all fields, including finance, production, distribution and marketing, is an absolute requirement for MSMEs to continue to exist and develop and optimize the goals of all MSMEs (Septiani and Wuryani 2020). MSMEs are independent business units managed by individuals or groups that can be in the form of individual companies, partnerships, or limited liability companies. The contribution of micro, small and medium enterprises (MSMEs) in Indonesia is unquestionable. Since the economic crisis that hit Indonesia in 1998, it has been proven that the MSME sector has been able to stand alone and survive in the face of the crisis to date. The role of MSMEs is relatively important for the Indonesian economy. For MSMEs to continue to play a good role, survive and even grow, better financial literacy and understanding are needed. Mastering financial literacy and understanding enough for them will be able to help them manage their finances as efficiently and effectively as possible. (Herdjiono and Damanik 2016; Sanistasya *et al.* 2019) explained that MSME players need to know how to manage

their finances well and how to invest or technically. Malang Raya which includes Malang City, Malang Regency and Batu City is an area in East Java with a large MSME relationship. Based on existing data from the Batu City Industry, Trade and MSME Cooperative Office (Diskoperindag and MSMEs), the number of MSME players reached 28,060 business units, in 2020 there were 23,458 units. A large number of business actors is supported by data from the Central Bureau of Statistics Batu City in 2020 which shows that the business profile in Batu City tends to be dominated by micro businesses. This can be seen from the percentage of small and medium enterprises which reaches more than 95% (Diskoperdag Kota Batu 2020).

MSMEs in Malang are currently considered to be growing, but MSME players are still comfortable using cash in transactions. Financing for MSME development is also a problem that is often faced by MSMEs. Customers of MSME products also want the ease of transactions. Micro, Small and Medium Enterprises (MSMEs) in Malang City diversified from the Apparel, Food and Beverage, and Handicraft sectors after being registered as small enterprises (MSMEs) by the local government.) in Malang City, out of 70,000 MSMEs, only 30% sell online. MSMEs often face some obstacles, one of which is capital, merchandise distribution, licensing, manual bookkeeping, and online marketing.

The growth of fintech in Indonesia is in line with the increasing number of fintech companies, until now (in 2021) the number of fintech companies incorporated in AFTECH or the Association of FinTech Innovation Organizations number is officially appointed by the Financial Services Authority (OJK). Based on PJOK No.13/2018 as many as 359 companies (Fintech Indonesia 2021). The growth in the number of fintech companies is in line with the growth in the number of digital consumers. A study conducted by Facebook and Baik & Company revealed that the number of digital consumers in Indonesia is expected to grow from 119 million in 2019 to 137 million in 2020. Bank Indonesia also estimates that Cryptocurrency transaction transactions will increase 32.3% to Rp201 trillion in 2020 to Rp266 trillion in 2021 (Dakum and Asari 2020; Putri *et al.* 2021) alternatives for the community, especially during the Covid-19 pandemic, especially for small and medium enterprises. Fintech plays a very important role in the development of SMEs. Fintech provides convenience and efficiency for MSMEs in terms of technology-based financial management, such as digitizing financial reports, online payments, and lending technology. Fintech is also increasing its accessibility to new customers by expanding the market to the unbanked community with convenient and easy digital financial transaction services (Fajar and Larasati 2021; Fifaldyovan and Supriyanta 2021) Fintech's ability to transform almost any transaction and possibly Knowledge Finance. In this case, financial literacy is defined as a cognitive aspect, namely a person's knowledge and cognitive abilities about finance. Financial literacy describes a person's ability to recognize and apply concepts related to finance. According to Orton (2007), financial literacy can be a tool for making financial decisions in such a way that it becomes very important in life. The more knowledge related to finance, the better financial decisions are taken, so one's financial management behaviour will likely be more responsible. This way it will encourage individuals to be aware of their finances in the future. Therefore, the better the individual's attitude towards his finances, the better the individual's performance in carrying out financial management by linking financial inclusion with management.

Financial inclusion is an important factor in reducing economic inequality (Widayanti *et al.* 2017). Entrepreneurs still face many obstacles in the development process and even in maintaining business operations. Financial inclusion is an effort to eliminate all forms of price and non-price barriers to public access to the use of financial services (Hilmawati and Kusumaningtias 2021). Meanwhile, according to (OJK 2022), financial inclusion is the ability to access various financial institutions, products and services based on the needs and ability of the community to improve welfare. Based on research (Bongomin *et al.* 2017) there are 4 (four) measures of financial inclusion, namely: access, use, welfare, and quality.

Furthermore, OJK (20–22) outlines financial inclusion indicators, namely accessibility, availability of financial products and services, and use of financial products and services, as well as quality. Research (Ozili 2021) shows that financial inclusion variables can affect the performance of MSMEs. Financial inclusion will bring benefits to communities, helping them improve their standard of living, especially those in remote and border areas. Financial inclusion is a key factor in supporting economic growth, especially by optimizing the contribution of the financial sector and expanding access to financial services to the public, especially commercial entities such as MSMEs. requires capital assistance. so that they can grow their business and contribute to their performance (Malagueño 2018; Mujanah *et al.* 2019; N Nuryakin *et al.* 2018; Wati *et al.* 2021) The existence of research deficits create gaps or opportunities for researchers to conduct research or further investigate the relationship between financial literacy, fintech and financial inclusion has an impact on the performance of small and medium enterprises. Because some of the results of previous research have become research gaps, it can be used as a new point in the current research.

2 METHOD

This journal is based on the bibliometric method Vosviewer and SEM-PLS. where combining data search from the Vosviewer application through *data co-citation* or building keyword maps based on *co-occurrence* data. Before getting into bibliometric analysis, the initial way to derive *novelty* from the keywords we want should be through the publish or perish application. Where this application can analyze related literature or references that are following this research. Publish or perish will find 100 journals for the Google Scholar category and a maximum of 200 journals for the Scopus category. After searching in publish or perish, continue to filter journals that are more adapted back to this study. The mapping is done to make it easier if you want to enter data through Vosviewer. Furthermore, data input is carried out into the Vosviewer application on all journals that have been filtered. This research selected keywords are Financial Literacy, Financial Inclusion and MSME Business Performance in Malang Raya. VOSviewer can display maps in various ways, each in the form of a bubble with various clusters (Van Eck and Waltman 2010). The result of the bubble colour is a solution to problems that will later be for all business people such as MSMEs. This study included keywords from journals in 2018–2023 so that it can find out explicitly which *keywords* are still rarely researched. The results of all existing journal filters were obtained from appropriate journals, namely in 2019–2021. One *novelty* is found in this study, it will proceed to the quantitative method. William (2011), and Apuke (2017) stated that quantitative research begins with a problem statement, produces hypotheses or research questions, reviews of related literature, and quantitative analysis, so the research is referred to as hypothesis test research. The reason that underlies *explanatory research (explanatory research)*, is that use this study will prove empirically and explain the influence of the role of financial literacy, Financial *Inclusion* and Financial Technology on SME Performance with SmartPLS 3.3. The sample in this study was 215 SMEs in Malang Raya, Indonesia. Thus, the existence of these two analytical methods will strengthen the research ess. Here is the arch design of SmartsPLS 3.3.

3 RESULTS AND DISCUSSION

The results of this study show that various keywords appear in the bibliometric analysis of the Vosviewer application. The basic keywords in the results of this analysis are

Financial Literacy, SMEs and Innovation. All categories that have networks will be clustered by colour. The results showed that there were 5 clusters in this study. Here is the result of Figure 1. About Vosviewer result schema based on the cluster or Network Visualization.

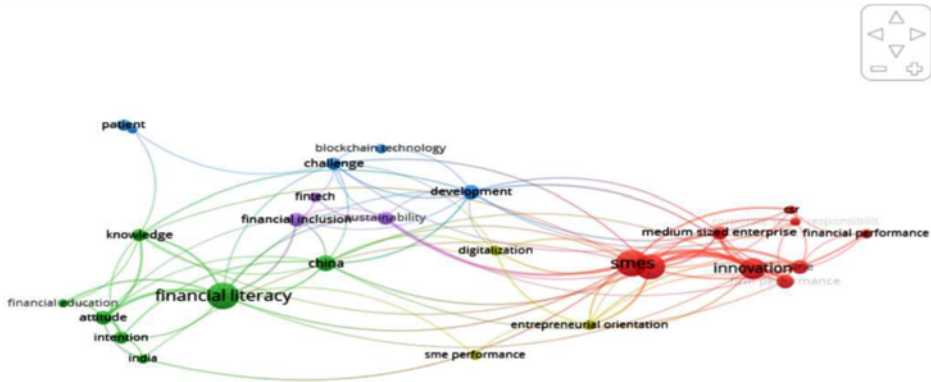


Figure 1. Vosviewer schema based on network visualization. Source. Processed by researchers (2023).

It can be explained that there is a connection in the network in this study. Classification according to keywords that will provide any factors related to the outline in the *keyword*. There are 5 clusters in this study which can be seen in the Table 1 below.

Table 1. Cluster bibliometric analysis based on network visualization.

Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
corporate social responsive	Attitude	Blockchain technology	Digitalization	Financial Inclusion
CSR	China	Challenge	Entrepreneurial Orientation	Fintech
financial performance	financial education	Development	SMEs Performance	Sustainability
firm performance	financial literacy	Patient		
innovation	India	United State		
medium size enterprise	Intention			
performance	knowledge			
SMEs				

Source. Processed by researchers (2023).

The existence of a classification process in the results of Vosviewer, so researchers want to find out more not only by looking at the Overlay Visualization factor. Explicitly this study will find out more details related to what *keywords* can be used as a *novelty* or find relationships between variables that are still rarely researched. Based on Overlay Visualization or the latest from 2019, you can see the following picture.

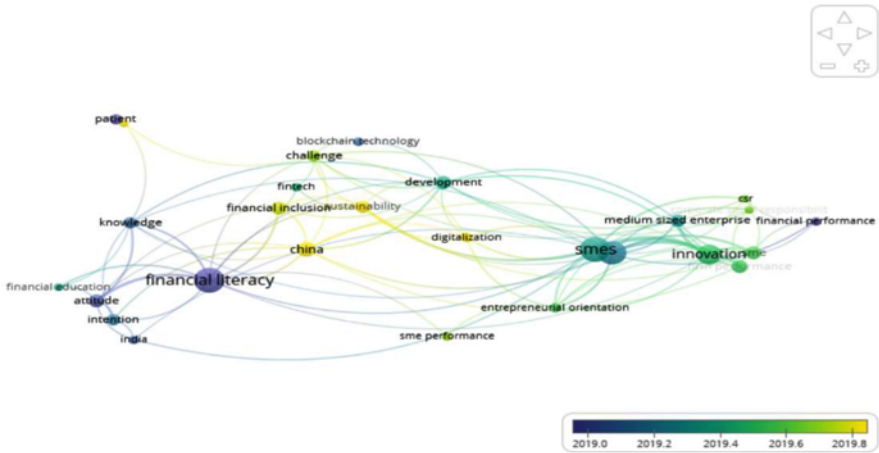


Figure 2. Vosviewer result schema based on overlay visualization.

Based on the results of overlay visualization, it can be seen in terms of various colours ranging from dark to light. The classification of purple as a keyword has been passed and a lot of research was done in 2019 with the keywords financial literacy, attitude, intention, India, knowledge, patient, and financial performance. Furthermore, looking at the colours red, orange, and green is research that has become a trending topic in 2019 such as the keywords SMEs, innovation, CSR, development, Fintech, and blockchain technology. As for yellow, it is research that is still rarely carried out in 2019 such as financial inclusion, sustainability, China, and digitalization. Therefore, this study takes the relationship between variables between financial literacy, fintech for SMEs performance and financial inclusion as a novelty in this study. The search process for novelty research is to focus on keywords about financial literacy. The results of Vosviewer that associate various keywords which will know the novelty in this study can be seen below as follows.

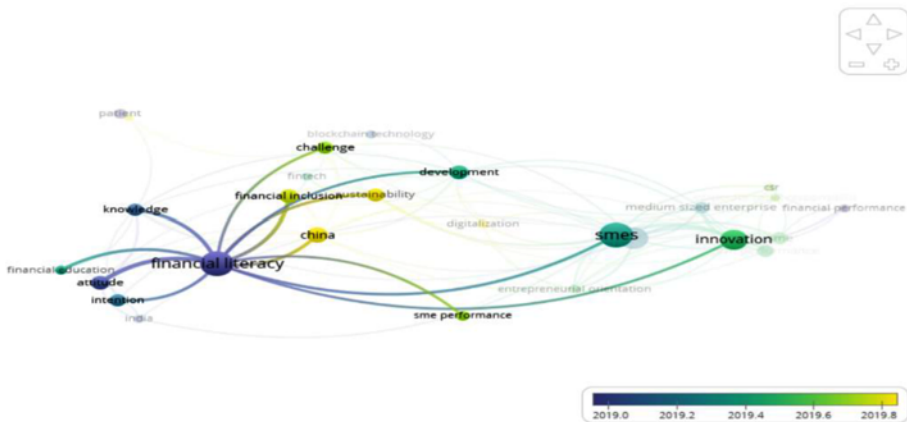


Figure 3. Overlay visualization schema based on financial literacy keywords.

Based on the *keyword* classification of financial literacy is the existence of financial inclusion, China, challenges and SMEs Performance which are still rarely researched, so researchers are interested in linking financial inclusion and SMEs Performance as the focus of this study. It can be concluded that there is financial literacy that can help SMEs to manage aspects of their financial management. The Association of Public Accountants (2014) explained financial literacy can include holistic financial concepts, understanding how to communicate financial concepts, and managing personal and business finances (Adella and Rio 2021). According to Huston (2010), financial literacy has moved from just knowledge about financial matters to the ability to use that knowledge to make everyday financial decisions. However, the terms financial literacy, financial literacy, and education have been used interchangeably in the literature. Financial literacy is a direction of the extent to which an individual can understand and use information related to his or her finances. Financial literacy has two dimensions: understanding and usage. The knowledge that shapes financial decision-making coal knowledge, including aspects of understanding and use. People with financial literacy have self-esteem, confidence and the ability to use that knowledge of choice (Lusardi and Mitchell 2007); (Remund 2010) an option if that financial literacy is the process a person understands key financial concepts and has the ability and confidence to manage his funds appropriately and in the short term for decision making and in the long term provisions. long-term financial care (Remund 2010).

Financial literacy is understood as the ability to understand, know and understand how to manage one's finances well. According to (Raut 2020) financial literacy is not only related to financial knowledge but also related to the ability to manage finances and make relatively appropriate financial decisions for the benefit of others in the future. When a business entity has a good level of financial literacy, they tend to be better at managing its business finances, being able to identify and access financial resources in the expected way, we will be able to sustain its business. Elements of financial management are necessary for effective regulation and financial stability or financial inclusion. According to (Rohner 2020), there are several reasons why financial inclusion is urgent, including increasing economic efficiency, supporting financial system stability, reducing the responsibility of shadow banking or financial actors, supporting financial market deepening, providing new market potential for banks, supporting the improvement of Indonesia's Human Development Index (HDI), contributing positively to international economic growth, central and local governments that sustainable and sustainable, reducing inequality and the severity of the low-income trap, improving people's welfare, ultimately leading to a reduction in poverty rates. (Tristiarto and Wahyudi 2022). According to (Banna *et al.* 2021) financial inclusion is a set of efforts to increase public access to financial services by removing all barriers, both price and non-price. The definition of financial inclusion is the availability of access to various financial institutions, products and services tailored to the needs and capacity of the community to improve welfare, and community interests (OJK 2022).

In his previous research (Pulungan and Rizliyanto 2019) explained that financial inclusion is not an option, but a necessity and banking is the main driver to be able to implement it. The development of financial inclusion supported by technological developments has great strength in financial markets, especially for business activities. The revolution in the financial sector has an important role in the context of improving financial services that will affect the stability of the financial system. Financial system stability can be seen through the performance of the banking sector such as credit and loans as well as improving public welfare through financial inclusion. However, the role of financial inclusion through *fintech* integration has not been able to reach a wide range of Indonesian people and has not seen the dominant contribution of financial inclusion in influencing financial system stability (Marini and Linawati 2020).

The concept of financial inclusion came after the concept of financial inclusion. Leyshon and Thrift in 1995 defined financial exclusion as a process that prevents social groups and individuals from accessing the formal financial system. (Chen and Divanbeigi 2019) explain

that financial exclusion is a process in which people have difficulty accessing and/or using financial services and products in the general market that meet their needs, so they cannot lead a social life that suits their society and residence. (Tristiarto and Wahyudi 2022). Financial inclusion is defined as an effort to reduce all forms of tariff and non-tariff barriers to public access to the use of financial services. Financial inclusion is one form of the national financial inclusion strategy, namely the right of everyone to have access to all financial institution services in a timely, convenient, complete, informative and affordable manner while upholding human dignity. (Shrestha 2022) defines financial inclusion as the proportion of individuals and businesses using financial services who have been the subject of policymakers, researchers, and interested parties. Financial inclusion is a condition where most individuals can use available financial services and minimize the existence of groups of individuals who do not know the benefits of financial access through accessibility, and availability without high costs. Other definitions related to financial inclusion (Supramono *et al.* 2020) are a comprehensive effort to remove all forms of barriers in the form of both price and non-price for public access to use financial services.

The goals of financial inclusion include, 1) Making financial inclusion a strategy in the broader strategy of economic development, poverty alleviation, income equality, and financial system stability. 2) Provide financial products and services following the needs of the community. 3) Increase public knowledge about financial services. 4) Improve public access to financial services. 5) Strengthening synergy between banks, microfinance institutions and non-bank financial institutions. 6) Maximizing the role of information and communication technology (ICT) in expanding the reach of financial services.

This same technology can be considered the second stage of technological finance and lasted until the mid-20th century. Starting with the onset of digital information and communication technology, the era of digital financial technology, sometimes called Be-Finance, asserts that by the late 1980s, financial services had become an important part of the digital industry, relying on electronic transactions between financial institutions, market funding agents and customers around the world (Musari and Hidayat 2022). In the banking sector, technology is spread throughout the banking signal chain, this chain has developed into four groups, Customer first, e.g. Retail, Trade, and Investment. Secondary channels e.g. affiliate, broker, web, mobile, social. Third, funding service providers, such as banks, non-banks, and finally interbank providers, such as exchanges, and networks. Large financial service providers, especially banks, have pioneered the use of IT internally since the 1960s. In particular, major banks have set up IT departments, often recruiting several thousand people. This division has a proprietary form of system programming and manages a corporate network that connects internal departments, including branch offices. Electronic interfaces with customers and external stakeholder interests (such as ATMs and online banking) have also been implemented by the system over the years. Multinational electronic networks such as the Society for Worldwide Interbank Financial Telecommunication (SWIFT) and the Trans-European Automated Real-Time Total Repayment Total Rapid Transfer System "TARGET"; First appeared on the interbank market in 1973 and 1999. These are important bricks for interbank digitization, forming an interface with their internal systems (interbank space). The newest network is the Common Euro Payments Area of Europe (INTERESTING), which started in 2009 and recently upgraded to handle real-time processing between banks (Amri *et al.* 2021; Yue 2022). In addition, in the 1980s, vendor exchanges began using trading systems and phased out physical electronic trading platforms instead of exchanges. Now fully electronic, stocks, certificates, and other derivatives can trade in real-time. (Figueiredo *et al.* 2021) A globally diverse set of user-friendly banking brands of different and inconsistent information systems highlights the need for standardization. Financial firms are leading the standard interface initiative, and IT vendors are providing software packages. And standard interfaces, for example, aim to reduce the inefficiencies of system ownership. Given these problems, researchers are looking for research related to Fintech related to transaction

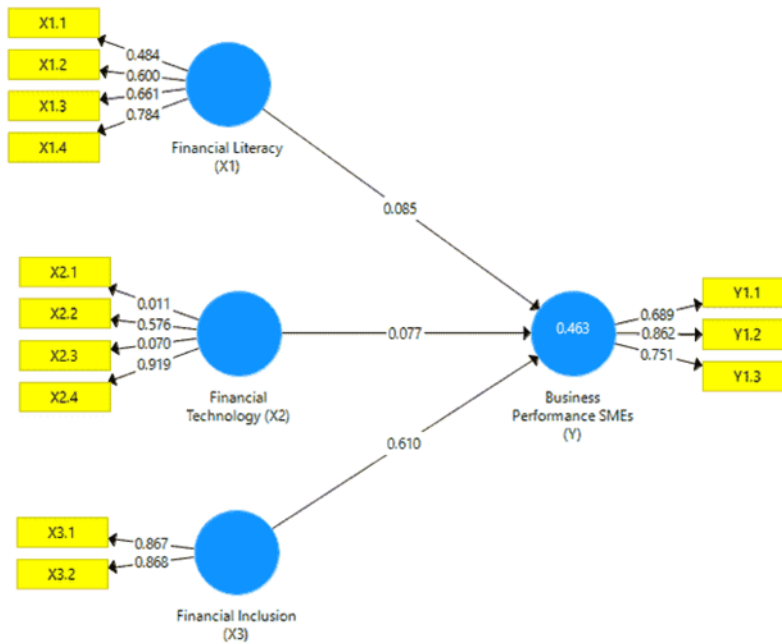


Figure 5. Results of smartPLS financial literacy, financial inclusion, financial technology.

lack of optimal socialization in SMEs. Plus there are SMEs that are in the process of regeneration due to family businesses, so this heir theirs must be able to adjust the use of fintech in the current era. So the alpha cronCronbachthis study shows the following.

Table 2. Cronbach alpha, composite reliability, and average variance extracted (AVE).

	Cronbach Alpha	rho_A	CompositeReliability	(AVE)
Financial Literacy	0, 672	0, 683	0, 731	0, 578
Financial Inclusion	0, 660	0, 673	0, 859	0, 753
Financial Technology	0, 657	0, 667	0, 712	0, 523
Business Performance	0, 623	0, 647	0, 813	0, 593

Furthermore, continued reliability from Cronbach Alpha more than 0.6 indicates o the reliability of all variables studied. The reliability test results are in Table 2. The above shows that all structures have sufficient reliability and Cronbach alpha greater than 0.6. In short, all variables have the necessary reliability. Discriminant validity is used to ensure that the concept of each latent variable is different from the others. The model has a good discriminant value if the AVE square value of each exogenous construct (the value on the diagonal) exceeds the correlation between one structure and another. The results of the validity discriminant test show that all structures have AVE square roots greater than the correlation value with other latent structures (via the Fornell-Larcker criterion) so it can be concluded that the model satisfies the discriminant validity. The effect test was performed using the partial least square (PLS) t-test. model using SmartPLS 3.3 software. With the bootstrapping technique, the R-squared value and significance test value are obtained in Table 3 as follows.

Table 3. R-Square value.

	R Square	R Square Adjusted
Business Performance SMEs	0.463	0.455

Based on Table 3 above, the R-Square value of SME business performance is 0.463 which means that SME business performance has variables that can be explained by financial literacy, financial inclusion and fintech. Furthermore, hypothesis testing on PLS is also known as internal model testing. This test includes direct and indirect significance tests and measures the influence of exogenous variables that affect endogenous variables. Includes a coefficient of determination to determine the value of the contribution of two independent variables to dependence and a t-test of concomitant effect significance, as well as a t-test of the significance level of simultaneous effects. Variable-free individuals. However, you must first perform a correlation test to ensure that there is a relationship between each independent variable and the dependent variable.

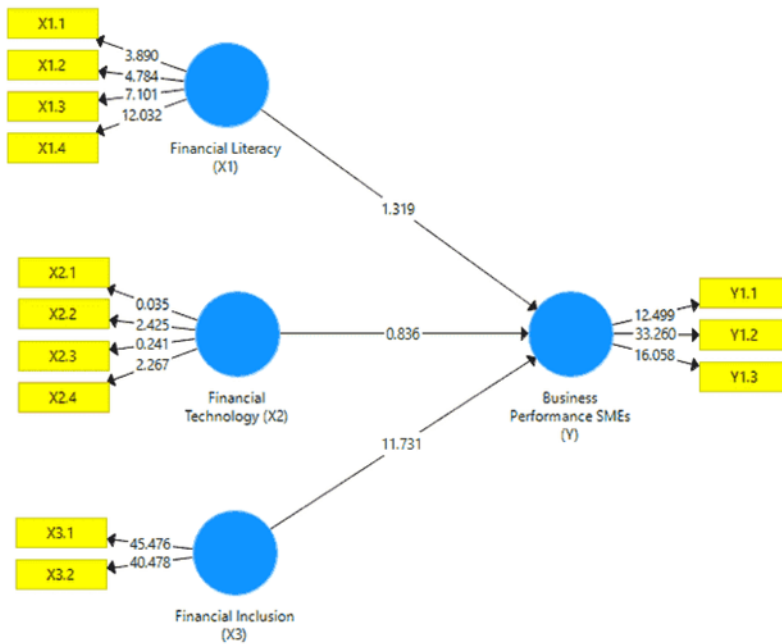


Figure 6. Results of hypothesis test between variables.

After being done, Bootstrap will meet the results of the hypothesis test directly. The following hypothesis test between variables can be seen in Table 4.

Table 4. Result of T-test.

	T Statistics	P Values
Financial Inclusion (X3) -> Business Performance SMEs (Y)	11,678	0,000
Financial Literacy (X1) -> Business Performance SMEs (Y)	1,214	0,000
Financial Technology (X2) -> Business Performance SMEs (Y)	0,747	0,987

4 DISCUSSION

The results of the analysis test show that the p-value of $0.000 < 0.050$ means that Financial Literacy (FL) has a significant influence on SME Business Performance (BP). It is interpreted that the level of knowledge and understanding of financial literacy will encourage SME business performance. The results of this study are supported by previous research from Pratami Putri and Christiana (2021), Mancebón *et al.* (2019), A. Lyons *et al.* (2019), HC (2022) and Malinda *et al.* (2018).

The results of the analysis test gave a p-value of $0.987 < 0.050$ meaning (FT) did not have a significant effect on the business performance of SMEs (BP). So, the existence of fintech is not necessarily that all SMEs can run it seen from the regional level and socialization related to effective and efficient use for SME business performance. It is also seen that there are efforts from SMEs to be family businesses which will later regenerate for business development. Supported by research in line with Menne *et al.* (2022), Fajar and Larasati (2021), Wall (2021), Anah (2020) and Nuryakin Nuryakin (2020).

The results of the analysis test give a significant p-value of $0.000 > 0.050$ means that Financial Inclusion (FI) has a significant effect on SME Business Performance (BP). Automatically, the use of Financial Inclusion (FI) will encourage SME Business Performance (BP). The results of this study are supported by findings Rohner (2020), Sanistasya *et al.* (2019), A. C. Lyons (2021), Adetunji and David-West (2019) and Yue (2022).

It can be concluded that there is a correlation test on each independent and dependent variable there is a significant and insignificant relationship. Supported by a positive and significant relationship between Financial Literacy and Financial Inclusion variables which shows that for knowledge, understanding and use all can access it following the rejection measure of the territory. As for the financial technology variable, it has an insignificant influence because there is still no signal access in remote areas and a lack of socialization related to contributions to empowering SMEs and local economies in the use of various types of fintech which are said to be the easiest, simplest and most+ effective to do. Supported by the age factor of SMEs who are still carrying out the regeneration process for SMEs based on family businesses.

5 CONCLUSION

MSMEs are independent business units run by individuals or groups that can be in the form of individuals, partnerships, or limited liability companies. The contribution of MSMEs in Indonesia is unquestionable. Since the economic crisis that occurred in Indonesia in 1998, it has been proven that the MSME sector has been able to stand alone and survive in the face of the crisis so far. The role of MSMEs is relatively important for the Indonesian economy. The development of the current era makes everything mandatory instantly. For example, all transactions carried out must be effective and efficient. This research reviews how the potential and optimization of SMEs to continue to develop their business performance. The demands of the times are required to adjust all transactions related to their business. The discussion of this research seeks to find out a series of transactions such as financial literacy, financial technology and financial inclusion on SME business performance in Malang Raya, Indonesia. It can be concluded that, the lack of use related to fintech in remote areas due to access signal barriers and lack of socialization of various types of fintech that are considered easy and simple. Supported by SME managers who are still regenerating to the next heir because it is a family business. Recommendations for further research are expected, exploring problems in other objects related to this research variable.

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The ideology behind the reporting on Habib Rizieq’s trial: A framing analysis on cnnindonesia.com

Budi Suprpto

Universitas Muhammadiyah Malang, Malang, Indonesia

ABSTRACT: When reporting on events involving Islamic groups or figures, the media frequently takes a negative point of view and creates a public opinion that is biased against Islam. This is due to ideological factors or political interests promoted by the media. The study seeks to uncover the ideological or political interest that was expressed on cnnindonesia.com behind the news framing of the trial of a Muslim figure, Rizieq Shihab, published on May 20, 2021. Using Murray Edelman’s framing analysis, it was discovered that the cnnindonesia.com media’s construction of news tended to be in line with the prosecutor’s perspective, which represents the interests of the power. It was also proof that the defendant and his critical actions on government policies have an impact on the national political level.

1 INTRODUCTION

There shouldn’t be a significant relationship between Islam or Muslims and the spread of the Covid-19 outbreak in 2020. But there is a fact that the corona outbreak can be used as an entry point for certain parties to stigmatize and discredit Islam, Muslims, and Islamic figures. Amid world fear and panic facing Covid-19 in 2020, the media and haters of Islam have used it to ‘fish in murky water’ by using the media. For example, the world-class weekly newsmagazine *The Economist* published a story entitled, “The arrival of covid-19 was predicted. The spread of radical Islam is more surprising”. Following that, the BBC invited politicians and hard-line anti-Islam activist, Nigel Farage, on the *Newsnight* program to talk about viruses. In the end what emerged from Farage’s mouth was nothing but hate speech and accusations against Muslims as carriers of the Covid-19 virus outbreak (Tejomukti 2020).

If the explanation above can be used as a reference, logical reasons can be obtained to say that in the name of preventing Corona, there has been discrimination and even criminalization in law enforcement and media coverage of the Habib Rizieq Shihab (HRS) trial. The authorities have categorized cases of violating health protocol regulations as criminal acts or criminal acts, naming an influential Islamic figure, HRS, as the main suspect. The series of law enforcement on the case even claimed that 6 HRS bodyguards were shot dead by the police.

HRS was accused of violating health protocols for the events called the *Petamburan* and *Megamendung* crowds, and accusations of public lying about the results of the Covid-19 swap at *UMMI Bogor Hospital*. Since April 2021 the HRS case has entered trial at the East Jakarta District Court. All expert witnesses from HRS who were presented in court, many legal experts, and legal observers said that cases of violations of rules, including the Covid-19 health protocol, were not criminal acts. Therefore the sanctions given can be in the form of fines or administrative sanctions, not prison sanctions.

Meanwhile, in terms of reporting, most of the mainstream media prefer to quote statements from official (government) sources that classify HRS and its followers as public enemies, radical groups, intolerant, and undermining the Unitary State of the Republic of Indonesia. Thus imprisoning or killing HRS and its followers must be considered permissible, and lawful, and need not be questioned. With such an approach to reporting, the media has contributed to

strengthening the negative stigma, particularly towards HRS and its followers, and Muslims in general. Admittedly or not, HRS followers are part of the Muslim community, and HRS is one of the influential Islamic figures who tend to take a critical position on the policies of the authorities.

There have been quite several incidents that have caused large crowds and violated health protocols in various regions in Indonesia. Part of the crowd was caused by the activities of government officials. But there are different stances taken by law enforcement and the media. For example, the incident of a crowd of supporters of Gibran Rakabuming Raka (GRBR), President Joko Widodo's son, and his rivals, when registering as Mayor of Solo, Central Java, September 4, 2020. There has been a violation of health protocols and physical distancing. For these violations, the police are categorized as non-violations which fall under the jurisdiction of the police but fall under the authority of the Badan Pengawas Pemilu (Bawaslu). The media also agreed with this attitude, so no one reported that was full of enthusiasm (Mansur 2020).

Looking at the background of the two examples above, namely the cases of the GRBR and HRS crowds, and the differences in treatment from the authorities and the views of the press in covering the case, the researcher suspects that there are ideological and political factors accompanying the media's framing of the HRS crowd case. This means that certain ideological/political interests influence the media to frame them in a certain way (Hall 2018).

This study aims to reveal the structure of the categories/rubrications and the ideological or political context represented by the media *cnnindonesia.com* about the events of the HRS trial. To find out the ideological and political context of the news coverage of the case as described above, the researcher uses the frame analysis method from Murray Edelman.

2 LITERATURE REVIEW

2.1 *Media construction*

Media construction is the definition of the reality of events or news facts (news events) carried out by parties who can influence the working process of the media. This definition is a reflection of the perspective (point of view), interests, and alignments of the media. Say the media product is news, then it can be said that the appearance of news cannot be separated from the interests of the parties behind the work of the media. Therefore, every message conveyed by the media can explain values, ideology, goals, and in what context the news is framed.

Constructionists view the media as agents of the construction of reality, it can define reality. The news or opinions presented by the media can indeed describe reality, but it is not a value-free reality (objective reality). The news or opinion presented is the result of a struggle for values and interests between journalists, editors, media owners, and authorities, in interpreting a news event. If these values and interests are owned by parties who have interests related to the existence, role, and power of the media, and they have the power to influence the content of the media, then they will also determine the color and shape of the media frame (Hall 2018). Thus the production of news media is always filled with various contents of interest from both internal and external media. Therefore, there is often a gap between the reality of events and the reality of the media.

With the reporting framework developed, the media consciously constructs facts on the ground to become messages and then gives judgments according to their wishes. So it is not surprising that the same fact can be assessed from different angles by different media. The evaluation process is very subtle so the audience does not realize that they are being led to judge or view issues according to the wishes of the media they consume. In the end, the issues framed by the media turn into public issues.

Media assessment begins with the newsgathering process when a journalist faces reality on the ground. When in the field journalists consciously select and highlight some, and set aside (even negate) some others, from the reality of the events they face as news material. This process continues at the editorial desk. The editor-in-chief or editorial board will choose and evaluate again, which part of the reality of the event is worthy of reporting and framed in what perspective or interests or whose interests.

Fairclough describes that the framing of media is thickly wrapped in interests and ideology (Fairclough 1995). Even Althusser firmly said that the media is part of the ideological state apparatus. Through representational machines, the media spreads ideology by articulating the meaning of the dominant group wrapped in a message frame (Althusser 1971). For Gramsci, the media is an arena or field of power; in this arena, various ideologies are represented (Boukala 2019). As an arena, the media becomes an open area of various interests and ideologies that compete with each other and dominate one another (Artz 2013; Enrique and Ramirez 2015; Simon 2000).

According to Stuart Hall, representation is the production of meaning from various thought concepts conveyed through language. There are three approaches in Hall's version of representation, namely reflective, intentional, and constructionist (Hall 1997). In the reflective approach, the meaning conveyed by language or communication messages is like a mirror that reflects something (object, person, idea, etc.) as it is, according to its original meaning (true meaning). Through an intentional approach, the meaning contained in a language text is based on the explanation of the writer/communicator. Meanwhile, the constructionist approach emphasizes that everything initially does not have any meaning, until we construct meaning for it. In the context of media messages, in the first approach, the media does not intervene in the meaning of events. The media only functions as a channel to convey an event to the public. Whereas in the second and third approaches, the media tries to "intervene". Even with a constructionist approach,

According to Edelman, the political and ideological context is very decisive in understanding a reality, event, phenomenon, or object. In political practice, reality is understood within the framework of a certain political language and is presented to influence public understanding of that reality. Thus, the grouping of reality or events into certain categories and the construction of certain language symbols are the creations of politicians to influence public understanding and perception (Edelman 1993).

2.2 *Murray Edelman's framing analysis*

The writer wants to take the analogy from Edelman above to explain the process of framing in the practice of communication and media reporting. In communication practice, if this understanding is in the communicator's self, it will determine the construction of the message symbols conveyed to the communicant and will be able to influence the communicant's understanding of the reality being discussed. If the same thing happens to the practice of media reporting, then the political and ideological context that underlies the media's understanding of an event will also determine the form of construction of the news conveyed to the public, and at the same time can influence the public's understanding and perception of the events or reality being reported on.

The media's understanding of an event does not only stop at the cognitive area but based on this the media crew will interpret and arrange categories that guide the direction in which an event is grouped and constructed in the form of a news frame. For example the choice of words, the grammar of the sentence, the use of pronouns, who is used as a source of information, which parties are presented and excluded, which side is highlighted and which is hidden. Thus the categorization and choice of certain language symbols in a news frame is the creation of media workers, who are influenced by a particular political and ideological context.

The main idea of the Murray Edelman framing model stems from the concept of categorization. Edelman emphasized that framing and categorization are like two sides of a coin. Categorization has great power in influencing the public mind and consciousness, with a process that is more subtle than propaganda methods and goes directly into the subconscious (Eriyanto 2011). Categorization is the use of a certain perspective to understand, interpret, and define a reality or event. The arrangement of categories is expressed in the form of certain language symbols which aim to make it easier to classify a complex reality so that it is easy to understand. Categories are an abstraction and a function of what someone thinks. A category is a framework or scheme, which contains various events, people, or groups that are given

meaning in a frame or scheme. Without this framework, the complexity of events would seem confusing, meaningless, and unrelated. Categories help humans or the public understand various and irregular realities to become realities that have meaning (Eriyanto 2011).

The same reality may be understood in different meaning constructions depending on the frame and point of view used. The incident of imprisoning figures who are critical of the government can be interpreted as maintaining the stability of the country; on the other hand, it can also be interpreted as an act of anti-democracy. All of these choices are not just techniques of using words but are ways to present and interpret an event to the public. Public understanding of a media reality is a reality that has been selected based on a certain frame. Meanwhile, media framing is based on certain perspectives and interests. In the end, the public is directed and 'dictated' to understand reality in a certain way and a certain frame. It can be said, in fact public understanding and perception can be directed according to certain interests (Edelman 1993).

By categorizing, the human mind will spontaneously use a certain perspective to understand reality (Edelman 1993). In the case of media coverage, when the media has determined the categorization of an event reality, it will immediately be followed by the next sub-categorization, namely determining the sources to be interviewed, the questions to be asked, the quotes to be taken, and which side of the event will be highlighted and which will be highlighted. thrown away. All of this is done to direct the public's focus to certain categories according to the perspective and attitude of the media (Eriyanto 2011).

According to Murray Edelman, there are three forms of categorization (constructs) that are commonly practiced by the media, namely rubrication constructs, news constructs, and ideological/political constructs. Rubrication is the use of categories by the media as a reference for classifying various realities of events encountered. Technically, classification relates to how an event is understood, defined, and communicated. In political practice, classification can generate public support, but it can also generate opposition or rejection. Support and resistance to a government policy are largely determined by the construction of the framing and submission of the policy to the public. In the process of framing and delivery (reporting), this is the categorization and classification at work in the mind or point of view of the media. The use of certain categories and classifications can lead the public to support or reject actions (Edelman 1993).

About the news frame, the categories set by the media require media workers to think about classifying the various events that the news wants to report on. The form of classification of news events is a rubric. Therefore the process of classification in the practice of media reporting is also known as rubrication. It is the decision to place each news event in a certain rubric according to the category that has been determined by the people who work in the news media, according to their point of view. Therefore, rubrication is not just a technical issue or standard technical reporting procedure, but rather part of the categorization of various news events (Eriyanto 2011).

2.3 *News category and structure*

As explained above, when we have established a category or classified a reality that we face, then the next stage of the category will affect the way we construct that reality in our minds. Constructions that exist in the mind consist of sub-categories, which then become maps for action or response to reality. In the practice of news framing, when the media wants to report on a reality event, media workers first determine the classification of the event, namely which rubric category it should be included in. This is what is meant by the rubrication process. Based on these categories, the media then determines what information is to be explored and how deep it is, who should be a resource person, which side is considered important, and choose information. This is where the media begins to work more intensively to translate their perspectives and attitudes toward the reality of the events they want to make news about. From then on, the parties behind the media framed the reality of events (factual) based on their perspective, becoming a new reality called media reality. That's what is called news.

Media reality is an artificial reality produced by the media. It is the result of interpreting the reality of events (factual) by the media. So the news is just media reality, not factual reality. It is only an abstraction and expression of the thoughts of the parties behind the media, using

symbols that appear rational and touch the audience (Edelman 1993). Therefore the categorization packed with these symbols can appear smoother than the propaganda method. Even though it looks subtle and indirect, the use of certain categories of events, in reality, can have a very significant impact. Because it is more touching, more subtle, and more piercing in the subconscious. The audience is not aware that their minds and consciousness are being and have been dictated by a certain point of view or perspective, a certain way of thinking, so they do not have the chance to think that there are other dimensions (Eriyanto 2011).

The construction of news frames commonly used by the media consists of three elements, namely news headlines, news bodies, and news supporters (complements). Through these three news elements, the media translates the categorization they have made of an event reality into a news frame or media reality. The method is to explore symbols and signs of language, choosing words, sentence constructs, and pictures or graphics that can touch the minds and awareness of the audience. The goal is to invite audiences so that they interpret the reality of events in line with the media's point of view.

2.4 *Categories and ideology/politics*

What is meant by the word ideology in Edelman's news framing analysis model does not seem to be the same as the notion of ideology as an ideology or as a value system that is adhered to by a person, group of people, community, or country as the basis for rules to achieve a goal. So the meaning of ideology here is not the same as Socialism, Marxism, or liberalism. The ideology referred to by Edelman is a point of view, point of view, perspective of thought, or the tendency of a person or group of people to understand, define, interpret, and make sense of a reality embodied in the form of a structure of language symbols which is then called a frame.

The reality in question can be social, political, economic, cultural, phenomena, or events. As a point of view or perspective owned by a person, ideology in Edelman's sense is subjective. Therefore, the same reality can be interpreted, defined, or interpreted differently by different people. However, every person or group tends to try to influence other people or groups to follow their point of view, interests, or ideology.

Bearing in mind that the realities in life are many and complex, then to make it easier to understand and interpret various realities, people create a category 'as a container' to sort and place each reality or event they encounter. Categorization is an attempt to classify and simplify the complex world of reality to be simpler, conical, and easily understood. In Edelman's view, categorization is related to ideology. So a statement that looks objective to the public is just a game or reflection of an ideology (Eriyanto 2011).

When Edelman talks about categorization, rubrication, and ideology as referred to above, he based his research on news framing by the media on political practices in the United States, especially during the administration of President Ronald Reagan (Edelman 1993). Therefore Edelman explained that categorization as the main element of the frame analysis model that he offers has a political context. Likewise, when he asked about the ideological context in news framing, what he meant was the political interests of political actors. This means that the ideology of a report is the same as the political interests possessed by a person or group of people as political actors. These political interests are framed into language symbols. For example, the use of the words regulation, defense, election, justice, prosperity, for the benefit of the people, and the like, should not be solely a matter of technical language. Because behind these statements there are issues related to the interests of the political elite.

In the study of political communication, the media has a very important position. The media is a strategic bridge that connects the political super-structure and political infrastructure. With this position, the media can have direct and free access to both regions. Even in the current and future information world, these two political areas need the presence of the media as a channel for the flow of political information and political interests for both. Such a position at the same time gives tremendous power to the media.

On the other hand, with this strategic position, the media can also play themselves as a political actor which is also loaded with the interests of the media itself. This is where the

agenda-setting theory or model by Maxwell E. McCombs and Donald L. Shaw was born. This model explains the relationship between the agenda of the government (rulers) which is called the policy agenda, the media agenda, and the public agenda. This theory assumes that the media can transfer issues to influence policy agendas. On the other hand, if the media says that an issue is important, then the audience (society) will also consider it important. This means that the media has the power to determine the public agenda (McCombs and Shaw 1972). The problem is to which side will the media's interests be directed when it is dealing with a political event? Or how does the media put perspectives and attitudes in framing the reality of political events? Every perspective or attitude requires justification or rationality. For Edelman, frames or categories are the result of the production and reproduction of language symbols based on a certain perspective. The important thing is to seem rational and reasonable.

The use of language symbols such as choice of words and certain sentence constructs carried out by the media aims to form a certain image of an event reality including the actors involved in it. Edelman believes that audiences or society live in a world of images. Certain words and sentences used by the media can affect the audience's view of the image of reality, group, institution, or image of a person. The image constructed by the media ultimately forms public opinion about events, groups, institutions, or a figure. Certain language symbols can reinforce certain views, attitudes, prejudices, and even hatred.

3 RESEARCH METHODOLOGY

This research is a qualitative media text analysis study. The research method used is the framing analysis model of Murray Edelman, which divides news framing into elements of rubrication, categorization, and ideological/political contexts. In categorization, the researcher explores news texts to find out how the media used as research objects defines the events of the HRS case trial and the person accused of HRS as representing or at least part of the Muslim group. While the elements of the ideological/political context are aimed at exploring what and whose (ideological/political) tendencies and interests are reflected by the framing structure of reporting on the events of the HRS trial and the figure of HRS as an Islamic figure carried out by the research object media.

4 RESULT AND DISCUSSION

The object of this research is news text about the trial for violating the health protocol (health protocol) with the defendant Habib Rizieq Shihab (HRS), which was published on the online media *cnnindonesia.com*, on 29 Apr 2021 07:04 WIB – Thursday, 10 Jun 2021 10:55 WIB. The trial took place at the East Jakarta District Court. During this period there were 13 news texts displayed by *cnnindonesia.com*, which involved three cases that ensnared HRS, namely the Umami Hospital swab case, the Petamburan crowd, and the Megamendung crowd. All of these cases were cases of violations of health protocols during the Covid-19 pandemic. The researcher deliberately focused on research on news about the trial events, assuming that at that time all parties involved in the trial, (prosecutor, defendant, and the panel of judges) will submit all statements or arguments to prove the truth based on the law according to their respective perspectives. Furthermore, the researcher wants to explore how the online media *cnnindonesia.com* constructs the statements of these parties into news texts.

What is meant by construct in this study is a statement through language symbols used by *cnnindonesia.com* to define the events of the HRS case trial. The language symbols in question are in the form of a choice of words, sentence structure, and pictures or graphics. Therefore the focus of this research analysis is directed to rubric statements (rubrication) and statements on the structure of the news about the events of the HRS trial.

4.1 *Rubrication construct*

The reality that is objective after being constructed by the media turns into subjective reality. This cannot be separated from the perspectives and subjective interests of the parties

“behind” the media. The media are agents of the construction of reality for interested people. While each interest is subjective. Every interest that is owned by everyone will color their perspective on an object which can be an event or a reality that is outside of themselves. Thus the perspective which is a representation of that interest also contains subjectivity.

As agents of reality construction, the media are instrumental. This means that the media is only a tool that can be used by those who control the media, to compile a reality of an event that is in line with their interests. The reality formed by the media is only media reality, not the actual reality. Media reality is the result of the definition made by those who control the media on the reality of events or factual reality.

When the media compiles certain categories as the home of every event/factual reality, then the media has carried out event rubrication. For example, there are international, national, economic, political, cultural, legal, and criminality rubrics/sub-rubrics, and others. Rubrication as exemplified above is rubrication based on the content, topic, or content of the events being constructed. There are other forms of rubrication based on important and unimportant values according to the media’s point of view. If an event is considered by the media to be very important to be reported (immediately), then the news containing the event is categorized as the main story, and technically it will be included in the headline news rubric, or become the opener or precursor of all the news that day.

Each media has its definition of the important or unimportant value of the events they convey. Therefore, for the reality of the same event, media A classifies it as the main news while media B does not. Thus the construction of rubrics must be understood not merely as a technical matter or a standard procedure for making news. Rubrication must be understood as part of how a fact is constructed into certain categories.

Based on the rubrication construct, *cnnindonesia.com* has included 26 news titles about the HRS trial in the National rubric, the Criminal Law sub-section. The questions are 1) Does *cnnindonesia.com* place the case in the criminal-law rubric in the perspective of legal studies, namely viewing the trial of this case as a process that can produce normative products in the form of jurisprudence, with various legal consequences? 2) Or does this media put the case solely as a form of criminal act (crime), and define HRS and friends as criminals?

Observing the choice of words, sentence structure, and symbols accompanying the headlines and news text, *cnnindonesia.com* is more inclined towards the second question, namely deliberately considering this case as a serious crime and defining HRS and his friends as criminals. This is based on the results of an overview of a series of reports about this case, *cnnindonesia.com* does not attempt to present reviews from independent legal experts on this case, so that the public can get an alternative perspective, which educates and adds legal insights that come from outside the courtroom.

According to legal expert witnesses, this case of violating health protocols that befell HRS is a mild case. As with minor crimes, according to them, such cases do not need to go to court. Expert witness Refly Harun said that if the judge decides HRS to go to prison, especially if the prison term is as demanded by the prosecutor, which is 6 years in prison, then it will set a bad precedent for law enforcement in Indonesia. If the judge’s decision functions as permanent jurisprudence, then in turn it can be used to imprison perpetrators of minor crimes. If the perpetrators of minor crimes are imprisoned for more than two years in prison, then this will hurt the value of justice. Because corruptors who steal people’s money and destroy the foundations of national life are only subject to legal sanctions for an average of 2 to 4 years. This means that the level of violation of health protocol law (health protocol) is much higher than that of non-criminal corruption. In turn, community members may be more afraid of violating health protocols than committing acts of corruption.

4.2 *News structure construct*

Murray Edelman emphasized that the construct of categorization is an important element in framing the reality of events by the media. The construction of reality is also related to the media’s perspective on the reality of the events that are about to be reported. Every event

that occurs is not singular or exists in a vacuum. It is multidimensional, and complex, involving various parties, and constellations. In this context, this perspective gave birth to two forms of media attitudes, namely neutral (balanced) or one-sided.

Ideally, media neutrality is needed in conveying information to the public. This means that the media should not be burdened by any interests or anyone, including the political interests of media owners and those in power. Neutrality must also become an ideology that every media adheres to. Media alignment should only be in the public interest. If the media only sides with the public interest, then the media can avoid being an agent of social construction for the benefit of certain parties. The media can also function as agents of social control and awareness (education and literacy) agents in society in the fields of ideology, politics, law, and socio-culture.

Categorization is the use of a certain perspective by using certain choices of words and the arrangement of certain sentences, which indicate how facts or reality are understood and interpreted. Categorization is an abstraction and a function of a perspective. Categorization is a form of simplification of complex reality, which emphasizes one side or a certain dimension and ignores other dimensions. By categorizing, the media constructs every event reality into a new frame.

News framing is a process that describes how the reality of events is understood and interpreted by the media and presented to the minds of the wider community. Through this framing, the media continually tries to construct a new reality for every event reality that is reported to a wide audience. The trick is to classify the reality of events into certain categories and frame them with certain choices of words and sentences. From there, two forms of reality for the same event were born, namely media reality and event reality (factual reality). It is this media reality that then influences people's understanding and meaning of the reality of events.

Categorization construction can be seen from the way the media chooses words and sentences when writing news. The construction of words and sentences can be in the form of quotations, either directly or indirectly, originating from 1) Statements from parties who are directly or indirectly involved in the reality of events; 2) Statements from parties that are not directly related. In the HRS case trial, the parties directly involved were the Public Prosecutor Team, the Panel of Judges, and HRS along with the Attorney Team, and expert witnesses. Meanwhile, parties that are not directly related include observers, legal experts or legal academics, and members of the public.

Even though quoting statements from sources involved in the reality of events, journalists and editors or editors have full power to choose and sort out which sources and statements are considered important and not important, to construct a news frame. The selection and sorting are based on their perspective and attitude in interpreting the reality of the event to be reported.

The construction of words and sentences can come from the media itself, which is carried out by journalists and/or editors or editors. When compiling a story, journalists and editors also have full power to deliberately choose words or diction and sentence structure, which are on their perspective and attitude toward the reality of events. These perspectives and attitudes will color the structure of media reality, which is reflected in the reporting framework. Likewise, what happened in the news framing process about the HRS case trial at the East Jakarta District Court by cnnindonesia.com, cannot be separated from the media's perspective and attitude towards the reality of the incident.

There were 26 news headlines about the HRS case trial that were revealed by cnnindonesia.com which were used as research objects. Based on the category construct from Edelman, the researcher identified cnnindonesia.com's position or perspective on the events of the HRS case trial through the following stages of analysis:

- (1) Use of citation sources. Overall cnnindonesia.com provides a balanced portion when quoting statements from sources, both the prosecutor, the judge, the defendant, and the witnesses. Their statements are almost evenly written in every news headline. In terms of the news sources cited, cnnindonesia.com has implemented the concept of a balanced report (covering both sides) on 26 news titles that are used as research objects.
- (2) Word choice and sentence structure. Selection of words, phrases, and sentence structure used in the news structure:

- (a) News headlines. The news title is considered a representation of the main idea (main thought) of a news story. Therefore, to consume a news story, many people feel that it is enough with the information displayed in the title, so they do not need to read the text in the body of the news as a whole. The news headline is the starting point where the perspective and attitude of journalists and editors towards an event reality is placed. Through the headlines that are made, the media begins to offer a meaning to the reality of an event to the audience based on the media's point of view. The aim is to influence the audience to accept the meaning of the reality of events as the meaning set or defined by the media.

Looking at the words and sentences printed on the 26 news titles, *cnnindonesia.com* tries to be neutral. This means that the selected words and sentences compiled by *cnnindonesia.com* for news headlines do not contain negative connotations. But neutrality is only at the symbolic level; while the meanings contained therein, mostly from the words and sentences used as titles, tend to be in line with the contents of the prosecutor's indictment. There 78.6% (11 titles) of the 26 titles which can be interpreted that HRS and friends committed criminal acts. There are 2 titles can be said to be leaning towards HRS, namely *Saksi Sidang RS Ummi: Rizieq Tak Kabur hingga Drone di Sentul* (29 April 2021, 07.04 WIB); *RS Ummi Akui Laporan Swab Rizieq Lambat karena Dibawa Polisi*. And there is one news headline that is meaningfully leaning towards HRS, namely *Refly Anggap Rizieq Tak Perlu Dipidana karena Sudah Didenda* (10 May 2021, 13:18 WIB).

- (b) News body. In this section, the media has more space to produce meaning and categorize the reality of events that are to be presented to the public. In this news body, journalists and/or editors/editors can choose words and sentence structure, and choose which parts and whose actors are highlighted (prioritized) and omitted. They, media workers, and those behind the media can include opinions or assessments of the reality of events according to their point of view. Judging from the choice of words and sentences contained in the 26 news bodies which are the object of this research, *cnnindonesia.com* when constructing news bodies on the reality of the trial of the HRS defendant at the East Jakarta District Court, can be said to be more informative in nature.

In this section, *cnnindonesia.com* tends to function as a window of information for the public, namely by quoting directly from the parties involved in the trial. By relying on direct quotes, this media appears to be cautious and 'looking for safety'. It could be that this attitude was taken by the media because they realized that this case contained a high level of sensitivity. This is at least based on two reasons: 1) considering the existence of HRS as a very influential Islamic figure; thus this case can also directly touch the religious feelings of Indonesian Muslims, especially HRS followers who are scattered in various regions in Indonesia; 2) *cnnindonesia.com* realizes that the violations committed by HRS and friends are not serious crimes, not even minor crimes,

Despite being quite 'cautious', *cnnindonesia.com* is not completely neutral. This can be seen from: 1) The construction of news titles and sub-headings. There are certain topics chosen by *cnnindonesia.com* to highlight which are placed in the headline or subheading of the news. For example the news title: *Sidang Rizieq RS Ummi: Dicap Bohong, Mer-C Tak Boleh Tes Swab* (*cnnindonesia.com*, 06 May 2021 07:13 WIB). This news has a sub-heading: *Mengaku Sehat Tapi Sakit Termasuk Bohong*. Here the word 'bohong (lying)' is what you want to highlight. Even though the sub-headline quotes expert witnesses from the prosecutor's side, the audience will tend to interpret that HRS lied. Moreover, the news text, it is not matched the response from the defendant. 2) Cover construct. Almost all the news that was researched was always closed with sentences containing legal violations committed by HRS and friends accompanied by articles of regulations and or laws that were violated, and lawsuits filed by prosecutors. Based on the above arguments, it can be

said that *cnnindonesia.com*, either directly or indirectly, defines that HRS and his friends have committed serious crimes and are dangerous figures.

- (c) Elements of supporting (complementary) news. In this section there are two news stories complete with infographics: 1) News entitled: *Rizieq Dituntut 2 Tahun Penjara Kasus Kerumunan Petamburan*, which will be broadcast on 17 May 2021 at 20:50 WIB. The graphic info included here is entitled: *Jejak Tiga Tahun Rizieq di Arab Saudi*. The plot described by the infographic has nothing to do with the content of the news regarding the three legal cases being charged against HRS. The contents of the news are about crowds violating quarantine laws and health protocols, not immigration violations. Meanwhile, the infographic, which was processed based on sources from the Indonesian Embassy in Saudi Arabia, contains immigration problems faced by HRS in Saudi Arabia, resulting in a ban on overstaying.

There are two interesting things from the infographic presentation that *cnnindonesia.com* wants to emphasize to the public, namely the issues of overstaying and deportation. The emphasis on these two things can be considered as a reflection of *cnnindonesia.com*'s attitude towards the figure of HRS: 1) This media agrees that HRS ran away from violating pornographic content that was accused of him between 2016–2017. In other words, *cnnindonesia.com* reinforces the stigma that HRS is legally irresponsible; 2) *cnnindonesia.com* also emphasizes that HRS is a lawbreaker and a troublemaker, both domestically and abroad. This can be proven by constructing sentences with larger font letters than other sentences, Business visa: 365 days; *Overstay*:845 days.

2) News entitled: *'Ahli di Sidang Rizieq: Undangan Jadi Hasutan Bila Dibelokkan'*, which was reported on 18 May 2021 at 04:47 WIB. The infographic title included in this news is *'Rizieq Pulang Memicu Kerumunan'*. Here is described the sequence of times, locations, and events (events) where the crowd occurred, in which the presence of HRS was the central actor. There were five incidents of crowds and four locations of events, two of which were cases of crowds in Petamburan, East Jakarta, and Megamendung, Bogor, West Java. The contents of the infographic included at the end of the news body are also inconsistent with the contents of the news, namely the expert witness's explanation of the relation between the meanings of the words 'invitation' and 'sedition'. Frans Assisi, a Forensic Linguistics Expert from the University of Indonesia when testifying stated: Invitations have a positive connotation.

From the title sentence of the infographic, it is clear that *cnnindonesia.com* interprets the existence of HRS as the main source of the occurrence of crowds that violate quarantine laws and the Covid-19 health protocol and endanger the wider community. In the title sentence, there is the word 'trigger'. According to *kbbi.web.id/picu* the word 'trigger' means to set something in motion which is harmful; while the culprit is called the 'trigger'. Based on the meaning of the word, the construct of the infographic title *cnnindonesia.com* implies that HRS is a subject that drives crowds that can endanger the wider community. It can be said that the word trigger or incite is the negative meaning of the word stir.

The use of the word is in line with the prosecutor's charge that HRS had incited a crowd and incited the crowd to oppose or violate the quarantine law and the Covid-19 health protocol. Other evidence that explains *cnnindonesia.com*'s perception of HRS, namely as a character who likes to make trouble, can be revealed from the construct of the choice of words, phrases, and concluding sentences from the infographic: Front Pembela Islam (FPI) returns to Indonesia, 10 November 2020, after three years of residence in Saudi Arabia. His return drew crowds for several days amid the coronavirus outbreak. In everyday life, the word 'headman' often has a negative connotation. The use of the word 'headman' is often introduced to the leader of criminals or gangs of rebels.

4.3 Political ideology (interests) construct

The notion of ideology in Edelman's framing analysis model is more inclined to the political interests of the elite. The tendency of this understanding can be referred to as the basis of the research

he has conducted and the articles he has written, namely those relating to the reporting of political issues or events that occur in the United States (US). According to Edelman, the choice of words and sentences used by the elite (politicians) published in the media is not merely a matter of linguistic technique but is also useful for “covering” their interests. The trick is to set a category (defining) of an event or action using certain language symbols. For example, currently the words: terrorism, radicalism, anti-pluralism, intolerance, anti-unitary state, and the like often adorn media coverage.

When a construct consisting of words or sentences is used to define an object, be it an event, person, or group, it will be able to influence people’s thoughts, awareness, and perceptions of that object. Especially if those who produce the definition are those who have power and convey it through the media. For example, the words terrorism and intolerance, if used to define a person, group of people, or adherents of a particular religion, then the defined party will be understood as a common enemy. In the end, a collective perception is created in society which gives legitimacy to the authorities to act proactively in preventing, eliminating, and even repressive actions, the implementation of which requires special forces.

On the other hand, even though it has been proven that there have been separatist movements that terrorized, killed, robbed, intolerant, and other acts of violating the law that has caused many victims of property and lives because the perpetrators were not categorized as terrorists or radicals, the government only carried out “security restoration” measures. For example, they are only categorized as an armed criminal group (Kelompok Kriminal Bersenjata/KKKB), so there is no need for special forces. Even when the media reports on acts of separatism and various crimes committed, they are interpreted as normal events, news that is passed down “flat”; not as “exciting” as news about certain (religious) groups known as terrorists. And society does not question and accept. Why? Because they (separatist groups) are not categorized as terrorists or radicals.

In a political structure, those who have the power to produce such definitions and categories are political elites and rulers. Of course, the definition made is based on their point of view and interests. Meanwhile, the media helps socialize this category to the public through news coverage. Finally, people unconsciously accept and interpret this categorization as truth. Based on these categories, the authorities have a rational basis for issuing certain policies on behalf of the interests of the nation and state. Based on the results of Edelman’s research, the same method was also used by the US Government during the reign of President Ronald Reagan (Edelman 1993). It turned out that the same method was used by the US when it wanted to attack Afghanistan (2001), Iraq (2003), and Libya (2011).

These countries are defined by the US and friends as hotbeds of terrorism, dictatorial governments, producing weapons of mass murder, and endangering people’s lives and the safety of the world. Therefore every invasion of these countries by the US and its allies is referred to as a rescue operation or a liberation operation (Whitcomb 2005). The words or sentences that were used as the name of the operation seemed to contain great human values so that the people of the US and allied countries gave legitimacy to the military intervention actions carried out by their governments.

In the case of the military attack on Iraq, Barack Obama criticized that the US and allied invasion of Iraq was: “a stupid war; a reckless war; a war that was not based on dignified reasons, but only driven by passion; not on principle, but on political interests.” (Fitzgerald and Ryan 2014). Even though almost all of the definitions they made were not proven, namely classifying the countries mentioned above as evil parties, they continued to attack and occupy them. The behavior of the US and its allies by making various definitions containing these accusations is only to hide their interests. For the US there are two interests: first, the US wants to show military supremacy in the global political sphere so that all countries are afraid and submit. Second, economic interests by plundering natural wealth (oil fields) in the countries being attacked. As for the allies, it was more about economic interests, namely being able to share in the oil fields in the plundered country (Sutopo 2011).

In the context of reporting reality, through this categorization or definition, the media invites and teaches the public to think about how a factual reality should be understood and interpreted. Information from the media that looks objective to the audience is just a game or a reflection of certain ideologies (interests) (Eriyanto 2011).

Based on Edelman and Eriyanto and accompanying examples, as described above, it can be concluded that the meaning of the statement used in a news frame is not the real meaning. This statement is an arena used by the media and certain parties behind the media to hide their ideology (interests) by utilizing the media.

Following the results of the analysis on the rubrication construct and news structure regarding the HRS case trial at the East Jakarta District Court, it can be said that in the context of ideological/political interests, *cnnindonesia.com* tends to be in line with the interests of the prosecutor. Some of the findings that can be used as evidence are:

- (1) Rubric category. The incident at the HRS trial is included in the national/legal/criminal rubric. The meaning is an event that occurred in the local area and is legally included in the category of minor violations (violation of health protocols), but by *cnnindonesia.com* it is categorized as an event with a national dimension. This can also be interpreted that the existence of HRS has a national influence. Then, when the events of the HRS trial were included in the criminal rubric, *cnnindonesia.com* also agreed that HRS was a criminal (criminal) who endangered people's lives nationally.
- (2) News structure categories. Of the 26 news stories studied, *cnnindonesia.com* selected headline statements and news bodies using declarative words, phrases, or sentences and implemented balanced coverage. It is said so because *cnnindonesia.com* provides a place for statements from all parties involved in the trial. *Cnnindonesia.com* wrote more direct quotes from statements from each party. However, all of the news contained an affirmative meaning, namely to confirm or strengthen the prosecutor's accusations. Then almost 90% of more than 26 news stories are always closed with a statement reaffirming the prosecutor's demands, regarding violations of the law committed by HRS, articles and paragraphs of laws or regulations that were violated, and the amount of the prison sentence imposed. This confirms the position of *cnnindonesia.com*, that HRS has committed a serious violation of the law.
- (3) Category completeness (support) news. The use of pictures and graphics and other non-verbal symbols in reporting practices, among other things, is for artistic purposes and makes it easier for audiences to understand news content. Because pictures and graphics can do more to 'talk' than the use of words or writing. However, the choice of images and infographics to support news is also based on the attitude and subjectivity of the media. Likewise, the use of two infographics by *cnnindonesia.com* when reporting on the HRS case trial. The purpose of the use of two infographics by *cnnindonesia.com* is to strengthen the categorization that HRS is a troublemaker, likes to break the law, or is a criminal who needs to be severely punished.

Based on the results of the analysis and discussion above, it can be said that the meaning and attitude of *cnnindonesia.com* towards the HRS case trial at the East Jakarta District Court tend to be in line with the meaning and attitude of the public prosecutor. If the public prosecutor is positioned as a government representative in the context of law enforcement, then it can also be said that in framing the news about the HRS trial incident, *cnnindonesia.com* takes a stand on the side of those in power. This means that referring to Edelman's opinion, it can be said that behind the news frame of the HRS trial displayed by *cnnindonesia.com*, there is a certain ideological context/political interest.

5 CONCLUSION

The results of the analysis and discussion prove that behind the news framing of the trial events of the three cases that befell Habib Rieziq Shihab (HRS), *cnnindonesia.com* carries the ideology/political interests of power, which is represented formally normatively by the police

and public prosecutors. Therefore, in facing the trial, HRS is not only dealing with problems of criminal law procedures but also the political interests of power.

This conclusion is strengthened by the facts: 1) Violations of health protocols committed by HRS actually fall into the category of misdemeanors, but the prosecutor and the police classify them as serious criminal offenses that can be prosecuted for more than 2 years in prison; 3) HRS is a religious figure who has strong political influence and has fanatical followers spread across various cities and regions in Indonesia; 2) HRS more often takes a critical position and is in opposition to the authorities. The last two things prompted the authorities to pay special attention to HRS and the legal cases they were facing.

The above proves the truth of Edelman's thesis that what appears to be objective and rational in media coverage harbors certain interests/ideologies from the media themselves or the interests of other parties outside the media by exploiting the power of the media. Therefore, for the audience or society what is needed is the ability to think and act critically when consuming information from the media, so that they are not trapped in the construction of unfair opinions that are developed based on a media perspective. Meanwhile, for the media, moral wisdom is needed in carrying out its responsibilities as a social institution that has full power to influence public opinion and perceptions. Especially in carrying out the role of the media as social control and education in society.

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Towards a clean energy system in Southeast Asia: ASEAN's efforts to encourage net zero emissions

Devita Prinanda, Jannah Afa Aprilya & Najamuddin Khairur Rijal
Universitas Muhammadiyah Malang, Malang, Indonesia

ABSTRACT: The use of cleaner energy sources needs to be done to avoid the effects of global warming. This is because the energy that is widely used still produces greenhouse gas emissions which affect global warming. The Southeast Asia Region is an area that is vulnerable to the effects of global warming because it is located close to the ocean. Therefore, reducing greenhouse gas emissions is very important. It is targeted that ASEAN will reach NZE by 2050. This study aims to analyze the efforts made by ASEAN member countries toward a cleaner energy system to achieve NZE. The author uses a descriptive-qualitative research method by collecting data through library research. The research results show that the Southeast Asia Region has great potential for the development of renewable energy. This is an opportunity for an energy transition in the region. In addition, ASEAN already has various instruments to encourage the energy transition toward NZE. In general, ASEAN countries have made efforts to adopt clean energy, especially Singapore, Thailand, the Philippines, and Indonesia.

1 INTRODUCTION

Global energy use is increasing over time. The greater the use of energy, the greater the impact that will be generated. Based on projections from the International Energy Agency (IEA), the increase in world energy demand will reach 45% in 2030 and to date, global energy use still adopts materials from fossil energy sources, namely oil, natural gas, and coal (Kementrian ESDM RI 2008). The continuous use of fossil energy sources threatens the availability of reserves of these energy sources because fossil energy is a non-renewable energy source, this is due to the fact that over time the demand for energy is increasing.

Consumption of fossil energy on an ongoing basis will also cause many negative impacts, for example, environmental pollution, energy crisis, dependence on energy sources, and the use of fossils also contribute to greenhouse gas emissions. The emergence of these negative impacts will later cause other negative impacts. Like the release of greenhouse gas emissions resulting from the use of fossil energy can cause climate change. Greenhouse gas emissions affect the rise in earth's temperature and produce solar heat because greenhouse gas emissions retain geothermal heat obtained from the sun. Until now, it can be felt that the earth's temperature is getting warmer than in the late 1800s due to the increasing release of greenhouse gas emissions (United Nation 2018). As for the emissions of greenhouse gases in the atmosphere, namely carbon dioxide (CO₂), nitrogen dioxide emissions (N₂O), methane (CH₄) emissions, and freon emissions (SF₆, HFC, and PFC) if they increase will cause global warming. Among the various types of greenhouse gas emissions, carbon emissions are the highest in ASEAN.

World Resource Institute (WRI) stated that the contribution of carbon emissions by Southeast Asian countries in 2016 reached 7.35% of total carbon emissions worldwide.

In addition, Southeast Asian countries continue to carry out industrialization processes which certainly require a lot of energy to support the ongoing industrial process. The ASEAN energy sector occupies the number two position as the sector that contributes the most carbon emissions after the forestry sector and land use expert. Population growth is also a factor in increasing carbon emissions. This is because the increase in population also causes an increase in the amount of energy demand used for production, in which the production is adjusted to meet the increasing demand of the population. Therefore, carbon emissions will continue to increase because energy use will continue to be used as a tool to meet the needs of a growing population. In addition, Southeast Asia is a region whose population growth is relatively fast, so the carbon emissions that will be produced will also increase (Khusna 2020).

If emissions continue to increase around the world, climate change will get out of control. The impacts resulting from climate change will affect life from various aspects such as jobs, health, safety, drought, hunger, and other threatening risks. The problem of climate change cannot be solved if only one country can solve it, but international cooperation is needed. As an effort to overcome global climate change, it was agreed in the Paris agreement on December 12, 2015 which has been in force since November 4, 2016.

The Paris agreement also applies Nationally Determined Contribution (NDC), a nationally defined contribution that is a country's climate target commitment to reduce greenhouse gas emissions. The NDC contains steps taken by countries as an effort to reduce greenhouse gas emissions and also adjust to the impacts of climate change. With the NDC, countries can determine how to achieve targets and communicate all actions taken as an effort to reduce greenhouse gas emissions. NDC reports under the Paris agreement must be updated by countries every five years. Not only that, with the NDC, countries are guided towards transformative changes that create greener and more sustainable development (United Nations 2021).

Through explanation above, the purpose of this research is to examine how ASEAN's efforts are in realizing net zero emission (NZE) by utilizing renewable energy or cleaner energy. This research is expected to contribute to studies on energy transition policies, studies on the Southeast Asian Region, and sustainable development goals (SDGs).

2 CONCEPTUAL FRAMEWORK

2.1 *Energy transition*

Energy transition is a process of changing the use of fossil energy resources into clean energy that is more environmentally friendly. Clean energy in question is like solar energy, geothermal, water, and wind. Energy transition refers to the shift away from limited and polluting conventional energy sources, such as coal, oil and natural gas, towards clean and renewable energy sources, such as solar energy, wind energy, hydroelectricity, biomass and geothermal energy (Energi Terbarukan 2020).

The main goals of the energy transition are to reduce greenhouse gas emissions, reduce air pollution, and create a more sustainable and stable energy system in the long term. One of the main reasons for continuing the energy transition is climate change (Khalid 2023). Excessive human activity in using fossil fuels has led to an increase in greenhouse gas emissions, which in turn causes global warming and significant climate change. Therefore, reducing carbon emissions is a top priority in energy transition efforts.

Renewable energy sources do not produce significant carbon emissions during their operation, so they are a promising alternative. In addition to environmental benefits, the energy transition also has significant economic and social benefits. Creating a new renewable energy industry can generate new jobs and drive economic growth. Factories that manufacture solar panels, wind turbines and other renewable energy systems provide employment opportunities for local people and increase regional income.

In addition, reducing dependence on imported fossil fuels can improve a country's energy security and reduce its vulnerability to fluctuations in global energy prices. However, the energy transition also involves a number of challenges that need to be overcome. One of the biggest challenges is the integration of renewable energy sources into the existing electricity grid. Renewable energy sources are often unstable and fluctuate depending on weather conditions and time of day (Josh Cohen 2021). Therefore, an efficient energy storage system and adequate infrastructure are needed to overcome this uncertainty and maintain stable energy availability.

2.2 *Net zero emissions*

The concept of Net Zero Emissions (NZE) refers to conditions in which human-generated greenhouse gas emissions are proportional to the amount absorbed or removed from the atmosphere. In this case, the amount of emissions released into the atmosphere must be balanced by the amount reduced or eliminated through actions such as the use of renewable energy, reducing emissions, or eliminating emissions using carbon capture and storage technologies. The importance of the NZE concept is applied to prevent global warming from occurring so that it is no more than 1.5°C which is also stated in the Paris agreement where it is written that emissions need to be reduced by 45% in 2030 (United Nations 2023).

Greenhouse gases are the keepers of the earth's temperature. It is called that because the sunlight that enters the earth will turn into heat and make the earth warm, but some of the incoming light is reflected from the earth's surface into outer space as radiation. Part of the reflected sunlight will be absorbed by greenhouse gases in the atmosphere (water vapor, carbon dioxide (CO₂), and methane) which locks heat from sunlight in the Earth's atmosphere. This is what makes the earth has a warm temperature so it can be inhabited by humans, animals and plants. This phenomenon is known as the greenhouse gas effect. Without the greenhouse effect the earth would be colder (Surtani 2015).

There are several reasons why the NZE is very important in mitigating climate change, namely to reduce the increase in global temperatures that occur, in where greenhouse gas emissions are the main cause of global warming. By reducing global temperature increases, emission neutrality can be achieved so that global temperature increases will be reduced in a sustainable manner and can also reduce other risks such as sea level rise, extreme weather and other natural disasters.

In addition, this concept is also important for the balance of ecosystems where excessive emissions can disrupt the balance of all types of natural ecosystems, including the survival of various vulnerable species, and also for human health. The danger of greenhouse gas emissions is not only bad for nature, but greenhouse gas emissions also have an impact on human health (United Nations 2022). This is because greenhouse gas emissions also contribute to air pollution which is of course detrimental to respiration and ultimately to human health.

Reducing emissions will certainly be beneficial for improving healthy air quality as well as cleaner for breathing and reducing the risk of respiratory diseases and improving overall human health. With NZE, it will encourage a shift in energy sources. The current use of energy sources still uses a lot of fossil energy sources, so with the achievement of the NZE, a transition from energy sources that previously used limited fossil energy to using sustainable renewable energy sources will be realized (GGGI 2017). The NZE will eliminate dependence on fossil fuels, increase energy security, and also promote innovation in the renewable energy sector.

The transition to the NZE creates new economic opportunities in the form of green jobs, technological innovation and investment in the renewable energy sector. This can promote sustainable and inclusive economic growth. To achieve NZE requires serious action and commitment from individuals, companies and governments. These include the use of renewable energy, energy efficiency, increased transport efficiency, forest protection, and investment in research and development of green technologies. All of these help reduce our carbon footprint and make a real contribution to global climate change mitigation efforts.

3 RESEARCH METHODOLOGY

In this study the authors used a descriptive method with a qualitative approach. Presentation of data with a descriptive method that is trying to describe and explain objects according to what is there. Qualitative descriptive research intends to describe systematically the facts contained in the objects and subjects studied (Sukardi 2009). The data collection is done through library research, by collecting data from various relevant references, such as journals, books, reports, websites, news, and others.

4 RESULTS AND DISCUSSION

4.1 *ASEAN policy to achieve net zero emissions*

To achieve the goal of NZE or net zero emissions in the Southeast Asia region, there are several policies and regulations implemented by ASEAN. First, the ASEAN Plan of Action for Energy Cooperation (APAEC). APAEC is a framework designed to advance energy cooperation in ASEAN. One of the main pillars of APAEC is reducing greenhouse gas emissions and increasing energy sustainability. Through APAEC, ASEAN seeks to encourage increased energy efficiency, use of renewable energy, and reduced emissions in the energy sector (Kementrian ESDM RI 2019).

Second, the priority of the ASEAN Economic Community 2025. ASEAN has a commitment to significantly reduce greenhouse gas emissions. One of the targets is to increase the contribution of renewable energy in meeting energy needs up to 23% by 2025. In addition, in this priority ASEAN also promotes the application of environmentally friendly technologies and sustainable waste management (ASEAN 2020).

Third, the ASEAN Working Group on Climate Change (AWGCC). AWGCC is a working group tasked with coordinating climate change mitigation and adaptation efforts in ASEAN. They focus on capacity building, information exchange, and policy development related to climate change. The AWGCC also plays a role in directing steps towards achieving the NZE target in ASEAN (ASEAN 2021).

Fourth, the Paris Agreement. ASEAN is a party to the Paris Agreement on Climate Change. In this agreement, each ASEAN member country is committed to reducing greenhouse gas emissions according to their Nationally Determined Contribution (NDC). This NDC includes efforts to reduce emissions and energy sustainability that contribute to achieving NZE.

Fifth, regional cooperation and joint projects: ASEAN promotes cooperation and joint projects among its member countries to reduce emissions. This includes technology transfer, investment in renewable energy, sustainable infrastructure development, and training in clean energy (Chan *et al.* 2020).

4.2 *Potential and efforts to achieve NZE*

ASEAN countries have huge energy resource potential, ranging from fossil resources to renewable energy. However, the excessive use of fossil energy can have a negative impact on the environment and human health, including increasing greenhouse gas emissions which cause global climate change. Therefore, ASEAN countries need to move towards a cleaner energy system as an effort to achieve the NZE target. There are various renewable energy sources in ASEAN, namely there is biomass found in Thailand, then ASEAN also has geothermal potential because the location of some ASEAN countries, namely Indonesia and the Philippines, is located close to the equator which makes sunlight a renewable energy source and can be utilized. for ASEAN (Siregar 2016).

In addition, wind also has potential in Thailand, the Philippines, Vietnam and Indonesia. And there is Laos whose country has fossil and biomass energy sources such as wood and

charcoal. Biomass energy owned by Laos can potentially contribute 69 percent of total energy consumption, water energy can contribute 12 percent, and coal can contribute 2 percent (Khuong 2017 ; Paramitha 2023). This indicates that renewable energy has potential and is the best alternative in switching energy sources. The electricity potential of renewable energy sources can reach 4100 megawatts (MW), including those generated from the production of biogas, biomass and solid waste of around 1450 MW, and also from the sun around 500 MW (Khuong 2017). In the utilization of renewable energy and seeing its potential, Cambodia can use biomass as a substitute for diesel, the use of wind energy is estimated to contribute up to 3,665 gigawatt-hours (GWh) per year, and solar energy is also expected to contribute up to 65 GWh/year (Reve 2015). Renewable energy owned by Vietnam such as wind energy has a potential that is estimated at 513,360 MW, there is also stable solar power in this country. In addition, Indonesia has geothermal energy potential which is estimated to reach 28,897 MW which can contribute around 40 percent of the world's thermal power (Khuong 2017).

ASEAN's efforts towards a cleaner energy system are accelerating the development of renewable energy. ASEAN countries have great potential in the development of renewable energy, such as solar, wind, water and biomass energy. Therefore, ASEAN countries need to accelerate the development of renewable energy as an environmentally friendly energy source. The ASEAN government also created a scheme for ASEAN countries to determine renewable energy development targets and the agreement of all regional countries in 2025 to meet the target of 23 percent renewable energy. Meanwhile, Laos has set a target of reaching 30 percent renewable energy by 2025 (Khuong 2017). ASEAN is trying to tighten regulations on the use of fossil energy and also trying to improve energy efficiency to reduce the use of fossil energy and greenhouse gas emissions. ASEAN countries need to tighten regulations on the use of fossil energy, such as emission limits and the use of more environmentally friendly fuels (Hasjanah and Simanjuntak 2023).

4.3 *ASEAN opportunities and challenges towards NZE*

ASEAN's journey to NZE is an important but not easy and challenging goal. To reach NZE requires a process that is not fast because to achieve these goals ASEAN needs to pay attention to the opportunities and challenges that exist. One of the opportunities that ASEAN has in using renewable energy towards NZE is natural resources owned by ASEAN. ASEAN has abundant natural resources, including renewable energy potential such as solar, wind and bioenergy. Making good use of this natural resource can help in the shift to clean energy and reduce dependence on fossil fuels (Khuong 2017).

The next opportunity is the increasing awareness of the importance of environmental protection and climate change among the people of ASEAN. With higher awareness, there will be a push to adopt sustainable technologies and policies. From this awareness will also create close cooperation between member countries, ASEAN can strengthen efforts towards NZE by sharing knowledge, technology and resources. Another opportunity with the transition from fossil energy to renewable energy will create jobs and increase the economy of a country (Keminfo 2023).

In addition to the opportunities towards NZE, ASEAN is also faced with challenges along the way. There are Infrastructure challenges, this is because the change towards clean energy requires adequate infrastructure, such as a strong electricity transmission network, energy storage systems, and electric vehicle charging infrastructure. Building this infrastructure will be a challenge on a large scale and will require significant investment (Aprilianto and Ariefianto 2021). ASEAN countries are also still very dependent on fossil fuels, especially in the energy and transportation sectors. Reducing this dependency and switching to renewable energy sources will require a comprehensive and sustainable transformation. The energy sector with fossil fuels is a major contributor to greenhouse gas emissions in ASEAN.

The use of fossil fuels in power generation, transportation causes high CO₂ emissions and also causes serious air pollution in several big cities in ASEAN. Air pollution can have a negative impact on human health and the environment. There is therefore a need to increase the use of renewable energy such as solar, wind and biomass power as well as better energy efficiency measures. Population growth is also a challenge, due to the increasing number of people the demand for energy is also increasing. Because of this, ASEAN needs to protect and use energy wisely (Jeti and IESR 2022).

Another challenge is the gap in capabilities and resources in ASEAN countries. This is because each ASEAN country has different levels of capabilities and resources in dealing with climate change. Some countries may have difficulty adopting sustainable technologies and policies due to financial constraints or lack of capacity. To address these challenges, ASEAN needs to work together on developing sustainable energy policies, promoting the use of renewable energy, increasing energy efficiency, and increasing investment in sustainable energy infrastructure.

4.4 ASEAN Instruments to Support the Transition Towards NZE

There are several plans in the transition to NZE by ASEAN, first namely the ASEAN Action Plan for Sustainable Energy (ASEAN Plan of Action for Energy Cooperation, APAEC) is a strategic framework developed by ASEAN member countries to encourage cooperation in the energy sector and achieve goals sustainable energy in the region. APAEC covers a five-year period and currently applies to the period 2021–2025 (Hohne *et al.* 2021). APAEC's main goal is to improve energy security, accessibility of affordable energy, and energy sustainability throughout the ASEAN region. This plan is designed to guide ASEAN member countries in developing interrelated energy policies, strategies and programs.

Second, the ASEAN Climate Change Framework (ASEAN Climate Change Initiative, ACCI) which aims to improve coordination between ASEAN member countries in dealing with climate change. This framework covers various aspects, including mitigation of greenhouse gas emissions, adaptation to climate change, climate finance, and transfer of technology. As proof of commitment to fighting climate change, ASEAN leaders launch the ASEAN Climate Change Initiative (ACCI) is a suggestion made by the ASCC Blueprint (Drouet *et al.* 2021).

The establishment of ACCI is intended to further enhance regional coordination and collaboration in combating climate change and to implement practical responses to its adverse impacts. ACCI's top priority is developing policies and strategies, followed by information sharing, capacity building, and technology transfer. The 11th ASEAN Environment Ministers Meeting supported the establishment of the ASEAN Working Group on Climate Change (AWGCC) to implement ACC I.27 and accept the Terms of Reference from ACCI (Sari and Indriyani 2015).

Third, the Paris Agreement in which ASEAN member countries have committed to achieving the targets in the Paris Agreement on Climate Change. This includes significantly reducing greenhouse gas emissions to reach the NZE by mid-century. The Paris Agreement was agreed to initially occur at the 21st United Nations Climate Change Conference (COP21) held in Paris, France in December 2015 (Hohne *et al.* 2021). With the main goal of the Paris Agreement being to fight global climate change by limiting the rise in global average temperatures to below 2 degrees Celsius above pre-industrial levels, with maximum efforts to limit temperature rises to 1.5 degrees Celsius. Countries also agreed to increase their adaptive capacity to the impacts of climate change and to mobilize sufficient funds and financial resources to support mitigation and adaptation actions in developing countries.

Fourth, the Emissions Trading System (ETS) is one of the policy instruments that can be used in the context of achieving the NZE. ETS is designed to reduce greenhouse gas (GHG) emissions by imposing limits on the amount of emissions allowed in a particular economic

sector or region. In this system, the government sets a limit on total allowable emissions (national emission cap) and divides it into tradable emission permits (usually called emission quotas or emission units) (Stern and Valero 2021). Each entity, such as a company or industrial installation, is assigned an emission quota that reflects a part of that total emission limit. If an entity or country manages to reduce emissions below its quota, the entity can sell the remaining emission quota to other entities that exceed their quota.

Thus, the emission trading system encourages GHG emission reduction by providing economic incentives for entities that can reduce emissions at a lower cost than other entities. In the NZE context, ETS can play a role in helping to achieve this goal. The emission trading system can be used as a tool to direct emission reductions efficiently and gradually in sectors that have emission quotas. Over time, the total emission cap can be gradually lowered, so that entities in the system are expected to reduce emissions to net zero or NZE. Several ASEAN member countries have introduced or are developing emission trading schemes at the national level (Zhou and Wang 2022). So that this system allows emission control through the allocation of emission permits that can be traded between companies and the industrial sector.

Fifth, the Renewable Energy and Sustainability Initiative where ASEAN has launched various initiatives to encourage the development of renewable energy, including increasing investment in renewable energy infrastructure, providing fiscal incentives, and formulating policies that support the use of renewable energy. Such is the case in Indonesia where Bank Indonesia also has regulatory instruments related to sustainable renewable energy initiatives that lead to sustainable finance by providing support to the palm oil industry to achieve this plan.

Through the biodiesel strategy to achieve net zero emissions, Indonesia is also determined to accelerate the clean energy transition. Promises to use palm oil as a biofuel feedstock will help Indonesia achieve its energy and security mix target of 23% by 2025 (OJK 2022). Implementing biodiesel can overcome the environmental impact of climate change and is dedicated to presenting innovation as one of the main forces behind the energy transition process. Along with other renewable energy options, the commercial development of palm-based gasoline and its derivatives will help the world achieve the COP26 Framework Convention on Climate Change goal of reducing greenhouse gas emissions (OJK 2022). Thus, it can be concluded that to ensure a smooth transition towards a low carbon economy, OJK as one of the Indonesian state agencies has a long-term commitment to sustainable finance. In addition, OJK continues to support Indonesia's commitment to the Paris Agreement and its efforts to meet the NZE target.

Sixth, Technology cooperation and knowledge transfer play a key role in achieving NZE. In this context, technology cooperation and knowledge transfer refers to the exchange of technology, knowledge and experience between countries, institutions and industrial sectors to support efforts to achieve the goals of the NZE. Where ASEAN member countries can share technology and knowledge in an effort to achieve NZE. This can be done through bilateral cooperation, research exchange programs, and the establishment of centers of excellence for clean technologies. So that in a sense technology cooperation and knowledge transfer are important components in achieving NZE globally. In facing the challenges of climate change (Charani Shandiz *et al.* 2021).

Seventh, Clean energy standards and labels by providing guidance and information to consumers, companies and other stakeholders about products and services that contribute to reducing greenhouse gas emissions (Pye *et al.* 2020). So that ASEAN member countries can introduce special standards and labels for clean energy products, such as electric cars or energy-efficient household appliances. So these clean energy standards and labels help inform consumers and stakeholders about the level of sustainability of certain products and services. By having clear guidelines on products that contribute to the NZE, consumers and companies can make more sustainable choices and support the transition to a low-carbon society and economy.

Of the seven policies and regulatory instruments, successful implementation of these policies and regulatory instruments will depend on commitment and cooperation between ASEAN member countries, as well as a willingness to take concrete steps to reduce greenhouse gas emissions. While ASEAN's efforts to achieve the NZE are still in their early stages, these frameworks and policies also reflect a commitment to tackling climate change and driving the transition to a low-carbon economy in the ASEAN region.

4.5 *ASEAN countries that have adopted clean energy*

One of the ASEAN countries that have adopted clean energy and made progress in reducing greenhouse gas emissions is Singapore. Despite having limited natural resources, Singapore has committed to reducing greenhouse gas emissions by implementing clean energy solutions and technological innovations. Singapore has developed various strategies to achieve this goal. One of the steps taken is to increase energy efficiency by applying energy-efficient technologies in buildings and industries. The government also provides incentives and support for the development of renewable energy such as solar and wind power. Singapore is also investing in research and development of new technologies to increase energy efficiency and introduce cleaner energy solutions (Salamba 2020). In addition, Singapore has adopted a sustainable transport policy by encouraging the use of electric vehicles and environmentally friendly public transport. The government has also introduced an extensive electric vehicle charging infrastructure and expanded the public transport network to reduce the use of private vehicles.

Apart from Singapore, other ASEAN countries have also taken steps to reduce greenhouse gas emissions and adopt clean energy. Examples are Thailand, the Philippines, and Indonesia. Thailand has developed renewable energy and energy efficiency programs. The country has increased its wind, solar, and biomass power generation capacity. Thailand is also encouraging the use of electric vehicles and has reduced fossil fuel subsidies to encourage the transition to green vehicles (N *et al.* 2022).

In addition, the Philippines has launched various policies and programs to promote clean energy, including the development of renewable energy such as wind, solar, hydro and biomass power. The country also implemented incentives for investment in the clean energy sector and committed to reducing greenhouse gas emissions by 70% by 2030 (Mahira 2022).

Indonesia has also taken steps to reduce greenhouse gas emissions by expanding the use of renewable energy such as solar, wind and biomass power. The Indonesian government has announced a target of reducing greenhouse gas emissions by 29% by 2030 and plans to build more renewable power plants (Mahira 2022).

Overall, ASEAN countries have shown progress in adopting clean energy and reducing greenhouse gas emissions. Although challenges still exist, these efforts demonstrate their commitment to sustainable development and environmental protection. In its implementation, each ASEAN member country has differences in terms of the level of economic development, energy needs and natural resources. Therefore, the implementation of policies and regulations to achieve NZE can be different and vary in each country, depending on local conditions and the capabilities of each country. ASEAN as a whole is committed to reducing greenhouse gas emissions and transitioning to a low carbon economy to achieve the goals of the NZE. However, the realization of this goal requires close cooperation between member states.

4.6 *Experience of countries that have adopted clean energy*

On the way to NZE, it is important to continue to learn from experience and lessons learned. Adapting strategies and policies, collaborating with countries and other stakeholders, and engaging communities will help achieve a common goal of creating a more sustainable future. So in line with this, the experiences and lessons that can be drawn from countries that

have adopted clean energy and succeeded in reducing greenhouse gas emissions can be identified.

First, countries that are successful in reducing greenhouse gas emissions usually adopt a diversified approach to energy sources. They don't just rely on one type of renewable energy, but combine several sources such as wind, solar, hydro, geothermal, biomass, and others. This is known as a form of diversification of energy sources. This diversification helps reduce dependence on fossil energy sources that produce high emissions. As happened in Singapore in the energy transition scenario. In a scenario entitled "Charting the Energy Transition to 2050", the Energy Market Authority of Singapore describes three scenarios for the transition of the national energy sector towards net zero emissions. Singapore is pushing for a target of net zero emissions by 2050 (Kementrian ESDM RI 2023).

There is a sizeable contribution from the electricity industry to Singapore's overall emissions. Apart from energy, decarbonization is being carried out in the transportation industry and various heavy sectors to make it more sustainable. Under a "clean energy awakening" scenario, Singapore achieves a diversified supply of clean energy by 2050 through the use of renewable energy sources to supply electricity across international borders, expanding hydrogen infrastructure to reduce hydrogen costs, and adding geothermal and solar energy to its domestic energy mix. Under the "climate action bloc" scenario, Singapore's dependence on imported power increases to 60% of its total energy consumption (Kementrian ESDM RI 2023). Collaboration between countries to create functioning carbon markets is one method being investigated for carbon credits.

Second, countries that are successful in reducing greenhouse gas emissions usually have strong policies and regulations to encourage the use of clean energy. They may provide fiscal incentives and subsidies for renewable energy, set clear emission reduction targets, impose carbon taxes, or ban the use of fossil fuels in certain sectors. Firm and consistent policies are an important factor in directing investment and driving the necessary changes (Rohid *et al.* 2023).

Third, countries that successfully adopt clean energy usually have supporting infrastructure, such as a strong and extensive electricity transmission network, extensive wind or solar panel drilling installations, and the development of efficient energy storage technologies. Adequate infrastructure facilitates the effective integration of clean energy sources into energy systems (Pramono and Kusmiati 2023).

Fourth, countries that have made achievements in reducing greenhouse gas emissions often establish partnerships and cooperation with other countries, international institutions, and the private sector. They share knowledge, technology and experience in the development of clean energy. Collaboration of this kind can accelerate global progress in addressing climate change (Wepo 2023).

Fifth, public education and awareness also play an important role in adopting clean energy. Countries that are successful at reducing greenhouse gas emissions often have active information programs and awareness campaigns to persuade people to use clean energy, save energy, and reduce their carbon footprint. By building higher awareness, people can actively participate in sustainable energy changes (Rohid *et al.* 2023; Wepo 2023). It is important to note that each country has unique contexts and challenges in adopting clean energy. The lessons that can be drawn need to be adapted to the conditions and needs of each country. However, by examining the experiences and best practices of successful countries, we can gain valuable insights into reducing greenhouse gas emissions effectively.

5 CONCLUSION

ASEAN countries need to move towards a cleaner energy system in an effort to achieve the NZE targets. ASEAN's movement towards the NZE is certainly possible because ASEAN has potential in renewable resources such as water energy, sunlight or solar power, wind, and

also biomass. But on the way to NZE, of course ASEAN is not only faced with opportunities but also challenges. Efforts made by ASEAN countries towards the NZE include accelerating the development of renewable energy, increasing energy efficiency, tightening regulations on the use of fossil energy, increasing international collaboration, and providing incentives for the development of clean energy. Therefore,

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Implementation of tourism policy as leading sector towards sustainable economic growth in Indonesia

Arfida Boedirochminarni, Setyo Wahyu Sulistyono & Rahmad Hidayat

Department of Development Economics, Faculty of Economics and Business, Universitas Muhammadiyah Malang, Tlogomas, Malang, Indonesia

ABSTRACT: The goal of a sustainable economy is to improve the quality of life with various aspects, starting from the use of economic factors based on sustainability, to ensure the distribution of development benefits between generations. Equality, diversity, inclusion participation and long-term goals are elements that are considered in the preparation of sustainable policy implementation, in accelerating economic growth in Indonesia which can be done with a leading sector approach to tourism, one of which is through a special economic area policy as a momentum for sectoral economic acceleration, therefore the formulation of the problem of research is to analyze the form of government efforts in realizing sustainable tourism through the tourism reinforcement sector and the determinant variables that determine sustainable tourism reinforcement, with the approach of economic growth theory, tourism sector revenue in this case tax as a momentum to open up opportunities for employment opportunities as wage income for the community.

Keywords: Tourism, sustainability, Development policy, Economic growth

1 INTRODUCTION

The concept of sustainable development is a form of improving the quality of life of the entire community, the sustainable development planning process is carried out through an economic, social and environmental approach that takes into account the needs of the current generation without compromising the ability of future generations, such as the use of economic resources for limited production factors to meet life's needs. This concept is based on the realization that natural resources and economic resources and the environment are limited, so that their use must be done wisely in order to ensure the sustainability of human life and ecosystems in the future with the principle of eco-efficiency. Prior to the realization of the importance of sustainable development, countries tended to prioritize economic growth as seen from the value of economic increase numbers without considering the long-term impact on the environment and society.

Comprehensive development starts from the form of interaction between the community, government, private sector and institutional functions with efforts to improve social, cultural and environmental life are interrelated and must be taken into account together. Economically, sustainable development demands the creation of decent jobs, wages, and increased consumption of the people in achieving inclusive economic growth, and fair income distribution. Furthermore, the social strengthening function has the goal of achieving equality, reducing poverty, increasing access to basic services such as education, health, clean water, and sanitation, market access and improving people's quality of life. Environment, on the other hand, emphasizes sustainable management of natural resources, preservation of ecosystems, and reduction of negative impacts or externalities on the environment.

According to (Hayami and Godo 2005) the form of increasing economic productivity in the sub-system, will have an impact on increasing economic growth, production factors consist of natural resources, labor and capital, while technology is a combination factor supporting added value, analogous to increasing people's income towards prosperity. Openness to the acceleration

of the Indonesian economy is carried out with a sectoral approach in each region, the new paradigm raises perceptions where economic acceleration is carried out through the tourism sector, according to (Sapta Nirwandar 2019) The tourism sector is an effort to increase income through foreign exchange for economic development in a country, including Indonesia. However, in principle, tourism has a broader spectrum of development fundamentals for a country with integrated functions including 1) Efforts to eliminate poverty 2) Sustainable development efforts 3) Preservation of culture. 4) Increased industrial activity 5) Technology development. The acceleration of tourism is a form of shared responsibility, it is also in line with the results of research revealing the tourism sector contributes 11 percent of the world's gross domestic product absorption with around 200 million workers. Or have an indirect impact (Nurmansyah 2014).

According to (WTTC 2022) The World Travel and Tourism Council (WTTC) based in London, England, explains the relationship between economic actors and governments. It states that tourism development today requires 1). Coherent partnerships between tourism actors – communities, private businesses and governments. 2). Tourism activities are carried out commercially, but still provide guaranteed benefits for each party involved. 3) Focusing on benefits not only for tourists who come but also for the communities visited and for the local natural, social and cultural environment, based on this it becomes important how tourism is used as an acceleration of economic growth with an approach to the contribution of government policies in supporting sustainable development. The fulfillment effort is carried out with policies that aim to improve the welfare of the community. Through fiscal policy instruments, the Government can develop its regions, presenting new sources of growth and centers of economic activity. Indonesia's natural and cultural wealth has the potential to be developed as an ability to strengthen world-class competitiveness. Referring to the results of the Asian Competitiveness Institute study, the top 10 provinces with the highest competitiveness scores are not only inhabited by representatives from Java Island, which has been the center of the economy. In detail, the first rank was occupied by DKI Jakarta. Then followed by East Java, East Kalimantan, Central Java, and West Java. (Tan *et al.* 2014).

The focus in developing economic growth is basically an effort to improve the welfare of all levels of society through increasing and equalizing people's income. Realizing economic development based on the people's economic system and developing industry is one of the focuses of sustainable development, especially labor-intensive and export-oriented industries supported by increased human resources and technology to strengthen the nation's development fundamental, increase competitiveness and towards a global economy. However, there are externalities or forms of logical consequences where development in the current era of globalization is economic openness in doing business in all regions of the country with increasingly fierce competition, careful preparation is needed in international market competition, in depth The national economy achieves high and sustainable growth is the goal of strengthening competitiveness given that tourism in Indonesia is one of the mainstays of the economic sector. According to the World Economic Forum (WEF), Competitiveness is defined as the ability to create added value to improve welfare by managing its assets, investment attractiveness, globality and by integrating relationships in an economic context and being a role model for society. The concept of sustainable tourism can be applied to a value-added approach that causes an increase in economic acceleration, so efforts need to be made to revive the tourism industry and restore the economy of communities that depend on the tourism industry. There are 37 provinces in Indonesia and each region certainly has its own potential to be a tourist destination. With the advantages of each region that can improve the tourism industry. According to BPS, there are 2,550 tourist attractions in Indonesia. Based on BPS data, the five provinces with the highest tourism revenue are DKI Jakarta, West Java, Central Java, East Java, and Bali.

Based on Figure 1, provinces in Indonesia have the ability to strengthen sustainable tourism by leading to changes in economic growth on its determining variables so that this research has a formulation of the problem of analyzing the form of government efforts in realizing sustainable tourism through the tourism booster sector and the determinant variables that determine sustainable tourism boosters, with the approach of economic growth theory, tourism sector revenue in this case tax as a momentum to open up opportunities for employment opportunities as wage income for the community.

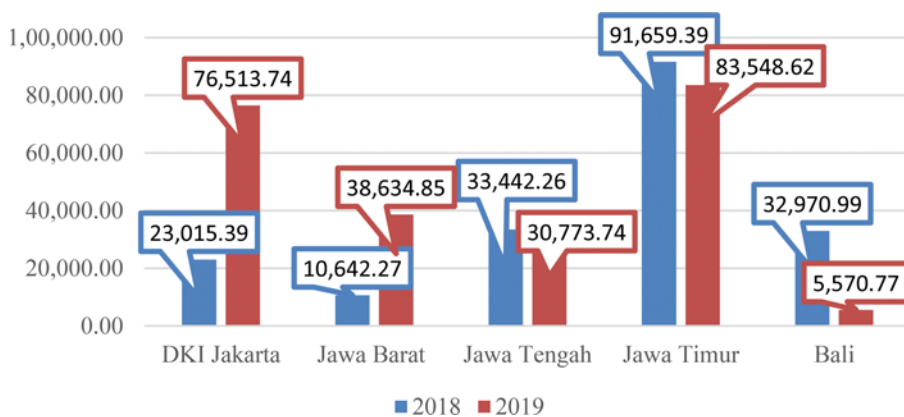


Figure 1. Data of provinces with the highest tourism sector revenue in Indonesia in 2018–2019. Source: BPS in figures ADHK GRDP by business field of Indonesia province.

2 LITERATURE REVIEW AND THEORY REVIEW

The tourism sector accounts for 11 percent of gross domestic product absorption with around 200 million workers, by opening up new opportunities to create jobs, forming a new balance in the labor market. Or have an indirect impact of 800 million people. In 2012, the direct and indirect contribution to Indonesia's gross domestic product amounted to 12 percent. Tourism potential is enormous but much hampered by infra-structure, security, ability in promotion towards commercialization, and slow sensitivity in composing government policies based on tourism strengths. In addition to having a positive impact on Indonesia's economic growth. Tourism also has a negative impact on the economy and social community, although the positive impact is still far more than the negative impact, it will indirectly bring added value to developing countries like Indonesia.

2.1 *Concept of tourism competitiveness*

The added value in the economy of the increase in production factors becomes an amplifier for determinant factors in the improvement of the tourism sector, including tourist visits, employment opportunities, taxes and wages, in-depth into the determinants of strengthening growth towards sustainable development. (Porter 2008), the competitive advantage requires building factors such as:

2.1.1 *Cost advantages*

Excellence in the cost of providing products, services and services in the tourism sector, which is an important factor in building the competitive advantage of tourism destinations. It incorporates various factors capable of developing destination performance such as planning (design), tourism product development, commercialization activities such as marketing, service, and the price level offered. The form of cost advantage can also be supported by the government's contribution in providing constructive policies through fiscal policies to build supporting infrastructure through taxes and other financial incentives, such as tariff setting and levy assistance schemes.

2.1.2 *Differentiation*

Differentiating tourism destinations and products is a focus in developing comparative advantage in the tourism sector. A tourism destination must be able to be different from its competitors, as a special characteristic when producing unique and valuable accessibility, attractions and amenities for incoming tourists. Logical differentiation is done by determining local wisdom that is supported by economic sectoral activities referring to sustainable development.

2.1.3 *Business linkages*

Developing mutually beneficial relationships is an integrated process in building tourism's competitive advantage. The relationships built are vertical and horizontal and integrated with each other.

2.1.4 *Services*

It is a form of consistent service, as a form of commitment since tourists arrive at the entry point, while in tourism destinations until their return. All related parties such as airport and port administrators, immigration, customs and quarantine officers, taxi drivers and others and are able to provide excellent and standard services so that they leave a deep impression on tourists.

2.1.5 *Infrastructures*

The condition of well-maintained and operating tourism supporting infrastructure and facilities, which is an important factor in building the competitive advantage of a tourism destination, supports sustainable development.

2.1.6 *Technology*

The use of production factors including appropriate and easy-to-use technology will be able to provide support for services to tourists who come as well as being able to support the decision-making process in the development, management and marketing of tourism destinations.

2.1.7 *Human resources*

The competence of human resources in providing services and fostering tourism is the key to implementation as a factor in shaping competitive advantage, illustrating the complexity of tourism development which is multi-sectoral and multi-disciplinary at the central, provincial and local levels.

2.2 *Government support for labor absorption and wage levels*

Based on (Instruksi Presiden Republik Indonesia Nomor 16 Tahun 2005 Tentang Kebijakan Pembangunan Kebudayaan Dan Pariwisata 2005) Presidential Instruction No. 16/2005 on Culture and Tourism Development Policy, three important elements are required: a) Vision; b) Leadership; and c) Commitment. These three elements must also be demonstrated in the process of developing, managing and promoting tourism. Government support is a fundamental pillar of the economy; the government has the function of allocation, distribution and stabilization. The functions of allocation and distribution have the role of making the economy more efficient and less distortive. Issues that are currently emerging and have to do with the function of allocation of state revenue and state expenditure, while the government's stabilization function performs tasks in the process of sustainable development prioritizing economic growth. The form of government commitment in the readiness of the tourism sector by opening up opportunities for tourists from abroad is in line with research conducted by (Mahiroh 2019) with the title Analysis of the Relationship between the Tourism Sector and Indonesia's Economic Growth shows that foreign tourist visits are insignificant to economic growth but on the contrary economic growth affects the number of foreign tourist visits.

Based on a review (Betcherman 2012) of the results of research in developing countries on living standards (*employment and income effects*), productivity, and social activities, it has an impact on the availability of employment. However, the effects of labor efficiency using technology and various regulations on companies such as salaries, health insurance will affect the labor market occupying the labor sector, and then the effects of equity among workers such as youth, women, and less skilled workers are disproportionately out of scope and not absorbed in employment. While the overall conclusion is one of modest effects in many cases, this does not mean that the impact of *tid-ak* can be more dramatic where regulations are set or institutions operate in a way that exacerbates the labor market imperfections that the government is designed to address through policies that are set up in such a way in an effort to increase employment which is

influenced by several things including: 1) Labor productivity through indicators of the production capability of the Community. 2) Improvement of labor capability through training. 3) The ability to adopt new technology 4) The efficiency of labor reallocation 5) The size of the company structure, causing the amount of labor absorption in each industry or job field to be different.

Increasing the capacity of human resources absorbed in the employment field cannot be separated from the role of the government and companies in determining the amount of wages received by the community, which directly affects per capita income through accumulated economic activities, the government has a role in determining the level of wages received, as a form of performance and productivity, in formal employment, then in informal employment will absorb unskilled labor, but has a great opportunity and contributes lowly, according to the following figure:

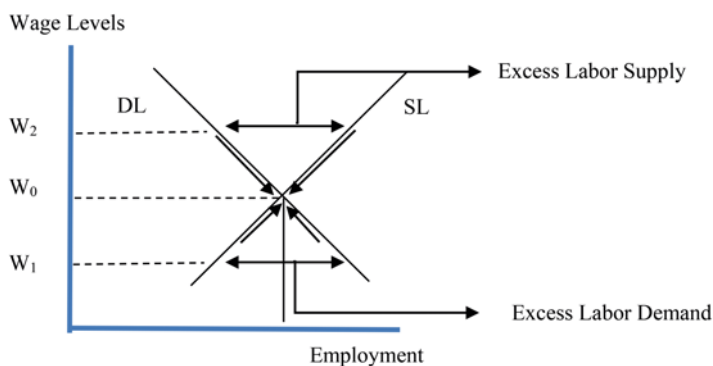


Figure 2. Labor market supply and demand equilibrium by wage rate.
 Source: Data processed, 2023.

2.2.1 Tax stipulation as a reinforcement for sustainable development

Based on research (Sanjaya and Anis 2020) examining the effect of taxation on welfare, using Granger causality analysis, and focusing on economic growth and human development as components of welfare, with linkages between growth, and human development. The analysis is based on a comparative study between some *Central and Eastern European* (CEE) countries and the richest European Countries, over the period 1995–2015. Taxes are illustrated by different types of tax revenue to GDP ratios, economic growth is determined by gross domestic product and gross national income, while the *Human Development Index* (HDI) included in the analysis is a composite measure used to rank countries based on their social status and level of economic development. The results of the study led to the fact that taxes support economic growth, but their impact on human development is rather limited. However, in countries with higher HDI, an increase in tax revenue is expected, but in the long run. The study confirms that taxes are an important instrument for the government, and should be used in economic growth. In addition, taxes are closely linked to welfare, as citizens of countries with large HDI values tend to pay higher taxes over time, especially for developing countries like Indonesia. Therefore, practical tax reform should imply a balance between equity and a decent standard of living that supports life expectancy, increased tax revenue, and efficiency in achieving sustainable Development.

In terms of human development, its relationship with tax policy and economic growth is expected as long as the government can introduce fiscal policies that increase social and economic investment used to improve the welfare of citizens, while government spending on education and other public services as a form of tax system practice in an effort to distribute income and redistribute income form providing the best services and reducing income inequality.

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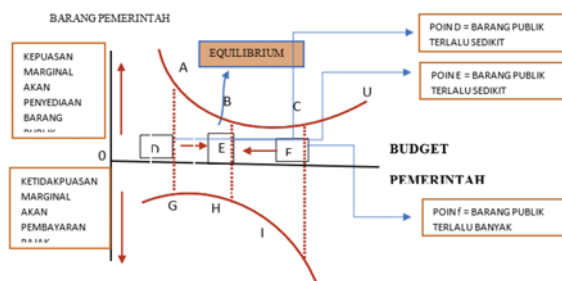


Figure 3. Pigou chart.

Pigouvian Tax, is a tax on market transactions that generate negative externalities, or additional costs, borne by individuals not directly involved in the transaction. Adverse side effects are costs that are not included as part of the market price of the product. Negative externalities are not necessarily “bad”. On the contrary, negative externalities occur when economic entities do not fully internalize the costs of tourism activities as a form of private good use. In this situation, society, including the environment, bears most of the costs of economic activities. An analogous example of the Pigouvian Tax on the concept of economic growth on sustainable tourism is the tax on economic acceleration through the tourism sector where its use is feared to cause negative externalities, but the use of taxes along the way if done optimally will lead to sustainable development.

2.2.2 Economic growth as a sustainable development

Used as a determinant in development policy, economic growth is an indicator that shows how successful a country’s economic development is. Mankiw continued The increase in output and national income shows the economic growth of a country. The increase in national income can be seen from the amount of Gross Domestic Product (GDP) that can be generated each year, and the increase in regional income can be seen from the amount of Gross Regional Domestic Product (GRDP) generated each year. In line with the theory put forward through research (Schurr 2020) shows that the Solow model includes the accumulation of human and physical capital – per capita income, and the estimated effect of accumulated physical capital, and population growth has an effect. Furthermore, for convergence in decent living standards in poor countries, it tends to grow faster than rich countries. Evidence suggests that, population growth and capital accumulation are constant to accelerate sustainable development.

3 RESEARCH METHODS

3.1 Location of research

The provinces of Indonesia were the ones chosen in this study, but only 5 provinces were taken as research sites. Indonesia originally had 34 provinces, but in 2022 it increased to 38 provinces. Each province has a different regional income, known as *Gross Regional Domestic Product* (GRDP). The 5 provinces with the highest GRDP from 2016–2020 were selected for this study.

3.2 Type of research

This research uses quantitative data, which is concrete data contained in a collection of numbers. Furthermore, the two-dimensional panel data method is used for secondary data. These are time series and cross-section, respectively. This data was collected from the population in the Province of Indonesia, which consists of five Provinces.

3.2.1 Time series

Time series data is data that covers several periods (quarterly, annual, etc). This study uses annual data for 5 years, from 2016 to 2020.

3.2.2 Cross-section

Cross-section data is data that consists of several observation units within one period. There are 5 Indonesian provinces involved in this study.

3.3 Data analysis method

Panel regression model estimation

To achieve the research objectives and test the hypotheses, the panel regression model used in this study was used. Panel data consists of a combination of more than one time series and cross section data. Regression analysis includes model feasibility test (F test), goodness of regression model, and significant test of independent variables (t test). The dependent variable is economic growth in five Indonesian provinces (East Java, Central Java, West Java, DKI Jakarta, and Bali), while the independent variables are the number of tourist visits, local taxes, labor force participation rate, wages, and salaries.

In the regression model, the goodness assessment is viewed from the R-square which shows how much the independent variable affects the dependent variable (percentage). Evaluate the model that shows whether the model is significant and feasible.

The panel data equation model is as follows:

$$\begin{aligned} \text{LogY}_{it} = & \text{Log } \beta_0 + \beta_1 \text{LogTourist visit}_{X_1it} + \beta_2 \text{LogTax}_{X_2it} + \beta_3 \text{LogTPAK}_{X_3it} \\ & + \beta_4 \text{LogWage}_{X_4it} + \text{eit} \end{aligned}$$

Where:

Y: Gross Regional Domestic Product (GDRP)

X₁: Number of Tourist Visits

X₂: Local Tax

X₃: Labor Force Participation Rate

X₄: Wages and Salary

β₀: A constant

β₁, β₂, β₃, β₄: Coefficient of variable X

i: Number of object

t: The amount of time

e: Error/residual

To test each variable, several statistical tests were carried out using the review 9 program. The approach model or steps in conducting regression tests are As for the determination of the policy, the analysis process is carried out with a policy lit-eration study by prioritizing the process of determining the carrying capacity of the tourism sector for the achievement of sustainable development referring to the book Majchrzak, A. (1984). The research method with a policy approach is carried out on the discovery of the application of policies on how the process of approaching social life forms characteristics by identifying policy issues, information and providing input on policies in the form of communicative recommendations.

4 RESEARCH RESULTS

4.1 Panel data model test

4.1.1 Chow test

From the regression results conducted to obtain the best model by comparing the common effect model with the fixed effect, the probability results are as follows:

Table 1. Chow test regression results.

Redundant Fixed Effects Tests			
Equation: FEM			
Test cross-section fixed effects			
Effects Test	Statistic	d.f.	Prob.
Cross-section F	59.786973	(4,66)	0.0000
Cross-section Chi-square	114.835636	4	0.0000

Based on the Chow test results, the cross-section F probability value of 0.0000 is smaller than $\alpha = 5\%$ ($0.0000 < 0.05$), thus indicating rejection of H_0 . Therefore, the Fixed Effect model is the appropriate model to use in testing the hypothesis.

The test results above allow you to decide whether to use the Fixed Effect or Random Effect model. However, to determine which model is better to use between Fixed Effect or Random Effect, the Housman test is required.

Table 2. Housman test regression.

Correlated Random Effects – Hausman Test			
Equation: REM			
Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	239.147892	4	0.0000

Source. Processed data 2023.

4.1.2 Housman test

Based on the Hausman test results, the cross-section F probability value of 0.0000 is smaller than $\alpha = 5\%$ ($0.0000 < 0.05$), so H_0 is rejected. Therefore, the Fixed Effect model is the most appropriate model to use in testing the hypothesis.

The test results above, which involve the analysis of the Chow test and the Hausman Test, show the results produced by the Fixed Effect model.

4.1.3 Normality test

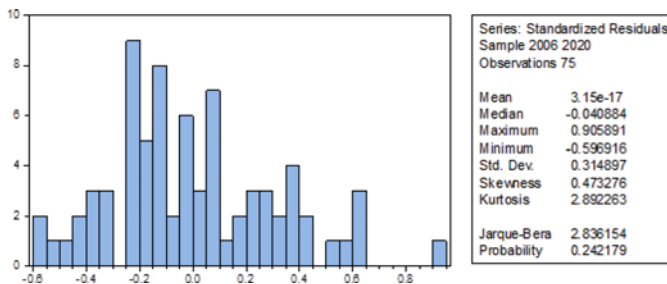


Figure 4. Normality test.

Source. eviews 9 (processed, 2023).

The sum of the p statistics for the jarque-era test is 0.242179, which is a value above 0.05, as shown by the output of Figure 4. Thus, the decision to accept H_0 indicates that the error/residual normality assumption is met (normal distribution data).

From the panel data regression significant test data, the Fixed Effect model was selected as the appropriate model and the regression equation model was obtained as follows:

Table 3. Panel data regression.

Variabel	Koefisien	T-Statistik	Probabilitas
C	-7.28738	-1.26002	0.2121
Foreign Tourist Visits X_1	0.080537	1.077474	0.2851
Employment Opportunity X_2	1.506299	1.221822	0.2261
Tax X_3	0.487618	4.022728	0.0002
Wages X_4	0.780187	5.250826	0
R-Squared	0.933994		
Adj. R-Squared	0.925994		
F-Statistik	116.7391		
Prob. (F-Statistik)	0.000000		

$$\text{Log Y} = -7.287382 + 0.0805537\text{LogX}_1 + 1.506299\text{LogX}_2 + 0.487618\text{LogX}_3 + 0.780187\text{LogX}_4$$

4.1.4 *Partial test (t test)*

According to the estimation results made using the Static Effect Model, the foreign tourist visit variable has a positive and insignificant effect on the provincial economic growth variable in Indonesia with a coefficient of 0.080537, meaning that every 1% increase in foreign tourist visits increases economic growth by 0.08%. The Prob value of the foreign tourist visit variable is 0.2852 which is greater than 0.05 or the t-count value.

With the coefficient of the TPAK variable of 1.506299 has a positive and insignificant effect on provincial economic growth in Indonesia. This means that every 1% increase in TPAK increases economic growth by 1.52%. The probability value of the TPAK variable of 0.2261 is greater than 0.05, which means that the TPAK variable is insignificant and has no effect on economic growth.

With a coefficient of 0.487618, the tax variable has a positive and significant effect on economic growth in all Indonesian provinces; every additional 1% of tax increases economic growth by 0.4%. The probability value of 0.0002 for the tax variable is smaller than 0.05, indicating that the tax variable has a significant effect on economic growth.

With a coefficient of 0.780187, the wage variable has a positive and significant effect on provincial economic growth in Indonesia. This means that every 1 per cent increase in wages results in 0.7 per cent economic growth. The probability value of the wage variable is 0.0000 smaller than 0.05, meaning that the wage variable has a significant effect on economic growth.

4.1.5 *Simultaneous (F-test)*

Prob(F-statistic) value of 0.000000 < 0.05. Indicates the variable number of tourist visits, employment opportunities, taxes and wages have an influence on economic growth significantly.

The correlation coefficient of variable Y of -7.287382 indicates that there is an inverse relationship between tourist visits, employment opportunities, taxes and wages on economic growth, where if there is a change in economic growth decreases by one unit, the value of tourist visits, employment opportunities, wages and taxes will increase by 7.287382 and vice versa if there is a change in the value of tourist visits, employment opportunities, taxes and wages has increased by one unit, the value of economic growth will increase by 7.287382.

4.1.6 *Tourist visit revenue as an economic boost*

The Money Generation Model (MGM) developed by the National Park Service (NPS), produces a form of effort in accelerating the income of a region, in its simplest form, MGM relies on revenue through tourism activities on the number of estimated visits, MGM estimates sales through direct transactions and total revenue at tourist attractions, the impact of revenue received at tourist attractions leads to an increase in local taxes nationally is the contribution of the activities of each community when accumulated referred to as per capita income, In line with

research (Stynes 2011) where the effect of income and labour is estimated by applying the ratio of employment to sales and the ratio of income to sales to total sales as well as an analogous form of income turnover on tourism activities. Furthermore, tourism activities have an income effect on per capita income by measuring employment and can be easily calculated through the wage rate of incoming tourists. The most commonly used measure of contribution to gross domestic product as added value or competitiveness, strengthening competitiveness is measured through the presence of foreign tourists with different socio-cultural characteristics to transfer education and skills in accordance with sustainable development.

4.1.7 *Employment opportunities for sustainable tourism development*

Economic activities are expected to be able to provide welfare at every level of society, as a new economic driver, in accordance with research (Aynalem *et al.* 2016) where tourism is one of the main economic drivers for countries with a total contribution of 9.5% to global GDP and 8.9% of total employment in 2013. Tourism can only develop if the industry is supported by constructive policies and boils down to command policy planning, then the industry can employ qualified human resources or sustainable labour which is the core of an excellent and fast service delivery system. The tourism industry cannot stand alone, and is followed by other sectors such as restaurants, hotels, and even the trade sector thus creating diverse employment opportunities in various sectors such as accommodation, food and beverage companies, transport services, travel agents, other tourism support-based companies.

However, it is interesting that the economic growth variable in the provinces in Indonesia is positively and insignificantly influenced by the labour opportunity variable. In other words, the employment opportunity variable has no effect; as a form of analogy, if employment opportunities increase, economic growth will not increase and vice versa. The estimation results are not in accordance with the theoretical hypothesis and contradict previous research. (Syafitri and Ariusni 2019) which states that the employment opportunity variable has a negative and significant effect on the economic growth variable.

4.1.8 *Tax contribution to sustainable tourism development*

With a significance level of 5%, the tax variable has a positive and significant impact on the Provincial Economic Growth variable in Indonesia. This means that an increase in taxes will increase economic growth, and vice versa. This is in accordance with the hypothesis based on theory and previous research (Dewi and Sri Budhi 2018) has a positive and significant influence on variables that affect provincial economic growth in Indonesia. With PAD as one of the tax sectors, the economy and development in a region will run smoothly or productive activities can provide a greater multiplier effect to improve the overall welfare of the community. However, the results of research by Mdanat *et al.* 2018 in (Dewi and Sri Budhi 2018) state that high tax revenue does not always result in high economic growth; this is because the money received from taxes is not used to finance activities or projects that produce results. This is in line with research (Fatimah and Rahmah 2022) which shows that tax variables have a significant effect on economic growth.

4.1.9 *Wages for sustainable tourism development*

The wage variable has a positive and significant effect on economic growth in Indonesian provinces at a significant level of 5%, which means that an increase in wages increases economic growth and vice versa. This is because if people's wages increase, their consumptive behaviour or purchasing power increases. As is the case with a phenomenon in Spain (Casado-Díaz and Simón 2016) where wages in the hospitality sector are high causing hotel revenue as a supporting force for tourism to decline. This happens because of the special characteristics of workers, especially their lower educational qualifications with high wages, but for tourism deposit qualified individuals are an exception because they are bound to a certain wage level.

4.1.10 *Government efforts in strengthening tourism based on sustainable development*

Government efforts in realising tourism to support sustainable development start from the strategy of developing sectoral-based tourism potential, by prioritising local wealth, art, culture and community social life. Sustainable tourism is a process of strengthening tourism capital that must

be used in developing and improving the quality of tourist destinations that are planned in a structured manner involving all parties.

4.1.11 *Sustainable infrastructure development*

Every economic activity through accelerated growth can cause externalities, the form of interconnectedness between tourism actors becomes a pillar of sustainability to build supporting infrastructure, the Government can build environmentally friendly tourism infrastructure, such as using renewable energy and green technology when building hotels, resorts, and other tourist facilities. In addition, investments in sustainable transport, such as green public transport and bicycle infrastructure, can help reduce tourism's negative impact on the environment. Not only can physical infrastructure be a method of managing the environment and natural resources in tourism destinations, governments should create policies that regulate the use and protection of existing natural resources. These policies may include restricting access to environmentally sensitive areas, establishing national parks and conservation areas, and policing illegal acts that damage the environment.

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The role of diversification geographical as variable moderation on corporate social responsibility, political connection and cash holding

Dwi Irawan, Salsabillah Mustika Sari & Ihyaul Ulum

Study Program Accountancy Faculty Economics and Business Malang Muhammadiyah University, Malang

ABSTRACT: Every company has one main goal, which is to obtain maximum profit. This goal can be achieved by making the right policy. The policy taken by the company is the implementation of the cash holding policy. The purpose of this study is to determine the impact of corporate social responsibility and political connection on cash holding, and to determine whether geographic diversification can moderate the impact of corporate social responsibility and political connection on cash holding. This sample selection is based on a purposive sampling process with a total of 225 basic and chemical industry sector companies listed on the IDX from 2019 to 2021. Testing in this study uses a random effect model assisted by Stata software. The results of this study indicate that corporate social responsibility has no effect on cash holding, political connection affects cash holding, geographic diversification is unable to moderate the effect of corporate social responsibility and political connection on cash holding.

Keywords: cash holding, corporate social responsibility, political connection, diversification geographical

1 INTRODUCTION

Today's economic conditions encourage companies to have good policies and in accordance with government policies in order to maintain the establishment of the company and increase the development and growth of the company. All companies that stand must have an intended direction, and want to achieve all the goals that have been designed. Primarily, the goal of a company or industry is to be able to achieve and generate maximum profit. The company's goals can be realized by implementing good company policies. The company is able to implement a good policy if the company is able to apply the right tactics and preparations so as to provide satisfactory results for the company. There are several types of tactics required by a company, one of which needs to be underlined, namely the cash holding policy.

Cash holding is defined as cash in the company with the aim of being provided for investment in assets which are then given to investors (Gill & Shah 2012). The most liquid asset of the company is cash holding. The amount affects the company's ability to carry out its policies. Therefore, cash holding is needed to calculate the size of cash. It takes a correct determination to optimize cash holding in order to support the company in operating the steps and programs that have been designed by the company. Cash holding in a minimal amount results in the company being overwhelmed in meeting the company's short-term needs. As a result, the company has a bad image so that it is considered unable to maintain its liquidity and investors feel distrustful when investing in the company. Meanwhile, if the cash holding in the company is too large, it will generate the maximum possible profit for the company. However, cash holding that is too large can also provide losses for the company if the cash that should be invested is not optimal in its use for company profits. Large cash holding indicates that the company can increase opportunity cost through the amount of idle cash (William and Fauzi 2013).

Corporate Social Responsibility (CSR) is a decision step based on the company's ethical considerations aimed at improving the economy, where the company tries to create a good image through environmental attention and social responsibility in the eyes of society (Dahlsrud 2008). CSR policy is an instrument that can be utilized by a manager to overcome conflict with an important company. CSR is described as covering tactics to enhance a company in the period length and possible issues that will be faced about capabilities that are not entered in the annual report. CSR information can signify prospect sales in the indicating market that the market pays attention to CSR, also shows how an employee displays a level of productivity for the workforce work. With utilizing CSR policy with appropriate can create an influence positive for a company, wrong only one is to create an image of a good company.

If the company has a good image, it is undeniable that the stakeholders will have high trust in the company, so as to improve the quality of the company. The high trust that has been formed in the company will attract many investors to invest, the more investors who put their trust, the more capital the company will get, the high capital also affects the company's operations to be better, so that the sales or profits the company wants to get are also increasing. This means that the more profit obtained, the greater the cash ownership policy or cash holding.

Theory of agency used to connect two stakeholders, where relations hiring stakeholders agent or manager to carry out activity on name of principal and delegate authority taking decision to manager (Hoesada 2020). Based on this theory, the principal and agent are two different parties. According to agency theory, companies tend to implement a joint supervision system by means of Corporate Social Responsibility (CSR) policies to minimize problems between managers and important figures. That is because in agency theory, stakeholders want high returns so that the cash holding required by the company must also be high, while managers want optimal cash holding.

This research refers to and refines the research conducted by Husna & Haryanto (2019), variable Political Connection in research. This added as a variable independent. Then replace object research in companies manufacture sector industry basic and chemistry 2019–2021. The addition of the political connection variable as an independent variable because the factor that has the opportunity to influence cash holding is political connection. Political connections that exist between company directors and government politicians can influence the policies set by the company, one of which is the cash holding policy. The company's political connection can affect the company's risk taking, companies that have a relationship with the government usually lead to maximize cash holdings for certain purposes against the government.

In research conducted by Nurul Husna & Haryanto (2019) with use method study quantitative and study empirical disclose exists implementation of CSR has an impact positive to policy cash holding, and additions variable diversification geographical capable moderate impact Corporate Social Responsibility (CSR) on cash holding. Other research conducted by Hartono (2018) with use method statistics descriptive own objective to investigate how much wide statement Corporate Social Responsibility (CSR) in the company sector industry basic and chemical listed on the IDX in 2013–2015 stated during year research implemented, ability company in convey report annual regarding CSR still said low. In research conducted by Bandiyono (2020) apply method study descriptive quantitative disclose political connection in a way Partial own influence positive and substantial on value company.

The reason researchers conduct this research is because they want to examine further the impact of Corporate Social Responsibility (CSR) and political connections on cash holding policies applied by companies by applying geographic diversification as a moderating variable. Another reason is that research on cash holding has been found, but the results of these studies do not show substantial consistency regarding the factors that have an impact when calculating cash holding.

Researchers measure the impact of CSR and political connections on cash holding by adding geographic diversification as a moderating variable. The selection of manufacturing companies in the basic and chemical industry sector is because researchers see that this sector has a lot of influence on environmental health and has a much higher responsibility to society and the environment. The selection of the basic and chemical industry sector is also related to environmental policy, the number of manufacturing companies in the basic and chemical industry sector that do not keep promises in implementing CSR, many companies only implement CSR to get a good image, but not done optimally, so that pollution from activities carried out by companies still has a bad impact on society.

2 HYPOTHESIS FORMULATION

2.1 *The influence of CSR on cash holding*

Agency theory reveals that companies usually take advantage of the joint supervision system by means of Corporate Social Responsibility policies to minimize problems between managers and important figures. This indicates that the enactment of CSR policies is a very important instrument that can be utilized by managers to resolve problems with important figures. CSR disclosure includes some long-term development tactics and sustainability issues regarding performance that lie outside the annual report.

In research conducted by Nurul Husna & Haryanto (2019) with use method study quantitative and study empirical disclose exists implementation of CSR have impact positive to policy cash holding .

If the company has a good image, it is inevitable that the stakeholders will have high trust in the company, so as to improve the quality of the company. The high trust that has been formed in the company will attract many investors to invest, the more investors who put their trust, the more capital the company will get, this high capital also affects the company's operations for the better, so that the sales or profits the company wants to get are also increasing. The more company profits, the greater the cash holding policy. Thus, the researcher outlines the following hypothesis.

H₁ = Corporate Social Responsibility (CSR) influential good at policy cash holding

2.2 *The influence of political connection on cash holding*

Based on agency theory there are 2 differences in information between the principal and the agent. Principals or shareholders want high cash holding so that the returns obtained are also semamin high, while agents or managers want high cash holding to support the cost of political connections. Companies that have political relations have more cash holding opportunities. Conversely, companies that do not have political relations also reduce cash holding opportunities (Subhi *et al.* 2019) . This is due to facilitate the extraction of liquid assets.

According to Bandiyono (2020) in a study entitled The Effect of Good Corporate Governance and Political Connection on Firm Value in manufacturing companies in the basic and chemical industry sectors in 2014–2016 using descriptive analysis with the ADS approach states that GCG and political connection have a positive effect on firm value.

Companies that have political connections will have more responsibilities, because if political connections are owned by many boards of directors, the greater the cash spent by the company for the board of directors. In other words, the higher the cash holding that must be controlled. This is because cash is a liquid asset, and liquid assets facilitate extraction. Therefore, managers must make decisions to handle cash holding, which has become a medium for political extraction in order to achieve targets (Freng & Johansson 2014) . According to this expression, the hypothesis formulation in this study is:

H₂ = Political Connection impact good at policy cash holding

2.3 *The effect of geographic diversification in moderating the effect of CSR on cash holding*

In line with agency theory, which states that companies will implement Corporate Social Responsibility in order to be socially responsible and want to get optimal benefits from the implementation of CSR, for example, the selfish attitude of managers is slowly disappearing. The loss of a manager's selfish attitude causes the use of cash in the context of business programs and company operations to be very effective and will invite profits for the company. Thus, the more efficient the use of cash and cash equivalents, it indicates that the cash holding policy carried out by the company has good value (Nurul and Haryanto 2019) . If the company has a good image, then the stakeholders will have high trust in the company, which will have an impact on improving the quality of the company. With a lot of trust, many investors are interested in investing in the company, if the number of investors increases, the company will also be able to generate a lot of capital. Through this capital, the company's operations are getting better, so that the sales or profits that the company wants to get will also increase. Large company profits also have an impact on large cash

holding policies. According to resource-based theory, geographic diversification is a tactic that aims to increase the company's competitive quality (Nababan *et al.* 2022) .

In research conducted by Nurul Husna and Haryanto (2019) stated that the interaction of CSR with geographic diversification in manufacturing companies in the basic and chemical industry sectors listed on the IDX 2013–2017 has a negative influence on cash holding. This opinion is also supported by the attachment of evidence of the coefficient value of -0.221 . Which shows that the interaction between CSR and geographical diversification that is not good shows a strong interaction that can have an impact on decreasing the cash holding of the company.

Geographical diversification is a company that has branches abroad. Overseas branches of Indonesian companies still do not disclose corporate social responsibility reports. Geographical diversification is expected to create more pressure than increasing the quota of important figures and external aspects of the company. The more pressure there is, the more it pressures the company to improve its CSR policy. However, from the pressure exerted by stakeholders, the company will not be able to fulfill all the wishes of the stakeholders, which makes the company more objectionable in structuring its cash holding policy. So geographic diversification weakens CSR in its influence on cash holding policy. From the theory and research above, it can be concluded that the hypothesis of this study is:

H₃ = Diversification geographical No moderate influence Corporate Social Responsibility (CSR) on policy cash holding

2.4 *The influence of geographic diversification in moderating the influence of political connection on cash holding*

According to agency theory which reveals that companies that have political relations get more cash holding opportunities. Conversely, companies that do not have political relations will have minimal cash holding opportunities (Subhi *et al.* 2019) . Principals or shareholders want high cash holding so that the returns obtained are also high, while agents or managers want high cash holding to support political connection costs. This is because cash is a liquid asset, making it easier for liquid assets to be extracted. Therefore, managers must make decisions to handle cash holding as a medium for political extraction in order to achieve targets (Freng and Johansson 2014).

According to Bandiyono (2020) in his hypothesis named The Effect of Good Corporate Governance and Political Connection on Firm Value in manufacturing companies in the basic and chemical industry sectors in 2014–2016 using descriptive analysis with the ADS approach states that GCG and political connections have a positive influence on company quality.

The wider the company's reach, the wider the political pressure it receives. If the company has a political board of directors or directors who are related to politics, the costs or cash that will be spent by the company to politics will also increase the wider the company's area. So that the preparation of the company's cash holding is also getting higher. From the theory and research above, it can be concluded that the hypothesis of this study is:

H₄ = Diversification geographical moderate impact of political connection on policy cash holding.

2.5 *Empirical models*

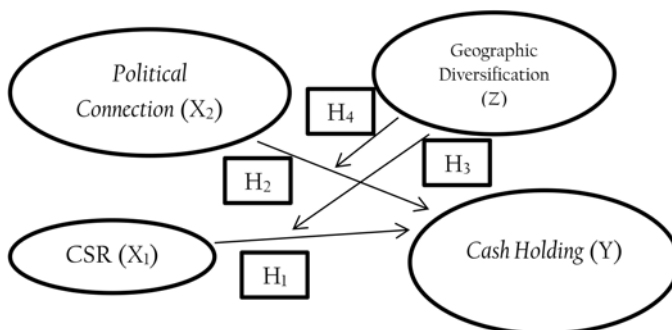


Figure 1. Framework thinking.

3 RESEARCH METHODS

3.1 *Population and sample*

The population analyzed by the researcher namely Manufacturing Company Sector Basic Industry and Chemicals listed on the IDX 2019–2021. The sample taken applies purposive sampling method. Researchers use a number of criteria determination samples, including:

- (1) Manufacturing company sector industry basic and chemical listed on the IDX 2019–2021
- (2) Manufacturing company sector industry basic and chemistry is issuing report annual or annual report for the period 2019–2021
- (3) Manufacturing company sector industry basic and chemistry is issuing sustainability reporting during period 2019–2021

3.2 *Definition operational variable*

Definition operational described as share information to researchers about system measurement the variables studied (Ulum *et al.* 2021)

3.3 *Corporate social responsibility (X1)*

According to Dhalsurd (2008) Corporate Social Responsibility is a decision based on the company's ethical considerations that lead to economic development, where the company tries to create a good image in society by paying more attention to the environment and its social responsibility.

Measurement of Corporate Social Responsibility can be done using the CSRI Corporate Social Responsibility Index. The size of the CSR index shows how much responsibility the company has regarding all aspects of the environment, social, and economy. There are 32 indicators in measuring CSR: natural resource saving, biodiversity conservation, energy saving, environmental pollution, emission control, waste management, use of environmentally friendly materials, freedom of association, forced labor practices, underage labor, gender equality, occupational safety, occupational health, human rights, equality of rights, education and training, employee welfare and remuneration, industrial relations, local workforce, employee turnover, working hours, anti-corruption, fair business competition, working hours, copyright, political activity, public policy, compliance with laws, social responsibility, customer health, customer safety, product information, and community (Sembiring 2005).

Of the 32 indicators used as a measurement of CSR, researchers measure based on the 32 indicators above, the measurement technique carried out by researchers is by looking at the accountability report and giving a value of 1 for indicators that are stated in the annual report, and giving a value of 0 for indicators that are not stated in the annual report. From all indicators that have been assessed, then divided by 32 for the overall value, so that the percentage of CSR used in the company is found.

3.4 *Political connection (X2)*

Political connection is the establishment of a relationship between one of the company directors or the board of directors and politicians because they have the same educational background (Do *et al.* 2012). Political connections usually started with happen connection between manager peak, investors or employees and politicians of the period moment this and before, at the time campaign as well as business programs (Bianchi and Viana 2014). Company considered have connection political if one from holder share main or executive peak company (board of directors, board of commissioners, and secretary company) is member parliament and or have connection near with official tall (Faccio 2006).

Measurement Political connection got done with dummy variable. Measurement variable Political connection is made with rated 1 for companies that have a board of directors that have connection with political government and rated 0 for company that doesn't have a board of directors who have connection with political government. Political connection got seen through report annual company.

3.5 Cash holding (*Y*)

Gill & Shah argue *cash holding* is cash in the company and provided to use investment in assets owned by the company that will later given to investors. Cash be easiest asset disbursed in the company. The most liquid asset in the company is cash or cash. The amount of cash available affects the company's ability to carry out its policies. Therefore, cash holding is needed to calculate the size of cash.

Cash holding measurement is carried out use formula cash ratio namely:

$$\text{Cash Ratio} = \frac{\text{Cash and Cash Equivalents}}{\text{Total Assets}}$$

3.6 Geographic diversification (*Z*)

The geographical diversification variable added to the moderating variable has the reason that there are many companies in Indonesia that do business in the manufacturing industry aspect of the basic and chemical industry sector which has the advantage of innovating through faster product development which has a larger consumer coverage. Geographic diversification is the expansion of a company's operations in several locations that have different economic systems.

Geographic diversification can be measured using dummy variables. Geographic diversification variable is measured by scoring 1 for companies that expand locations in different economic regions or abroad and scoring 0 for companies that have not expanded locations in different economic regions or abroad.

3.7 Data analysis techniques

3.7.1 Analysis statistics descriptive

Testing statistics descriptive made guidelines in produce manifestation form data illustration that can showed from *mean*, standard deviation, maximum and minimum.

$$Y_{it} = a + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 (X_{1it} * Z) + \beta_4 (X_{2it} * Z) + e_{it}$$

3.7.2 Panel data regression random effect model

REM ie something type prediction regression on the panel data that occurs between individual and inter time with estimation constant slope coefficient and intercept different (*random effect*) (Widarjono 2013). The dummy variable in the fixed effect model also does not know about the original type. This creates the impact of reduced degrees of freedom which ultimately reduces the effectiveness of the parameters. The panel data prediction in this method describes the disturbance variables in terms of their expected relationship with each other across time and individuals. The type used to estimate the random effect model is Generalized Least Square (GLS) as the estimator because it can increase the effectiveness and least square (Andy 2009).

3.7.3 Hypothesis test

Usually, in science social use level significance between 90% ($\alpha = 10\%$) to 95% ($\alpha = 5\%$) (Ghozali 2014). The significance level used in this study is ($\alpha = 10\%$). Which means, the researcher's decision to refute or support hypothesis 0 has a 10% probability of error. Then is to carry out the hypothesis research stage including the *R2* test, the F test, and also the T test.

4 RESULTS

Table 1. Analysis statistics descriptive.

Variable		Means	Std. Dev	Min	Max	Obs
Y	Overalls	-3.188135	1.45317	-9.666054	-0.2747839	225
X ₁	overallL	0.7641667	0.2284	0.0625	1	225
X ₂	Overalls	0.5955556	0.4918785	0	1	225
Z	Overalls	0.24	0.4280354	0	1	225

4.1 Cash holding (Y)

On research This measurement variable cash holding is carried out use formula cash ratio. The average value (mean) is -3.188135 where standart more cash holding big from the average of 1.45317 , with mark mean -3.188135 which is value the Far If compared to standard cash holding of 1.45317 results the disclose that the average yield data study approach number 0 and no approach the number 1, which signifies that data spread the data No evenly.

4.2 Corporate social responsibility (X₂)

Review results statistics descriptive variable corporate social responsibility proves that an average of 0.7641667 has standard deviation a number of 0.2284 which means show quality from good variable, the data characteristic homogeneous, spread the data uniformity and deviation low, because mean more Lots compared standard deviation and can indicated on the variable independent This Already ok.

4.3 Political connection (Y)

The results of the descriptive statistical review of the political connection variable show a mean of 0.5955556 which has a standard deviation of 0.4918785 which means that it shows good variable quality, the data is homogeneous, the data distribution is evenly distributed and the deviation is low because the mean is more than the standard deviation, so it is indicated that this independent variable is good. From the results of descriptive statistics, it is known that the results of descriptive statistical tests tend to be 1 and it can be said that the company has political connections.

4.4 Diversification geographic (Z)

The results of the descriptive statistical review of the geographic diversification variable show a mean of 0.24 which has a standard deviation of 0.4280354 which means that it indicates that the quality of the variable is not good, the distribution is uneven because the standard deviation is greater than the mean, so it is indicated that in this moderating variable there is a gap or the deviation is too far or extreme. From the results of descriptive statistics, it is known that the results of descriptive statistical tests tend to be 0 and it can be said that companies do not use the concept of geographic diversification or the addition of branches abroad.

Table 2. Regression (random effect model).

Y	Coef	Std. Error	z	P > z	95% Conf. Interval
X ₁	0.6278575	0.7150456	0.88	0.380	-0.7736062 2.029321
X ₂	0.5917305	0.3274597	1.81	0.071	-0.0500787 1.23354
Z	0.0041681	1.508689	0.00	0.998	-2.952808 2.961145
Moderation 1	0.1272996	1.874186	0.07	0.946	-3.546038 3.800637
Moderation 2	0.1966226	0.7277292	0.27	0.787	-1.2297 1.622946
_cons	-4.075417	0.5788446	-7.04	0.000	-5.209932 -2.940902
Sigma_u	1.1868915				
Sigma_e	0.79572862				
rho	0.6899038				

Equality regression variable corporate social responsibility (X₁), political connection (X₂) to cash holding moderated by diversification geographic (Z), namely:

$$Y_{it} = a + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 (X_{1it} * Z) + \beta_4 (X_{2it} * Z) + e_{it}$$

$$Y = -4.075417 + (0.6278575) X_{1it} + (0.5917305) X_{2it} + (0.1272996) X_{1it} * Z + (0.1966226) X_{2it} * Z + e$$

4.5 Hypothesis test

Table 3. Coefficient determination.

hypothesis	Influence	Coef	t	Prob	Conclusion
H ₁		0.6278575	0.88	0.380	No Influential
H ₂		0.5917305	1.81	0.071	Influential
H ₃		0.1272996	0.07	0.946	No Influential
H ₄		0.1966226	0.27	0.787	No Influential
R-Square					0.0873
F-Statistics					4.25
Prob > chi2					0.2055

Viewed from Table 3 R-square value of 0.0873 or 8.7%. This prove variable free corporate social responsibility, political connection, and variable moderation diversification geographical by 8.7% have influence on cash holdings. Whereas other variables outside the variables studied is other influences with reminder by 96.3%.

4.6 Statistical test F

in this test held to use understand whole variable independent impact simultaneously on variables dependent the test results in Table 3 are obtained the value of prob>chibar2 is 0.0000, then variable free X₁ = Corporate Social Responsibility and X₂ = Political Connection, and variable Z moderation = Diversification Geographical impact on Cash Holding in a manner simultaneous.

4.7 Statistical test t (Partial Test)

H₁: Corporate Social Responsibility No have impact on Cash Holding

H₂: Political Connection impact on Cash Holding

H₃: Diversification Geographical No can moderate influence Corporate Social Responsibility in Cash Holding

H₄: Diversification Geographical No can moderate influence Political Connection on Cash Holding

5 DISCUSSION

5.1 Influence corporate social responsibility in cash holding

According to the data obtained from Table 3 which shows that the probability obtained is 0.380 greater than the significance value of 0.10, then H1 is rejected and it can be said that the corporate social responsibility variable has no effect on cash holding.

Research results This No suitable with formula hypothesis researchers where pointed out that CSR has influence good at *cash holding*. Research results This opposite with hypothesis (Nurul & Haryanto 2019). This agrees with legitimacy theory which reveals that the costs that companies need to release in order to fulfill social responsibility in the eyes of society, the environment, the economy, and social do not have to use the cash available in the company. The company's social responsibility report has been designed as well as possible so that there is no need to have cash reserves owned by the company to fulfill social responsibility. Cash holding is a cash policy used by companies to meet short-term needs, while corporate social responsibility is a policy enacted by companies to meet long-term requirements (Manisa and Defung 2018). Through that, the conclusion is that corporate social responsibility has no impact on cash holding policies.

5.2 Influence of political connection on cash holding

The test data shows, obtained from Table 3 which shows that the probability obtained is 0.071 lower than the significance value of 0.01, then H2 is accepted and it can be said that the political connection variable has a positive impact on cash holding significantly.

This study found that the results show that the researcher's hypothesis is that political connection has a positive influence on cash holding. This result is one way of research Bandiyono (2020) *The Effect of Good Corporate Governance and Political Connection on Firms Value*. This study found that the average political connection value was 0.5955556. That way, it is concluded that companies with political relations are very large or more dominant, there are 134 companies out of 225 companies studied that have political connections. The higher the political connection owned is directly proportional to the cash holding target that must be owned. This is in line with agency theory which states that companies with political alliances will lean towards greater responsibility ownership because if there are many political organizers, the amount of cash spent by the company for the board of directors is also large, so the number of political alliances is directly proportional to the cash holding owned by the company to support the company's good name. The theory is based on the fact that liquid assets have an easier extraction rate. So, the person in charge will set a large cash holding for political extraction vehicles as a way to achieve political goals (Freng and Johansson 2014).

5.3 *The effect of geographic diversification in moderating the effect of CSR on cash holding*

Geographic diversification is the expansion of a company's operations in locations that have different economic systems. Factors and considerations that must be taken into account by the company when examining the geographic component include political economy, the mix of geographic area operations, the geographic distance of operations, and the level of currency exchange. In the interaction of corporate social response variables measured using the corporate social responsibility formula using geographic diversification variables, based on the t test, the data obtained in Table 3 with a probability of 0.946 is higher than the significance value of 0.10, so it is concluded that partially the geographic diversification variable is not able to moderate the impact of corporate social responsibility on cash holding.

Based on the research conducted, the results obtained show conformity to the researcher's hypothesis, namely geographic diversification does not moderate the influence of Corporate Social Responsibility (CSR) on cash holding policies. The results of this study are not one way to the results of research Nurul Husna and Haryanto (2019) *The results of this study have one frequency with stakeholder theory, namely that geographic diversification has the opportunity to get higher pressure than the increase in the number of influential parties and factors outside the company* (Rokhlinasari 2016). The more pressure there is, the more it pressures the company to improve its CSR policy. However, from the pressure exerted by stakeholders, the company will not be able to fulfill all the wishes of the stakeholders, which makes the company more objectionable in structuring its cash holding policy. The burden of funds spent by the company to fulfill the company's social sector responsibilities to the community, environment, economy, and social does not have to use cash. Geographical diversification is a company with international subsidiaries. Indonesian industrial branches with international scope still do not disclose accountability reports regarding corporate social responsibility. So that geographic diversification does not have the ability to moderate the level of influence of corporate social response on cash holding.

5.4 *The influence of geographic diversification in moderating the influence of political connection on cash holding*

The interaction of political connection variables is measured using the political connection formula with the geographic diversification variable. Based on the t test, the data obtained in Table 3 with a probability of 0.787 is higher than the significance value of 0.10, so it is concluded that partially the geographical diversification variable is unable to moderate the effect of political connection on cash holding.

The results of this study indicate a discrepancy with the formulation of the researcher's hypothesis which shows that geographic diversification is unable to moderate the effect of political connection on cash holding. The results of this study are in accordance with institutional theory

which states that organizations that always prioritize legitimacy have a higher level of self-adjustment to external and social goal orientation wherever the organization is located (Fitrianto 2015). In institutional theory, it is stated that if the company has a branch outside the economic system or abroad, the company must have political connections between countries. However, political systems between countries are different, so not all political policies between countries can be generalized. The currencies owned by each country are also different, so the cash in a company will not affect the operations of the company's system abroad, because of different currencies and economic systems (Purwanto and Harsono 2022). By considering several explanations that come from institutional theory, it is concluded that geographic diversification is unable to moderate the effect of political connection on cash holding.

6 CONCLUSION

Study This give four findings main. First, corporate social responsibility is not affecting cash holding. Second, political connection influences to cash holding in kind positive significant. Third, geographical diversification is not capable moderate the influence of CSR on cash holding. Fourth, geographical diversification is not capable to moderate influence political connections against cash holding.

7 LIMITATIONS AND ADVICE

There are still limitations to this research that can be considered for improvement in future research. First, the scope or coverage is still minimal, namely the subject of manufacturing companies in the basic and chemical industry sectors with a scale that is not classified by researchers. Second, the measurement of geographic diversification variables is still limited to companies that have branches abroad. Third, the measurement of CSR variables is still limited only based on the subject of local companies in Indonesia without paying attention to international branches that have not implemented CSR. Fourth, research on the effect of CSR on cash holding is still very minimal so that there are few reference journals. Fifth, the measurement of geographic diversification variables is still limited, this measurement is only intended for companies that have branches abroad.

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The dynamics of data-driven decision-making at local government in Indonesia

D.S. Sayogo

University of Muhammadiyah Malang, Malang, Indonesia

Center for Technology in Government, University at Albany, New York, USA

S.B.C. Yuli & F.A. Amalia

University of Muhammadiyah Malang, Malang, Indonesia

ABSTRACT: This paper presents the dynamics of determinants that support effective data-driven decision-making at the local government level using the case of Bojonegoro District, Indonesia. In-depth interviews with top-level executives and middle management from agencies and offices in the Regency of Bojonegoro were conducted for the data. Our findings further signify the existence of three building blocks necessary for the practical application of data-driven decision-making. The components are: a) transforming quality data into knowledge, b) capable and motivated people, and c) appropriate tools/apps. The three components are interrelated meanings that transforming quality data into knowledge is conducted through the use of appropriate tools/apps performed by capable and motivated people. Our findings also point out that each of these components have its own distinctive determinants and each determinant is affected by its antecedents. We thus presented the relationship among the components, its determinants and the antecedents.

1 INTRODUCTION

Grounding policy on data produces more transparent, faster, and precise policy actions that are critical in crises and high-uncertainty environments such as healthcare (Kennedy 2009). The conscientious use of data resulted in notable actions and efforts to content with pandemics and endemics, as evidenced in the case of Covid 19 (Harrison and Pardo 2020) and the Ebola crisis of 2014 (Griliopoulos 2014). By basing a decision on superior data, the government could generate more significant policy decisions and actions that create a better trusting relationship between the government and the public (Harrison and Sayogo 2014; Matheus *et al.* 2018). The lack of data availability, accessibility, and usage curtail many innovative and services-based technologies needed to support every aspect of city life in a smart city environment (Calzada and Cowie 2017).

On the other hand, government officials are suddenly inundated with large, diverse, and complex data as a result of digitalization progress. It is rare for these officials, especially from developing countries, to use, analyze, and interpret data to make appropriate policy decisions (Hwang *et al.* 2019, 2021). In like manner, government officials in Indonesia often circumvent the use of data for policy decisions (Pramusinto 2016). In lieu of data, policy decisions are often based on political interests and intuitions (Bachtiar 2011). Although the Indonesian government has been fronting an effort to push the availability and use of data since 2011, especially at the National and Provincial level, the propensity of officials in local government to engage in data-driven decision-making has yet to be discovered. Hence, this paper aims to present the dynamics of determinants that support effective data-driven

decision-making at the local government level using the case of Bojonegoro District, Indonesia.

This study, thus, performed In-depth interviews with top-level executives and middle management from agencies and offices in the Regency of Bojonegoro for the data. Bojonegoro has been one of Indonesia's most progressive Regencies in pursuing open government and smart cities since 2011. This paper consists of four (4) sections, including the preceding introduction. Section two (2) highlights studies evaluating the critical factors of data-driven decision-making. Section three (3) presents a description of the research methodology. Finally, the last section discusses the results, findings, and concluding remarks.

2 CRITICAL FACTORS OF DATA-DRIVEN DECISION-MAKING

Data access and availability are among the critical factors affecting the propensity to use data driven decision-making. Guaranteeing ease of and reasonable access to data becomes a challenge for the government in pursuing data-driven decision-making (Bulger *et al.* 2014; Kennedy 2009). Safeguarding data availability includes conforming flawless data collection and gathering process (van Oijen *et al.* 2019), which is often costly and time-consuming (Chatfield *et al.* 2015).

Low-quality data lessen or even hinder the probability of data usage in decision-making processes (Bulger *et al.* 2014). In a smart city environment, ensuring satisfactory data quality early in the process is critical for data-driven smart cities (Sutherland and Cook 2017). Insufficient data quality negatively affects the process and quality of decisions leading to misunderstanding of the analysis results and objectionable inferences drawn from the data (Chatfield *et al.* 2015; Matheus *et al.* 2020).

The rational decision-making might be constraint by, among others, the employees' analytic capacity and capability in organization (Sahin and Zaitoon 2021). Data need to be analyzed and transformed into information and knowledge to facilitate decision-making (Mandinach *et al.* 2006). Even having the correct information, making a decision based on information requires the ability to process the information (van Oijen *et al.* 2019). As such, the decision-makers need different skill sets to become data-driven (Storm and Borgman 2020). Data literacy, management, communication, and the use of tools and equipment for data analytics are among the necessary skills (Grundke *et al.* 2018). Developing analytic capacity and capability by providing technical assistance to use data and training to staff to improve the individual capability to access, use, and analyze data become a crucial component to support data-driven decision-making (Gill *et al.* 2014).

Data-driven culture – the norms, guidelines, and practices of using and managing data – to cope with the issues and needs of organizations to adapt to external and internal pressures is another major challenge (Gill *et al.* 2014). Data-driven cultures influence how the individuals use data to create decisions and choose strategies to pursue the organizational goals (Rexhepi *et al.* 2020). Strong leadership is also significant in increasing the possibility of data usage by communicating a clear vision and plan for data-driven. Visionary and effective leadership also crucial to promote and encourage the staff to use and analyze data throughout the organization (Gil *et al.* 2014; van Oijen *et al.* 2019).

Finally, a lack of legal rights, ethics, or politics could inhibit the government's inclination to maximize the use of data for policy-making, service delivery, or routine operations. The ability to re-use in the future is often not considered in the plan for data collection (Dawes 2012), which results in the potential breach of privacy and confidentiality due to re-use through data aggregation and combination (Hemerly 2013; Sutherland and Cook 2017). As such, the possibility of personal re-identification from aggregated data challenges the conventional regulation protecting privacy, ownership, transfer, and confidentiality of personal data and information (Hemerly 2013).

3 RESEARCH METHODS & CASE BACKGROUND

3.1 *Research methods*

The study conducted in-depth semi-structured interviews with ten (10) executives from top-level to middle-level public managers of agencies and offices at the Regency of Bojonegoro, Indonesia to gather the empirical data (see Table 1). All interviews were recorded, transcribed, and analyzed following an inductive logic and using grounded theory techniques (Strauss and Corbin 1997). The analytical processes conducted by the research team were iterative. We conducted validation of the analysis results in two stages. First, we contrasted the resulting constructs with the previous studies initially used as the theoretical lens. Second, we also asked the respective interviewees to re-validate the resulting challenges identified in the analysis of the interviews.

Table 1. Respondents composition.

No.	Government Agencies or Offices	Number
1	Department of Education	1
2	Department of Trade and Entrepreneurship	1
3	Department of Women Empowerment, Child Protection, and Family Planning	1
4	Department of Village and Community Development	1
5	Department of Health	1
6	Department of Industrial and Labor	1
7	The Office of Regional Finance and Asset Management	1
8	Department of Information Technology and Communication	1
9	The Office of Regional Disaster Management	1
10	Department of Animal and Fisheries	1

3.2 *Case background*

Bojonegoro regency is one of the most progressive regencies in innovatively using ICTs to improve their regency's governance and government services. In 2017, Bojonegoro regency was selected as part of the 25 cities/regencies pioneer to adopt a smart city in response to the National government program of "100 smart city movement" in Indonesia. The Regent Regulation no. 13 of 2020 supported the efforts to pursue Bojonegoro Smart City. In the Bojonegoro Smart City masterplan for the period of 2019 to 2023, Bojonegoro's smart city action plan consists of four development plans, namely: a) the smart city policies and governance, b) the smart city infrastructure, c) the software and applications supporting the smart city, and d) the smart city literacy. According to the master plan, the smart city effort is putting forward smart people as their first target (Bojonegoro, 2019). The objective is in realizing the socio-technical ecosystems for humanist and dynamic society, both physically and virtual, to create a productive, communicative, and interactive society with high digital literacy. For that, the regency aims to develop an ecosystem for efficient learning and community interactions.

In conjunction with the effort to pursue smart people, the Bojonegoro regency also strives to improve the governance and management of agencies and offices to support an effective smart city. For that, each agency and office to develop standard operating procedures for ICTs usage to support smart city which includes: a) policies for office computer use and internet access, b) policies for using district/city official email, c) policies for network and computer security, d) policies for data-sharing across agencies and offices, e) policies for management of the agencies websites, f) policies for handling complaints and public services through ICTs, g) policies for routine data backup, and h) policies for change management.

The master plan specified the plan to build a Data Center as a centralized supporting facility to provide the storage, computing, and distribution of data needed to run the smart city applications in the Regency of Bojonegoro. However, there are minimum efforts in the current master plan of Smart City to support the use of data-driven decision-making aside from the policies for data sharing across agencies and offices. To further the use of data to support policy decisions, the Regency updated Sustainable Development Goals (SDGs) data from 419 villages in the Regency (Nur 2023). The Regency of Bojonegoro also launched updated regional poverty data to support policy decisions to strengthen the poverty alleviation strategy involving a collaboration of public officials, academics, NGOs, private entities, and villages (Suyonowarso 2022).

4 RESULTS & DISCUSSION

This study presents the dynamics of determinants that support effective data-driven decisionmaking in agencies or offices in the Regency of Bojonegoro, Indonesia. The interview results demonstrated several components guiding a practical application of data-driven decision-making at the local government level. In brief, the results indicated that a practical application of data-driven decision-making depends on transforming quality data into knowledge, capable and motivated people, and appropriate tools/apps (Figure 1). The three components are framed within the contexts of culture and institutions as well as rules and regulations. The three components are interrelated meanings that transforming quality data into knowledge is conducted through the use of appropriate tools/apps performed by capable and motivated people. Set of determinants are driving each of the three components in affecting the dynamics of effective data-driven decision-making.

4.1 *Determinants and antecedents of data-driven decision-making at local government*

4.1.1 *Transforming quality data into knowledge*

The interview results indicate both the efforts of public managers to obtain quality data and the processes they employ to turn data into knowledge. All interviewees stated the importance of ensuring data quality, especially in verifying and validating data. As noted by the interviewees, ensuring data validity continues to be a challenge for them. Several agencies and offices often carry out a more expensive task to re-validating or re-verifying data by directly comparing data with reality on the site.



Figure 1. Components of effective data-driven decision-making.

However, the interviewees differed on how to verify and validate data to ensure quality. Some of the interviewees pointed out the importance of using regulations as a lens to verify and validate data. They argue that data is valid if it complies with existing regulations. Other interviewees pointed out four (4) elements needed for data quality assurance: 1) the need to

ensure trustworthiness and legitimacy of data sources, 2) timeliness of data collection, 3) correctness of data collection methods, and 4) documenting the data collection processes.

The results of the interviews demonstrate that public managers will turn data into information and subsequently knowledge for decision making after the quality of the data is confirmed. An interviewee from the Department of Trade and Micro Enterprises revealed that the process begins with identifying or selecting data for collection. Once collected, the data is then organized by classifying data into different classification groups to ensure data integration.

The interviewees also indicated the steps taken to summarize and analyze data as part of the process of transforming data into information. The interviewees explained that to summarize data begin with determining the basis for summarizing. In particular, this process requires adapting data to existing rules, regulations and policies. After the data was summarized, the interviewees mentioned that the team discussion carried out the analysis process.

Table 2. Determinants and antecedents of transforming quality data into knowledge.

Determinants	Antecedents
Ensuring the Quality of Data	Verification and validation during data collection Validation and verification in organizing the data Using regulations as lens to validate the data Trustworthiness and legitimacy of data sources Timeliness of data collection The correctness of data collection methods Documentation of processes to collect data
Data Transformation Processes	Identifying and selecting data Classifying data based on decision's objectives and task level Determining the basis for summarizing data Summarizing the data Corroborating the data with existing policies and regulations Team discussion for analyzing data Comparing different datasets Integrating different datasets Complying to regulations and policies Obedience culture

The interview results further showcase that the next process of turning information into knowledge for decision making is to synthesize and prioritize data. The synthesis and extraction are performed using limited statistical analysis or simulation of the data. The interviewees thus emphasized further the importance of the use of tools and applications to help them analyzing data.

4.1.2 *Existence of appropriate apps and tools*

As stated by the interviewee, limited analytical skills denote the importance of existing tools and applications to help implement data-driven decision-making. According to the interviewees, various devices and applications help in various steps of data transformation. There are various tools and applications for data collection or analysis, although as stated by the interviewees with limited or unclear features and capabilities.

On the one hand, the interviewees acknowledged that the availability of online data collection applications greatly accelerated data transformation and decision-making processes. On the other hand, many interviewees also mentioned a number of things related to existing tools and applications, starting from the variety, varied reporting formats, and the many

features that are often confusing. The availability of multiple tools and applications places an additional burden on field staff, who must use many different tools and applications for different tasks. Interviewees stated that public officials at the local government often find there are too many reporting features and formats for them to study. Conclusively, three functions can be drawn from the results of the interviews in terms of proper tools and applications: a) availability/accessibility, b) flexibility, and c) simplicity.

Furthermore, the results of the interviews show that culture, norms, and institutional context significantly influence the way public officials use data and the tools/applications for managing data. Compliance culture greatly influences not only the behavior of government officials but also how officials use tools and applications to manage the use of data for decision making.

Table 3. Determinants and antecedents of appropriate tools and apps.

Determinants	Antecedents
Trust on appropriate tools and apps	Features and capabilities of the tools and apps Accelerating data collection Variety of tools and apps Varied reporting formats Confusing features and capabilities Lack of flexibility of the tools and apps

4.1.3 *Capable and motivated personnel*

The interview results further demonstrate the importance of three qualities of public managers for practical data-driven decision making: strong-willed personality, intuition and experience, and formal skills.

The interview results also point to total obedience as an important social norm, particularly in Java, Indonesia, which may discourage public managers from using data for decision making. Thus, the interviewees stressed the importance of having a strong personality to mitigate the possible adverse effects of obedience norms. Thus, the interviewees commented on the criticality of personnel combining their experience and intuition for the effective implementation of data-driven decision-making. As the interviewees pointed out, such a person would be able to properly use data while deftly navigating the hurdles of obedience norms.

Finally, the interviewees agreed on the importance of formal skills learned from formal education or practice. In particular, the interviewees were specific about the three types of skills required. These skills are basic domain, statistics, and ICT-related skills. Basic domain skills are needed, considering that each unit has its own main tasks and functions. Thus, basic domain knowledge is essential in providing a context for analyzing data. In addition, almost all of the interviewees stated the importance of having statistical analysis skills to help analyze data.

Table 4. Determinants and antecedents of capable and motivated personnel.

Determinant	Antecedents
Capability and motivation of the personnel	Individual with strong personalities Intuition and experience Domain knowledge and skills Statistical capability ICTs related capability

5 CONCLUDING REMARKS

Our findings further signify the existence of three building blocks necessary for the practical application of data-driven decision-making. The components are: a) transforming quality data into knowledge, b) capable and motivated people, and c) appropriate tools/apps (Figure 1). The three components are interrelated meanings that transforming quality data into knowledge is conducted through the use of appropriate tools/apps performed by capable and motivated people.

Our findings align with and enrich Mandinach & Honey's (2008) argument signifying the need for the transformation of data to information to knowledge in using data for decision-making. The findings further affirmed the stages required to transform data into knowledge conformance to Ackoff (1989). Our study confirms that data is transformed into information by collecting, organizing, summarizing, and analyzing the data. As our finding indicated, the crucial aspect of data collection efforts is ensuring data quality. In the case of Indonesia, ensuring data quality entails the often lengthy and expensive processes of data validation and verification. Once the data quality is assured, our findings suggest that public officials synthesize and prioritize the information to transform it into knowledge for decision-making. The findings demonstrate that the process of synthesizing and prioritizing to extract conclusions was conducted through performing limited statistical or simulation analysis followed by team discussion.

The findings indicate that government officials use the existing tools and apps along the data transformation processes into knowledge. Findings indicate that different devices and apps assist the officials with varying data transformation steps. The availability and accessibility of tools and apps speed up the data transformation and decision-making process. On the contrary, the existence of many tools and apps, the variety of reporting formats, and the many, often confusing features challenge government officials in effectively using the tools and apps. Our findings also identify three instead of six traits that help understand how the official use of apps and tools influences the data transformation process (see: light *et al.* 2004). The three characters: a) availability/accessibility, b) flexibility, and c) simplicity signify the way the officials use tools and apps in the process of transforming data. The officials in Indonesia prefer accessible, flexible, and simple apps and tools to work with instead of complicated apps with many features and different reporting formats.

The extent to which the official use tools and apps depend primarily on their motivation and capability. Assessment of public official skills and motivation in terms of training, understanding of statistics, or information and communication of technology is crucial. Our findings indicate several qualities necessary for public officials to apply data-driven decision-making effectively, namely: a) strong-minded personality, b) experiences and intuition, and c) three necessary basic, statistical, and ICTs-related skills. The unyielding personality is necessary to defuse the possible adverse effect of the obedience culture that people in Jawa, Indonesia, firmly hold.

The functioning of the three components mentioned above is shaped by culture and norms, institutional contexts, rules, and regulations. The findings indicate that conformance to the rules and regulations is the determining factor. The public officials will firstly and strictly adhere to rules and regulations. From an institutional context, the selection of data, tools and apps, and capable officials depend on the decision's objective, function, and task level. For instance, most administrative or operational tasks are not data-driven. The adherence to the strict bureaucratic, hierarchical structure embedded in Indonesia is another institutional context that influences how officials use or not using data. The institutional context is often confounded by the existing culture, norms, and political nuances. In Indonesia's case, the obedient culture reinforced commitment to the top-down bureaucratic, hierarchical structure that often constrains the public officials from using data.

Notwithstanding, politicians often undermine the executives' decisions based on data to further the politician's agenda. Political interest and intuition are presumed to play more

prominent roles in Indonesia's public officials' policy and administrative decisions (Bachtiar 2011; Hwang *et al.* 2021) than in using data. On the other hand, political responsiveness to public demands and needs is a determining factor in decision-making in the public sector (Aucoin, 2005).

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Financial stability, nature of industry, rationalization, and change in director on financial statements fraud

E.D. Wahyuni, H.N. Fadhlullah, S. Wibawani & A. Rahman

University of Muhammadiyah Malang, Indonesia

ABSTRACT: This study aims to analyze the influence of financial stability, nature of industry, rationalization, and change in director of financial statement fraud in manufacturing companies listed on the Indonesia Stock Exchange for the 2021 period. Sample selection in this study This done with use method purposive sampling And obtained 170 company data as a sample. The data used is the financial report data from the company published through site www.idx.co.id And report annual from website official each company. The data analysis method used in this study used the classic assumption test including normality test, multicollinearity test, and heteroscedasticity test, and hypothesis test. The results of this study indicate that financial stability and the nature of industry have an effect on financial statements fraud whereas rationalization and change in directors don't influential to finances statement fraud.

Keywords: Financial stability, Nature Of Industry, Rationalization, Change In Director, Fraud Financial Statements

1 INTRODUCTION

The existence of good financial reporting will have a positive impact on company performance. However, in some of these financial reports there are parties who deviate from the rules for preparing financial reports that have been determined on the basis of obtaining a benefit. individual or group with done in a manner on purpose Which give loss to something party other. Treatment error in give report Which Wrong on moment this often called with fraud. According to (Singleton *et al.* 2010) fraud is something matter Which general and includes all actions regulated by humans with the aim of benefiting from wrong means or representations whereas according to (Tuanakotta 2013) fraud is deed oppose law Which contain element intentional, intention wicked, deception, concealment, and abuse of trust. The act is done to take advantage of illegal. From the several opinions above, it can be interpreted that fraud is an act of crime that aims to benefit individuals or groups and has a negative impact on the aggrieved party with elements of intent, fraud, and illegal abuse.

The phenomenon that has occurred in recent years related to fraud has also occurred in companies in Indonesia. Case fraud Which happen Bank Development Area Southeast Sulawesi in 2022 which, one of the employees with several people who helped him embezzled 1.9 billion customer funds and replaced these funds from 105 accounts customers. (Source: www.antaraneews.com, accessed 31 October 2022, O'clock 09:38 WIB). Case other jug experienced by PT Three Pillar Prosperous (AISA) on year 2018 Which where, there are conjectures overstatement on account receivables business, supply, And asset still as big 4 trillion as well as on sales of 662 billion. (Source: accounting.binus.ac.id, accessed 31 October 2022, 09:38 WIB).

Several studies have discussed the factors related to financial fraud statement fraud with variable dependent form financial stability, nature of industry, rationalization, And change

in director produce impact And mark Which different. As research conducted by (Marliani *et al.* 2020) states that financial stability has an effect in a manner significant to financial statement fraud whereas (Sasongko *et al.* 2019) stated that the results of financial stability have no effect on financial statement fraud. Other research related to the nature of industry researched by (Wahyuni *et al.* 2017) states that nature of industry affect the financial statements fraud while research from (Ijudien 2018) state that nature of industry No influential significant to financial statement fraud. Study about variable rationalization too researched by (Wahyuni *et al.* 2017) states that rationalization has a significant effect on finance statement fraud while research from (Marliani 2019) get results that rationalization does influential to financial statement fraud. On study (Sasongko *et al.* 2019) found that change in directors had a significant effect and obtained positive financial results. statement fraud whereas study which is conducted by (Handoko 2020) which discusses change in director stated that had no effect to financial statement fraud.

In this study using manufacturing companies as objects with the topic of exposure of fraudulent financial statements along with the factors that influence it with agency theory as a reinforcement. Agency theory focuses on stock options, bonuses, and other requirements for making accounting choices that identify the methods within their suitability and outside the scope of exigencies, requirements, and limitations on action by internal and external controls. This theory supports a company in providing information on its financial statements which will lead to a good decision to draw attention to stakeholders for the need for explanations which include information related to the economics and accounting fields.

2 LITERATUR REVIEW

According to (Schinasi 2005) states that, Financial stability is defined as a ability from system or channel finance For give means And increase economic sector To use handle process, management risk, And reception pressure in company. Besides That, financial stability considered as sustainable Which where, can capricious from time to time And consistent with a number of combination element constituents finance. Research conducted by Marliani *et al.* (2020) and Yesi Ariani *et al.* (2017) regarding the influence of financial stability to financial statement fraud obtain results Which state that balance case finance influential positive with mark Which significant to fraud financial statements Which happen on something company while study Which done by Sasongko *et al.* (2019), Didin Ijudin (2018), and Revelation *et al.* (2017) obtain results Which States that stability finance No own influence to fraud report finance in a company. From this research it can be said that the variable financial stability has affect to variable Which aim with evaluation Which systematic accompanied the object in question.

H1: Financial stability influential to financial statement fraud

According to Skousen *et al.* (2009) states that, the nature of industry is a good condition in an industry which is described as having significant performance. Research conducted by Ijudien (2018) as well as Yes Ariani *et al.* (2017) about influence nature of industry on financial statement fraud which obtained the result that these variables had no effect on financial statement fraud while the research conducted by Marliani (2019) and Nenda Marliani *et al.* (2020), And Revelation *et al.* (2017) stated results that the condition of the company has a positive and significant effect on fraudulent financial statements. From the results obtained, it can be said that the nature of industry is a form of depiction of the conditions that occur in the company's financial statements. From the results obtained can said that nature of industry is something form depiction in conditions that occur in the company's financial statements.

H2: Nature of industry influential to financial statement fraud

According to Shelton (2014) rationalization (rationalization) is an individual with his own mind that justifies the crimes he has committed. Research conducted by Wahyuni *et al.*

(2017) as well as Nenda Marliani *et al.* (2020) about influential rationalization to financial statement the fraud obtain results that variable it has an effect positive to fraud report finance with accompanied mark in a manner significant while study other Which done by Handoko (2021) And Marliani (2019) States that rationalization No own influence to fraud report finance. From that result obtained can said that rationalization is something factor in defense by violators of fraudulent financial statements in the company.

H3: Rationalization influential to financial statement fraud

According to Setiawati *et al.* (2018) state that, replacement directors can become a company effort to improve the performance of the previous directors by making changes to the composition directors or recruitment directors new Which considered more competent. Study done _ by Sasongko *et al.* (2019) as well as Nenda Marliani *et al.* (2020) related change in influential directors to financial statement the fraud obtain results that variable it has an effect positive to fraud report finance with accompanied mark in a manner significant while other studies conducted by Handoko (2021) and Setiawati *et al.* (2018) obtained results that replacement directors on company No own influence from fraudulent company financial statements. From the results obtained it can be said that change in director is a factor to improve the company's performance in the performance that has been done by previous directors at the company.

H4: Change in director influential to financial statements fraud

3 FRAMEWORK STUDY

For support clarity in a manner structured so variable free and variable bound can be described in the form of a chart or framework in which the dependent variable is financial stability, nature of industry, rationalization, and change in director going to variable independent ie financial statement fraud.

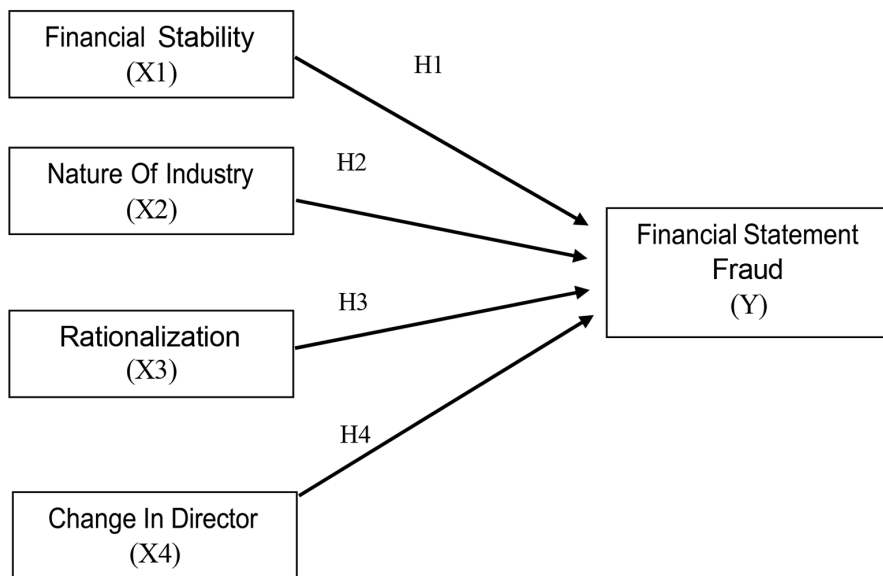


Figure 1.

4 METHOD

On type study This Which used is study in a manner quantitative that is research with the aim of analyzing and measuring from one variable to another. This study includes five variables, namely financial stability, nature of industry, rationalization, change in director, And financial statement fraud.

The population selected in this study is a manufacturing company in various industrial sectors Which registered in Exchange Effect Indonesia (IDX) on year 2021. Taking sample on research This use method purposive sampling type non probability sampling with the aim of finding samples that fit certain criteria. The samples obtained from manufacturing companies obtained 170 companies along with the criteria for determining them. The criteria in this study are as follows:

- (1) Company manufacture Which registered in IDX in 2021.
- (2) Company Which own data complete in accordance with need researcher Which in the form of company financial statements in 2021.
- (3) Company manufacture Which registered in IDX Which use eye Money rupiah.

For measure discretionary accruals, especially formerly count total accruals For each company i in year t with the modified formula Jones (1991) Dechow *et al.* (1995), in Yesi Ariani *et al.* (2017), namely:

$$TACCit = Laba Bersih - Arus Kas Operasi$$

Mark total accruals (TACC) estimated with equality regression as following:

$$TACCit = \alpha_1 \left(\frac{1}{Ait - 1} \right) + \alpha_2 \left[\frac{(\Delta REVit)}{Ait - 1} \right] + \alpha_3 \left(\frac{PPEit}{Ait - 1} \right) + \frac{\varepsilon it}{Ait - 1}$$

Information:

$Ait - 1$ = total asset company i on period $t - 1$

$\Delta REVit$ = change sale clean company i on period t

$PPEit$ = gross properties, plant, and equipment company on period t

εit = error

With use coefficient regression on, mark non-discretionary accruals (NDACC) can be calculated by the formula:

$$NDACCit = a_1 \left(\frac{1}{Ait - 1} \right) + a_2 \left[\frac{(\Delta REVit - \Delta RECit)}{Ait - 1} \right] + a_3 \left(\frac{PPEit}{Ait - 1} \right)$$

Information:

$\Delta RECit$ = change receivables clean company i on period t

a_1, a_2, a_3 = mark coefficient Which obtained from results regression

Furthermore, discretionary accruals (DACC) can counted with method as following:

$$DACCit = \frac{TACCit - NDACCit}{Ait - 1}$$

Information:

$DACCit$ = discretionary accruals company i on year t

$TACCit$ = total accruals company i on year t

$NDACCit$ = nondiscretionary accruals company i on year t

Variable independent Which used in study This is Financial stability, nature of industry, Rationalization, And change in director. Measurement variable independent described in Table 1 as follows:

Table 1. Measurement variable.

Name variable	Measurement
Financial Stability	$ACHANGE = \frac{Total\ aset(t) - Total\ aset(t-1)}{Total\ aset(t-1)}$
nature Of Industry	$RECEIVABLE = \left(\frac{Piutang_t}{Penjualan_t} - \frac{Piutang_{t-1}}{Penjualan_{t-1}} \right)$
Rationalization	Variable dummy used as measurement Which where 1 (one) for a company that changes auditors while 0 (zero) for the other way around.
change in Director	The dummy variable is used as a measure of director turnover where code 1 indicates a director turnover during period study And code 0 if on the contrary

5 RESULTS AND DISCUSSION

Descriptive statistics in this study are used to provide information regarding the characteristics of the variables in the study using 170 companies in the 2021 period. The existence of descriptive statistics can obtain values including minimum, maximum, average, and standard deviation. Table 2 below contains descriptive statistics for five variables in the form of four independent variables and one dependent variable used in this study.

Table 2. Statistics descriptive of 170 companies.

Variables	Obs	Means	std. dev.	Min	Max
Y	170	-0.03009	0.13990	-0.97842	0.29085
X1	170	0.07611	0.17834	-0.39642	0.80606
X2	170	-0.50361	4.41244	-42.14450	5.88895
X3	170	0.45882	0.49977	0	1
X4	170	0.24117	0.42906	0	1

In further sample testing of 170 companies the resulting data experienced errors in the next measurement test. Therefore, researchers sort again data Which more approach level normal with method outliers and produce 126 companies.

Table 3. Statistics descriptive of 126 companies.

Variables	Obs	Means	std. dev.	Min	Max
Y	126	-0.01660	0.03365	-0.10229	0.08370
X1	126	0.06038	0.08926	-0.18780	0.31420
X2	126	-0.00462	0.07137	-0.34098	0.51187
X3	126	0.44444	0.49889	0	1
X4	126	0.20635	0.40630	0	1

The financial stability variable (X1), based on 126 samples studied by the population of manufacturing companies, has an average value of 0.06038 with a standard deviation of 0.08926. The minimum value obtained is -0.18780. The maximum value of data processing is 0.31420.

The nature of industry variable (X2), based on 126 samples studied, the population of manufacturing companies has an average value of -0.00462 with a standard deviation value of 0.07137 which has a minimum value of -0.34098 . The maximum value obtained is 0.51187 .

Variable rationalization (X3), based on 126 sample Which researched population from Manufacturing companies have an average value of 0.44444 , which means that 44% of companies change auditors with a standard deviation value of 0.49889 . This variable has a minimum value of 0 which indicates that the company did not change the auditor in presenting the company's financial statements and a maximum value of 1 which means the company changed the auditor.

Change in director variable (X4), based on 126 samples studied by the population of the company manufacture own mark average 0.20635 Which It means 20% company made a change of directors in that period with a standard deviation value of 0.40630 . This variable has a minimum value of 0 which indicates that the company has not replaced directors in its financial statements and a maximum value of 1 which means the company has replaced directors.

Variable financial statement fraud (Y), based on 126 sample Which researched population from manufacturing companies has an average value of -0.01660 with a standard deviation value of 0.03365 which own mark minimum -0.10229 . Mark maximum Which got from processing data of 0.08370 .

5.1 Test assumption classic

Table 4. Skewness and kurtosis tests.

Variables	Obs	pr (skewness)	pr (kurtosis)	Adj chi2(2)	Prob>chi2
Res	126	0.0275	0.5097	5.23	0.0733

Based on Table 3 can seen with provision mark probability exceed 5% . That trials Which done produce mark 0.0733 . mark residual Which obtained state that the p-value <0.05 means that the residual data is normally distributed.

Based on sample with mark each variable Which has processed For test model regression in order to find a correlation between independent variables.

Table 5. Test multicollinearity.

Variables	VIF	1/VIF
X1	1.50	0.668289
X2	1.05	0.956433
X3	1.82	0.548865
X4	1.34	0.748132
cons	2.82	0.354028
Means VIF	1.71	

Based on Table 4, the data that has been processed states that the tolerance value of each independent variable is more than 0.01 or tolerance > 0.01 . As well as the VIF value generated from each variable obtaining an average value of 1.08 which is less than 10 or VIF <10 so that multicollinearity in this study with the results obtained did not occur and it can be said to show good results.

Based on sample with mark each variable Which has processed For test model Regression occurs variance inequality from the residual one observation to another observation.

Table 6. Test Heteroscedasticity.

Wald chi2(4)	30.05
Prob > chi2	0.6812

Based on Table 5 can interpreted with mark probability exceeded chi2. That mark of all the independent variables produced 0.6812 which exceeds 0.05 or p-value > 0.05 so that it can be stated that the residual data is free from heteroscedasticity.

5.2 Test hypothesis

Based on results Which obtained that R-square Which got as big 0.1989. It means 19% in this study regarding financial statement fraud can be explained by the variable financial stability, nature of industry, rationalization, and change in director. Furthermore explanation another about financial statement fraud explained by variable other Which No researched on this research.

Based on the data that has been processed statistics using STATA 17 shows that F obtain mark 0.000. It means results Which obtained not enough from levels significant by the rules mark significance $0.00 < 0.05$ or $F < 5\%$. So hypothesis related variable financial stability, nature of industry, rationalization, And change in director own influence Which Enough means or meaning to variable financial statement fraud.

Table 7. Results test t.

Y	coefficient	std. err.	t	P>t	[95% conf. interval]	
X1	-0.13828	0.03104	-4,450	0.000	-0.199737	-0.076823
X2	-0.11996	0.03915	-3,060	0.003	-0.197462	-0.042457
X3	-0.00401	0.00552	-0.730	0.469	-0.014941	0.006922
X4	-0.00625	0.00694	-0.900	0.370	-0.019988	0.007495
cons	-0.00573	0.00458	-1,250	0.214	-0.014803	0.003345

Variable financial stability (X1) obtain mark 0.000 with provision mark significance $0.000 < 0.05$. Viewed from matter the can stated that financial stability influential and impact on financial statement fraud. Agency theory if it is connected with the first independent variable, the relationship can be described that, the existence of an agent element in the company can affect the financial stability contained in the company, in which an agent has the authority in making decisions by making choices in accounting decisions without identify methods contained in accounting.

The results stated in this study are in line with other studies conducted by Marliani *et al.* (2020) and Yesi Ariani *et al.* (2017) which state that financial stability influences significant to financial statement fraud. In another party study from Sasongko *et al.* (2019), Didin Ijudin (2018), and Wahyuni *et al.* (2017) have inconsistent explanations, on study This with clarity that financial stability No influential significant to financial statement fraud.

Variable nature of industry (X2) obtain mark 0.003 with provision mark significance $0.000 < 0.05$. Viewed from matter the can stated that nature of industry influential and impact on financial statement fraud. Theory agency, if it is connected with the second independent variable, then the relationship can be described that the condition of the company with agency theory has a conjunction, in which an agent has a role in managing

company resources. Therefore, an agent or internal party in the company has a contribution in stabilizing the conditions that take place in the company in the form of employee performance, financial management, as well as sales and purchases carried out by the company.

The results stated in this study are in line with research conducted by Marliani (2019), Nenda Marliani *et al.* (2020), and Wahyuni *et al.* (2017) stating that the nature of industry has a significant effect on financial statement fraud. However, research This No in line with study Which has done by Ijudien (2018) as well as Yes Ariani *et al.* (2017) Which state that nature of industry No influential significant to financial statement fraud.

The rationalization variable (X3) obtains a value of 0.469 with a significance value of $0.000 < 0.05$. Judging from this, it can be stated that rationalization has no effect and has an impact on financial statement fraud. There is no significant relationship between rationalization on financial statement fraud with agency theory, Which where something auditors have role in handling reporting finance in company. Viewed from corner From the point of view of economic stakeholders, if a company appoints an auditor or KAP to audit its financial statements for a long period of time, it will result in an act of fraud because it has opportunities for a long period of time and vice versa if something company replace auditors with period time short or in only a few periods of auditing will reduce fraud crimes.

The results of this study are in line with research conducted by Handoko (2021) and Marliani (2019) get results that rationalization does influential on financial statements fraud. However, study This No in line with study Which has done by Revelation *et al.* (2017) as well as Nenda Marliani *et al.* (2020) Which state that influential rationalization significant to financial statement fraud.

Variable change in director (X4) obtain mark 0.370 with provision mark significance $0.000 < 0.05$. Viewed from matter the can stated that change in director No influence and have an impact on financial statement fraud. The existence of a relationship has no effect between change in director on financial statement fraud with agency theory, Which where something company directors own authority in management source Power company form continuous decision making in order to obtain developing performance results. Viewed from the point of view of economic stakeholders, if a company has directors with a long period of time it will lead to fraud, if the results of the performance that have been carried out by something directors not enough create results Which develop so will do fraud in order to improve performance results with the aim of developing results as well as if a company replaces directors in a certain period with a short period of time it will reduce acts of fraud committed by a director.

Results study This consistent with study Which has done by Handoko (2021) and Setiawati *et al.* (2018) found that change in directors had no significant effect on financial statement fraud. However, other research conducted by Sasongko *et al.* (2019) and Nenda Marliani *et al.* (2020) stated that change in director significant effect on the financial statement fraud.

6 CONCLUSION

Based on From the results of the research that has been done, it can be concluded that financial stability and the nature of industry have an effect on financial statement fraud, while rationalization and change in directors have no effect on financial statements. fraud. The limitations of this study are that the period used is only one year or relatively short, the variables used are only a few of which are discussed. And research data taken from Wrong One website Which provide company financial reports.

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Factor analysis of operations strategy at Umrah and Hajj bureaus

Fien Zulfikarijah & Baroya Mila Santi
Universitas Muhammadiyah Malang, Indonesia

ABSTRACT: The study aims to determine the factors considered in implementing the operational strategy of Umrah and Hajj bureaus in Indonesia with 105 owners or manager respondents in New Normal conditions. The analytical tool used in this research was factor analysis with 7 variables: cost, quality, delivery, flexibility, innovation, service, technology, and differentiation with 27 variables. The results of rotation and factor reduction leave 19 variables with a total of 5 factors scilicet technology, service, quality, differentiation, and cost. This finding was interesting because literature and technology research rarely discusses technology and services that were relevant to technological developments where most services were carried out online.

Keywords: Community service, Shariah implemented, Training, Mentoring

1 INTRODUCTION

In the current dynamic development of the business environment, adaptive adjustments are needed in every company. Operations strategy is a company's efforts to sell its products or services to consumers by becoming one of the company's foundations. Operations strategy or competitive advantage can be used in facing an increasingly global market. Experts agree that an operating strategy is crucial for companies, Awwad *et al.* (2013) companies are forced to respond efficiently and effectively to the changing business environment, one of the most substantial challenges facing companies is to gain and develop competitive advantage, and plays an important role in creating decent company operational efficiency (Veiga *et al.* 2019). Operational strategies are more widely practiced in large companies. Still, the results of Koch *et al.* (2015) show that in small and medium-sized companies managers take the initiative to succeed in operating strategies.

Even though strategic operations have stabilized, studies still need to be carried out because they are not yet optimal (Slack 2005). Operations strategies are needed for all types of companies to make adaptive adjustments to a dynamic business environment that will become competitive (Liu and Takala 2012). Baines and Lightfoot (2014) produce consistent business pattern thinking in operational decisions. The results from Baines and Lightfoot (2014) can be applied to service companies. Operations strategies have been successfully practiced in both manufacturing and service companies and have been proven to improve company performance (Lillis and Sweeney 2013). Skinner introduced operations strategy as a competitive advantage through cost, quality, delivery, and flexibility, then practitioners added service, technology, and environment. *In their research*, N. Russell and H. Millar (2014) used indicators of quality, flexibility, cost, delivery, and innovation. In general, the operating strategy has cost, quality, delivery, and flexibility indicators, but as the business grows, services and innovation are added (Malek *et al.* 2015).

According to Heyzer (2016) competitive advantage directly states the creation of a system that has a distinct advantage from its competitors, the idea is to create customer value efficiently and sustainably. Heyzer is ahead of the competition for differentiation, cost leadership, and responsiveness. Competitive advantage is very important for companies in determining prospects, resulting in failure or failure according to research by Yuleva (2019), Lasalewo *et al.* (2017), dan Stevenson (1999) which can be achieved through price, quality, and product/service differentiation, flexibility and time to certain activities. Wilson (2020) states that competitive advantage refers to other countries, not other companies because it is related to society, changes in market demand conditions are very fast, bringing together the production of goods/services on the international market. All of these advantages are measured through Gross Domestic Product (GDP), the ratio of exports and imports, as well as increased productivity. In particular, Taylor did not mention how to achieve competitive advantage and only explained how to measure competitive advantage.

The pathway to achieving competitive advantage can be based on different strategies, namely using cost leadership and differentiated using indicators of low-cost leadership, quality differentiation, innovation differentiation, and service differentiation with consideration following the manufacturing industry in Malaysia (Micheli and Mura 2017; Samarrokhii *et al.* 2015). The indicators of cost, quality, delivery, and flexibility are carried out through cost, quality, delivery and flexibility, price, speed, differentiation, time, and response (Kumar *et al.* 2020; Qi *et al.* 2017). Sansone *et al.* (2020) mention cost, quality, time, flexibility, innovation, and sustainability. This opinion can be classified into two, namely the initial and the addition. The initial concepts by Skinner were cost, quality, delivery, and flexibility. Terms added or changed by experts after Skinner are price, speed, differentiation, time, and response.

All of the ways to achieve the competitive advantage mentioned above are ideal, but not all of them can be done by companies. In other words, companies can choose one or several ways to achieve a competitive advantage that is tailored to the conditions of the company. One of them is the difference in the type of company and company level (Jagoda *et al.* 2016). Harmonization of operating strategies is expected to affect service quality and performance (Alkhatib and Migdadi 2019).

The Umrah and Hajj bureau is a religious service business that serves Muslims in fulfilling the obligations of the 5th pillar, this business is very attractive and attracts a lot of interest from entrepreneurs because it has good prospects. The number of Muslims until 2022 is 87% of people in Indonesia (Ardani *et al.* 2022; Statista 2022). The large number of Muslims in Indonesia is still not comparable to the implementation of Umrah and Hajj services which must be further improved (Hariyanto 2021). Moreover, according to Halidin *et al.* (2019) that Indonesia is one of the countries with the largest number of Umrah pilgrims in the world. These services need to be fulfilled. Likewise, for the Umrah pilgrimage, the Hajj quota limit per year which causes the Hajj waiting list to exceed 20 years makes some Muslims choose to perform the Umrah pilgrimage only or carry out the Umrah pilgrimage while waiting for the Hajj departure schedule. This is an alternative form that can be done due to the long waiting list (Putri *et al.* 2020).

The development of the number of pilgrims/umrah pilgrims in Indonesia is ranked 2nd in the world after Pakistan (Halidin *et al.* 2019). The proof can be seen through the number of Umrah pilgrims, which are more than hundreds of thousands of people each year starting from 2016 – 2019 which shows a high average sequentially (699.6 thousand, 750 thousand, 1.1 million, and 849 thousand). While the number of pilgrims in the same year has reached 4.34 million people while the quota provided is only 231 thousand people (Ardani *et al.* 2022; Kemenag 2019). This difference causes the haj waiting list to get longer. Meanwhile, the number of Hajj bureaus that exist is only 1013. If on average each Umrah/Hajj bureau can serve 1 million pilgrims and an average of 21 million per pilgrim, then each Umrah bureau manages as much as 21 trillion funds, indicating a business this is very interesting and prospective. This assumption applies if there are no obstacles that occur. Even though the reality

is that the Umrah business, which is of interest to entrepreneurs, is attractive and prospects cannot be spared from drastic changes due to the pandemic and the current New Normal period.

The Umrah business, which has been in great demand by entrepreneurs some time ago, has changed due to the pandemic. For two years, all activities have stopped completely because there are no more Umrah and Hajj departures, so they cannot serve pilgrims. Because this business is very dependent on other countries where the condition of all countries is in a protective mode to minimize the widening and prolongation of the pandemic, even though several countries including Indonesia are in the New Normal stage faster. Still, vigilance and caution are the main steps in business involving a country. This stagnant condition was experienced by all Umrah and Hajj businesses, even most of which closed their businesses. Uncertainty about the departure of Umrah and Hajj is a major problem for them. Several companies chose to stay because of two things, firstly pilgrims who had registered and secondly to prepare for Umrah and Hajj departures to reopen at any time. What is happening now is that both entrepreneurs and pilgrims/consumers are both waiting and have a strong commitment. In maintaining the stability of the company and interaction with the congregation, it is necessary to review what kind of operating strategy is used by the company after this big pandemic or the New Normal period.

This research is to find out the operational strategy of Umrah and service bureaus in Indonesia during the New Normal period. Are cost, quality, delivery, flexibility, innovation, service, technology, and differentiation considered in implementing the operations strategy. Based on this, this study explains and describes operations management related to strategic operations through cost, quality, delivery, flexibility, innovation, service, technology, and differentiation which can be used as a basis for future research references. This research has never been done on Umrah and Hajj services, especially in Indonesia. Meanwhile, Umrah and Hajj services are international services that require approaches and strategies to be continuously developed. So far, the management of Umrah and Hajj services has tended to be conventional and hereditary because these services place more emphasis on religious impressions which tend to make pilgrims surrender to the services provided. The results of this study can be used as benchmarks for Umrah and Hajj service companies in providing and improving services to pilgrims.

2 LITERATURE REVIEW

2.1 *Operational strategy*

Some experts define different operating strategies, but broadly speaking the meaning is the same. The following relates the operations strategy to the company's vision and mission, the operations strategy is a tool for realizing the company's vision and mission through production operations (Haming dan Mahfud 2011), namely the function of operating vision that determines all directions or impetus for decision making, vision must be integrated with business strategy and often, but not always, reflected in formal planning (Schroeder 1989), is part of the operations management function that refers to the company's vision and mission hence that strategic operations must be in line with corporate strategy (Stevenson 1999). Operations strategy refers to decisions and plans focused on the effective use of company inputs and operating capabilities to achieve competitive advantage and long-term performance (Shou *et al.* 2019). The importance of strategic operations begins with the role of market and economic operations and there are many cases related to strategic operations as both the key to success and the key to failure (Warszawska 2018). The right operating strategy is very important for an organization not only to determine the extent to which its business strategy can be implemented but also as a source of competitive advantage (Wambua Boniface 2014).

In addition, the operational strategy is defined as the capture of goals, plans, and policies for the organization in achieving success in the market. *et al.* 2016. However, the choice of operating strategy can differ between small and large companies, and between national and international scale companies (Yu and Ramanathan 2011). Slack (2005) divides the operational strategy into three levels, namely compatibility between resource needs, development of irrational competitive advantage, and coverage. N. Wandiga *et al.* (2017) operations strategy answers a very important question about how key resources should be acquired and configured to achieve the desired corporate performance objectives. Operations strategy can improve quality, and flexibility, and reduce costs (Maia *et al.* 2010).

Not all authors refer to the operating strategy for the same concept, some use other terms for operations strategy, namely competitive advantage or competitiveness. Its advantages are linked to its core content i.e. what it does better than other companies. Operations strategies are designed to manage operations functions based on certain priorities (Choy *et al.* 2016). Operations strategy is intended to analyze the changes that affect competition due to industrial and social trends (Arias Aranda 2003). The role of operations strategy is to provide planning for the operations function so that it can make the best use of resources (Voss. C. A. 1995).

A key element in developing a successful operations strategy is providing its customers with increased costs following additional benefits with or through lower prices by providing greater benefits and services (N. Wandiga *et al.* 2017). How companies compete or how companies create added value for customers (Heineke 2006). Maylor *et al.* (2015) said that the operating strategy is a trade-off meaning that not all of them can be chosen. Based on Giovanni (2020), operating strategy, or what can be called operational performance has indications of cost, quality, delivery, and flexibility. An operations strategy is needed in managing services (Matthias and Brown 2016). According to Vergara *et al.* (2016), the indicators are cost, quality, delivery, flexibility, service, and environment. Technology is a complementary indicator of operations strategy (Yu and Ramanathan 2012). Cost, quality, time, and flexibility (Choy *et al.* 2016; Magutu *et al.* 2010). Sansone *et al.* (2020) stated cost, quality, time, flexibility, innovation, and sustainability. Wilson (2020) describes cost, quality, and delivery. Based on the results of the literature review and research results above, the research framework can be described in Figure 1.



Figure 1. Framework research.

Based on various sources that have been collected and reviewed, it can be explained that the indicators in the operations strategy are cost, quality, delivery, flexibility, innovation, service, technology, and differentiation. In other words, it can be said that the Umrah and Hajj bureau entrepreneurs in implementing the operational strategy are carried out through these indicators.

3 RESEARCH METHOD

This type of research is explanatory research which aims to test the theory and whether it strengthens or rejects the hypothesis of previous research results. The research was conducted at Umrah and Hajj bureaus in the form of head offices, agents, and branches in Malang. Based on the data collected and can be contacted as many as 122 people who are also the study population. The research sample consisted of 122 people using a census sampling technique where everyone in the population was sampled (Sugiyono 2018), but of the 122 respondents who filled out the questionnaire completely only 105 people. Thus the data were processed by 105 people using a factor analysis tool with the provisions of MSA (Measure of Sampling Adequacy) > 0.5 the variables assessed could be predicted and analyzed further, then formed through eigenvalues (Rahardjo 2019).

The definition of operational strategy operational variables is a way to achieve company goals through competitive advantage, while the indicators and sub-indicators that are broken down from the research indicators are:

- (a) Cost (X1): lower price, price according to the initial agreement, guaranteed price for leaving until returning
- (b) Quality (X2): superior quality, a quality that meets the expectations of the congregation, consistent quality
- (c) Delivery (X3): assistance by the company, departure according to schedule, conformity to schedule, conformity to schedule
- (d) Flexibility (X4): addition of worship schedules, the addition of worship services, ease of carrying out independent worship
- (e) Innovation (X5): expanding service lines, creating new services, creating new, different services
- (f) Services (X6): Umrah equipment, hotels, transportation, consumption
- (g) Technology (X7): online congregation registration, use of WA groups, online boarding passes, online lodging bookings, online team communication
- (h) Differentiated (X8): unique services, provide different services from competitors, have a different corporate image. The data used are primary data obtained through filling out questionnaires by respondents. The measurement uses a 5 Likert scale, namely from strongly disagree to strongly agree. The analytical tool used is exploratory factor analysis which functions to reduce data from a large number of variables/indicators to a small number. The purpose of using factor analysis is to explain the structure of the relationship between many variables in the form of factors, latent variables, and formation variables.

4 RESULT AND DISCUSSION

The results of data processing using SPSS by entering as many as 27 sub-indicators. After reduction based on the MSA (Measure of Sampling Adequacy) value of more than ($>$) 0.5, 8 sub-indicators must be excluded, and 19 indicators that are appropriate for factor analysis. Of the 19 sub-indicators classified into 5 factors which are formed from the results of their eigenvalues, while the naming of the 5 factors is based on the results of the largest loading factor or adjustments. The conditions are listed in the following table:

5 EVALUATION AND SUSTAINABILITY

Based on the results of the analysis of data and tables, it can be explained as follows:

Table 1. Factors to be considered in implementing the operations strategy.

No	Factor Name	Percentage of Diversity	Indicator	Loading Factor
1.	Technology (X7)	25.362%	X3.1 Assistance by the bureau	.629
			X3.3 Iteration Compatibility	.643
			X4.1 Added iteration	.727
			X5.1 Expansion of service lines	.547
			X7.3 Boarding passes online	.795
			X7.4 Online booking of the accommodation	.826
			X7.5 Online team communication	.866
2.	Service (X6)	11.423%	X3.2 Departure according to schedule	.533
			X5.3 Create differentiated services	.474
			X6.3 Transport	.768
3.	Quality (X2)	9.121%	X8.1 Unique services	.679
			X2.1 Superior quality	.798
4.	Differentiated (X8)	7.432%	X2.2 Quality that meets the expectations of the congregation	.870
			X4.2 Addition of worship services	.443
			X8.2 Provide different services from competitors	.785
			X8.3 Has a distinct corporate image	.692
5.	Cost (X1)	6.572%	X1.2 The price is according to the initial agreement	.688
			X1.3 Guaranteed departure price until the return	.728
			X2.3 Consistent quality	.593

5.1 Factors to be considered in selecting an operating strategy

In this study, based on the results of previous studies, it was stated that cost, quality, delivery, flexibility, service, innovation, technology, and differentiation were factors considered in determining the company's operating strategy. Still, based on the results of factor analysis, only 5 factors were selected, namely technology, service, quality, differentiation, and cost. The other 3 factors are reduced or some of the indicators are removed and the indicators that are not reduced become the new member factors that are formed.

5.1.1 Technology (X7)

Technological factors which originally consisted of online congregation registration, use of WA groups, online boarding passes, online accommodation bookings, and online team communication have changed to online accommodation bookings, and online communication teams. This change is a combination of the indicators of delivery, flexibility, and innovation.

The use of technology in the business world can no longer be avoided because technology can make it easier for companies to sell their services to consumers. Technology according to Heineke (2006) the use of technology can produce and speed up the delivery of products that suit individual needs at very competitive prices. The technology used by Umrah and Hajj bureaus in facilitating their activities in serving pilgrims is to do online boarding passes at the time of departure and return of pilgrims which greatly saves time and is not in a hurry and avoids delays. Likewise, the communication of booking hotel accommodations, transportation, and consumption to providers makes it easier to find out the availability and comfort of accommodations for pilgrims. The location of the team used is very easy to coordinate using technology, especially information technology.

Assistance by companies, company assistance, itinerary adjustments, additional itinerary, service line expansion, online boarding passes, itinerary adjustments, additions to itineraries, and expansion of service lines into technology can be interpreted as a way of handling pilgrims by providing guarantees of itinerary conformity and adding itineraries at the request of pilgrims which can be used as a basis for expanding the lines of services that have been provided at this time. The findings from Nunes *et al.* (2013) indicate that adaptation of the traditional operations strategy framework can be useful when developing and examining a sustainable strategy for operations by offering definitions for a sustainable operations strategy and sustainable technology that are useful in the development and evaluation of a sustainable operations strategy which always includes choice and use of technology. Baines and Lightfoot (2014) state that technology in the form of ICT is very important in delivering goods/services (Wu *et al.* 2019). Innovation and flexibility are strong variables in strategic operations (Shen 2016). Technology in the form of IT plays a very important role in shaping the operations strategy (Yu and Ramanathan 2012).

5.1.2 Service (X6)

Service factors, which were initially Umrah equipment, hotels, transportation, and consumption, have changed to departures according to schedule, making different services, transportation, and unique services. Indicator change is a combination of delivery, innovation, and differentiation. In Umrah/Hajj services, each bureau must prepare and have booked accommodation, airplanes, hotels, and catering as a condition for obtaining a visa.

Booking lodging services can be made directly with suppliers or through brokers, the difference is that direct orders to suppliers can minimize costs compared to through brokers. This strategy is the mainstay of Umrah/Hajj bureaus in cutting operational costs so they will get bigger profits at the same price as competitors. Not all bureaus can place direct orders due to limited networking with suppliers.

Service is important for every agency, but many agencies provide minimal service at a low price. Several bureaus often think in the short term that the departure of the average congregation does not have an impact on loyalty. The bureau provides low prices with limited services such as flights that have to transit several times to save costs on the one hand, on the other hand, they do not pay attention to the convenience of pilgrims. Apart from that, in some cases, the service still has delays in departure, and service discrepancies as promised. Some bureaus seem to provide services at a low cost, when in fact the services are non-cash, namely, pilgrims have to pay for additional services such as adding to the cost of Umrah equipment (ihram cloth, suitcases, etc.).

The results of this study support the thoughts of practitioners who conveyed to Skinner that it seems like technology service factors are not widely discussed in the literature because technology and services are additions proposed by practitioners. However, if you look at the results of data analysis, technology, and services are highly considered by companies. Hence that technology and services are interesting findings to be included in indicators of the company's operating strategy in achieving competitive advantage. A holistic approach to service through processes, activities, and resources contributes to a better understanding of the sources of competitive advantage (Rabetino *et al.* 2017). Liu and Liang (2015) companies struggle to achieve and maintain a competitive advantage in today's turbulent business environment by adjusting resource allocation and ultimately optimizing resource-based strategies to develop operational competitive advantages sustainably. Cost, quality, delivery, flexibility, service, and environment are important indicators in creating operations and service strategies that are highly considered by companies (Vergara *et al.* 2016). Free services are a recommendation for companies (Tomaszewski *et al.* 2016). These results differ from the research of Samarrokh *et al.* (2015) which states that service differentiation does not have a strong effect on creating a competitive advantage.

5.1.3 *Quality (X2)*

The quality factor which was originally superior quality, quality following the expectations of the congregation, and consistent quality have changed to provide services that are different from competitors, a quality that is by the expectations of the congregation. Service quality is the service provided by the company to customers which includes physical evidence, reliability, assurance, responsiveness, and empathy. Physical evidence is the condition of the office and customer service that serves the congregation, in general, the office looks clean with Islamic nuances with pictures of the Prophet's mosque, the Prophet's mosque, and calligraphy with the sound of reciting verses from the Koran. The atmosphere becomes solemn and solemn, prospective pilgrims can feel as if they are already there and are part of the place of worship they are going to. In addition, customer service that is polite, friendly, and neat makes prospective pilgrims feel comfortable.

Reliability is the dexterity of employees in serving prospective pilgrims, namely starting to explain the requirements that must be met, the itinerary, the implementation of the Manasikh, handling departure, in the holy land, and returning. The Bureau always prepares trained and educated employees to be able to provide the best service for Umrah/Hajj candidates and pilgrims. The guarantee is one that the bureau continues to maintain the trust of prospective candidates and pilgrims by using the congregation's database only for the benefit of the bureau and guaranteeing that visas can be issued after the requirements are completed. The database is confidential data related to the privacy of prospective pilgrims, while a visa is a requirement that pilgrims must have to be able to visit the holy land and perform the Umrah/Hajj pilgrimage. Visa delays are often caused by the bureau's disorder in preparing the congregation's administration and finances, this is anticipated to always be avoided by making schedules and SOPs.

Responsive is a form of speed and accuracy of the bureau in answering questions and helping to solve problems faced by prospective pilgrims. Many prospective pilgrims are unfamiliar with matters of religion and worship, so they often ask questions not only about Umrah and Hajj. Therefore, every employee is required to have an understanding of religion and the Umrah/Hajj pilgrimage. To increase this knowledge, several bureaus conduct regular training and education for employees. Apart from that, employees are also required to learn on their own either through guidebooks, other media, or YouTube. The Bureau tries to provide the best service for customers, namely by meeting all customer expectations and keeping the minimum service the same from time to time or it can be continuously improved. Worship services are different from other services in that worship services tend not to have many demands as long as worship can be carried out, if there is a discrepancy in service, the congregation tends to accept patience as a test/trial.

The results of this study support the research of Samarrokhi *et al.* (2015) that quality, cost, and innovation support the realization of competitive advantage. N. Russell and H. Millar (2014) shows that cost and quality are most emphasized while innovation is less emphasized. (Sansone *et al.* 2020) Quality is the most important dimension of a company. (Kumar *et al.* 2020) Delivery and quality have a dominant role in the operations strategy. The results of another study (Kumar *et al.* 2020) state that quality and flexibility play an important role in strategic operations. Slightly different from (Lidelöw and Simu 2015) which states that the appropriate operating strategy based on the sequence is quality, capacity, technology, and facilities.

5.1.4 *Differentiated (X8)*

Differentiated, which was originally a unique service, providing different services from competitors, has a different corporate image, has changed to adding religious services, providing different services to competitors, and has a different corporate image. Differentiation refers to the differences between one agency and another in terms of service and corporate image. The intended additional services are additional internal services,

meaning that the existing services are standard provided by all bureaus, in other words, additional services regarding Umrah/Hajj worship. Often asking for more services related to hotel rooms, Umrah frequency, tourist destinations, and accompanying worshipers. All requests that are attempted can be fulfilled both at the cost of additional pilgrims and for free, all of this is intended to give a different impression from other bureaus which may not allow all of them to be fulfilled.

In general, 99% of Umrah/Hajj services are the same between one bureau and another, this is because they have the same supplier (Land arranger) in the country (LA). Meanwhile, bureaus that also have their own LA can be more creative in offering services that can differentiate them from existing bureaus. They can offer extras such as mutawwif, tour guides, and better management of pilgrims.

Every Umrah/Hajj bureau always tries to maintain a good name and improve the bureau's image by trying to have a different image from other bureaus. The image of the bureau is built based on the type of service provided and community groups. Often choosing an agency is adjusted to the type of service provided by the congregation and the religious organization that oversees it. In dealing with this kind of thing, the agency tries to be neutral. Some congregations are fanatical about certain organizations, so the bureau will try to provide understanding. The image is also built based on honesty and maintaining the trust that has been given by the congregation, once the congregation is disappointed it will be difficult to restore the bureau's image and will cause high social costs because word-of-mouth recommendations are greater losses.

5.1.5 Cost (X1)

The cost factor, which was originally a lower price, the price according to the initial agreement, the guaranteed price for going home, changed to the price according to the initial agreement, the guaranteed price for departure and return, and consistent quality. The addition of consistent quality can be linked to costs, meaning that the quality of service that has been standardized so far can be maintained at the existing costs or find more regulatory loopholes that can save costs while maintaining the existing quality, namely consistency with service quality provided.

One of the main considerations for the average Hajj pilgrim is the low cost of Umrah, before choosing an Umrah/Hajj agent they compare prices. Many prospective pilgrims are tempted by cheap prices even though these prices are unreasonable. This condition is unavoidable which causes companies to try to offer low prices in various ways such as setting psychological prices, cheap prices without Umrah equipment, without reliable mutawwif, without tours to find the traces of the Prophet, etc., but if pilgrims need and want it an additional fee will be charged.

Most prospective pilgrims want to be able to worship in the holy land in both Medina and Mecca, so they hope that the most important thing is that they can leave and return safely. Worship in these two places is the dream of every Muslim because Allah has promised a huge reward so that the congregation does not demand more. The important thing is they can go and come home without any problems. The company as a service provider will try to fulfill it with the promise that the price is a high price departure to return.

The results of this study support the research of Samarrokhi *et al.* (2015) that quality, cost, and innovation support the realization of competitive advantage. N. Russell and H. Millar (2014) shows that cost and quality are most emphasized while innovation is less emphasized. Tomaszewski *et al.* (2016) stated that fee services are a recommendation for companies. Companies that are in a high-cost environment tend to pay attention to quality, cost, time, flexibility, and innovation rather than just cost-related capabilities (Sansone *et al.* 2020). Of the 4 indicators, namely cost, quality, speed, and flexibility, the cost is the dominant indicator in the operations strategy (Wambua Boniface 2014).

5.2 Technology is the main factor considered in selecting an operating strategy

Technology consisting of company assistance, itinerary cohesiveness, adding itineraries, expanding service lines, online boarding passes, online accommodation bookings, and online team communication are the factors most considered by the company. The emphasis on the use of this technology is on boarding houses, accommodation bookings, and team communication which is the core of Umrah/Hajj pilgrims services.

Availability of convenience is the main requirement in obtaining a visa to be able to go for Umrah/Hajj, by having a visa pilgrims will feel safe and comfortable. In addition, for the convenience of departure and return, it can be made easier with online boarding passes which make it easier for pilgrims not to be in a hurry and not feel tired in long queues. This is following the results of research by Amado *et al.* (2013) that technology will drive a better operating strategy.

6 CONCLUSION

Based on the results of the discussion, it was concluded that the operating strategy considered in its implementation was technology, service, quality, differentiation, and cost, meaning that of the 8 factors studied and considered by the company, only 5 factors were more widely applied in achieving successful business management. The results of this study are very interesting because 2 of the 5 indicators, namely technology, and service, are new findings in this business because research rarely uses them. Of the five indicators considered, technology is the main factor considered. This is to current developments where in the digital era and the industrial revolution 4.0, technology has become an inseparable part and necessity in company operations. The company's operations are made easier, cheaper, and have a very wide range by using technology, so it is very profitable for the company. The suggestions from the results of this study are that companies must use technology, both technology that facilitates services and information technology that can be used to interact with consumers. Information technology such as the use of social media, websites, and online payments with the help of financial technology will make it easier for both companies and consumers.

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Financial inclusion and its impact on inclusive growth (Evidence from Islamic banking in middle east countries)

Idah Zuhroh, Firdha Aksari Anindynta & Fitri Rusdianasari
University of Muhammadiyah Malang, Malang, Indonesia

ABSTRACT: Financial inclusion is one of the instruments in sustainable development and a comprehensive commitment for many developing countries as a development agenda from the financial aspect and it is expected to encourage inclusive growth. This study aims to look at the role of financial inclusion in Islamic banking on economic growth and unemployment reduction as indicators of inclusive growth in Indonesia and the Middle East countries. The data was used quarterly from IFSB (Islamic Financial Statistics Board) and World Bank. The panel regression method is used to see the effect of financial inclusion instruments consisting of the amount of financing as well as macroeconomic variables consisting of the interest rate, exchange rate, and inflation rate on economic growth and unemployment as a proxy for inclusive growth. The results found that financial inclusion with Islamic bank financing had a significant positive effect on economic growth. Meanwhile, Islamic bank financing can help reduce unemployment so that the increase in Islamic financing channels can absorb labor. Thus, financial inclusion can encourage inclusive growth through indicators of economic growth and employment. Meanwhile, macroeconomic variables, such as inflation, pose a negative effect on economic growth and unemployment.

Keywords: Inclusive Growth, Financial Inclusion, Macroeconomics

1 INTRODUCTION

The effort to achieve inclusive growth in line with the Sustainable Development Goals (SDGs) was adopted by the United Nations. The SDGs aim to eradicate poverty and inequality globally by 2030 (Mehry *et al.* 2021). OECD (2014) defined inclusive growth as growth in the economy that creates opportunities and ensures equitable distribution of income for society (Amponsah *et al.* 2021). The financial inclusion strategy was directed at low-income people in accessing financial products and services to create money circulation through capital, investment, and savings (Vo and Nguyen 2021). The World Bank (2014) sets 3 indicators of financial inclusion including access, usage, and quality of financial service products. The financial development strategy through financial inclusion is a comprehensive commitment to enhancing the development of the country (Demirguc-Kunt *et al.* 2017).

Financial inclusion includes access to financial services which is reflected in the use of financial products that not only affects aspects of development but also reduces unemployment. Mehry *et al.*, (2021) found that increasing financial inclusion had an effect on decreasing unemployment. This financial inclusion agenda is in line with the philosophical foundation of Islamic finance which aims to achieve social justice for all people. The IMF Press Release on 9 May 2018 stated that growth in Islamic finance creates an important opportunity to strengthen financial inclusion, deepen and expand financial markets, and also can increase public participation and literacy about banking by mobilizing funding as financing for business. Financial inclusion refers to universal access to various financial services at a rational cost (Ouma *et al.* 2017; Swamy 2014; Zins and Weill 2016). Fundamentally, financial inclusion can be defined as an effort to remove barriers to society

in accessing and utilizing financial services and products (Ali *et al.* 2019). The World Bank Middle East sets targets for individuals and businesses to have access and services to financial products to fulfill the needs of transactions, payments, financing, savings, credit and insurance (Siddiqui and Malik 2001; Trianto *et al.* 2021).

In the Organization of Islamic Cooperation (OIC) countries, increasing financial inclusion has an impact on increasing economic growth (Kim *et al.* 2017). Financial inclusion as measured by access to finance also has a positive impact on growth in Middle East countries (Emara and El Said 2021). Several studies using various analytical tools and case studies in different countries also show that financial inclusion has a positive effect on economic growth (Anwar and Amri 2017; Mwaitete and George 2018; Sethi and Acharya 2018). In a different direction, the relationship between financial inclusion and economic growth actually shows an inverted U-curve or non-linear relationship in developing countries (Amponsah *et al.* 2021; Nizam *et al.* 2020). These results confirm that financial inclusion will increase economic growth. But under certain conditions, if financial inclusion cannot be controlled properly beyond the normal size it can actually reduce the economic growth of countries so that it shows a non-linear relationship under certain conditions. Islamic financial products those carried out by the financial institution Ar-Rahn also help boost Malaysia's economic growth through increasing its production (Razak *et al.* 2019). On the other hand, macroeconomics is also an important factor because banking financial flows are also influenced by economic factors such as inflation, economic growth, and exchange rates. Habib and Islam (2017) found that the exchange rate and interest rate variables significantly affect economic growth.

In the topic of financial inclusion, the majority of discussion is still focused on conventional banking and only a few academics or researchers focus on financial inclusion in Islamic banks. So this study tries to focus on financial inclusion in Islamic banks in influencing economic growth and reducing unemployment in Indonesia and several Middle East countries, which have a basis of Islamic banking. Indonesia is a country with great potential in developing financial inclusion in the Islamic banking sector with its capacity as the world's largest Muslim country. Competition between conventional banks and Islamic banks is still visible with a fairly large gap seen from financial deepening and financial access as well as total assets and profitability as a reflection of banking performance. Meanwhile, Indonesia and several other Middle East countries have opportunities in developing the Islamic finance sector and need efforts to encourage financial inclusion. The importance of development from the financial aspect to encourage the achievement of public welfare in terms of ease of access and banking product services for financing and investment. In addition, financial inclusion not only helps in achieving inclusive and sustainable development but also maintains and encourages the banking sector itself. At present, the performance of the Islamic banking industry which has experienced a significant increase is indicated by banking profitability.

Islamic banking in Indonesia has experienced an increase in performance from the financing aspect as recorded in the report of OJK (2019), which is experiencing a significant increase compared to national banking. This means that the Islamic banking industry has opportunities for market expansion through financial inclusion efforts so that it can have an impact on increasing economic growth and reducing unemployment. In addition, external banking instruments such as macroeconomic fundamentals can also be a factor influencing economic growth and unemployment in Indonesia and several Middle Eastern countries. The urgency of this study is to look at the role of the Islamic banking industry in providing services and access to financial products through Islamic financial inclusion to encourage inclusive growth which is proxied by economic growth and unemployment rate.

2 METHODOLOGY

The research method used panel data regression analysis with research samples consisting of Indonesia, Oman, Pakistan, Kuwait, and Brunei Darussalam. The data comes from the

Islamic Financial Statistics Broad (IFSB) and the World Bank. Panel data in this study is a cross-section of 5 countries (Indonesia, Brunei Darussalam, Oman, Pakistan, and Kuwait) with a series of 2013–2021. The panel model specifications for the purpose of knowing the effect of each component of the financial inclusion variable consisting of the number of bank branches, and the number of Islamic financing in influencing economic growth and unemployment in Indonesia and several Middle East countries are as follows:

$$GDP = f(\text{financing}, IR, ER, CPI) \quad (1)$$

$$Unemployment = f(\text{financing}, IR, ER, CPI) \quad (2)$$

The panel model is as follows:

$$\text{LogGDP}_{it} = \beta_0 + \beta_1 \text{logfinancing}_{it} + \beta_2 IR_{it} + \beta_3 ER_{it} + \beta_4 CPI_{it} + e_{it} \quad (3)$$

$$\text{Unemployment}_{it} = \beta_0 + \beta_1 \text{logfinancing}_{it} + \beta_2 IR + \beta_3 ER_{it} + \beta_4 CPI_{it} + e_{it} \quad (4)$$

The GDP used is nominal GDP then converted into logarithms to simplify the units so they are linear with other data units used in the model. Unemployment shows the unemployment rate that occurs in each country as a reflection of labor market conditions so that further identification of the effect of financial inclusion on unemployment reduction can be identified. The financing variable reflects the amount of Islamic financing that is distributed to the public as a form of financial inclusion from the financial deepening aspect throughout Indonesia and Middle Eastern countries. The ER shows the exchange rate of each country against US\$ and the CPI shows the inflation experienced by each country so that the IR, ER, and CPI are a reflection of macroeconomic fundamentals. β_0 , β_1 , β_2 , β_3 , and β_4 indicate the parameter of each variable, indicates the error term, and reflects the panel data.

3 RESULT AND DISCUSSION

The issue of financial inclusion has become a major agenda for developing countries to achieve inclusive growth where the concept of development is not only seen from the economic aspect but also from the social and environmental aspects. In this study, aspects of inclusive development used include economic growth and employment as a result of financial inclusion. The development of Islamic financial inclusion in several countries with an Islamic banking base is quite varied. Several indicators as a measure of financial inclusion by using access and formal financial services from the supply side in the banking market (Cámara and Tuesta 2017). In this case, the financial sector offers access and financial services as reflected with the public having access to financing for accelerated real sectors so that it can increase production output and create jobs which will have an impact on increasing income and reducing unemployment. However, the fact is that efforts are not yet inclusive also massive, and not yet accessed by the entire community due to various basic reasons, such as geographic constraints on service points that cannot be reached and accessed by people in certain areas. In the context of Islamic financial inclusion, it still tends to be lower than conventional financial inclusion. Market share and inadequate infrastructure are one of the obstacles to expanding the achievement of financial inclusion.

The dynamics of Islamic financial inclusion indicators have not moved significantly from year to year in various countries, including several countries in the object of this research. Financial inclusion indicators used to analyze the role of financial inclusion are seen from the form of access and services in the form of financing channeled by the Islamic banking industry, as shown in Figure 1. The movement of data changes in Islamic financing is almost different in each country. It can be seen that the largest of the financing was in Oman with

the highest Islamic financing distribution, which shows the highest number compared to other countries and tends to increase every year. In Pakistan, the distribution of financing does not show a large enough increase every year but tends to be high under Oman when compared to other countries. Meanwhile, Indonesia, Kuwait, and Brunei Darussalam tend to show relatively small financing figures and do not show large changes.

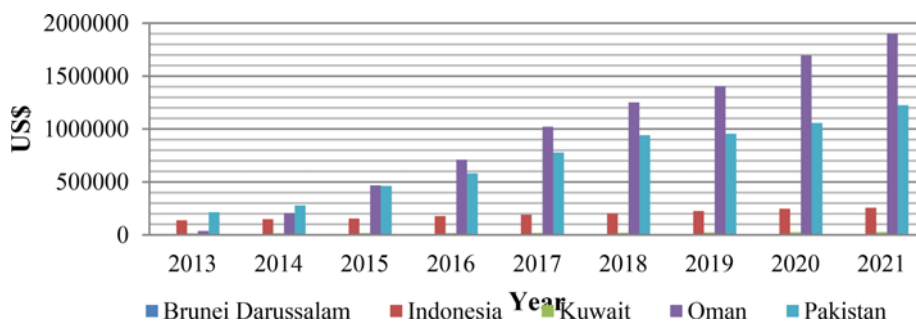


Figure 1. The development of Islamic financing in Indonesia and middle east countries.
Source. IFSB, 2022.

The gap between Islamic and conventional financial inclusion still tends to be high in Indonesia. The results of the OJK survey in 2019 showed that Islamic financial inclusion reached 9.1% and tends to increase compared to the previous year's 8.39%. However, this figure is still very far compared to Indonesia's conventional financial inclusion which almost reached 75.28%. The report from the National Committee for Islamic Economy and Finance (KNEKS) based on OJK data noted that the market share of Islamic finance only reached 10.11% in April 2021. This condition is very unbalanced considering that Indonesia is one of the countries with the largest Muslim population in the world. Thus the existence of the Islamic finance industry has a great opportunity to reach a wider market segment. So that Islamic banking can contribute significantly through financial inclusion to encourage inclusive growth in achieving development both from the economic aspect through increasing economic growth and labor aspects through reducing unemployment by creating jobs with increased financial inclusion. Preferably, the use of financial products as an indicator of Islamic financial inclusion through financing in the productive sector can encourage the creation of real output and encourage the creation of new jobs so that it can absorb a lot of workers. But in fact, the ratio of Islamic financing is lower than conventional financing. This can be influenced by the low literacy related to Islamic finance so people are still reluctant to choose Islamic banks to use their service products.

Meanwhile, Islamic finance assets have more than 50% of the market share in Islamic finance as a whole, which is larger than other countries with Islamic finance bases in Brunei Darussalam (bdif.com). The number of Islamic financial assets in Brunei Darussalam which almost reaches 50% of the Islamic financial market share, is one of the impacts of the high distribution of Islamic financing compared to other research object countries. Ideally, high financing will have an impact on increasing bank profitability which must be accompanied by an increase in third-party funds from the public so that the circulation of funds will be more effective and can encourage productivity in the real sector which can have an impact on increasing real economic growth and creating jobs. Pakistan with the largest number of bank branches is also the country with the largest Islamic banking assets compared to the 4 other research sample countries.

The fixed effect model (FEM) is an appropriate model from a panel data regression analysis test to see the effect of financial and macroeconomic inclusion variables to

encourage inclusive growth through economic growth indicators.

$$\begin{aligned} \text{LogGDP}_{it} = & 26,11231 + 0.351105 \text{logfinancing}_{it} - 0.020967 \text{IR}_{it} + 0.03421 \text{ER}_{it} \\ & - 0.57856 \text{CPI}_{it} + e_{it} \end{aligned} \quad (5)$$

The regression coefficient for the financing variable is 0,351105 which means if there is an increase of 1 unit in the Islamic financing distributions, it will increase economic growth by 0,351105. Furthermore, the regression coefficient for the interest rate variable is $-0,020967$ which means if there is an increase of 1 unit in the interest rate, then economic growth will decrease by 0,020967. And then, the coefficient for the exchange rate is 0,03421 which means that the increase of 1 unit exchange rate will increase economic growth by 0,03421. The last variable is inflation which has a regression coefficient of $-0,57856$ which means if there is an increase of 1 unit in inflation, there will be a decrease of 0,57856 in economic growth.

Table 1. Estimation results of fixed effect model panel data with dependent variables of economic growth.

Independent variable	Relation	Coefficient	Prob
Constanta	+	26,11231	0,0000
Financing (X1)	+	0,35110	0,0004*
Interest Rate (X2)	-	0,02067	0,1055
Exchange rate (X3)	+	0,03421	0,0022*
Inflation (X4)	-	0.57856	0,0009*
R-squared		0,696066	
Prob F		0,000000	

*Significant in 5%

The value of R-squared is 0,696066. It means that economic growth can be explained or influenced by financial inclusion variables represented by the number of Islamic bank offices and financing as well as macroeconomic variables as indicated by the exchange rate and inflation variables of 66,23% and the remaining 30,04% is explained by other variables that not included in the model. Furthermore, for the simultaneous statistical test, it is indicated by the prob value of $F = 0,000000$ less than $= 5\%$ or 0.05, which means the variables of financial inclusion and macroeconomics jointly affect economic growth in Indonesia and Middle East countries. Furthermore, based on the results of panel data regression analysis and model selection test to see the effect of financial inclusion and macroeconomic variables in encouraging inclusive growth through labor indicators, the model chosen is the Fixed Effect Model (FEM).

$$\begin{aligned} \text{Unemployment}_{it} = & 11.54153 - 0,647332 \text{financing}_{it} + 0,015703 \text{IR}_{it} + 0,011281 \text{ER}_{it} \\ & - 0,090337 \text{CPI}_{it} + e_{it} \end{aligned} \quad (6)$$

Table 2. Estimation results of Fixed Effect Model Panel Data with Dependent Variables of Unemployment.

Independent variable	Relation	Coefficient	Prob
Constanta	+	11,54153	0,0000
Financing (X1)	-	0,647332	0,0000*
Interest Rate (X2)	+	0,015703	0,1218
Exchange rate (X3)	+	0,011281	0,0007*
Inflation (X4)	-	0,090337	0,0883**
R-squared		0,547778	
Prob F		0,000000	

*Significant in 5%, ** Significant in 10%

The regression coefficient for the financing variable is -0.647332 which means if there is an increase in the financing with 1 unit, it will decrease unemployment by 0.647332. It means that Islamic financing to intervention the real sector can increase job creation and the rate of unemployment could decrease. Furthermore, the regression coefficient for the interest rate variable is 0.015703 but not significant effect on the unemployment rate. Meanwhile exchange rate variable is significant with probability number 0.0007 and coefficient regression of 0.011281 which means if there is an increase of 1 unit in the exchange rate, then unemployment will increase by 0.011281. The last variable is inflation which has a regression coefficient of 0.090337. It means if there is a decrease of 1 unit in inflation, there will be an increase of 0.090337 in unemployment. Inflation shows that an increase in the price of certain products which are price elastic along with an increase in investment can encourage a reduction in unemployment.

The value of R-squared is 0.547778, it means that unemployment can be explained or influenced by financial inclusion variables represented by the number of Islamic bank offices and financing as well as macroeconomic variables as indicated by the exchange rate and inflation variables of 54.77% and the remaining 46,23% is explained by other variables that not included in the model. Furthermore, for the simultaneous statistical test, it is indicated by the probability value of $F = 0,000001$ less than $= 5\%$ or 0.05 which means the variables of financial inclusion and macroeconomics jointly affect unemployment in Indonesia and Middle East countries.

Financing is a very important instrument in encouraging economic growth, especially in developing countries. Financing intervention in Islamic banking as a form of service and financial access is necessary, particularly in a country that has two banking systems with a majority Muslim population. Job creation is not only driven by investment but also by internal financing from the banking sector, which can boost aggregate output and reduce unemployment. This result is in accordance with the analysis which shows the effect of sharia financing which has a significant positive relationship to economic growth and a significant negative effect on reducing unemployment. The productive financing model is very important to increase people's creativity so it can produce output that has contributed not only to increasing aggregate output but also to encourage the creation of business fields as well as to reduce the unemployment rate in a country.

The results of this study are in line with empirical research from Kim *et al.* (2017) that Islamic financial inclusion through positive financing aspects significantly affects economic growth. Several countries selected in MENA from the research results by Emara and El Said (2021) found a positive relationship between the effect of financial inclusion (number of banks and financing) on economic growth. This condition implies that financial development is necessary for achieving financial inclusion and can encourage economic growth through financing instruments. Financing is channeled to the real sector in order to increase production output so that it will have an impact on increasing real output in the aggregate which has an impact on stimulating economic growth, especially in developing countries. Increased access to financial services has a positive effect on economic growth in line with research from (Anwar and Amri 2017; Onaolapo 2015; Sethi and Acharya 2018; Sharma 2016).

The existence of massive and productive financing by banks can have an impact on reducing the unemployment rate through the creation of new jobs by increasing activity in the real sector. This is in line with the results of this study that the role of financing as an instrument of financial inclusion can help reduce the unemployment rate. Empirically this result is supported by the research of Mehry *et al.* (2021). Alshyab *et al.* (2021) found the negative relationship between financial inclusion and labor market dynamics and thus helps to further contextualize the role of financial inclusion in creating job opportunities and ultimately promoting economic development and prosperity to achieve inclusive growth.

Macroeconomic variables such as the exchange rate can increase economic growth. It means that the appreciation of the exchange rate can encourage real output and national income because when the exchange rate of a country strengthens, export production will increase and contribute to boosting aggregate output also encouraging an increase in the balance of trade

and payments. In addition, the appreciation of the domestic exchange rate will encourage capital inflows so that investment inflows will increase which in turn will have an impact on increasing job creation which can reduce unemployment. This is in line with Solow's (1956) growth model which states that an increase in production inputs such as investment, technology, and capital (through Islamic banking financing is one of them) can increase in aggregate output and help reduce unemployment. Meanwhile, the interest rate variable cannot explain directly between economic growth and unemployment because it must pass through monetary policy transmissions such as transmissions to price stability, the real sector, or the financial system.

The inflation variable showed a significant negative effect on the two dependent variables, namely economic growth and the unemployment rate. In the concept of the Phillips curve theory, it is emphasized that in the long run, there is a tradeoff between inflation and unemployment so we cannot choose simultaneously between a decrease in unemployment with inflation. In addition, an increase in prices as reflected by an increase in inflation can lead to a sluggish economy which can have an impact on a decrease in growth. This is due to a decrease in aggregate demand, especially for goods that are elastic to price changes. Putra (2018) stated that inflation can have a negative effect on unemployment because along with rising prices, producers will increase their production. Therefore, they need a lot of labor which will have implications for decreasing unemployment.

4 CONCLUSION

Based on the results of the study, it can be concluded that financial inclusion is very important to achieve inclusive growth which does not only grow in the economic aspect but also in social aspects such as stability in the labor market through reducing unemployment. In addition to conventional banking which contributes to achieving inclusive growth, countries that adopt a dual banking system also need to pay attention to the role of Islamic banking in contributing to inclusive growth. Although the role of Islamic banking tends to be small, its existence shows an increase in performance and has a great opportunity to be further developed, especially in countries with large Muslim populations such as the countries in the sample of this study. Technology integration for digitizing the financial sector is very important in Islamic banking so that financial inclusion can be achieved more massively. In addition, in order to go hand in hand to achieve high financial inclusion, it is also necessary to expand Islamic financial literacy so as to increase public understanding and knowledge of Islamic banking and encourage the use of Islamic financial products.

Reflecting on the conclusions and suggestions above, this study has limitations because it used panel data. The weakness is it cannot identify more detail in both Indonesia and Middle East countries. In addition, data collection from several sources of Islamic banking data is still minimal, so it is difficult to obtain complex models, especially regarding the integration of technology into the Islamic banking system. In addition, this study only uses financing as a proxy in reflecting financial inclusion. It is hoped that further research can add to the role of technology and banking digitalization as a proxy for financial inclusion.

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Towards cybersecurity in Southeast Asia: Singapore's role as the Asean chair in 2018

Haryo Prasodjo, Ely Nursetiani & Najamuddin Khairur Rijal
Universitas Muhammadiyah Malang, Malang, Indonesia

ABSTRACT: This research aims to analyze Singapore's role in promoting cybersecurity in the Southeast Asian region. The digital era has brought significant changes to regional security dynamics, including in the Southeast Asian area that is not exempt from cybercrime threats. This study employs a qualitative descriptive approach by gathering data from literature studies. Utilizing the concept of regional integration, the research findings argue that Singapore plays a crucial role in fostering cybersecurity and stability in Southeast Asia. As the most technologically advanced nation in the region, Singapore contributes significantly to collective efforts to enhance awareness about cybersecurity in the region. Singapore holds a pivotal role in prompting regional countries to recognize the importance of cybersecurity. Singapore has led efforts to bolster regional cybersecurity cooperation through various initiatives and programs. Furthermore, Singapore also significantly promotes inter-member state dialogues among ASEAN countries regarding cyber threats by coordinating regional cooperation and reinforcing the cyber security capacities of ASEAN nations in this field.

1 INTRODUCTION

ASEAN, as a regional organization, was formed as a result of interdependence among countries in the Southeast Asian region with a shared vision to create a cohesive and prosperous ASEAN community, along with a mission to promote ASEAN awareness in aiding the development of a caring, united, just, and peaceful ASEAN Community. Since 1967, ASEAN has embarked on a lengthy journey to accelerate economic growth, social progress, and cultural advancement in the region (Ismawati and Hartati 2022). One of the objectives of the member states through ASEAN cooperation is to enhance regional peace and stability while upholding the rule of law and interstate relations in Southeast Asia (Constanta 2022). Following the establishment of the ASEAN Community in 2015, Southeast Asian countries have made considerable progress in advancing their cooperative strategies guided by ASEAN values (ASEAN Way).

In the past few decades, we have witnessed how information technology has become a major force in global politics, triggering shifts in global defense and security perspectives, and is regarded as the dawn of a new era in the concept of warfare, where foreign nations increasingly consider cyber threats as a key factor in international security, underscoring the importance of foreign policies that integrate cyber security, including at the regional level such as ASEAN (Timur 2017). Cyber itself has emerged as the fifth dimension of human existence, following the dimensions of land, water, air, and outer space, forming a dimension space composed of computer hardware and software, as well as parallel, virtual, and undifferentiated information communication networks that enable rapid and continuous data movement from one node to another dynamically and without detection (Novitasari 2017).

The potential threats can have significant implications for countries in the Southeast Asian region, particularly for those with high levels of technology adoption but relatively low cyber security. The digitization of the economy and widespread internet penetration has facilitated cross-border transactions and have even made Southeast Asia the world's third-largest digital

economy market, with over half the region's population, approximately 330 million people, having adopted the internet in their daily lives (Rizki 2018). The extensive use of the internet and involvement in the economic sector have yielded substantial benefits, including significant economic growth that has positioned Southeast Asia as the world's seventh-largest market with a GDP of \$2.7 trillion and a growth rate of 5.2% (J. Lee 2018). The combined population of ASEAN exceeds 600 million people, with Southeast Asia's internet economy reaching \$100 billion in 2019, of which 90% of the 360 million internet users in the region are connected, primarily through mobile devices, making the digital economy and cyber governance increasingly crucial for ASEAN (Noor 2020).

The potential cyber attacks on information systems in Southeast Asia have the potential to create disruptions and disarray in the region's digital economy. Presently, the mastery of information technology in Southeast Asia is concentrated in Singapore, making it the hub of information technology across the region. However, the technological capabilities in information technology among individual ASEAN member countries are unevenly distributed, rendering Southeast Asia vulnerable to cyber security threats (Ramadhan 2019). Each cyber threat is holistic and capable of impacting all nations in Southeast Asia. Therefore, ASEAN member states need to enhance their technological capabilities and foster inter-country cooperation to address cyber security threats.

What cannot be disregarded is that ASEAN has long been a target of various cyber-attacks. Given the critical geographical position and strategic value of the region, this dynamic might not come as a surprise. With an increasing reliance on digital technology and global connectivity, ASEAN countries have become focal points for cyber attackers seeking to exploit their vulnerabilities. Despite the ASEAN Charter's commitment to effectively respond to all forms of threats, transnational crimes, and cross-border challenges, the regional group has never directly or explicitly addressed these cyber attacks (Noor 2020).

The issue of cyber security in the ASEAN region has become increasingly concerning due to the lack of effective strategies in addressing this matter, which reflects a weak strategic mindset, regulatory vigilance, and a lack of appropriate actions from organizations or institutions in dealing with cyber security issues (Salsabila *et al.* 2020). With its high dependence on the digitized world, cyber security in Southeast Asia is a problem that has yet to be a significant priority for ASEAN countries. As of now, only the Philippines and Thailand have established national policies in the cyber field, while only Malaysia and Singapore are in the advanced category (Dobberstein *et al.* 2018).

As a founding member and active participant of ASEAN, Singapore has contributed to building and strengthening security cooperation in the Southeast Asian region. Singapore has been a robust and influential member of the organization, actively initiating numerous changes within it and supporting various institutional and non-institutional initiatives and reforms. One of Singapore's main foreign policy objectives is to support the development of ASEAN as an organization consisting of three pillars: the Political-Security Community, the Economic Community, and the Socio-Cultural Community (Grzywacz 2021).

Despite having a strong military capability, Singapore also focuses on non-military defense and unconventional warfare, as well as fostering relationships with ASEAN countries. Singapore engages in various regional security initiatives and forums. As a nation dependent on international trade, both exports and imports serve as primary drivers of its growth and development, especially in manufacturing, where the country is an investment destination due to its stable political and security conditions (Hartati 2018). To support this economic growth, political and economic stability within the ASEAN region is crucial for Singapore. This is because any disruption or conflict in the region can have an impact on Singapore's economy.

The urgency of this research lies in the increasing importance of cyber security and regional integration in the digital era, particularly among ASEAN countries with significant digital dependence. As the digital landscape develops, the cyber security threats faced by countries in this region are increasing. Understanding Singapore's role in promoting regional integration and security cooperation within ASEAN becomes crucial, thus, this research will examine Singapore's contributions and initiatives in this regard. Therefore, this study aims to elucidate how Singapore contributes to promoting cyber security and stability in the region.

2 CONCEPTUAL FRAMEWORK

According to Hettne, there are three factors influencing integration in a region: support from regional great powers within the region, the level of interaction among the countries in that region, and mutual trust among those countries (Hettne 2000). The stronger these factors are in a region, the more the region develops. Meanwhile, Walter S. Jones identifies seven conditions that affect integration, including social assimilation, shared values, mutual benefits, historical relationship closeness, the importance of integration itself, relatively low costs, and external influences (Jones and Kusumohamidjojo 1993).

Regional integration can help address how Singapore participates in developing policies and regulations that are integrative and collaborative, leveraging its strengths and potential as a leading nation with advanced technology in Southeast Asia to advance cyber security cooperation within ASEAN. Regional integration is relevant for use in the study to assist in explaining how Singapore contributes to strengthening security cooperation within ASEAN in the digital era and how this nation plays a crucial role in constructing a mutually beneficial framework to promote security and stability in the Southeast Asia region.

3 RESEARCH METHODOLOGY

This research employed a qualitative-descriptive research method aimed to provide an objective overview or description of the observed phenomenon, in this case, the role of Singapore in promoting ASEAN's security and stability in the digital era. Data for this research were collected through library research, conducted by seeking, gathering, and analyzing information from credible sources such as journals, books, articles, reports, and other reliable secondary data sources. Therefore, the research method employed in this study will offer an objective portrayal of Singapore's active involvement, supported by relevant information as supporting data in the preparation of the related research.

4 RESULT AND DISCUSSION

4.1 *Singapore's response to cyber challenges in Southeast Asia*

The development of digital security threats in ASEAN countries is an indicator that signifies cybercrime has evolved into a serious menace to the stability of the Southeast Asian region. ASEAN countries have become the primary targets of cyber attacks for several reasons: a) being a global host that accommodates suspicious web activities, particularly in countries like Malaysia, Indonesia, and Vietnam; b) the region's weak cybersecurity policies, governance, and capabilities; c) the lack of domestic abilities and expertise due to fragmented industries and skill shortages; d) the corporate perception of cyber risks not prioritizing cybersecurity as a business priority (Putri 2021). This illustrates the necessity for an enhancement in cyber resilience in ASEAN countries.

The risk of cyber attacks in the Southeast Asian region is very high, primarily due to its high vulnerability and dependence on technology. ASEAN countries must collaborate in addressing this threat by employing policies, regulations, law enforcement, and swift responses (Novitasari 2017). However, most ASEAN member states have not yet prioritized cybersecurity issues, even though the consequences of online data breaches could potentially lead to significant financial and structural losses. Therefore, ASEAN, as a forum for its member states, plays an important role in establishing reliable cyber security (Tampubolon and Ramadhan 2020). The digital transformation poses significant challenges to cyber security as information and data are stored in digital forms. Hence, the protection of privacy and data security must be placed as priorities by every organizational entity.

In Southeast Asia, efforts to combat cybercrime remain suboptimal and can have detrimental consequences on regional stability, mainly concerning economic growth. This is due to the total population in the Southeast Asian region reaching 663.47 million people, making it the third most

populous market in the world, as well as the combined GDP of ASEAN surpassing USD 3.11 trillion, ranking seventh in the global market scale. Meanwhile, cybersecurity experts estimate that the net cost of cybercrime will increase by 15% annually over the next five years, reaching USD 10.5 trillion per year by 2025, up from USD 3 trillion in 2015 (J. Tan *et al.* 2021). Therefore, it is essential for ASEAN member states to not only focus on economic and defense dimensions but also digital security aspects.

However, regional efforts to adopt a comprehensive cybersecurity strategy have been progressing slowly, despite several critical incidents related to the cyber world affecting ASEAN member states. For example, in July 2016, a group of hackers from China known as '1937CN' targeted Vietnam through a cyber attack, breaching flight information and voice systems at Noi Bai and Tan Son Nhat Airports. Meanwhile, APT32 or OceanLotus, associated with the Vietnamese government, conducted cyber attacks on ASEAN computers before a regional leaders' meeting in Manila, Philippines, and hacked the websites of government agencies and companies in multiple countries, including Cambodia, Laos, and the Philippines (Raska and Ang 2018). In the same month, following the Philippines' victory in a dispute case against China at the International Tribunal for the Law of the Sea in The Hague, around 68 Philippine government websites experienced Distributed Denial of Service (DDoS) attacks targeting various strategic government institutions, including the Department of Foreign Affairs, Department of Defense, Central Bank, Presidential Management Staff, and several local government portals (Rahim 2021).

In July 2018, Singapore experienced its worst-ever cyber attack, where hackers successfully breached the IT system of Singapore's healthcare provider, SingHealth, and managed to infiltrate and steal 1.5 million patient records and 160,000 outpatient medical records, including data belonging to Prime Minister Lee Hsien Loong (Salsabila *et al.* 2020). By October 2018, Malaysia had encountered at least 45 ransomware incidents targeting various sectors, while Brunei's Computer Emergency Response Team (BruCert) recorded 2,143 cyber attacks in Brunei in 2018, with 38% attributed to malicious software, and Toyota Motor Corporation also fell victim to a series of data breaches on its Thai website and suffered its most severe attack in March 2019 when personal information of 3.1 million customers was exposed at its sales outlets in Japan (Mizan *et al.* 2019).

The series of cyber attack events demonstrate that cybersecurity has become a serious issue in Singapore and other ASEAN countries. Collaborative initiatives in the field of cybersecurity within ASEAN play a vital role in addressing hacking threats and the negative impacts of cybercrime activities. According to the 2020 Global Cybersecurity Index (GCI) report, Singapore leads in cybersecurity in the ASEAN region with a score of 98.52, followed by Malaysia at 98.06, Indonesia at 94.88, Vietnam at 94.59, Thailand at 86.5, Philippines at 77, Brunei Darussalam at 56.07, Myanmar at 36.41, Lao PDR at 20.34, Cambodia at 19.12, and lastly, Timor-Leste with a score of 4.26 (ITU Publications 2021). This assessment index takes into account five main components: legal measures, technical measures, organizational measures, capacity building, and cooperation, underscoring the need for ASEAN member states to collectively enhance each of these components.

Singapore has been actively engaged in enhancing its cybersecurity, a journey that was initiated in 2005 with the launch of the Cybersecurity Masterplan. This effort was furthered by the Infocom Security Masterplan in 2007 and continued in 2013 with the introduction of the National Cyber Security Masterplan and the National Cyber Security Research and Development Program. Singapore also took a pioneering role by establishing the National Cyber Security Center, which is responsible for overseeing and coordinating all aspects of cybersecurity for the nation. This commitment culminated in the establishment of the Cyber Security Agency in 2015, further fortifying Singapore's efforts to enhance cybersecurity (Estiyovionita and Sitamala 2022).

Additionally, Singapore made amendments to the Computer Abuse and Cybersecurity Act in 2017 to address the increasing scale and transnational nature of cybercrime (Anshori and Ramadhan 2019). Singapore's significant improvement in cybersecurity is evident through ongoing initiatives such as the renewal of the National Cyber Security Master Plan, the establishment of the Cyber Watch Centre and Threat Assessment Centre, the establishment of the Cyber Security Agency (CSA) across all sectors as a public-private partnership, and robust efforts

to strengthen cybersecurity-related laws, including the Computer Misuse and Cybersecurity Act, Electronic Transactions Act, and PDPA (Tampubolon and Ramadhan 2020).

For Singapore, information and communication technology is considered crucial for its future as a “smart nation” with a dependable infrastructure and digital technology capabilities. This is particularly important as they continue to be targeted by cyber attacks in Southeast Asia, which have significant implications for the country. Singapore has also recognized that other ASEAN member states are not exempt from being targets of cyber attacks, much like Singapore itself. Singapore emphasizes the importance of a shared situation among ASEAN member states concerning cybersecurity threats in Southeast Asia. By doing so, Singapore is working to forge a collective identity among ASEAN nations in terms of cybersecurity. This approach aims to blur the distinctions between Singapore and other ASEAN member states, as they all face vulnerability to threats and cyber attacks in the region (Anshori & Ramadhan 2019). Therefore, Singapore underscores the significance of digital security in maintaining regional stability, acknowledging that this cannot be achieved in isolation but rather requires collective efforts with other ASEAN member states.

4.2 *Singapore’s role in promoting security cooperation*

The varying levels of network advancement among ASEAN member states have led to differing concerns regarding the digital divide. In this context, cyber diplomacy has become a crucial tool to achieve common goals, utilizing various platforms, including bilateral, multilateral, and regional frameworks like ASEAN (Timur 2017). This approach recognizes that ensuring robust cybersecurity requires strong technological support. Through deeper cyber cooperation, ASEAN nations can embrace emerging technological opportunities and collectively move towards an inclusive and innovative digital society.

Within ASEAN, Singapore is renowned for its rapid technological progress and technological prowess. Particularly during its chairmanship of ASEAN in 2018, Singapore championed numerous cybersecurity agendas by committing significant resources to build operational capacity, policies, and laws, while expanding partnerships through multilateral initiatives such as the United Nations and international efforts like the Global Commission on Stability in Cyberspace (Salsabila *et al.* 2020). Singapore’s endeavors in this regard have been evident in recent years and have shown gradual success, attributed to a business-friendly environment, skilled human resources, and technological advancements (Utomo 2019).

Singapore has taken proactive steps in developing its cybersecurity by establishing various agencies responsible for ensuring the nation’s security. For instance, the creation of the Cyber Security Agency of Singapore (CSA) serves as an entity to advance digital security, protect the Cyber Infocomm Infrastructure (CII), coordinate national efforts against large-scale cyber incidents, and enforce regulations, policies, and cybersecurity practices in Singapore (Rahim 2021). However, in the pursuit of creating a secure cyber network, collaboration with external or international entities is also needed.

Singapore encourages other Southeast Asian nations to cooperate in cybersecurity by raising awareness about cyber attacks among neighboring countries. Singapore advocates for policies and initiatives that build and strengthen security cooperation within ASEAN in the digital age. According to the Singapore Cybersecurity Strategy, Singapore emphasizes the importance of capacity building in cybersecurity that involves multiple stakeholders as partners, recognizing that cyber threats transcend national borders. The strategy highlights the belief that consensus and agreements among nations are essential to successful cybersecurity cooperation (Cyber Security Agency of Singapore 2016). As outlined in this strategy, Singapore plays a significant role in promoting regional security and stability.

Singapore has pioneered leading efforts in international and ASEAN cyberspace capacity development through initiatives encompassing operational, technical, legislative, cyber policy, and diplomatic aspects, and also facilitates the exchange of information about cyber norms and laws (Raska and Ang 2018). Singapore emphasizes the importance of establishing cybersecurity awareness in Southeast Asia, enabling ASEAN member states to determine appropriate measures to address cyber threats and vulnerabilities. As part of the ASEAN cyber capacity program,

Singapore actively advocates for personal data protection and enhances cybersecurity knowledge through the Singapore International Cyber Week (SICW), a significant forum for discussing regional and global cybersecurity policies, legislation, and resilience. The inaugural SICW was held in 2016 and featured the ASEAN Cybercrime Prosecutors' Roundtable Meeting, aiming to build legal capacity to address cybercrime in ASEAN member states (Tampubolon and Ramadhan 2020).

Subsequently, in 2018, Singapore, under the leadership of Prime Minister Lee Hsien Loong, assumed the role of ASEAN Chair, which rotates annually. During its chairmanship, Singapore centered its theme around "Resilient" and "Innovative", reflecting ASEAN's need to strengthen collective resilience against cross-border threats like terrorism, global warming, and cybersecurity (PM Lee Hsien Loong 2018). In the context of cybersecurity threats, ASEAN adopted the ASEAN Leaders' Statement on Cybersecurity Cooperation as a step toward enhancing cybersecurity in the digital realm, recognizing the urgency of bolstering security in the digital sector to counter-pressing cyber threats (Rizki 2018).

Regional cooperation has been established in the cyber realm to safeguard the security and stability of the region. One such initiative is the ASEAN-Singapore Cybersecurity Center of Excellence (ASCCE), which began operations in October 2019. ASCCE serves as a think tank, Cyber Emergency Response Team (CERT), and Cyber Range Training Center, aiming to bolster cybersecurity across ASEAN member states. It provides a new platform for sharing information, reporting cyber incidents, and enabling collective responses. This initiative also aims to narrow the digital development gap among ASEAN members regarding infrastructure, human resources, budget, and technology (Salsabila *et al.* 2020).

Singapore is willing to invest budgetary resources to promote cyber progress in the region, especially considering that some ASEAN countries like Cambodia, Laos, and Myanmar have not allocated significant budgets for cybersecurity (Dobberstein *et al.* 2018). Singapore has invested S \$ 10 million (AS\$ 7.3 million) in ASCCE to strengthen the cybersecurity capacity of ASEAN member states. This investment includes training, resources, expertise, incident response, support in strategy formulation, legal consultations, and capacity-building workshops for ASEAN member states. These workshops have been conducted in collaboration with the US Department of State, UNIDIR, Australia, and the Netherlands (Raska and Ang 2018).

Since assuming the ASEAN leadership in 2018, Singapore has taken on regional responsibility by launching the ASEAN Cyber Capacity Programme and hosting the inaugural ASEAN Ministerial Conference on Cybersecurity. This program has grown from an initial initiative of S\$ 10 million to S\$ 30 million. Singapore has also established the ASEAN-Singapore Cyber Center of Excellence, aimed at training, research, information exchange, and regional coordination. This is intended to align cyber diplomacy with operational issues and facilitate regional coordination toward an integrated perspective on the international platform (Noor 2020).

Cybersecurity is a vital international concern today. However, it is often overlooked by developing countries due to a focus on other security issues, making cyber threats a lower priority. Different priorities such as poverty, economic growth, and pressing domestic security concerns may contribute to this oversight. As a country within a regional context dominated by developing nations, Singapore views cyber threats as crucial and has developed its cyber defense. As a leader in regional cybersecurity, Singapore hopes that other ASEAN nations will adopt similar values and beliefs to strengthen their cyber defense capabilities (Rizki 2018). Furthermore, initiatives to enhance the cybersecurity infrastructure of less-developed member states can foster trust within ASEAN.

Regional development and support for regional institutions are important for Singapore's national development and stability, particularly concerning security and the economy. Singapore views ASEAN as a foundational entity, with aspects such as non-interference, compliance, and the promotion of international law equally paramount in integration and foreign policy (Grzywacz 2021). Singapore's role in ASEAN consistently encourages other member states to advance collectively. As the ASEAN Chair in 2018, Singapore vigorously worked to bolster ASEAN's economic integration, confront shared challenges, and prepare for the digital era. It strives to share knowledge and skills with neighboring countries, open to providing insights that allow each nation to decide what is useful for them (T. Tan and Zerrillo 2018).

4.3 *The role of Singapore in Asean's cyber dialogue*

ASEAN, as a regional organization in Southeast Asia, must serve as a platform for its member countries to address evolving security threats over time. While strategies to address conventional security threats such as border disputes are crucial, ASEAN also needs to formulate policies and action plans to tackle cyber security threats. Therefore, ASEAN should share a common foundational understanding in dealing with cyber security issues, prioritize cyber security as a focal area, and promote technical-level cooperation to ensure seamless network security (Timur 2017). ASEAN requires full cooperation from all member countries to overcome cyber security barriers. Cyber issues and challenges cannot be effectively managed by each country individually, hence ASEAN must leverage opportunities and enhance cooperation to achieve the goal of digital world stability in the region (Mizan *et al.* 2019).

Singapore supports the importance of cyber awareness and global norms through resource support and investment, evident in initiatives such as the Singapore International Cyber Week (SICW), ASEAN Ministerial Conference on Cyber Security (AMCC), and ASEAN Cyber Capacity Programme (ACCP), as forms of regional collaboration involving other nations (Rahim 2021). Singapore excels in telecommunications technology development in the Southeast Asian region, demonstrated by being ranked first in ASEAN in 2018 for Internet of Things (IoT) connectivity and possessing a solid competitive index in mobile telephone services during the same year, with significant contributions from companies like Singapore Telecommunication Ltd in realizing the IoT connectivity vision (Violentiana 2022).

Singapore initiated the ASEAN Cyber Capacity Program in 2016 and the ASEAN-Japan Cybersecurity Capacity Building Centre in Bangkok as efforts to address cyber security issues through overlapping methods that will institutionalize ongoing efforts to build cyber capacity in the region (Salsabila *et al.* 2020). In May 2017, Singapore successfully hosted the ASEAN Cyber Norms Workshop, which was part of the ASEAN Cyber Capacity Program, to support discussions on cyber norms in the Southeast Asian region (Anshori and Ramadhan 2019).

Singapore has led the initiative to establish ASCCE, an important collaboration considering that several ASEAN countries face challenges in infrastructure, technology, management, and finance. This makes this cooperation crucial to create collective security in the cyber realm and achieve cyber security stability in the region (Salsabila *et al.* 2020). Singapore has also initiated the development of the ASEAN Cyber Capacity Programme (ACCP) to enhance the cyber capabilities of ASEAN countries in addressing future hacking cases. Every year, Singapore hosts the Singapore International Cyber Week (SICW) and the ASEAN Ministerial Conference on Cybersecurity (AMCC), a derivative of SICW, which serves as a significant platform for discussing and sharing experiences and thoughts related to cyber security in ASEAN (Rahim 2021). This demonstrates Singapore's efforts to facilitate discussions and dialogues among ASEAN member states regarding cyber security in Southeast Asia.

The outcome of these efforts in 2016 saw ASEAN member countries agreeing to collaborate more closely on cyber security, enhance coordination on regional cyber security capacity-building initiatives, and focus on cyber security at the ministerial and senior officials' levels. They also agreed to establish a set of practical cyber security behavior norms within ASEAN to support digital technology in achieving economic growth and improving the quality of life in the Southeast Asian region (Anshori and Ramadhan 2019).

With its strategic position in 2018, Singapore continued to enhance cyber security within ASEAN by instilling awareness that cyber threats are real non-traditional challenges for ASEAN countries. These threats can impact digital sectors such as the economy, trade, finance, and governance. By disseminating these values, it is hoped that ASEAN countries will become more conscious and open to cyber threats that might not be physically visible (Rizki 2018). Through a shared spirit of awareness and concern, ASEAN nations are motivated to bolster their cyber security systems to safeguard infrastructure and sensitive data from potentially harmful cyber attacks.

Furthermore, Singapore's role in the ASEAN cyber dialogue is evident in establishing the ASEAN-Singapore Cyber Centre of Excellence in October 2019. This center is ASEAN-centric, open, inclusive, and collaborative, aiming to conduct research and train personnel to respond to

cyber security threats (Noor 2020). The program seeks to strengthen the development of cyber security strategy, legislation, and research capabilities among ASEAN member states. It provides technical training for national-level Computer Emergency Response Teams in ASEAN and facilitates the exchange of cybersecurity-related information among member countries and also as center that is oriented towards supporting regional coordination and aligning perspectives to secure collective regional interests within the international context. It also serves as a potential hub for sustaining and aligning efforts in regional cybersecurity capacity development (Anshori and Ramadhan 2019).

5 CONCLUSION

Based on research findings, it can be concluded that ASEAN faces complex challenges and threats in cybersecurity in the digital era. These threats include increasingly sophisticated and evolving cyberattacks that can impact regional security stability, necessitating close cooperation and coordination among ASEAN member states. Here is where Singapore's role as a regional leader with its technological prowess in promoting digital security becomes crucial. Singapore has played a significant role in promoting digital security in ASEAN through initiatives like SICW, ACCP, ASCCE, and others. Singapore is also actively engaged in ASEAN cyber dialogues, including building a framework for regional cybersecurity.

Singapore's contributions can help address cyber challenges and strengthen regional integration in terms of security and stability. However, achieving these goals requires close cooperation and coordination among ASEAN member states and collective efforts to tackle the challenges posed in the digital era. Cybersecurity is a critical issue that demands the attention of all ASEAN member states, and the close collaboration and contributions from Singapore can aid in addressing cyber challenges and reinforcing regional integration.

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How does job insecurity among employees affect employee well-being in the era of the Fourth Industrial Revolution?

Ros Patriani Dewi & Sowanya Ardi Prahara

Universitas Mercu Buana Yogyakarta, Kabupaten Bantul, Indonesia

ABSTRACT: During the Fourth Industrial Revolution era, organizations are required to adapt rapidly to constant changes. The Fourth Industrial Revolution also necessitates companies to prioritize Human Resources (HR) management and the development of HR skills, as human resources are a pivotal determinant of success within a company or organization. To enhance employee performance, the most fundamental aspect influencing employees is their well-being. Various factors impact employee well-being, including job insecurity. This study aims to understand the influence of job insecurity on employee well-being. The measurement tools employed in this study encompass the Employee Well-Being Scale (EWBS) and the Job Insecurity Scale. The study involves 125 employees aged between 20 and 56, situated across diverse regions in Indonesia. The research findings reveal that job insecurity significantly and negatively affects employee well-being, with a calculated t-value of $2.509 > t$ -table value of 1.979 and a significance level of 0.013 ($p < 0.05$). The coefficient of determination, amounting to 0.049, indicates that job insecurity influences employee well-being by 4.9%, while the remaining portion is influenced by unexamined variables in this study.

Keywords: Employee Well-being, Job Insecurity, Employees, Fourth Industrial Revolution

1 INTRODUCTION

The current digital transformation is taking place at a rapid pace and has an impact on almost every aspect of life. Digital transformation is a consequence of the disruptive era, better known as the Fourth Industrial Revolution, which has led to changes in business models and has transformed existing business ecosystems into new, more innovative, complex, and dynamic ecosystems (Berman 2012). In the face of challenges and competition due to global developments and acceleration, organizations need to achieve high employee performance to remain competitive. To enhance employee performance, the most fundamental and influential aspect is their well-being. Employee well-being is of paramount importance as it represents a state where employees feel positive, are able to reach or approach an optimal point in terms of physical, mental, emotional, and social aspects. This has positive implications for themselves, their families, communities, organizations, and society at large, resulting in optimal performance within the company (Pruyne 2011). Zheng, *et al.* (2015) emphasize that employee well-being is not solely tied to employees' perceptions and feelings about their work and life satisfaction, but also closely connected to psychological experiences and satisfaction levels in both their work and personal lives.

Workplace well-being is a crucial topic that significantly shapes an individual's behavior and the overall environment within a workplace. Harter *et al.* (2002); Robertson and Cooper (2010) have discovered a significant correlation between levels of well-being and work-related outcomes such as satisfaction, productivity, employee turnover, and absenteeism

rates. Haryanto and Suyasa (2007) have asserted a positive relationship between well-being and employee performance. This condition demonstrates that well-being levels can have an impact on a company's overall profitability. According to Rasulzada (2007), higher levels of employee well-being are accompanied by increased productivity and corporate profits. Well-being signifies the state of achieving happiness without psychological disturbances, characterized by an individual's ability to optimize their psychological functions. Snyder and Lopez (2002) state that well-being is a function of an individual's psychological state. Meanwhile, Robertson, Ivan and Cooper (2011) define workplace well-being as the level of psychological feelings and goals perceived by an individual in the workplace.

It has been established that employee well-being is essential for the individual interests of employees, as it involves maintaining both physical and psychological health. Failure to achieve employee well-being within the workplace can have adverse effects on overall employee performance and productivity (Kowalski and Loretto 2017). Furthermore, the lack of employee well-being makes employees more susceptible to absenteeism and consistently reduces their contributions to the organization (Price and Hooijberg 1992).

The level of well-being experienced by an employee is influenced by the process of evaluating their life experiences during their tenure as an employee. The actual working conditions, whether pleasant or not, are perceived as a psychological experience within an employee. Nuzulia (as cited in Rizky and Sadida 2019) states that an individual's interpretation of their position within the work environment can impact an individual's psychological well-being. Positive interpretations of experiences can lead to satisfaction within employees, serving as the foundation for optimizing well-being. One of the evaluations employees undergo is their level of job insecurity in their current job.

Job insecurity is a psychological state where an employee feels threatened or concerned about the future continuity of their job. Technology is a double-edged sword; while it can simplify human work, it also significantly impacts economic development. Asriandi and Putri (2020) mention that in the next five years, around 35% of job types are projected to be lost due to the Fourth Industrial Revolution, and this number may rise to 75% in the next 10 years. This is because human-performed tasks are gradually being replaced by artificial intelligence and technology. This transformation results in faster and more efficient production processes, reducing the need for human involvement. This presents a unique challenge that the workforce must confront in adapting to new job types that were never previously considered (Shahroom and Hussin 2018).

Sverke *et al.* (2000) define job insecurity as the emergence of fear or worry related to subjective perceptions concerning the possibility of losing one's job in the future. Research by de Witte *et al.* (2016) demonstrates that one of the impacts of job insecurity is a decline in employee well-being in the workplace. This finding is in line with a study conducted by Suciati, dkk, (2015), which indicates that job insecurity leads to increased stress and decreased employee well-being. Juniper (2010) within Rizky and Sadida (2019) states that stress is one dimension of employee well-being.

Furthermore, according to Farida (2003) as cited in (Rahmadhanty and Wibowo 2022), job insecurity is a psychological condition characterized by confusion stemming from environmental changes. Other studies also suggest that individuals experiencing job insecurity will suffer negative consequences (Murni *et al.* 2018). Individuals with high levels of job insecurity are presumed to have poor employee well-being and job performance. On the other hand, individuals with low job insecurity tend to be more productive and have higher job satisfaction (Schumacher *et al.* 2021).

In general, job insecurity refers to psychological insecurity in the workplace. According to Salmon and Heery (2000) as cited in Mawei (2016), employees in both developed and developing countries experience increasing insecurity due to the instability of their employment status and unpredictable income levels. Bryson and Harvey (2000) as cited in Setiawan and Hadianto (2008) differentiate job insecurity into two categories: subjective and objective. Objective job insecurity is typically associated with clear indicators such as job tenure.

On the other hand, subjective job insecurity is relatively challenging to directly observe since its indicators involve threats of job loss and the consequences of such loss, as perceived by the employees in question.

Previous research has also revealed that job insecurity affects employee well-being. Nopiando (2012) found strong evidence that job insecurity significantly influences the employee well-being of contract workers. Similarly, Maulidina and Nurtjahjanti (2016) discovered a negative relationship between job insecurity and employee well-being. Furthermore, Rahmadhanty and Wibowo (2022) explained that job insecurity has a significant impact on the employee well-being of contract workers during the pandemic. Another study conducted by Lisa *et al.* (2020) also demonstrated that high job insecurity results in low employee well-being, and conversely, low job insecurity increases employee well-being among contract workers. However, a study by De Cuyper *et al.* (2010) among European workers found that job insecurity does not consistently predict low employee well-being, which has spurred further research interest.

According to Van Vuuren (in De Witte 2005), job insecurity can diminish employee well-being in the workplace. Besides negatively impacting job performance, De Witte and Näswall(2003) suggest that job insecurity also leads to dissatisfaction with life and a lack of joy. Job insecurity fosters negative thinking among employees.

The aim of this research is to investigate the impact of job insecurity on employee well-being and to determine the effective contribution of the job insecurity variable to the employee well-being variable.

2 RESEARCH METHODOLOGY

2.1 *Research subjects*

The participants of this study were millennial employees aged between 20–56 years, totaling 125 individuals, who had worked for a minimum of 1 year in formal sectors, distributed across various regions in Indonesia. Informed consent was obtained from all participants before the commencement of the study.

Data Collection Method The variable “Job insecurity” was selected as the independent variable, and the variable “Employee well-being” was chosen as the dependent variable. Data collection was conducted using a survey method, specifically employing the Likert scale model. The scales used were the Employee Well-Being Scale and the Job Insecurity Scale. This was done to explore the relationship between job insecurity and employee well-being.

The Employee Well-Being Scale utilized was developed by Zheng, *et al.* (2015), then adapted by Rahmi *et al.* (2021), consisting of 18 favorable items with four response alternatives ranging from “Strongly Agree” to “Strongly Disagree.” The internal consistency test yielded a reliability coefficient of 0.942, and item correlation coefficients ranged from 0.54 to 0.82.

The Job Insecurity Scale employed was developed by the researcher based on aspects from Rowntree’s theory (2005), containing 15 favorable items with four response alternatives ranging from “Strongly Agree” to “Strongly Disagree.” After conducting a pilot test with 80 employees, the Job Insecurity Scale displayed a reliability coefficient of 0.932, with item correlation coefficients ranging from 0.579 to 0.739.

2.2 *Data analysis*

Technique The data analysis employed in this study includes classic assumption tests and hypothesis testing. The classic assumption tests comprise tests for normality, multicollinearity, and linearity. The hypothesis testing in this research employed the Multiple Linear Regression test using SPSS Version 21.0.

3 RESULTS

The objective of this study was to examine whether job insecurity has an influence on employee well-being. Based on the scale distributed through Google Form, the characteristics of the research subjects can be observed, including gender, age range, and tenure, as shown in Table 1 below:

Table 1. Distribution of research respondents.

Characteristics	Number	%	Total
Gender			
Male	52	42	125
Female	73	58	
Age			
20–30 years	86	69	125
31–40 years	30	24	
>40 years	0	0	
Tenure			
1–5 years	92	74	125
6–10 years	18	14	
>10 years	15	12	

The data obtained from the employee wellbeing and job insecurity scales are used as the basis for testing the hypothesis. A description of employee wellbeing and job insecurity data can be seen in Table 2 below:

Table 2. Description of employee wellbeing scale and job insecurity scale data (N = 125).

Variabel	Hipotetic Score				Empiric Score			
	Min	Maks	Mean	SD	Min	Maks	Mean	SD
<i>Employee wellbeing</i>	18	72	45	15	36	90	66,1	12,3
<i>Job Insecurity</i>	15	60	37,5	12,5	15	75	40,2	16,3

The categorization results of employee wellbeing show that there are no subjects with low scores or in the low category (0%), 37 subjects are categorized as moderate (29.6%), and 88 subjects are categorized as high (70.4%). Based on these results, it can be concluded that the majority of subjects have a high level of employee wellbeing. The categorization results of job insecurity show that there are 27 subjects with low scores or in the low category (21.6%), 63 subjects are categorized as moderate (50.4%), and 35 subjects are categorized as high (28.0%). From these results, it can be concluded that the majority of subjects have a moderate level of job insecurity.

The research data were analyzed using Simple Linear Regression. Before conducting hypothesis testing, classical assumption tests were performed, including tests for normality, multicollinearity, and linearity. The normality test is used to determine whether each variable has a normal distribution. The Kolmogorov-Smirnov (KS-Z) test is used for this purpose. The guideline used to determine normality is that if $p > 0.05$, then the data distribution follows a normal distribution, and if $p < 0.05$, then the data distribution does not follow a normal distribution. For the employee wellbeing and job insecurity scales, the obtained KS-Z value is 0.745 with a significance of 0.635 ($p > 0.05$). Thus, both variables have a normal distribution.

The results of the multicollinearity test show that there is no multicollinearity among predictor variables in the study. This conclusion is obtained by looking at the tolerance value of $1.000 \geq 0.10$ and the VIF value of $1.000 \leq 10$. Thus, there is no multicollinearity issue in the variables used. The linearity test results in an Fbeda value of 6.276 with a sig. = 0.014 ($p < 0.05$), indicating that the relationship between job insecurity and employee wellbeing is linear.

The hypothesis testing results regarding the influence of job insecurity on employee wellbeing in employees yielded an F value of 6.296 with a p-value of 0.013 ($p < 0.05$), thus the research hypothesis is accepted, indicating that there is an influence of job insecurity on employee wellbeing. The R Square value is 0.049, indicating that the contribution of the job insecurity variable to employee wellbeing in employees is 4.9%.

The researcher conducted additional analysis regarding demographic data in this study. Based on the analysis of variance (ANOVA), there is a difference but not significant in employee wellbeing when viewed based on gender, age, and length of employment. For gender, there are two groups: females and males. The mean for the female group is 65.40, while the mean for the male group is 67.00. The one-way ANOVA analysis result shows an F value of 0.542 with a significance of 0.463 ($p > 0.05$). This means that there is no significant difference in employee wellbeing based on gender. For age, there are four groups: 20 – 30 years, 31 – 40 years, and > 40 years. The mean for the 20 – 30 years group is 65.20, the mean for the 31 – 40 years group is 66.30, and the mean for the > 40 years group is 73.56. The one-way ANOVA analysis result shows an F value of 2.027 with a significance of 0.136 ($p > 0.05$). This means that there is no significant difference in employee wellbeing based on age. For length of employment, there are three groups: 1 – 5 years, 6 – 10 years, and > 10 years. The mean for the 1 – 5 years group is 64.60, the mean for the 6 – 10 years group is 69.50, and the mean for the > 10 years group is 70.93. The one-way ANOVA analysis result shows an F value of 2.748 with a significance of 0.068 ($p > 0.05$). This means that there is no significant difference in employee wellbeing based on length of employment.

4 DISCUSSION

The results of this study are consistent with previous research conducted by Maulidina and Nurtjahjanti (2016), which stated that there is a significant negative relationship between job insecurity and employee well-being. Another study by Lisa *et al.* (2020) also found that there is a relationship between job insecurity and employee well-being in a negative correlation, indicating that higher levels of job insecurity are associated with lower levels of employee well-being, and vice versa.

Based on the regression analysis results, it can be concluded that job insecurity significantly contributes to employee well-being. This indicates a significant negative influence of job insecurity on employee well-being among the employees in this study. The effective contribution provided by the job insecurity variable is 4.9% to employee well-being. The remaining 95.1% is influenced by other factors that were not measured in this study, such as perceived organizational support (POS) (Wattoo *et al.* 2018), job crafting (Hakanen *et al.* 2017), leadership behavior (Inceoglu *et al.* 2018), work engagement (Shimazu *et al.* 2015), transformational leadership (Verbraak 2015), work-family demands (Achour *et al.* 2011), and ethical leadership (Cheng *et al.* 2022).

The negative relationship between job insecurity and perceived employee well-being in this study highlights that the feelings of worry or threat experienced by employees have an impact on their future job security, even for those who hold permanent positions. The stronger the feelings of worry, the more it tends to diminish the employee well-being of the individual (Sverke *et al.* 2000). Stiglbauer and Batinic (2015) state that job insecurity has a negative impact on employee happiness. These feelings of worry imply that employees are less likely to experience positive emotions, which relates to one of the indicators of employee

well-being, namely life well-being. Individuals with higher levels of employee well-being tend to experience happiness in their lives (Zheng 2015). Rowntree (2005) also explains that job insecurity in individuals arises from the fear of losing their job, leading to a decline in their individual employee well-being.

The results are consistent with the study conducted by Nopiando (2012), where the findings explain a negative relationship between job insecurity and psychological well-being among outsourced employees. A high level of job insecurity is accompanied by low levels of psychological well-being in employees, and conversely, low levels of job insecurity are associated with higher levels of psychological well-being. Individuals with high psychological well-being can be interpreted as having a sense of security in their lives. According to Dekker and Schaufeli (1995), empirical evidence also indicates that employees experiencing high levels of job insecurity tend to have a higher likelihood of experiencing burnout, which is an unfavorable psychological condition.

Job insecurity influences employee well-being, where psychological coping plays a role as a strategy employed by employees to manage the negative effects of job insecurity on their well-being. Employees with high levels of psychological coping can effectively address the challenges posed by job insecurity (Darvishmotevali and Ali 2020). Employee well-being is closely linked to HRM practices, where effective HRM practices enhance employee performance (Guest 2017). Job insecurity acts as a trigger for workplace stress, leading to a decrease in psychological well-being (Wichert in Burchell 2002). Job insecurity is a significant risk factor for employment and a primary trigger of work-related stress, negatively impacting the well-being and health of employees (Chirumbolo and Areni 2010). Employees who feel insecure experience the threat of job loss and benefits uncertainty, and even though it's unclear if such events will occur in the future, the additional uncertainty about their future makes it challenging to evaluate and choose suitable coping strategies to deal with such insecure conditions (Darvishmotevali and Ali 2020).

The rapid advancement of technology is driven by the Industry 4.0 revolution, with the utilization of artificial intelligence and machines resulting in cost-effective and efficient outcomes (Setiawan 2019). If the digital technology evolution is not managed appropriately, it can lead to disruption, where jobs can be replaced by automation systems and digital technologies (Seto and Septianti 2021). This creates a threat for employees, causing them to feel uncomfortable at work due to potential workforce reductions and replacement by machines (Mutiasari 2020).

Frey and Osborne (2017) argue that artificial intelligence will directly replace 13% of jobs, including those that involve more cognitive tasks and are financially rewarding, such as finance, accounting, and senior management. Many scholars consider the introduction of new technology as an external factor to organizations, posing a threat to the job stability of employees. If organizations fail to take appropriate adjustment measures in a timely manner, employee anxiety can negatively impact the organization (Sanman and Bin 2010 in Liu and Zhan 2020). Greenlagh and Rosenblatt (1984) as cited in Setiawan and Hadiano (2008) define this emotion as job insecurity, the inability of employees to maintain the status quo when feeling threatened in the workplace. In relation to the notion of perceiving workplace stress as a source of job insecurity for employees, Hobfoll (1989) proposed the Conservation of Resources (COR) theory, suggesting that employees tend to hold onto their current conditions (status quo) during organizational changes caused by external factors. When they perceive uncertainty about resource access or feel unable to maintain those resources, workplace stress they experience in facing environmental changes manifests as job insecurity.

Based on the categorization of the research data, the majority of the subjects have a high level of employee wellbeing. This indicates that the employees have good psychological states and perform well in their work within the company. According to Harter *et al.* (2002), employees with high psychological wellbeing tend to be more cooperative, exhibit lower absenteeism rates, are punctual and efficient, and are willing to stay longer in an organization. On the other hand, in terms of job insecurity, most employees fall into the moderate

category, signifying that employees feel moderately anxious and worried while working, as they are exposed to unfavorable conditions (Kang *et al.* 2012). According to Gayatri and Muttaqiyathun (2020), job insecurity is a psychological manifestation of employees, characterized by a sense of confusion due to the threat of changes in the work environment, which in turn influences their job sustainability.

The findings of this research have implications for employees to consider utilizing mindfulness meditation techniques. Mindfulness interventions aim to cultivate greater attention and awareness of the present experience. The adoption of mindfulness programs in the workplace has grown in line with organizational efforts to support employee health, wellbeing, and performance (Hilton *et al.* 2019). The benefits of mindfulness in the workplace also include enhanced task commitment and job satisfaction (Hyland *et al.* 2015). Once employees can manage and transform feelings of worry into more positive emotions, this is likely to have positive effects on their overall wellbeing, both in their personal lives and in the work environment (Zheng, *et al.* 2015).

However, there are limitations to this study. The data collection method employed the use of self-reported scales/questionnaires, and since the respondents completed them without direct supervision, there is a possibility that they might not have adhered to the provided instructions. Additionally, the sample size of 125 participants may not fully represent the true state of affairs.

5 CONCLUSION

The results of this study demonstrate that job insecurity is a factor that influences employee wellbeing among workers. This means that perceived job insecurity has a simultaneous negative impact on employee wellbeing. Based on the analysis of demographic data, there are differences but not statistically significant differences in terms of gender, age, and work tenure concerning employee wellbeing.

For future research, it is suggested to consider a larger sample size or to focus on a more homogeneous group of subjects, such as employees in digital companies. This would aim to enhance the accuracy of the collected data. Furthermore, subsequent researchers could conduct longitudinal studies to observe and evaluate changes in respondent behaviors over time. Additionally, the inclusion of other relevant variables that may also impact the outcomes studied here is encouraged.

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Analysis of competitive priorities criteria in determining the competitiveness of café in Malang city

Achmad Naufal Fawwaz Hakim M., Baroya Mila Shanty & Kenny Roz
University of Muhammadiyah Malang, Malang, Indonesia

ABSTRACT: This research was conducted to determine the priority criteria used in determining the best Competitive Priorities criteria for cafes in Malang City. The study was conducted at four cafes in Malang City, namely Trijata Koffie, Oppa Express, Rodjo 2.0, and Akartana. The purpose of this research is to identify and analyze the criteria and sub-criteria of competitive priorities used by cafes, to determine and analyze the priority criteria in each cafe, and to identify the overall priority results of selecting competitive priorities criteria preferred by cafes in Malang City. This research used the Analytical Hierarchy Process (AHP) method. Based on the results of the conducted study, it is known that the criteria and sub-criteria of Competitive Priorities consist of Low Cost Operations with sub-criteria of low cost and low quality, Top Quality with sub-criteria of raw materials and production process, Development Speed with sub-criteria of product introduction and new products, and Volume Flexibility with subcriteria of capacity and facilities as the reference for café's Competitive Priorities. In Trijata Koffie café, the priority order of criteria from the highest value is Top Quality, Low Cost Operations, Volume Flexibility, Development Speed. In Oppa Express café, the priority order of criteria from the highest value is Low Cost Operations, Top Quality, Development Speed, Volume Flexibility. In Rodjo 2.0 café, the priority order of criteria from the highest value is Low Cost Operations, Top Quality, Volume Flexibility, Development Speed. In Akartana café, the priority order of criteria from the highest value is Low Cost Operations, Top Quality, Volume Flexibility, Development Speed. Overall, the criteria with the highest weight are Low Cost Operations, Top Quality, Development Speed, and Volume Flexibility. This research is expected to provide considerations for entrepreneurs in the café industry in carrying out their operational activities.

Keywords: AHP, Competitive Priorities, Café, Low Cost Operations, Top Quality, Development Speed, Volume Flexibility

1 INTRODUCTION

In the increasingly competitive business world today, with the passage of time and the proliferation of similar companies offering products and services, companies are facing significant challenges. To succeed in this competition, every company must consider the right steps. One of these steps is implementing decisions in operational management to fulfill the company's needs.

There are numerous ways to achieve a competitive edge in today's business competition. One crucial decision in operational management is operational strategy. Operational strategy is a plan that governs the utilization and design of resources to support the business strategy, including the location, size, and type of facilities to be used, the expertise and skills required of workers, technology utilization, specialized processes, equipment, and methods of quality control (Schroeder and Goldstein 2021). Therefore, operational strategy

constitutes an effective pattern of operational decision-making to compete with other companies.

The development of operational strategy within a company begins with Corporate Strategy conducted by the top management to achieve the long-term vision, mission, and objectives, with the aim of attaining competitive advantage and long-term growth. According to Krajewski *et al.* (2022), the development of Corporate Strategy involves four factors that need to be considered: (1) monitoring and adapting to changes in the business environment through environmental scanning, (2) identifying and developing the company's core competencies, (3) developing core processes of the company, and (4) formulating the company's global strategy. Furthermore, market analysis is necessary to comprehend customer needs and preferences, as well as how to address them. With comprehensive market analysis, companies can make informed decisions based on information to achieve success in a competitive market. Thus, companies can determine and focus on the most crucial Competitive Priorities for them.

In the modern era of business and commerce, cafés have emerged as a rapidly growing industry. The proliferation of café businesses in both large and small cities is due to the fact that in this modern age, people are adopting a new trend: choosing cafés as destinations for consumption and daily activities. However, the increasing number of café businesses doesn't guarantee entrepreneurs an easy path to maximum profits. This reality necessitates business owners to accurately determine the operational strategies for their café ventures. Therefore, business owners are encouraged to carefully consider operational strategy considerations. Choosing the right operational strategy is essential for a café business to compete effectively against its competitors.

Cafés have rapidly grown into an appealing business in Malang City due to their significant potential. Particularly among the youth, cafés have become a popular lifestyle choice, which has driven the proliferation of numerous cafés in the city. The support from various educational centers such as prominent campuses scattered across Malang City has rendered it a strategic location for establishing café businesses. As a result, students have become a promising target market and even the primary focus for cafés in Malang City.

Selecting and determining competitive priorities, a business based on short-term and longterm strategies and goals to achieve a competitive advantage over its competitors. According to Krajewski *et al.* (2022), Competitive Priorities are crucial factors within the operational dimension of an organization or supply chain that must be possessed to remain competitive in the current and future market. Therefore, companies need to implement suitable strategies to attain an edge in their manufacturing business competition by employing competitive priorities.

The proliferation of café businesses in the city of Malang has, in fact, intensified competition. Based on extant research, numerous Small and Medium Enterprises (UMKMs) in Indonesia face internal challenges related to criteria encompassing cost, quality, time, and flexibility. Consequently, to facilitate the prudent selection of a suitable café business for entrepreneurs, the application of the Analytical Hierarchy Process (AHP) method becomes imperative.

The selection of Trijata Koffie, Oppa Express, Rodjo 2.0, and Akartana as subjects for this study is underpinned by the distinct concepts and characteristics inherent to each café. An antecedent investigation conducted by Sri Ipnuwati *et al.* (2018) employed the Analytical Hierarchy Process (AHP) as a means to discern the optimal café selection. This facilitated the derivation of ranking outcomes and weight assignments, whereby Café 3, denoted as P3, attained the highest score of 0.31 in the assessment category, with predetermined weight values.

In the preliminary research phase, a total of 22 respondents participated, a statistic ascertained from the quantity of distributed questionnaires. Based on the collated data, discernible insights can be gleaned from the ensuing Table:

Table 1. Pre-research study taken from 22 respondents.

No	Variables	Total
1.	<i>Cost</i>	22
2.	<i>Quality</i>	22
3.	<i>Time</i>	20
4.	<i>Flexibility</i>	21

Source. Sugiyono (2019), processed.

Through the analysis of several questionnaires that have been conducted, it can be concluded that the majority of respondents provided agreeable answers with a score of 3. This indicates that the four indicators can assist customers in determining the best café choice. To process the available data, the Analytical Hierarchy Process (AHP) method is required as an effective tool. The determination of competitive priorities is essential in the café business to facilitate business owners in determining the appropriate operational strategy. The Analytical Hierarchy Process (AHP) method is utilized in this process to address complex decisions using a multi-criteria approach and to identify the main priorities in decision-making. According to Temrungsie *et al.* (2015), AHP is an analysis method used to deal with more intricate decisionmaking situations and assists in identifying the primary priorities within those decisions.

2 METHODOLOGY

This research was conducted in four cafes located in Malang city, namely Trijata Koffie, Oppa Express, Rodjo 2.0, and Akartana. This study falls under the category of applied research according to Sugiyono (2019). The focus of this research is to gather information to address a specific problem. The data collection techniques employed in this study involved interviews and questionnaires. The analytical tool used is the Analytical Hierarchy Process (AHP). This method is employed for the measurement of ratio scale, both in discrete and continuous pairwise comparisons. The Analytical Hierarchy Process (AHP) is a technique used for ranking decision alternatives and selecting the best one based on multiple criteria. The AHP method produces numeric values for each decision alternative, derived from the extent to which those alternatives satisfy the criteria established by the decision-maker (Taylor 2014). Through a hierarchical structure, complex problems are dissected into their respective groups, rendering them more structured and systematic.

Sari (2018) subsequently outlines the steps involved in the computation process using the AHP method as follows:

3 DETERMINING CRITERIA AND SUB-CRITERIA

Each company has different needs and objectives, leading to their unique set of criteria in selecting competitive priorities. To determine relevant criteria and sub-criteria for each café, interviews were conducted with the respective café managers. These criteria can be broken down into varying and unique sub-criteria for each company.

4 PAIRWISE COMPARISON

Each company utilized a 1–9 scale to express pairwise comparisons and determine the level of importance of relevant criteria for their company. In this research, pairwise comparisons were performed to establish priority criteria based on respondent assessments. Weights for each criterion were determined based on interview results and the level of importance among criteria. The comparative scale can be observed as shown in Table 2.

Table 2. Paired comparison scale.

Nilai	Keterangan
1	Sama pentingnya
2	Hampir sedikit lebih penting
3	Sedikit lebih penting
4	Hampir lebih penting
5	Lebih penting
6	Hampir sangat lebih penting
7	Sangat lebih penting
8	Hampir mutlak lebih penting
9	Mutlak lebih penting

Source. Pujawan, Sari (2018).

Performing pairwise comparisons to determine the priority of criteria based on respondent evaluations. Assigning weights to each criterion is determined through interview responses and the level of importance among the criteria.

Table 3. Initial pairwise comparisons.

	Kriteria (A)	Kriteria (B)	Kriteria (C)	Kriteria (D)
Kriteria (A)	A/A	A/B	A/C	A/D
Kriteria (B)	B/A	B/B	B/C	B/D
Kriteria (C)	C/A	C/B	C/C	C/D
Kriteria (D)	D/A	D/B	D/C	D/D

Source. Pujawan, Sari (2018).

5 PAIRWISE COMPARISON MATRIX

The first step involves creating Pairwise Comparison of Criteria. This entails comparing two criteria in pairs using a matrix, aiming to determine the superior criterion based on the selected values from the questionnaire.

Table 4. Pairwise comparison matrix between criteria.

	Kriteria (A)	Kriteria (B)	Kriteria (C)	Kriteria (D)
Kriteria (A)	A*	A/B	A/C	A/D
Kriteria (B)		B	B/C	B/D
Kriteria (C)			C	C/D
Kriteria (D)				D
Jumlah (T)				

Source. Pujawan, Sari (2018).

In the diagonal comparison, A is compared to criterion A. Since the level of importance is the same, $A/A = A$. Only the upper part of the diagonal is assigned values as the lower part holds the reverse values of the upper diagonal comparisons.

Subsequently, proceed to create the Pairwise Comparison Matrix of Sub-criteria. Each individual sub-criterion must also be assigned a priority. Determining these priorities is

achieved through the process of pairwise comparisons. Presented below is the pairwise comparison matrix of sub-criteria.

Table 5. Matrix sub-criteria.

	Sub-kriteria A	Sub-kriteria B
Sub-kriteria A	A	A/B
Sub-kriteria B	B/A	B

Source. Pujawan, Sari (2018).

Pairwise comparison matrices were used to compare various criteria and assign weights to each criterion, thereby indicating the level of importance between one criterion and another. Additionally, priorities must be assigned to each sub-criterion. These priorities were determined through the use of pairwise comparison matrices.

6 PRIORITY SYNTHESIS

Next, normalization was conducted to calculate priority values. Normalization involved dividing each comparison value by the sum of values in each row. This process yields the relative ranking or weight of the evaluated criteria or alternatives.

Table 6. Calculation of final priority for each criterion.

	Kriteria (A)	Kriteria (B)	Kriteria (C)	Kriteria (D)	Jumlah	Prioritas
Kriteria (A)	Y*	Y	Y	Y	$\sum Y$	$\frac{\sum Y}{n}^{**}$
Kriteria (B)	Y	Y	Y	Y	$\sum Y$	$\frac{\sum Y}{n}$
Kriteria (C)	Y	Y	Y	Y	$\sum Y$	$\frac{\sum Y}{n}$
Kriteria (D)	Y	Y	Y	Y	$\sum Y$	$\frac{\sum Y}{n}$
Jumlah	1	1	1	1	4	1

Explanation:

*obtained from A/X (column A)

** priorities are derived from the average sideways

Source. Pujawan, Sari (2018).

7 CONSISTENCY RATIO

After calculating priorities, the subsequent step is to measure consistency. Consistency measurement is employed to evaluate the validity of the responses provided by respondents. A comparison matrix is considered valid if the Consistency Ratio (CR) ≤ 0.1 , whereas it is deemed invalid if $CR > 0.1$. If the CR value exceeds 0.1, recalculations are necessary to achieve better consistency.

The method to calculate consistency involves computing the Consistency Index derived from the random eigenvalue vector matrix, which is also referred to as the Random Index. In the calculation of consistency ratio, it can be computed using the following equation:

$$CI = \frac{\max}{N}$$

Explanation:

CI = Consistency Index

λ_{\max} = Eigen Value

N = banyak element

Subsequently, the Consistency Index of the random matrix is determined using a 9-point assessment scale (ranging from 1 to 9), known as the Random Index (RI). Based on the calculations, the average consistency of matrices of varying sizes is obtained as follows:

Table 7. Matrix size and random consistency.

N	RI
1	0,00
2	0,00
3	0,58
4	0,90
5	1,12
6	1,24
7	1,32
8	1,41
9	1,45
10	1,49

Source. Pujawan, Sari (2018).

The comparison between the CI and RI for all matrices is defined as the Consistency Ratio (CR). The formula for its calculation is as follows:

$$CR = \frac{CI}{RI}$$

Explanation :

CR = Consistency Ratio

CI = Consistency Index

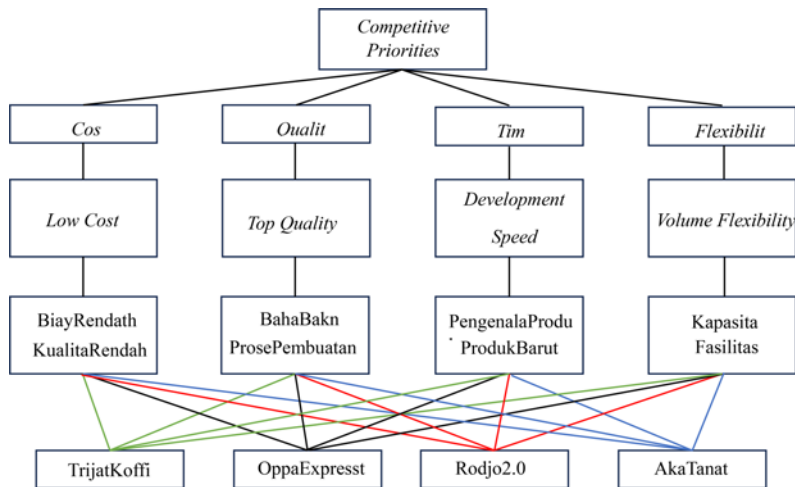
RI = Random Index

8 DECISION MAKING

Decision making is conducted by considering the highest value among alternatives, which represents the main priority weight. This decision is regarded as the most appropriate response to address the issues faced by the researcher.

9 RESULTS AND DISCUSSIONS CRITERIA AND SUB-CRITERIA OF CAFÉ COMPETITIVE PRIORITIES

The initially identified 9 criteria of competitive priorities were agreed to be consolidated into the 4 most relevant criteria for cafes. Similarly, the initially identified 16 sub-criteria of competitive priorities were reduced to 8 sub-criteria deemed most relevant. The outcomes of the interviews with Trijata Koffie, Oppa Express, Rodjo 2.0, and Akartana revealed that out of the 8 Competitive Priorities criteria identified by L. Krajewski (2022), the main focal points for cafes are Low Cost Operations, Top Quality, Volume Flexibility, and Development Speed.



Picture 1. Hierarchy structure
 Source. Krajewski, *et al.* (2022), processed.

For the “Top Quality” criterion, the used sub-criteria are Raw Materials and Production Process. To achieve Top Quality in the café, high-quality Raw Materials are essential for crafting the best products. The Production Process involves maintaining consistent and standardized procedures while creating the products.

Under the “Development Speed” criterion, the sub-criteria include Product Introduction and New Products. To attain Development Speed in the café, Product Introduction requires consistent delivery of product knowledge to customers for each item. New Products entail creating products that align with customer preferences while discontinuing those that don’t resonate with customers.

Regarding the “Volume Flexibility” criterion, the employed sub-criteria are Capacity and Facilities. To establish Volume Flexibility in the café, Capacity involves ensuring that the seating arrangement and capacity are balanced to prevent shortages or excess seating, maintaining café efficiency. Facilities involve conducting customer research to provide services that align with customer criteria, creating comfort and satisfaction for patrons.

10 PRIMARY CRITERIA FOR EACH CAFÉ

Table 8. Criteria competitive priorities.

Variabel	Kriteria	Jumlah
<i>Cost</i>	<i>Low Cost Operations</i>	4
<i>Quality</i>	<i>Top Quality</i>	4
	<i>Consistent Quality</i>	0
<i>Time</i>	<i>Delivery Speed</i>	0
	<i>On-Time Delivery</i>	1
	<i>Development Speed</i>	3
<i>Flexibility</i>	<i>Customization</i>	0
	<i>Variety</i>	0
	<i>Volume Flexibility</i>	4

Source. Krajewski, *et al.* (2022), Trijata Koffie, Oppa Express, Rodjo 2.0, Akartana. (2023), Processed.

The results of the calculations using the Analytical Hierarchy Process (AHP) method for Trijata Koffie café indicate the determination of priority criteria. In this case, Top Quality emerges as the primary criterion followed by Low Cost Operations, Development Speed, and Volume Flexibility as the final criterion. Trijata Koffie prioritizes superior quality to create high-quality products, aiming to entice customers to repeatedly enjoy their offerings. In this research, it was discovered that Oppa Express has a primary set of priority criteria. Low Cost Operations stands as the main criterion, followed by Top Quality, Development Speed, and Volume Flexibility as the final criterion. Oppa Express places primary emphasis on cost efficiency to deliver high-quality products. They achieve this by utilizing cost-effective raw materials, allowing them to offer affordable prices while maintaining high quality.

It was found that the priority criteria at Rodjo 2.0 café place Low Cost Operations as the primary criterion, followed by Top Quality, Volume Flexibility, and Development Speed as the final criterion. Rodjo 2.0 gives higher priority to cost-effectiveness in creating high-quality products by utilizing low-cost raw materials, allowing them to set a low selling price while maintaining high quality. Meanwhile, the priority criteria at Akartana café place Low Cost Operations as the primary criterion, followed by Top Quality, Development Speed, and Volume Flexibility as the final criterion. This is due to Akartana's focus on cost-efficiency in creating high-quality products. They achieve this by utilizing cost-effective raw materials, enabling them to offer low selling prices while upholding high quality. These findings consistently support the theories presented by Krajewski, L. J. Sri Ipinuwati, *et al.* (2018), Eka Martayani, Santoso (2019), and Chen Jia Wai (2016).

11 OVERALL MAIN CRITERIA ACROSS CAFÉS

Table 9. Competitive priorities criteria priority.

No	Kriteria	Trijata Koffie	Oppa Express	Rodjo 2.0	Akar Tana	Keseluruhan
1.	<i>Low Cost Operations</i>	2	1	1	1	1
2.	<i>Top Quality</i>	1	2	2	2	2
3.	<i>Development Speed</i>	4	3	4	4	3
4.	<i>Volume Flexibility</i>	3	4	3	3	4

Source. Krajewski, *et al.* (2022), Trijata Koffie, Oppa Express, Rodjo 2.0, Akartana. (2023), Processed.

Based on the results of the AHP (Analytical Hierarchy Process) calculations for Trijata Koffie café, the prioritized criteria are as follows: Top Quality is identified as the primary criterion, followed by Low Cost Operations, then Development Speed, and finally Volume Flexibility. This prioritization is crucial as Trijata Koffie places a strong emphasis on delivering the highest quality products to ensure customer satisfaction and repeat visits. To achieve high-quality products, Trijata Koffie prioritizes Low Cost Operations to obtain affordable raw materials, maintaining reasonable prices while ensuring high quality. Additionally, Development Speed is prioritized to prevent product monotony by continuously innovating based on market and customer developments. Lastly, in creating a comfortable environment, Volume Flexibility is given importance through customer research on required capacities and facilities.

The main priority criteria for Oppa Express are as follows: Low Cost Operations is identified as the primary criterion, followed by Top Quality, then Development Speed, and lastly Volume Flexibility. This prioritization is driven by Oppa Express's focus on prioritizing cost-efficiency while still delivering high-quality products. By prioritizing low-cost operations and utilizing cost-effective raw materials, Oppa Express can offer high-quality

products at affordable prices. Additionally, Top Quality is emphasized to create a product that attracts repeat customers. Development Speed is also important to avoid product stagnation by continuously adapting to market trends and customer preferences. Finally, Volume Flexibility is given importance to ensure a comfortable experience, with research conducted to align capacities and facilities with customer needs.

In the context of Rodjo 2.0 café, the priority criteria are as follows: Low Cost Operations is identified as the primary criterion, followed by Top Quality, then Volume Flexibility, and finally Development Speed. This prioritization is driven by Rodjo 2.0 commitment to delivering high-quality products with cost-effective raw materials, allowing them to offer products of exceptional quality at lower prices. Furthermore, Top Quality is prioritized to ensure customer loyalty and repeat business. Volume Flexibility is also essential to creating a comfortable environment, aligning facilities and capacities with customer requirements. Lastly, Development Speed is focused on to maintain innovation and keep up with market dynamics and customer preferences.

For café Akartana, the priority criteria are as follows: Low Cost Operations is identified as the primary criterion, followed by Top Quality, then Development Speed, and finally Volume Flexibility. This prioritization reflects Akartana's emphasis on producing high-quality products while maintaining cost-efficiency by utilizing low-cost raw materials and affordable pricing strategies. Prioritizing Top Quality contributes to attracting and retaining customers. Development Speed is also vital to prevent product monotony and align with changing market trends and customer needs. Lastly, Volume Flexibility is essential to provide a comfortable experience, with facilities and capacities tailored to customer demands.

Overall, the application of the Analytical Hierarchy Process (AHP) method enables the ranking determination based on the criteria and sub-criteria used in the research. The overall results indicate that the Low Cost Operations criterion holds the highest priority weight. Subsequently, the criteria of Top Quality, Development Speed, and lastly Volume Flexibility follow in order. Low Cost Operations can support café businesses in creating high-quality products with affordable raw material costs, allowing them to set reasonable selling prices while maintaining high quality. Therefore, the Low Cost Operations criterion becomes a priority in this study. These findings consistently support the theories presented by Krajewski, L. J. Sri Ipnuwati, *et al.* (2018), Eka Martayani, Santoso (2019), and Chen Jia Wai (2016). According to these theories, one of the priorities in selecting the best café based on competitive priorities is Low Cost Operations.

12 CONCLUSION

This study employed the Analytical Hierarchy Process (AHP) as an analytical tool and concluded that based on the research involving all respondents, the criteria used as references in determining the priority criteria for cafes based on Competitive Priorities in Malang city are Low Cost Operations, Top Quality, Development Speed, and Volume Flexibility. There are 8 sub-criteria with sequential priorities, starting with the Low Cost Operations criterion prioritizing low cost and low quality sub-criteria. The Top Quality criterion prioritizes raw materials and manufacturing process sub-criteria. The Development Speed criterion prioritizes product introduction and new product sub-criteria. The Volume Flexibility criterion prioritizes capacity and facility sub-criteria.

Overall, in cafes across Malang city, the prioritized Competitive Priorities criteria is Low Cost Operations. Trijata Koffie café places Top Quality as the primary criterion, followed by Low Cost Operations, Development Speed, and Volume Flexibility. Oppa Express has its main priority criterion as Low Cost Operations, followed by Top Quality, Development Speed, and Volume Flexibility. Rodjo 2.0 prioritizes Low Cost Operations as the primary criterion, followed by Top Quality, Volume Flexibility, and Development Speed. Meanwhile, Akartana café has its main priority criterion as Low Cost Operations, followed

by Top Quality, Development Speed, and Volume Flexibility. Overall, cafes in Malang city give the highest priority to the Competitive Priorities criterion, which is Low Cost Operations.

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Marketing mix differences analysis *Marketplace* Shopee and Tokopedia

Desi Nur Savitri

Desi Nur Savitri, University of Muhammadiyah Malang, Indonesia

Noor Aziz

Noor Aziz, University of Muhammadiyah Malang, Indonesia

Baroya Mila Shanty

Baroya Mila Shanty, University of Muhammadiyah Malang, Indonesia

ABSTRACT: This study aims to determine the differences in the implementation of the 7P Marketing Mix in the Shopee and Tokopedia marketplaces in the marketing coverage area, especially in Malang City. The type of research used in this study is a quantitative approach. In this study using discriminant analysis. Sampling uses the Quota Sampling technique with the criteria of users who have made transactions on the Shopee and Tokopedia marketplaces. The sample used in this study was 114 respondents using the Shopee and Tokopedia marketplaces. Based on the statistical test results, discriminant analysis showed that there were differences in the application of the Shopee and Tokopedia marketplace marketing mix, namely in the Product, Distribution Channel and People variables which were found in the indicators of Performance, Beauty, Affordability, Friendliness and Quick Response. From the calculation results it is also known that the Distribution Channel variable on the Affordability indicator is the most differentiating in the application of the marketing mix at the Shopee and Tokopedia marketplaces.

Keywords: Consumer Behavior, Marketing Strategy, Marketing Mix

1 INTRODUCTION

Intense competition in the online shopping service industry requires entrepreneurs to be sensitive to the conditions needed to maintain business continuity. One way to stay in business is through excellent service and relationship management. This can be done by digging up information about what consumers want and creating a good impression so that consumers want to reuse the services provided. One of the existing strategies in marketing is the Marketing Mix or marketing mix which plays an important role in encouraging consumers to buy products or services provided by the company.

Marketing mix or what is known as marketing mix is a marketing strategy carried out by a business entity or company to be able to achieve its marketing objectives. In the product marketing mix there is a set of marketing tools known as the 4Ps, namely product, price, place or distribution channel, and promotion. Service marketing mix is an element of a company organization that can be controlled by companies to communicate with consumers and will be used to satisfy consumers (Rendy 2018). Service marketing has several additional marketing tools such as people, physical evidence, and process, so they are known as the 7 P's.

Products that require the 7P marketing mix are service products. Service can be understood as “any deed or deed that can be provided by one party to another that is intangible

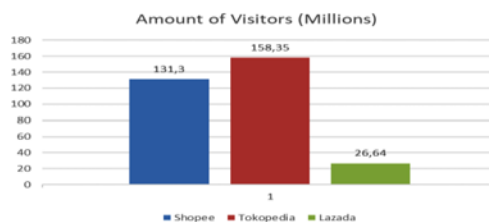
(intangible) and does not require any ownership” (Kotler 2009). Services do not claim ownership of anything such as products, as services are intangible, but are in the form of assistance intended to satisfy a customer’s need or desire without any particular reward.

The development of technology and information in the world, especially the internet is growing very rapidly. The internet connects one person to another, provides information, as a means of entertainment, as well as a means of communication. This makes the internet a basic need for most people today in addition to the need for food, clothing and shelter. Very rapid progress in the field of information technology has a major influence on several aspects of human life. The most obvious impact has been seen in fundamental changes to the way people trade, particularly in the business world. The Internet provides the ability to sell basic needs directly to consumers in consumer markets or to consumers in industrial markets (business-to-business markets). With the presence of the internet, the way businesses conduct transactions has changed from the old way where the process took a lot of time and money, to a process that is faster and easier.

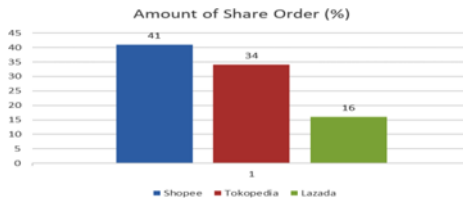
Digital marketing in Indonesia is growing with the emergence of online markets (*marketplaces*). According to (Brunn *et al.* 2002), *marketplace* is part of *e-commerce*. An *e-marketplace* is an interactive e-business community forum that provides a marketplace where businesses can engage in e-commerce and/or other e-business activities. According to Junusi (Aprilia 2021) the essence of providing an *e-marketplace* is connecting buyers and sellers according to their needs and bringing efficiency in transactions. Consumers will adapt to online shopping because it offers more flexibility in terms of time, place and variety of products. Time saving, home delivery, ease of ordering are some of the main factors that attract consumers to shop online. Privacy and the inability to see the actual product are barriers to online shopping. Experienced internet users and online shoppers are more likely to become potential online shoppers in the future (Rungsisawat *et al.* 2019)

Shopee, a subsidiary of Sea Group, was first launched in 2015 simultaneously in 7 countries: Singapore, Malaysia, Thailand, Taiwan, Indonesia, Vietnam and the Philippines. Shopee entered the Indonesian market at the end of May 2015 and began operating in Indonesia at the end of June 2015. Like Shopee, PT Tokopedia is an e-commerce company or commonly known as an online store. Since its establishment in 2009, Tokopedia has become an influential unicorn not only in Indonesia but also in Southeast Asia. After Shopee, Tokopedia is one of the markets most visited by Indonesians.

From the graph above, the number of visitors in the third quarter of 2022 shows that Tokopedia e-commerce is superior to Shopee in Indonesia. This shows that Tokopedia is an e-commerce in Indonesia that has an advantage in the number of visitors compared to e-commerce Shopee. However, the difference in the number of visitors does not make up for the fact that Shopee e-commerce is the number one e-commerce in Indonesia, followed by Tokopedia which is now the second-ranked e-commerce in Indonesia.



Picture 1. Graph of the number of visits to Shopee and Tokopedia in the third quarter of 2022. Source: www.goodstats.id, (2022).



Picture 2. Graph of percentage of transactions visiting Shopee and Tokopedia. Source: Investor Id, (2022).

From graph 2 above, the total percentage of transactions for the last 3 months of 2022 shows that Shopee e-commerce is superior to Tokopedia in Indonesia. This shows that Shopee is again recorded as the highest in three months of transactions, namely 41%, Tokopedia with 34%, and Lazada 16%. The difference in the number of transactions proves that Shopee e-commerce is the number one e-commerce in Indonesia, followed by Tokopedia which is now the second-ranked e-commerce in Indonesia. This phenomenon is very interesting because there is strong competition between e-commerce Shopee and Tokopedia, besides that the two e-commerce have many similarities in implementing marketing strategies to attract consumers to use e-commerce Shopee and Tokopedia as a means of online shopping. as a means of online shopping.

Table 1. Results of pre-Shopee and Tokopedia consumer research.

Facility	Shopee	Tokopedia
Promotion	16	9
Price	14	11
Distribution channel	15	10
Process	18	7

Source: Appendix, (2022).

Table 1 shows that the results obtained when conducting a pre-research of 25 respondents, Shopee is a popular *marketplace* and *Tokopedia is below Shopee*. From the results of the pre-research it can be seen that 16 respondents at the Promotion facility prefer Shopee compared to Tokopedia, which totals 9 people. And for processing facilities, 18 people prefer Shopee and 7 people choose Tokopedia. Although there is not too much value difference between Shopee and Tokopedia, these results reinforce the explanation in Picture 2 that Shopee visitors are far superior to Tokopedia. This phenomenon made researchers want to explore the influence of the 7P Marketing Mix on the Shopee and Tokopedia *marketplaces*, therefore, the researcher took the research title “Analysis of Differences in the Marketing Mix of Shopee and Tokopedia Marketplaces”.

2 LITERATURE REVIEW

According to Sheth & Mittal in Tjiptono (2014) Consumer behavior is the mental and physical activity carried out by home customers (end consumers) and business customers that lead to decisions to pay for, buy, and use a product. Marketing strategy is a set of goals and objectives, policies and rules that guide marketing efforts over time, at all levels, introduction and allocation, especially the company’s response to the changing environment and competitive conditions.

Marketing strategy is a set of goals and objectives, policies and rules that guide a company’s marketing efforts from time to time, at all levels, introduction and allocation,

especially business response, business in the face of a constantly changing environment and competitive conditions (Assauri 2013).

Products manage product elements, including planning and developing the right products or services to bring to market by modifying existing products or services by adding and taking other actions that affect various products or services Product quality indicators used to measure product quality (Kotler *et al.* (2012)according Tjiptono (2011)to Halim *et al.* (2014) the: performance, aesthetics and suitability.

Kotler *et al.* (2016)states that price is the amount of money that must be spent in exchange for a product or service, and consumers also exchange value for the ownership or benefits of the product or service. According to Kotler *et al.* (2008), there are four indicators that characterize prices, namely: price affordability, price suitability, price competitiveness and price suitability with quality.

According to Kotler *et al.* (2012)Promotion is an attempt to provide information about a product or service with the aim of persuading potential customers to buy or consume in the hope of increasing sales volume. According to Tjiptono (2008)Promotion indicators, namely: advertising, personal selling, sales promotion and public relations.

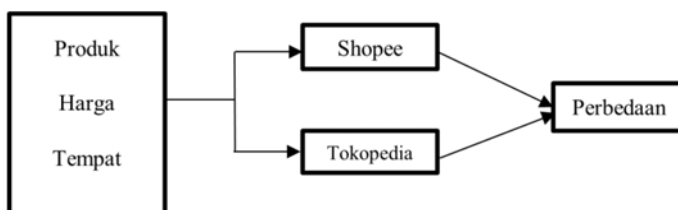
The distribution channel consists of a set of institutions that carry out all the activities (functions) that serve to distribute the product and its owner status from producer to consumer (Kotler 2009). Tjiptono (2008) stated that there were several indicators in the distribution channel, including: smooth access, affordability and proximity of locations.

According to Lupiyoadi *et al.* (2011) people (people) are all actors who play a role in the presentation of services so that they can influence buyer perceptions. Andriyanto, (2019) mentions several indicators in people, namely: good service, thorough company service, responsive in serving buyers and creating customer satisfaction and loyalty.

According to Yudhanto, (2019)the index of a process is a procedure. Based on the explanation of the procedural indicators, it can be concluded that the process is the whole activity consisting of steps starting with procedures and many other chains. All of these activities are related to products in the form of goods or services provided to consumers. According to Mursid, (2014)indicators related to the process, namely as follows: speed, ease, accuracy and delivery of complaints.

According to Chaffey *et al.* (2016)physical evidence, it is one of the elements of the marketing mix regarding opinions made about the quality of products purchased or used by consumers. According to (Kotler *et al.* (2012)the inside, Hassanien *et al.* (2013)there are measuring tools in managing physical evidence, as follows: *an attention creating medium, a massage creating medium, an effect creating medium.*

3 HYPOTHESIS FORMULATION



Picture 3. Framework.

Source: Kotler *et al.* (2012) and Yuni *et al.* (2021), processed.

H₁ : There are differences in the 7P *Marketplace* Marketing Mix of Shopee and Tokopedia

H₂ : There Are Process Variables That Are The Most Distinguishing In The Implementation Of The 7P Marketing Mix Of Shopee And Tokopedia *Marketplaces.*

4 RESEARCH METHODS

This research was conducted by distributing questionnaires in Malang City, East Java Province, which is included in the coverage area of Shopee and Tokopedia *marketplace marketing*. This type of research is quantitative research. The data collection method used in this study was through distributing questionnaires. This survey was assessed using a Likert Scale. The methodology for testing this research instrument is based on a questionnaire which includes reliability tests, reliability tests, and scale intervals. The data analysis method used in this study is discriminant analysis. It is used to test the significance between two or more groups and the variables that differentiate the two or more groups. The variables of this research include product, price, promotion, distribution channel, people, process and physical evidence. The indicators of this study are quality, beauty, suitability, affordability, price compatibility with product quality, price competitiveness, advertising, availability, accessibility, friendliness, courtesy, responsiveness, accuracy of transactions, accuracy of information provided and handling of complaints, product photos, app design, web chat.

5 RESULTS AND DISCUSSION

5.1 Description of respondent characteristics

The characteristics of the respondents in this study were dominated by 79 women with a share of 69.3%. Women shop more online through Shopee and Tokopedia than men. At the age of 20-25 years with a portion of 92.9%. Based on these results it can be concluded that young respondents aged between 20 to 25 years are a free group because they are happy to try at that age. The average number of respondents with an education level corresponding to undergraduate market users is 61 people and the percentage is 53.5%. This shows that most of the respondents who are currently pursuing their undergraduate education use Shopee and Tokopedia for online shopping. Most of the Shopee and Tokopedia *marketplace users* who took part in the research were students, private employees, civil servants, BUMN and others.

The average job respondents who answered market users were students with a total of 60 and a percentage of 41.7%. That is why most of the respondents who use the market extensively are students, because in general students have a high sense of influence and always follow trends.

5.1.1 Validity test

Table 2. Validity test.

Variable	Items	Shopee <i>Marketplace</i> users		Tokopedia <i>Marketplace</i> users	
		Mark	Ket	Mark	Ket
Product	X1.1	0.960	Valid	0.698	Valid
	X1.2	0.859	Valid	0898	Valid
	X1.3	0.801	Valid	0897	Valid
Price	X2.1	0.868	Valid	0.721	Valid
	X2.2	0.885	Valid	0.720	Valid
	X2.3	0.664	Valid	0.882	Valid
Promotion	X3.1	0.860	Valid	0839	Valid
	X3.2	0910	Valid	0.865	Valid
Distribution channel	X4,1	0.902	Valid	0921	Valid
	X4.2	0.902	Valid	0.905	Valid
Person	X5.1	0897	Valid	0.806	Valid
	X5.2	0.685	Valid	0.884	Valid

(continued)

Table 2. Continued

Variable	Items	Shopee Marketplace users		Tokopedia Marketplace users	
		Mark	Ket	Mark	Ket
Process	X5.3	0879	Valid	0.805	Valid
	X6.1	0.853	Valid	0.971	Valid
	X6.2	0.895	Valid	0.907	Valid
Physical Evidence	X6.3	0811	Valid	0893	Valid
	X7.1	0.842	Valid	0.794	Valid
	X7.2	0869	Valid	0.840	Valid
	X7.3	0.800	Valid	0.853	Valid

Source: Data processed by the author, (2023).

Based on the results of the tabulation table above, it can be concluded that all statement indicators in the research questionnaire were declared valid after a comparison was made between r count and r table.

5.1.2 Reliability test

Table 3. Reliability test.

No	Variable	Shopee Users		Tokopedia Users	
		Mark	Ket	Mark	Ket
1	Product	0.842	Reliable	0.785	Reliable
2	Price	0.721	Reliable	0.674	Reliable
3	Promotion	0.717	Reliable	0.622	Reliable
4	Distribution channel	0.793	Reliable	0.799	Reliable
5	Person	0.712	Reliable	0.763	Reliable
6	Process	0.810	Reliable	0.902	Reliable
7	Physical Evidence	0.775	Reliable	0.767	Reliable

Source: Data processed by the author, (2023).

Based on the results of the tabulations above, it can be concluded that all statement items in this research questionnaire are declared reliable or it can be interpreted that the statement items are consistent or stable.

5.2 Discriminant analysis

5.2.1 The average value of the Marketing Mix 7P Marketplace Indicator for Shopee and Tokopedia

Table 4. Average value of indicators.

Indicator	Shopee Means	Tokopedia Means
Performance	4.33	3.90
Beauty	3.92	3.32
Suitability	4.16	3.96
Price affordability	3.74	4.09
Compatibility of price with product quality	3.46	3.99
Price competitiveness	3.95	4.03
Advertising	3.86	3.72
Sales promotion	3.75	4.02

(continued)

Table 4. Continued

Indicator	Shopee Means	Tokopedia Means
Access	3.46	3.93
Affordability	3.79	2.80
Friendliness	3.98	3.46
Courtesy	3.92	3.34
Quick response	3.73	3.64
Transaction accuracy	3.46	3.91
The accuracy of the information provided	3.40	3.76
<i>Handling Complaints</i>	3.72	3.78
Product photo	4.13	3.92
App design	3.89	3.85
Online chat service	3.89	3.89

Source: Data processed by the author, (2023).

In the Shopee *marketplace*, the mean with a score of 3 is in the indicators of Beauty, Price affordability, Compliance with product quality, Price competitiveness, Advertising, Sales promotion, Access, Affordability, Friendliness, Politeness, Quick response, Accuracy of transactions, Accuracy of information provided, Handling Complain, Application design, Online chat service. The mean with a value of 4 is found in the Performance, Conformity, and Product Photo indicators. And on Tokopedia the mean with a value of 2 is in the Affordability indicator while for the mean value of 3 is in the indicators of Performance, Beauty, Conformity, Compatibility of price with product quality, Advertising, Access, Friendliness, Politeness, Quick response, Accuracy of transactions, Accuracy of information provided, Complain Handling, product photos, application design and online chat services and for a mean value of 4 are found in the indicators of Price Affordability, Price Competitiveness and Sales Promotion. From the average value of each indicator, there are certain indicators that have the greatest value. For example, in the Shopee *marketplace*, the performance indicator has the highest average value of 4.33. In contrast, at Tokopedia the price affordability indicator has the highest average value of 4.09.

5.2.2 Test of equality of groups means marketing mix indicator 7P

Table 5. Test equality of group means.

Indicator	Wilk's Lambda	F	Sig
Performance	.953	11.265	.001
Beauty	.921	19,481	.000
Suitability	.996	.473	.493
Price affordability	.987	1,499	.223
Compatibility of price with product quality	.997	.298	.586
Price competitiveness	.999	.326	.569
Advertising	.996	.951	.330
Sales promotion	.985	3,457	.064
Access	.998	.214	.644
Affordability	.794	58,786	.000
Friendliness	.926	18.129	.000
Courtesy	.998	.449	.504
Quick response	.863	35,997	.000
Transaction accuracy	.956	1,170	.305
The accuracy of the information provided	.993	.793	.375
<i>Handling Complaints</i>	.999	.240	.625
Product photo	.988	2,808	.095
App design	1,000	.067	.797
Online chat service	1,000	.000	1,000

Source: Data processed by the author, (2023).

In Table 5, there are 19 observed Marketing Mix 7P indicators. The nineteen indicators have 5 significant indicators namely performance, beauty, affordability, friendliness and responsiveness.

5.2.3 Variable in the analysis marketing mix indicator 7P

Table 6. Variables in the analysis.

Step		tolerance	Sig. of F to Remove	Min. D Square d	Between Groups
1	Affordability	1,000	.000		
2	Affordability	.763	.000	.170	Shopee and Tokopedia
	Friendliness	.763	.000	1,031	Shopee and Tokopedia

Source: Data processed by the author, (2023).

From Table 6, it can be seen that the affordability indicator for partner stores has the highest value among the other 14 Marketing Mix 7P indicators. So the indicator of the affordability of partner stores is the indicator that most differentiates between the Shopee and Tokopedia marketplaces.

5.2.4 Marketing mix variable average value 7P

Table 7. Variable average value.

Variable	Means Shopee	Means Tokopedia
Product	12.41	11.19
Price	11.15	12.11
Promotion	7.61	7.74
Distribution channel	7.25	6.73
Person	11.63	10.45
Process	10.58	11.46
Physical Evidence	11.90	11.66

Source: Author data processed, (2023).

From Table 7, it can be seen that the average value for each 7P Marketing Mix variable (Product, Price, Promotion, Distribution Channel, People, Process, and Physical Evidence). Marketplace shopee has the highest mean value in the product variable with a value of 12.41 and the lowest mean value is in the distribution channel variable with a value of 7.25. Whereas in the marketplace, the highest mean value is found in the price variable with a value of 12.11 and the lowest mean value is in the distribution channel variable with a value of 6.73.

5.2.5 Test of equality of group means variable marketing mix 7P

Table 8. Test of equality of group means.

Variable	Wilks' Lambda	F	Sig.
Product	.946	4,542	.034
Price	.992	.894	.346
Promotion	.999	.261	.610
Distribution channel	.928	17,425	.000
Person	.980	13016	.000
Process	.987	1,426	.235
Physical Evidence	.997	.660	.417

Source: Data processed by the author, (2023).

the *Test of Equality of Group Means* table, there are seven Marketing Mix 7P variables observed, namely Product, Price, Promotion, Distribution Channel, People, Process, and Physical Evidence. The seven variables observed, there are 3 variables that have significant differences. Based on Table 8 above, it can be concluded that there are three variables that show significant differences, namely Products, Distribution Channels and People.

5.2.6 Variable in the analysis marketing mix 7P

Table 9. Variables in the analysis.

Step	tolerance	Sig. of F to Remove	Min. D Square d	Between Groups
1 Distribution channel	1,000	.000		
2 Distribution channel	.959	.000	.164	Shopee and Tokopedia
Person	.959	.000	.306	Shopee and Tokopedia

Source: Data processed by the author, (2023).

Based on the available information, it is known that the Distribution Channel variable has a higher value compared to the other six variables, namely Product, Price, Promotion, People, Process, Physical Evidence. Therefore, it can be concluded that the Distribution Channel variable is the variable that most differentiates between the Shopee and Tokopedia marketplaces.

6 DISCUSSION

6.1 Differences in the application of the 7P Marketing Mix in the Shopee and Tokopedia Marketplaces

There are three different variables, it is known that the indicators have significant differences, namely the performance of the marketplace, the beauty of the appearance of the marketplace homepage, the affordability of partner store locations, the friendliness of partners, and the responsiveness of partners in dealing with problems. Shopee's marketplace performance tends to be simpler with a simple and easy-to-understand layout. Emphasis is placed on product visualization and easy navigation whereas Tokopedia has a more compact and diverse layout with lots of options and features to offer. This makes it might seem a bit more complicated to some users.

The distribution channels of the Shopee and Tokopedia marketplaces differ in a number of ways. One of them is seen in the affordability of partner stores. The Shopee marketplace has implemented Shopee Express which consumers can use to pick up orders purchased on the Shopee marketplace directly at the nearest partner store, while Tokopedia focuses more on third parties for shipping goods purchased by consumers such as JNE, JNT and Pos Indonesia expeditions so that buyers do not You can pick up the items purchased at Tokopedia directly.

Differences in the variable People are also seen between the Shopee and Tokopedia marketplaces. This is related to the politeness of Shopee's marketplace partners. In the experience of some buyers, partners in the Shopee marketplace respond more kindly to messages because the Shopee marketplace is dominated by women. Seeing the dominance of female buyers, most Shopee marketplace partners provide more friendly service so that buyers make purchases and do not give negative reviews to Shopee marketplace partners. Based on the buyer experience, Tokopedia's friendliness level of Tokopedia partners is fairly standard. This level occurs because Tokopedia has a tendency to provide products that are geared toward electronics, automotive, and equipment that are classified as heavier. Thus, Tokopedia is dominated by male buyers.

Shopee partners mostly respond to messages from consumers for a full 24 hours, as evidenced by the percentage of chats being replied to on each partner (seller) page. Meanwhile, Tokopedia is not all 24 hours a day, because there is no information on the percentage of chats being replied to and only displays the time the order was processed. The product, distribution channel and people variables differentiate the Shopee and Tokopedia *marketplaces*. Product variables affect performance and beauty, distribution channel variables affect the distribution of goods ordered by customers, while people variables affect friendliness and responsiveness of partners in communicating with consumers. The results of this study are supported by research by Wardani *et al.* (2021).

6.2 *The most distinguishing variable is the Shopee Marketplace and the Tokopedia Marketplace*

The results of the analysis that has been carried out show that the Distribution Channel variable is precisely the indicator of the affordability of partner store locations that most differentiates the Shopee and Tokopedia *marketplaces*. The Shopee *marketplace provides Shopee Express* facilities for distributing ordered goods to consumers, so that consumers can pick them up directly through the nearest Shopee *marketplace store partners*. Whereas Tokopedia prioritizes the distribution of goods through third parties such as JNT, JNE, and Pos Indonesia so that consumers only wait for the goods ordered to arrive through the expedition services provided by Tokopedia.

7 CONCLUSION AND SUGGESTIONS

7.1 *Conclusion*

There are significant differences in the Product variable, namely performance and beauty indicators, the Distribution Channel variable, namely the location affordability indicator and the People variable, the partner friendliness and responsiveness indicator. There are differences in the Marketing Mix 7P Shopee and Tokopedia. Based on the calculation of the Test of Equality of Group Means, it can be seen that the Distribution Channel variable has an F ratio value of 17,425 with a significance value of 0,000. It can be concluded that the Distribution Channel variable is the variable that most differentiates the Marketing Mix 7P Shopee and Tokopedia.

7.2 *Suggestion*

Based on the conclusions and results of the research, the following suggestions are proposed:

- (1) The management of the Shopee Indonesia company is expected to be able to maintain and improve what has been implemented by the Shopee *Marketplace*.
- (2) For company management PT. Tokopedia is expected to add and improve features both in the application and on the desktop so that users experience a better *online shopping experience*.
- (3) Future researchers are expected to develop research indicators and add research locations in analyzing the implementation of the 7P Marketing Mix.

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Analysis of consumer lifestyle on purchase decisions of Muslim fashion products

Sri A. Nastiti, Ardik Praharjo & Yholanda Himawati
University of Muhammadiyah Malang, Malang, Indonesia

ABSTRACT: In a life, of course there is a lifestyle in it to survive and keep up with changes in the environment and existing conditions. One of the changes felt is the Muslim fashion trend which is also developing and experiencing updates along with the times. The description of lifestyle in this study uses the psychographic method or is often referred to as AIO (activities, interests, opinions). With a background in lifestyle changes, especially in the Muslim fashion trend, researchers want to know the effect of lifestyle on consumer purchasing decisions for Muslim fashion products at Mutif Store. The population in this study are people who use Muslim fashion products from the Mutif Store in the Nganjuk City area with a sample of 140 respondents. The analytical tool used in the research was multiple linear regression (t test and F test) with the help of SPSS. The results of this study indicate that activities, interests and opinions have a positive and significant effect on purchasing decisions for Muslim fashion products either partially or simultaneously. Based on the results of this study it can be concluded that activities, interests and opinions have a positive and significant effect on purchasing decisions for Muslim fashion products at Mutif Store in Nganjuk City.

Keywords: Lifestyle, Activity, Interest, Opinion, Purchase Decision

1 INTRODUCTION

Appearance is something that cannot be separated from the daily style of every individual who tries to express himself through appearance. Appearance can also assess an individual character through the style shown to the general public. Style through appearance has become the passion of modern humans because they show themselves in that environment and are recognized for their existence. In addition, there is a lifestyle that emerges from a new spiritualism that leads to the antithesis of glamor fashion. This has resulted in the fashion industry currently growing rapidly and having many competitors (Lindawati 2019).

As time progresses fashion trends also growing and experiencing updates. One of them is the Muslim fashion trend which is also developing, because the majority of Indonesia's population is a large number of followers of the Islamic religion. Retno & Edy (2008) said that currently there are many shopping centers such as malls, companies engaged in advertising, fashion, beauty, food, branded goods and other manufacturing activities which are a sign that the lifestyle of the Indonesian consumer society is increasing. The rise of the Islamic lifestyle trend is currently popular among the public. This phenomenon was marked as the rise of Muslim society when Muslim fashion became one of the lifestyle icons in clothing and started to become big business.

Companies are required to be able to carry out a product innovation and be clever in marketing products to face business competition. Company policies and strategies are needed to attract the attention of consumers both in terms of products, distribution sites and promotions in order to increase sales. In response to increasing competition, Mutif Corp, which is a Muslim fashion company, has partners in dozens of distributors, agents and

resellers throughout Indonesia. In general, a company will not be able to serve a wide range of consumers in the market. This is due to the fact that there are many consumers and they are scattered, apart from that there are many variations on the needs of each. Competitor companies will continue to compete in gaining and dominating the market.

The people of Nganjuk Regency come from various backgrounds, so one's ability cannot be harmonized. Take the example as in shopping at elite shops and smells of entertainment, such as malls. This is very unfriendly for those whose income is below average but wants to visit and shop at this fully air-conditioned place. Life style the community in Nganjuk Regency itself is already more advanced by following current developments. Peer group pressure either directly or through social networks and also the image of young celebrities makes new habits or lifestyles nowadays.

Previous research has also explained that, according to Nasution & Nio (2019) The results of his research show that there is a relationship between lifestyle dimensions (activities, interests and opinions) and the decision to buy second hand clothing for psychology students on Campus V UNP. Based on the explanation of the background above, the researcher decided to focus on research with the title "Analysis of Consumer Lifestyle on Purchase Decisions for Muslim Fashion Products: A Study of Mutif Store Consumers in Nganjuk City.

2 LITERATUR REVIEW

Consumer behavior has a fairly close relationship to the buying process. According to Nugroho *et al.* (2019) consumer behavior is an ongoing activity related to finding and using an item or service that is included in the decision-making process and becomes the beginning of the purchasing activity. Competition in the business world is getting more intense so that marketers must always innovate and the right strategy for the sustainability of their products.

Buying decision is a consumer decision that is influenced by several things so that it forms an attitude towards consumers to process all information and draw conclusions in the form of a response that appears what product to buy (Almas 2011). Factors that influence purchasing decisions include internal factors and external factors, where lifestyle is one of the elements of these factors that can influence consumers in making purchasing decisions. Kotler & Keller (2016) argues that purchasing decisions have dimensions and indicators when purchasing an item or service which includes three decision indicators, namely stability, habit and speed in buying a product.

Lifestyle or life style describes how a person makes contact with the conditions of his environment (Utami 2021). The description of lifestyle in this study uses the psychographic method. Psychographics are often also referred to as AIO, namely the term Activities, Interests, Opinions. Psychographics are measurable measurements of lifestyle, personality and consumer demographics. Psychographics can be said as a measurement of AIO (activity, interest, opinion) namely activities, interests and opinions that are measured on the consumer. According to Engel *et al.* (1995) Activity is an identification of real actions that consumers do such as shopping, watching something and telling other individuals.

The activity dimension includes activities carried out by a person in his daily life, namely work, hobbies, social activities, vacations, entertainment, club membership, community, shopping and sports. According to Engel *et al.* (1995) the object or subject of an event that can increase enthusiasm accompanied by its own interest is the definition of interest. The interest dimension includes the interest a person has in certain topics, activities or fields such as in family, work, community, recreation, clothing, media and achievements. Engel *et al.* (1995) argues that opinion is the view of consumers orally and in writing in providing feedback on the events faced. Opinions can include attitudes towards oneself, political issues, education, social, economics, education, business, products, culture and the future. Based on the discussion of the literature review/theory that has been explained, a conceptual/thought framework can be compiled that describes the relationship and linkages between one variable and another. Sugiyono (2015) said that the framework of thought is a conceptual model

of theory related to various factors that have been analyzed as important issues. This conceptual framework shows the relationship between the four variables consisting of three independent variables namely (activity, interest and opinion) and the dependent variable (purchasing decision). Here's a picture of the frame of mind:

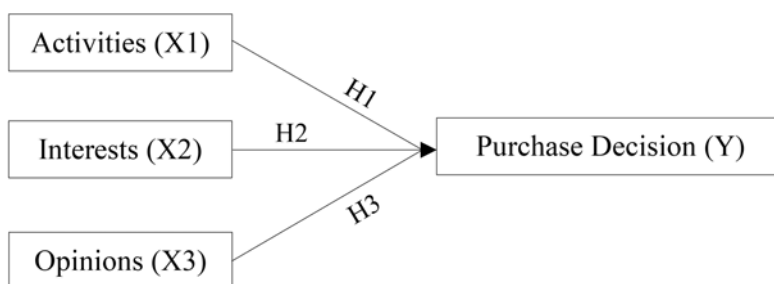


Figure 1. Research framework.

The following is the formulation of the hypothesis used in this study, namely as follows:

- (1) Consumer activity influences the purchasing decision of Mutif Store Muslim fashion products in Nganjuk City
- (2) Consumer interest influences the purchasing decision of Mutif Store Muslim fashion products in Nganjuk City
- (3) Consumer opinion on purchasing decisions for Mutif Store Muslim fashion products in Nganjuk City
- (4) The activities, interests and opinions of consumers influence the purchasing decisions of Mutif Store Muslim fashion products in Nganjuk City

3 RESEARCH METHODOLOGY

This research is a type of explanative quantitative research. The survey method was carried out to collect data by how to distribute questionnaires to respondents via google form. The target population is people who use Muslim fashion products from the Mutif Store in the Nganjuk City area. The sample size used in this study was 140 respondents purposive sampling method. The sample criteria selected in this study were respondents who were in the age range of 17 to 50 years and were shopping for Muslim fashion products at the Mutif Store from May to June. The measurement scale used is a Likert scale with a score of 1–5 (strongly disagree-disagree-neutral-agree-strongly agree).

The analysis tool used is IBM SPSS Statistics version 26. The instrument test used in this study is the validity test and reliability test. The classic assumption test includes the normality test, multicollinearity test and heteroscedasticity test. The data analysis technique in this study used multiple linear regression analysis. Hypothesis testing using the t test (partial), F test (simultaneous) and the coefficient of determination.

4 RESULTS AND DISCUSSION

The number of female respondents was 106 people with a percentage of 75%, while the number of male respondents was 34 people with a percentage of 25%. Women occupy the most dominant position because they buy more Mutif Store Muslim clothing products when compared to men because women are more fond of shopping. The number of respondents aged between 21–25 was the largest with a total of 89 people or the equivalent of 64%, a range of >25 with a total of 34 people or 24% and ages 17–20 with 17 people or the

equivalent of 12%. It can be concluded that the dominant respondents are aged 21 to 25 years. This is because at the age of 21 to 25 years is a productive and consumptive age and always wants to follow new things that are becoming a trend. Student respondents have a total of 46 individuals or the equivalent of 33%, private employees of 39 people or the equivalent of 28%, entrepreneurs totaling 27 people or the equivalent of 19%, civil servants (civil servants) with a total of 13 people or the equivalent of 9%, housewives as many as 9 people or 7%, state apparatus and health workers have the same number, namely 3 people in each profession or equivalent to 2%. In the respondent's work it can be concluded that students or students dominate because indirectly students and female students in tertiary institutions pay more attention to and know about fashion.

The indicators used in research with activity, interest, opinion and purchasing decision variables are valid. This is evidenced by the coefficient values obtained > critical values for a significance level of 0,05. The results state that each variable has a reliability coefficient value > than a significant level of 0.60, therefore declared reliable.

4.1 Analysis of Respondents' Answers

The analysis can be seen from the answers to the questionnaire which can be seen from the average number based on the existing questionnaire items. The results of the analysis of the respondents' answers show that the activity variable is in the intense category, interest variable is in the interested category, opinion variable is in the trust category, and purchasing decisions are in the steady category.

4.2 Classic assumption test

Table 1. Normality test results.

Unstandardized Residual		
N		140
Normal Parameters, b	Means std. Deviation	.0000000 1.44240084
Most Extreme Differences	absolute	,098
	Positive	,081
	Negative	-.098
Test Statistics		,098
asyp. Sig. (2-tailed)		,002c
Exact Sig. (2-tailed)		,125
Point Probability		,000

Source. Data management in SPSS (2023).

Based on Table 1 it can be seen that the variables of activity, interest, opinion and purchasing decisions have an Exact value. Sig. (2-tailed) is 0.125, meaning that the value is greater than 0.05, so it can be concluded that the data is normally distributed.

4.3 Multicollinearity test

Table 2. Multicollinearity test results.

Variable	tolerance	VIF	Information
Activity (X1)	0.232	4,306	There is no multicollinearity
Interest (X2)	0.103	9,713	There is no multicollinearity
Opinion (X3)	0.131	7,610	There is no multicollinearity

Source. Data management in SPSS (2023).

Based on Table 2 it can be seen that the activity variable (X1) has a tolerance value of 0.232, the interest variable (X2) is 0.103, the Opinion variable (X3) is 0.131, meaning that each of these variables has a tolerance value greater than 0.10 and a VIF value of less than 10, which is 4.306 for the Activity variable, 9.713 for the Interest variable and 7.610 for the Opinion variable, so it can be concluded that the regression model in this study did not show symptoms of multicollinearity on each independent variable.

4.4 Heteroscedasticity test

Table 3. Heteroscedasticity test results.

Variable	Sig	Information
Activity (X1)	0.244	There is no heteroscedasticity
Interest (X2)	0.462	There is no heteroscedasticity
Opinion (X3)	0.290	There is no heteroscedasticity

Source. Data management in SPSS (2023).

Based on Table 3 it can be seen that the significance value of the Activity variable (X1) is 0.244, the Interest variable (X2) is 0.462 and the Opinion variable (X3) is 0.290, meaning that each of these independent variables obtains a value greater than 0.05, so it can be concluded that there were no symptoms of heteroscedasticity in the study.

4.5 Results of multiple linear regression analysis

Table 4. Results of multiple linear regression analysis.

Variable	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig
	B	Std. Error			
Constant	0.513	,672		,763	0.447
Activity (X1)	0.118	,037	,214	3.203	0.002
Interest (X2)	0.146	,056	,260	2,598	0.010
Opinion (X3)	0.274	,050	,488	5,500	0.000

Source. Data management in SPSS (2023).

From Table 4 it can be seen that the multiple regression equation is as follows:

$$Y = 0.513 + 0.118 + 0.146 + 0.274 + e$$

The coefficient value for the activity variable is 0.118, interest is 0.146 and opinion is 0.274 which indicates a positive direction of relationship. This can be seen from the significance level of each variable which is less than 0.05. These results indicate that the variable activity (X1), interest (X2), opinion (X3) has a positive and significant effect. The higher the activity, the more interest and the better one's opinion about a product, the purchasing decision will also increase.

4.6 *t* test

Table 5. (Partial) *t* test results.

Variable	t count	t table	Sig	Information
Activity (X1)	3,203	1,978	0.002	Positive and significant influence
Interest (X2)	2,598	1,978	0.010	Positive and significant influence
Opinion (X3)	5,500	1,978	0.000	Positive and significant influence

Source. Data management in SPSS (2023).

Statistical results t_{hitung} for activity variable 3.203, interest 2.598, opinion 5.500 which as a whole $>$ equal to 1.978. The significant value is less than 0.05, namely activity 0.002, interest 0.010 and opinion 0.000, so it can be concluded that H0 is rejected and H1 is accepted, meaning that the variables of activity, interest and opinion partially have a positive and significant effect on purchasing decisions for Muslim fashion products at the Mutif Store. t_{tabel} .

4.7 *F* test

Table 6. *F* test results (Simultaneous).

Model	Df	f count	f table	Sig	Information
Regression	3	277,078	2.67	,000b	Positive and significant influence
residual	136				

Source. Data management in SPSS (2023).

Mark F_{tabel} of 2.67 which is obtained from the value of Df quantifier 3 and Df denominator 136. From the calculations carried out by the researchers found a value of 2.67, which can be concluded that all variables, namely activities, interests and opinions simultaneously (simultaneously) have a significant influence on the decision to purchase Muslim fashion products Mutif Store ($>$ or $277.078 > 2.67$). $F_{tabel} > F_{hitung} > F_{tabel}$.

4.8 Determination coefficient test (R^2)

Table 7. Test results for the coefficient of determination.

Model	R	R^2	Adjusted R Square	std. Error of the Estimate
1		0.859	,856	1,458

Source. Data management in SPSS (2023).

Based on Table 7, it can be seen that R^2 (R square) is 0.859 or 85.9%. This figure shows that 85.9% of the purchasing decision variables can be explained or influenced by the three independent variables, namely activity (X1), interest (X2), opinion (X3) while the rest ($100\% - 85.9\% = 14.1\%$) is explained or influenced by other variables outside this research model.

5 DISCUSSION

Based on the data analysis that has been done, namely the influence of variables *lifestyle* (Activities, Interests, and Opinions) on purchasing decisions for Muslim fashion products Mutif Store in Nganjuk City, by using analysis tools validity test, reliability test, classic

assumption test normality test, heteroscedasticity test, multicollinearity test, multiple regression test, F test, and test T. The discussion can be described as follows:

5.1 *Effect of activity on purchasing decisions*

Based on the results of data analysis and hypothesis testing, it can be seen that activity variables can have a positive and significant effect on purchasing decisions, so the first hypothesis is accepted. The higher the consumer activity associated with Mutif Store Muslim fashion products, the higher the purchasing decision. The use of Muslim clothing is very important, it is even an obligation for Muslims to cover their private parts, especially during religious activities so that this greatly influences purchasing decisions.

The research results are strengthened by the research that has been done Anggraini and Noviarita (2021), Kurniawati (2020), Ony and Lina (2020), Ivan (2019), Hilmi *et al.* (2018), Ula *et al.* (2012), Nasution and Nio (2019) and Hidayah *et al.* (2022) which shows that the activity variable has a positive and significant effect on purchasing decisions.

5.2 *The influence of interest on purchasing decisions*

Based on the results of data analysis and hypothesis testing carried out, it can be seen that the interest variable can have a positive and significant effect on purchasing decisions, so the second hypothesis is accepted. The higher the consumer's priority and interest in Mutif Store Muslim fashion products, the higher the purchasing decision. Sense of interest is a factor in consumers who can influence the decision-making process. The good quality of the product and the large selection of Muslim clothing offered by Mutif makes consumers hot, and finally interested in trying it.

The results of this study are strengthened by the research that has been done Anggraini and Noviarita (2021), Kurniawati (2020), Setiawan *et al.* (2023), Ony and Lina (2020), Ivan (2019), Hilmi *et al.* (2018), Ula *et al.* (2012), Rahajeng *et al.* (2018) and Hidayah *et al.* (2022) states that the interest variable in this study has a significant and positive effect on purchasing decisions.

5.3 *The influence of opinion on purchasing decisions*

Based on the results of data analysis and hypothesis testing, it can be seen that the opinion variable can have a positive and significant effect on purchasing decisions, so the third hypothesis is accepted. The higher the consumer's positive view of Mutif Store Muslim fashion products, the higher the purchasing decision. Consumers consider the use of Muslim clothing has become a culture for the people of Indonesia, because the majority of the people are adherents of the Islamic religion.

The results of this study are strengthened by research conducted by Anggraini and Noviarita (2021), Kurniawati (2020), Ony and Lina (2020), Ivan (2019), Ula *et al.* (2012), Nasution and Nio (2019), Rahajeng *et al.* (2018) and Hidayah *et al.* (2022) which states that the opinion variable has a positive and significant effect on purchasing decisions.

5.4 *Effect of activities, interests and opinions on purchase decisions*

Based on the results of data analysis and hypothesis testing, it can be seen that activities, interests and opinions simultaneously have a positive and significant effect on the decision to purchase fashion products. Muslim Mutif Store, the fourth hypothesis is accepted. The higher the consumer activity, the higher priority and consumer interest and the more positive the consumer's view, the higher the purchase decision.

The results of this study are strengthened by research that has been done Kurniawati (2020), Ony and Lina (2020), Rahajeng *et al.* (2018) and Hidayah *et al.* (2022) shows that

AIO simultaneously has a positive and significant influence on consumer purchasing decisions for products.

6 CONCLUSION

Based on the results of the study, the following conclusions can be drawn: Activity variable is in the intense category, interest variable is in the interested category, opinion variable is in the trust category, and purchasing decisions are in the steady category. The activity variable has a positive and significant effect on the use of Mutif Store Muslim fashion products. The more activities or consumer activities that require Mutif Muslim fashion products, the higher the decision to purchase Mutif Store Muslim fashion products. The interest variable has a positive and significant effect on the use of Mutif Store Muslim fashion products. The higher the interest or interest that consumers have towards Mutif Muslim fashion products, the higher the purchasing decision for Mutif Store Muslim fashion products. The opinion variable has a positive and significant effect on the use of Mutif Store Muslim fashion products. The better the opinion or opinions held by consumers on Mutif Muslim fashion products, the higher the purchasing decision for Mutif Store Muslim fashion products. Activity, interest and opinion variables have a positive and significant simultaneous effect on the use of Mutif Store Muslim fashion products. The more activities or consumer activities, the higher the interest or interest held by consumers and the better the opinions or opinions held by consumers on Mutif Muslim fashion products, the higher the purchasing decision for Mutif Store Muslim fashion products. Based on the conclusions that have been described, the following suggestions are given:

For Mutif Store The author suggests that the Mutif Corp company can make better strategies and plans to improve lifestyle of users in buying their products. Companies must observe the wishes and needs of the community to meet their clothing needs. For Further Researchers Future researchers should adopt other variables or add variables that have more influence on purchasing decisions and use different objects in the hope that this research will be more developed in order to gain more knowledge and add insight.

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The analysis of financial performance measurement using value for money method

Novitasari Agussaputri, Mudrifah, Andini Zulia & Noor Hidayah

University of Muhammadiyah Malang, Indonesia

University of Technology Mara, Malaysia

ABSTRACT: This study aims to analyze financial performance using the concept of value for money in Genteng District, Banyuwani Regency. The type of research used is descriptive comparative research and uses the results of the research. effective with an average ratio of 1.023%, 1.114% and 0.998% respectively.

Keywords: Worth the Money, financial performance, economical, efficiency, effectiveness

1 INTRODUCTION

Since it is anticipated that all local governments will be able to achieve good financial results after the introduction of performance-based budgeting, financial performance is an important topic for research in public sector enterprises, including governments. increasing demands for public sector institutions to carry out public accountability, including central and local governments, government work units, departments, and government agencies (Hastoro & Sunardi 2016) Performance measurement is the process of assessing how well work is done in relation to predetermined goals and objectives. This includes data on the effective use of resources in producing goods and services, the quality of those goods and services (how well they are delivered to satisfied customers), operating results compared to intended goals, and operational efficiency in achieving those goals. (Robertson, 20102) in Mahsun (2006: 25).

Value for money according to Mardiasmo (2002:130) is a management idea centered on the three concepts of economy, efficiency, and effectiveness for public sector companies. Buying inputs economically with a certain quality and quantity at the most affordable price. Financial, as defined in monetary terms, is the ratio of interest to the value of interest. Performance ranges from using a given input as efficiently as possible to using the minimum amount of that input to achieve a given performance. Efficiency is defined as the output/input ratio with respect to a predetermined standard or performance objective. Performance: The extent to which program outcomes are in line with stated objectives. Efficiency can be defined as the ratio of outputs to outcomes.

Both the organization itself and society benefit from using the notion of value for money to measure performance in public sector entities. Value for money initiatives are intended to help public sector organizations become more economical, efficient in using resources, and effective in achieving goals and objectives. (Mardiasmo 2009:130).

In contrast to loans that must be repaid, revenue is the flow of gross economic benefits resulting from the operations of a public entity over time that increases equity. (Bastian 2002).

Except for benefits associated with payments, an expense or cost is a decrease in future economic benefits or potential benefits over a period of time in the form of cash flows, consumption of assets, or incurrence of economic liabilities per individual. Except for the benefits associated with payment, an expense or cost is a decrease in future economic benefits or potential benefits over a period of time in the form of cash flows, consumption of assets, or the incurrence of economic liabilities per individual. (Bastian 2002).

Value for money is at the core of performance measurement in government and public sector organizations Mardiasmo (2002:130). Government performance should be evaluated by considering inputs, outputs, and outcomes together rather than just the outputs produced. The challenge of measuring outputs is a recurring problem because most of the outputs created by government are intangible and not necessarily physical.

1.1 *Output indicator*

Output is the end result of the process. Output measurement is the output of a process. Output measurement shows the results of program or activity implementation, and Output Measurement must have the following rules:

- (1) aimed at the actual field of activity, in the form of expressions that actually indicate the expected activity;
- (2) Targeted, in the sense that it does not merely reflect estimations
- (3) Timely, objective, in the sense that it cannot be manipulated.

1.2 *Indikator hasil*

Outcome is a measure of the impact of a program or campaign on the general population. Since outputs only reduce results without reducing impact versus the general population, outcomes have a higher value than outputs, while results reduce the quality of outputs and the resulting impact. In other words, the results of a program or project are referred to as "Outcomes" compared to expected outcomes.

The research was conducted by Chintya (2017). The results of the study indicate that the financial performance of local taxes as measured by economic metrics is in the economic category, the efficiency metric is in the highly efficient category, besides Jabir (2020). The results of this study indicate that the financial performance of the Riau Province Youth and Sports Office in terms of economic indicators is economic, because the annual economic percentage value is less than 100%, so there is no expenditure realization. always behind the annual budget expenditure. Sayuti (2018) The results of this study found that the realization of the value of transparency is implemented with information disclosure and period-based accountability processes, the concept of value for money is economical, effective in effective Regional Development. Regional Development Planning Agency (BAPPEDA), Anita (2020) This research was conducted at BPKAD Palopo City during. The results of this study indicate that the application of government accounting standards and value for money has a significant and positive effect on the accountability of regional financial management...

2 METHOD

The type of research used is case study research with comparative analysis. Case study is research that provides a detailed description of the background and characteristics of a typical case, which is then generalized. If comparative descriptive analysis is research that

compares the existence of one or more variables in two or more different samples or at different times, then the unit of analysis of this research must examine the data / determination of realization reports and income and expenses. Genteng Sub-district, Banyuwangi Regency APBD 2018-2020, the type of data is secondary data. Secondary data is usually in the form of evidence, historical records or reports compiled from published or unpublished archives.

The secondary data used to research the District's financial performance is from the Regional Revenue and Expenditure Budget of the Genteng District of Banyuwangi Regency in the form of the 2018-2020 Regional Revenue and Expenditure Budget Implementation Report. The data collection method used in this research is documentation using documents obtained from the Finance Office of Genteng Subdistrict, Banyuwangi Regency in the form of Financial Reporting Data (APBD and RAPBD) for 2018-2021. Value method, which looks at the effectiveness and efficiency of budget use in financial terms. To measure financial efficiency, the formula in the literature review Mahmud (2011: 21) is used, namely:

The economic ratio can be formulated as follows.

$$\text{Economic Ratio} = \frac{\text{Expenditure realization}}{\text{Expenditure budget}} \times 100\%$$

The criteria for measuring economic ratios according to Banyuwangi Regent Regulation Number 28 of 2020 are:

- If the value is less than 90%, it is very economical
- If the value is 90%-94.99%, it is economical
- If the value is 95%-100%, it is quite economical
- If the value is 100%-105%, it is less economical
- If the value is more than 105%, it is not economical

$$\text{Effectiveness Ratio} = \frac{\text{Revenue Realization}}{\text{Revenue Budget}} \times 100\%$$

The criteria for measuring the effectiveness ratio according to Banyuwangi Regent Regulation Number 28 of 2020 are:

- If the value is less than 90%, it means that it is not effective
- If the value is 90%-94.99%, it means less effective.
- If the value is 95%-100%, it means moderately effective
- If the value is 100%-105%, it means less effective.
- If the value is more than 105%, it is very effective.

$$\text{Efficiency Ratio} = \frac{\text{Realization of Cost to obtain PAD}}{\text{Realization of revenue}} \times 100\%$$

The criteria for measuring the efficient ratio according to Banyuwangi Regent Regulation Number 28 of 2020 are:

- If the value is less than 90%, it is highly efficient.
- If the value is 90%-94.99%, it is efficient.
- If the value is 95%-100%, it means moderately efficient
- If the value is 100%-105%, it means less efficient.
- If the value is more than 105%, it means inefficient.

3 RESULTS AND DISCUSSION

3.1 *Economic ratio measurement*

Table 1. Ratio of annual expenditure realization and budget of Banyuwangi Regency Government 2018-2021.

Tahun	Tingkat Ekonomi
2018	0,986%
2019	0,998%
2020	0,996%
2021	0,911%
Rata-Rata	0,972%

Sumber: Data processed year 2022.

Based on the table above, it can be seen that the financial performance of the Genteng District of Banyuwangi Regency in 2012-2015 showed economic value, because the Genteng District of Banyuwangi Regency could save costs or could realize costs and did not exceed the targeted budget.

3.2 *Effectiveness ratio measurement*

Table 2. Cost ratio and annual revenue realization of Banyuwangi Regency Government 2018-2021.

Tahun	Tingkat Ekonomi
2018	1,017%
2019	1,023%
2020	1,007%
2021	1,023%
Rata-Rata	3,302%

Sumber: Data processed year 2022.

Based on the table above, it can be seen that the financial performance of the Genteng District of Banyuwangi Regency in 2012-2015 showed an economic value, because the Genteng District of Banyuwangi Regency could save costs or could realize costs and not exceed the targeted budget. The results of the percentage comparison between the actual expenditure and the expenditure budget show a number between 1.007% - 3.302%, so the performance of the Genteng District of Banyuwangi Regency is economical.

3.3 *Efficiency ratio measurement*

Table 3. Cost ratio and annual revenue realization of Banyuwangi Regency Government 2018-2021.

Tahun	Tingkat Ekonomi
2018	1,114 %
2019	0,920%
2020	1,112%
2021	0,378%
Rata-Rata	0,881%

Based on the table above, it can be seen that the financial performance of the Genteng District of Banyuwangi Regency in 2012-2015 showed an economic value, because the Genteng District of Banyuwangi Regency could save costs or could realize costs and did not exceed the targeted budget.

Based on the analysis carried out on the Budget of the Genteng District of Banyuwangi Regency, it can be said that it is good. In this study, the financial performance of the Genteng District of Banyuwangi Regency has fluctuated, but seen from the economic ratio, its performance has decreased. So it is necessary to measure performance, this is intended to help government performance, to allocate resources, and to realize public accountability.

The purpose of this study was to determine the results of measuring the performance of the Government of Banyuwangi Regency, Genteng District in 2018-2021 using the price efficiency method. The value for money method is divided into three main points, namely: Economy, efficiency, effectiveness. the results of the data analysis, obtained the following research discussion:

3.3.1 *Financial measurement*

The economic efficiency of Banyuwangi Regency Genteng Sub-district is measured using the asset value method. The first economic objective is to determine the performance of Kecamatan Genteng Banyuwangi Regency from 2018 to 2021 to obtain and manage the resources (inputs) needed to avoid wasteful and unproductive spending. The economy of operations is not only seen from the level of savings achieved by the Genteng Sub-district of Banyuwangi Regency, but the output produced must also be considered, savings are meaningless if the output produced is not on target or can be achieved optimally.

3.3.2 *Efficiency measurement*

The financial performance of Banyuwangi Regency Genteng Sub-district is measured by the Value for Money method. The second efficiency aims to determine the performance of Banyuwangi Regency Genteng Sub-district in using available input resources to produce outputs in the form of services in the sub-district. The results of the performance measurement study based on the work program studied are discussed below. Based on the results of the data analysis of the performance measurement of the 2018-2021 work program, it is known that for the 2018 season it can be assumed to be effective.

3.3.3 *Measurement of effectiveness*

The financial performance of Banyuwangi Regency Genteng Sub-district is measured by the Value for Money method. The last is the purpose of effectiveness is to determine the performance of the government of Genteng Banyuwangi sub-district to achieve program or performance goals or political goals. adjust the discussion of the research results on performance measurement based on the value for money studied. The performance of the Genteng District of Banyuwangi Regency in 2018-2021 can be said to be effective.

4 CONCLUSION

Based on the information obtained, the data analysis can be concluded that the financial performance of Banyuwangi Regency, Genteng Sub-district according to the elements of Economy, Efficiency and Effectiveness (3E) has met the value requirements. reached the maximum proportional value and was associated with budget (financial) savings every year. In 2018, the budget savings amounted to IDR 1,155,692,300 with an efficiency of 1.114 and an efficiency of 1.023%. In 2021, the total budget savings amounted to IDR 20,816,400 and the efficiency ratio value was 1.017 percent of the average efficiency ratio value of 3.302%.

It is hoped that suggestions for further researchers will explore more sources and references related to educational facilities and infrastructure and the effectiveness of the learning process, so that the research results will be better and more comprehensive.

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Individual value, organizational commitment and turnover intention in the millennial workforce

Sandra Irawati & Rizki Febriani
University of Muhammadiyah Malang, Indonesia

ABSTRACT: The purpose of this study is to describe individual values, organizational commitment and turnover intention; and to determine the effect of individual values on organizational commitment, the effect of organizational commitment on turnover intention, the effect of individual values on turnover intention and the effect of individual values on turnover intention through organizational commitment. The study was conducted on 112 millennial workers in Malang using a range of scales and path analysis. The results of the scale range show that individual values are in the important category, low organizational commitment and high turnover intention. While the results of the path analysis show that individual values have a positive and significant effect on organizational commitment. Organizational commitment has a negative and significant effect on turnover intention. Individual values have a negative and significant effect on turnover intention. Individual values affect turnover intention through organizational commitment.

1 INTRODUCTION

Every success and failure of a company cannot be separated from the quality of its human resources. On this basis, the company seeks to optimally manage its human resources to achieve a competitive advantage in business. The company always makes maximum efforts to reduce the rate of employee turnover so that it can retain the employees it already has. Wayne F. Cascio (2003) states that human resources have a very important role in industry and organizations, therefore human resource management which includes procuring a quality workforce, and maintaining and controlling labor costs is something that should be done. Human resources are an invaluable asset for the company, so they should be maintained and avoided from turnover.

Today the world of work is filled with a unique generation, namely Generation Y or more popularly known as the Millennial Generation. The existence of this generation has changed the atmosphere in the workplace in recent years. They come with new values and attitudes as well as striking characteristics that can be both exhilarating and at the same time troublesome for previous generations.

The millennial generation in a very short time has become the largest workforce in Indonesia. According to data from the Central Statistics Agency (2014), of the total workforce in Indonesia, which reaches more than 160 million people, 4% of them are millennials, around 62.5 million people to be precise. Meanwhile, data from the city of Malang for the millennial generation with an age range of 20-44 years reached 373,124 people consisting of 187,983 men and 185,141 women. (BPS City of Malang 2019). This number is interesting to study considering that they have a unique lifestyle and are very different from previous generations.

Their lives are heavily influenced by the rapid development of information technology. There are at least ten characteristics inherent in their lives, namely: This generation is easily bored with something they already have. Busy activities make them dislike waiting too long and prefer something fast and instant. Both young and old feel comfortable surfing with gadgets. Prefer to use their money to seek new experiences rather than saving to own assets. Like doing transactions with non-cash payment models; Quickly adapts so that it manifests itself in different behaviors when in different groups or groups. Proud to be able to share with others. Very good at multitasking; Critical in viewing social phenomena; Likes to post on social media.

A number of findings from literature studies regarding the ways of the millennial generation in approaching the world of work. Millennials integrate technology in their lives and have high expectations for organizations to be able to accommodate them based on their wants, needs and experiences. The millennial generation has a higher level of job satisfaction than the previous generation. Also likes to work in teams with open communication, motivated by significant tasks, emphasizes individualism, emphasizes career advancement and development and has greater social needs. (Chou 2012). Currently, the millennial generation is experiencing dramatic changes. They are no longer the youngest generation in the workplace, but they are ready to become older professionals and are in higher positions.

Currently the work environment is facing the problem of increasing employee turnover. (Tnay 2013). This is reinforced by the results of the 2014 Hay Group survey regarding the increasing global employee turnover rate. Research entitled Individual Correlates of Organizational Commitment and Intention to Leave the Organization (Lina 2007) states that individual characteristics have a positive effect on intention to leave, and individual characteristics influence the intention to leave through organizational commitment. The results of this research are reinforced by the results of Dale Carnegie's 2016 research on Employee Engagement Among Millennials. The results are quite surprising, because it turns out that only 25% of the millennial workforce are fully involved with the companies they work for.

2 LITERATURE REVIEW

2.1 *Individual value*

Values are the basic beliefs that a particular mode of behavior or end-state of existence is personally or socially preferable to its opposite or opposite mode of behavior or end-state of existence. Milton Rokeach stated that Value is an enduring belief that is chosen by a person or group of people as the basis for carrying out a particular activity or as the ultimate goal of his actions. (Robbins 2015). Meanwhile, Robin Williams Jr. in the book Macionis and John J (2005) states that values not only function as criteria, or standards for action, but also function as criteria or standards for making assessments, making choices, arguing and behaving. This explanation indirectly states that values tend to be permanent. Someone who has determined the value of something, it will be difficult for him to change his mind. In line with Hofstede (2011) states that every individual has a mental program. The criteria for determining value are usually based on considerations of morality, things that should be and things that are good. So values are related to things that should be (ideal) which is called exposure value, not something that is real or value in use.

Values are important to learn because values are the basis for understanding attitudes and behavior. The Rokeach value survey states that there are two sets of values, namely terminal values referring to the desired end state, consisting of professional values, financial values, family values, social values, community values, spiritual values, physical values and intellectual values. Meanwhile, instrumental values refer to the preferred mode of behavior or

how to achieve terminal values, namely: ambitious, capable, forgiving, helping others, honest, imaginative, logical, obedient, polite, and so on.

Alport makes a different categorization of values, namely: Theoretical value, gives a very high place to the search for truth through a critical and rational approach. Economic value, emphasizing the importance of use value and practicality. Aesthetic value, giving high respect for form and harmony. Social value, paying high attention to the interests of society. Political value, emphasizing on the acquisition of power and influence. Religious values, emphasizing on upholding religious rules.

2.2 *Organizational commitment*

Organizational commitment is the degree to which an employee sides with a particular organization and its goals and intends to maintain membership in the organization (Robbins 2015). Research evidence demonstrates a negative relationship between organizational commitment and both absenteeism and employee turnover rates. Organizational commitment has three dimensions, namely: affective commitment, continuance commitment, and normative commitment. (Luthan 2008).

Organizational Commitment is defined as a situation where an employee sided with an organization is a kind of agreement between the individuals in it that is binding and leads to the overall goals of the organization. Robbins and Judge (2007) define commitment as a situation in which an individual sided with the organization and its goals and desire to maintain its membership in the organization. The definition of organizational commitment in this study leads to the theory of Allen and Meyer (2004) which says that employees who are committed will work with full dedication, which makes employees have the desire to give more energy and responsibility to support the welfare and success of the organization where they work.

Organizational commitment has three components: (1) Affective Commitment; relates to the emotional, identification, and involvement of employees in an organization. Employees with high affective still join the organization because of the desire to remain a member of the organization. (Allen and Meyer 2004). Emotional affective commitment states that the organization will make employees have a strong belief in following all organizational values, and trying to realize organizational goals as a top priority. Identification of affective commitment arises because of necessity, and views that commitment occurs because of dependence on activities that have been carried out in the organization in the past and this cannot be abandoned because it will harm employee involvement in the organization.

Allen and Meyer (2004) state that affective commitment has the following characteristics: (a) Employees enjoy spending their careers at the company, (b) Employees like to talk about the company with colleagues when they are not working, (c) Employees feel that the problems faced by the company are also employees' problems, (d) Employees find it easy to adapt while working in the company, (e) Employees feel that the company and the people in it are like part of the employee's own family, (f) Employees feel very attached emotionally to the company, (g) The company has deep meaning for employees, (h) Employees feel part of the company.

Normative Commitment is an employee's feelings about the obligations that must be given to the organization. The normative component develops as a result of socialization experiences, depending on the extent to which employees feel a sense of obligation. Loyalty that must be given because of the influence of others. Commitment that occurs when employees continue to work for the organization is caused by pressure from other parties to continue working in the organization. Employees who have a high stage of normative commitment are very concerned about the views of others about themselves if the employee leaves the organization. This commitment refers to the reflection of feelings of obligation to become employees of the company. Employees with high normative commitment feel that the employee should still work at the organization where they work now. In other words, the

commitment that exists within the employee is caused by the employee's job obligations to the organization.

Normative Commitment has the following characteristics: (a) Employees feel they have an obligation when they become employees of the company. (b) Employees feel they have many advantages when working in the company. (c) Employees will feel guilty if they leave the company. (d) The company deserves to get employee loyalty. (e) Employees will not leave the company because they still have obligations. (f) Employees owe a lot to the company.

Continuing Commitment is a component based on employee perceptions of the losses they will face if they leave the organization. Employees with an organizational basis are caused because these employees need an organization. Disadvantages of leaving an organization Continuance commitment refers to the strength of a person's tendency to stay with an organization because there are no other alternatives. High continuance commitment includes the time and effort put into acquiring non-transferable skills and the loss of attractive benefits or privileges as a senior. Employees need organization According to Allen and Meyer (2004), employees who continue to work in organizations because employees accumulate more benefits that will prevent employees from looking for other jobs.

The characteristics of sustainable commitment can be stated as follows: (a) Employees are worried if they leave the company because they do not have a replacement workplace. (b) It is very difficult for employees to leave the company even if the employees want to. (c) Employee life will be chaotic if the employee decides to leave the company now. (d) If the employee leaves the company in the near future, there will be no negative impact on the employee. (e) Currently, employees feel the need to work in the company. (f) Employees do not have many choices of replacement companies so they do not think about leaving the company. (g) One of the negative consequences of leaving a company is that alternative jobs are rarely available. (h) One of the biggest reasons employees keep working is that other places are not as profitable as the company. (i) Employees have given optimal effort when working at the company, so that employees still want to work at the company. (Allen and Meyer 2004).

2.3 *Turnover intention*

Turnover Intention can be interpreted as the level or intensity of the employee's desire to leave the company. Furthermore, W.H. Mobley (2011) states that turnover intentions are the desire to move employees from one workplace to another. This opinion means that turnover intentions are the desire to move, but have not yet reached the stage of realization and have moved from one workplace to another. There are many reasons for this condition and one of them is the desire to get a better job elsewhere. Based on the views that have been put forward, it can be understood that turnover intention is the level or intensity of the desire to leave the company which is a form of withdrawal behavior from the world of work as well as this behavior is the right of every employee. The following are indications of turnover intention: (1) Employees think about leaving the company. (2) Employees will try to find work in other companies. (3) Employees try to leave the company. (4) The employee seeks to leave the company in the near future. (5) Employees try to leave the company when there is a better opportunity.

Employee turnover sometimes has a positive impact on the organization. However, most employee turnover has a negative impact on the organization, both in terms of costs and in terms of lost opportunities to take advantage of opportunities (Mobley 2011). Turnover intention requires serious attention for the company because this condition leads to the act of leaving employees from the company. Furthermore, the cessation of individuals as members of an organization has an impact on the provision of financial rewards by the organization concerned. Turnover is a particular challenge for human resource development. Because these events are unpredictable, development activities must prepare at any time a

replacement for the employee who leaves. On the other hand, in many real cases, excellent company development programs actually result in increased turnover.

The relationship between variables in this study is described in the following framework:

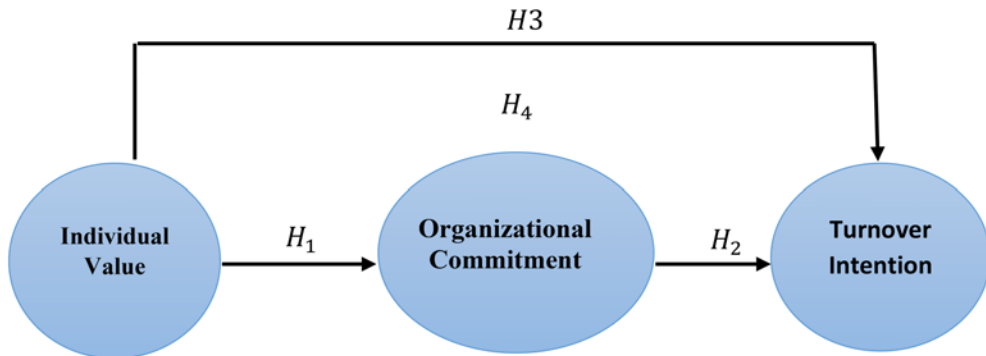


Figure 1. Relationship between organizational value, organizational commitment and turnover intention.

Joan Finagen’s research (2006) entitled “The Relationship Between Personal Values, Organizational Values and Organizational Commitment” found the results of the research that personal values and organizational values influence organizational commitment. Based on the results of this study, the following hypothesis was made: Hypothesis 1: Individual values have a significant effect on organizational commitment in the millennial work force.

Femi Angraini (2016) conducted a study entitled “The Influence of Organizational Commitment on Turnover Intention” found that organizational commitment had a significant negative effect on turnover intention. The results of this study became the basis for making the following hypothesis. Hypothesis 2: Organizational commitment has a significant effect on turnover intention in the millennial workforce.

Research from Saket Jeswani, *et al* (2012) entitled “Impact of Individual Personality on Turnover Intention A Study on Faculty Members” states that individual characteristics have a significant effect on turnover intention. Based on these findings, the path 3 hypothesis is made as follows. Hypothesis 3: Individual values have a direct and significant effect on turnover intention in the millennial work force.

Research from Lina Labatmediene (2007) entitled “Individual Correlates of Organizational Commitment and Intention to Leave the Organization” states its findings that individual values have a significant effect on turnover intention through organizational commitment. Based on the results of this study, the path 4 hypothesis was made as follows. Hypothesis 4: Individual values influence turnover intention through organizational commitment in the millennial workforce.

3 RESEARCH METHODOLOGY

This research is a correlational research, namely research that studies the relationship of two or more variables in one study. The study in this research is the relationship between variations in one variable and variations in other variables. This research was conducted in order to determine which variables correlate with one another.

The population of this study is all employees who are included in the millennial workforce in Malang city, namely the workforce born around 1980 – 2000, with an age range of 17 – 37 years. The research sampling technique used purposive sampling. According to Sugiyono

(2016) the definition of purposive sampling is a sampling technique with certain considerations. The reason for selecting the sample using purposive sampling is because not all samples have the criteria that the researcher determines. The criteria used as research samples are: 1) The work force is domiciled in the city of Malang. 2) Currently aged between 17 – 37 years. 3) Respondents as employees in government agencies and private institutions. This study takes three variables: Individual Value (X) as an independent variable; Organizational Commitment (Z) as the intervening variable and Turnover Intention (Y) as the dependent variable. The operational definitions of variables and indicators from this study can be explained as follows:

Individual Values are basic beliefs held by a person in working as a way of behaving that contains good/bad, right/wrong, desirable/undesirable considerations. Indicators of individual value variables are: work value, marriage value, social value, community involvement value, spiritual value, hobby value, intellectual value, career opportunity value, economic value, family togetherness value, friendship value, social work value, value peace of life, the value of health, the value of education.

Organizational Commitment is the degree to which an employee is in favor of a particular organization and its goals and intends to maintain membership in the organization. Indicators of organizational commitment variables are: Affective Commitment (employees' emotional attachment and involvement in the organization), Continuing Commitment (the desire to remain in the organization based on profit and loss considerations with the employee leaving the organization), Normative Commitment (a feeling of obligation to remain in organization as things that are considered appropriate, are the right things and must be done).

Turnover Intention is the degree of desire of employees to move from one workplace to another. The indicators of this variable are: thinking about leaving the company; trying to find work in other companies; trying to leave the company; trying to leave the company in the near future, trying to leave the company when there is a better opportunity. The data used in this study are in the form of qualitative data and quantitative data. The data source comes from primary data, namely data obtained from direct sources, in this case the millennial workforce and collected by distributing questionnaires.

In order to test the research instrument, validity and reliability tests were carried out. Validity test is a test used to show the extent to which the measuring instrument used in this study measures what is being measured. Testing the validity in this study using the Product Moment Correlation formula. If $r_{count} \geq r_{table}$ based on a significant test of 0.05 then the instrument or question items have a significant correlation with the total score and the condition is declared valid (Umar 2005).

While the reliability test is a test that is used to show how far the measurement results with the tool can be trusted, have a level of consistency and stability. Reliability testing in this study uses the Alpha Cronbach formula. If the alpha value > 0.90 means that reliability is at a perfect level, all items are reliable and all tests consistently have strong reliability. If the alpha is between 0.70 - 0.90, high reliability. If alpha 0.50 - 0.70 moderate reliability. If $\alpha < 0.50$ low reliability (Umar 2005).

To meet the statistical requirements for using the regression analysis tool, classic assumption tests were carried out in the form of normality tests, multicollinearity tests, and heteroscedasticity tests. The normality test is a tool to see whether the residual values are normally distributed or not. A good regression model will be normally distributed. Testing for normality in this study used the Kolmogorov-Smirnov test. If the probability is significant > 0.05 , it can be said that the data is normally distributed. The multicollinearity test is used to measure the degree of association (closeness) of the relationship/influence between independent variables through the magnitude of the correlation coefficient (r). If the tolerance value of the independent variable is more than 10%, it can be concluded that among the independent variables, there is no multicollinearity. The heteroscedasticity test, tests whether the variance of the residuals is the same from one observation to another. If there is a similar

variance from the residual of one observation to another observation that has a fixed value, then it is called homoscedasticity. Heteroscedasticity testing in this study used the Glejser Test (Ferdinand 2014).

4 RESULT AND DISCUSSION

Respondents in this study were 112 people with characteristics based on age, gender, occupation and length of service as follows:

Table 1. Characteristics by age.

Age	Amount	Percentage
18 - 27 year	88 persons	79%
28 - 35 year	24 persons	21%
Total	112 persons	100%

Of the 112 respondents, 88 people (79%) were aged 18-27 years. This means that most of the respondents are the millennial generation who were born around the 1990s to around the 2000s. When viewed from the age characteristics, respondents are in the productive age category.

Table 2. Characteristics by Gender.

Gender	Amount	Percentage
Male	60 persons	54%
Female	52 persons	46%
Total	112 persons	100%

Based on the characteristics of gender, out of 112 respondents, it was found that 60 people (54%) were men. This situation is thought to mean that the millennial workforce in this study is dominated by men.

Table 3. Characteristics by occupation.

Job	Amount	Percentage
Private Employees	92 persons	82%
Civil Employees	20 persons	18%
Total	112 persons	100%

Meanwhile based on their work, out of 112 respondents stated that 92 people (82%) were private employees and the remaining 20% were civil servants. This can be interpreted that the millennial workforce prefers to be private employees which are more performance-based and more challenging than being civil servants.

Table 4. Characteristics based on length of service.

Length of work	Amount	Percentage
1- 5 years	78 persons	70%
> 5 years	34 persons	30%
Total	112 orang	100%

Characteristics of respondents based on length of service shows that 78 people (70%) of respondents have worked for 1-5 years. This information corresponds to the characteristics of the respondents based on age, that they are still in their productive age and have not had a very long working period. The working period that is not too long indicates that this workforce does not have much work experience, is not stable at work and is still in search of identity as an employee.

Table 5. Validity test.

Research Variables	Item	r test	r table	Sig	Result
Individual Value (X)	X1	0,817	0,186	0,000	Valid
	X2	0,716		0,000	Valid
	X3	0,800		0,000	Valid
	X4	0,745		0,000	Valid
	X5	0,803		0,000	Valid
	X6	0,875		0,000	Valid
	X7	0,791		0,000	Valid
	X8	0,806		0,000	Valid
	X9	0,783		0,000	Valid
	X10	0,793		0,000	Valid
	X11	0,849		0,000	Valid
	X12	0,837		0,000	Valid
	X13	0,700		0,000	Valid
	X14	0,815		0,000	Valid
	X15	0,824		0,000	Valid
	X16	0,852		0,000	Valid
Organizational Commitment (Z)	Z1	0,723	0,186	0,000	Valid
	Z2	0,734		0,000	Valid
	Z3	0,641		0,000	Valid
	Z4	0,717		0,000	Valid
	Z5	0,100		0,000	Valid
	Z6	0,738		0,000	Valid
	Z7	0,712		0,000	Valid
	Z8	0,692		0,000	Valid
	Z9	0,619		0,000	Valid
	Z10	0,707		0,000	Valid
	Z11	0,652		0,000	Valid
	Z12	0,588		0,000	Valid
	Z13	0,625		0,000	Valid
	Z14	0,637		0,000	Valid
	Z15	0,488		0,000	Valid
Turnover Intention (Y)	Y1	0,858	0,186	0,000	Valid
	Y2	0,903		0,000	Valid
	Y3	0,904		0,000	Valid
	Y4	0,899		0,000	Valid
	Y5	0,829		0,000	Valid

Table 5 provides information that the research variables consist of 3 (three) variables, namely Individual Value (X) consisting of 16 questions; Organizational Commitment (Z) consists of 15 questions and Turnover Intention (Y) consists of 5 questions. The number of respondents is 112 people. Validity measurement was carried out using Pearson Product Moment Correlation, by correlating each item score with a total score. If the question items

are significantly correlated with the total score, indicating that the items are valid or if $r \text{ count} \geq r \text{ table}$ (2-sided test with a sig. level of 0.05) it means that the research instrument in this case the question items are significantly correlated with the total score (valid). The results of the validity test show that all question items are declared valid because at the sig. 0.05, $r \text{ count} > r \text{ table}$ ($r \text{ count} = 0.186$).

Reliability is a research instrument test to determine the stability (constancy), consistency, accuracy of a measurement. Reliability is used to measure the questionnaire whether the instrument used in this study can be trusted as a data collection tool and is able to reveal actual information in the field. The questionnaire is said to be reliable (reliable) if someone's answers to the questionnaire questions are consistent. A measurement is said to be reliable if the value of the reliability coefficient is close to 1. The results of the reliability test of this study can be seen as follows:

Table 6. Reliability test.

Research Variables	Number of Items	Alpha Value	Sig.	Result
Individual Value	16	0,9624	0,000	Reliabel
Organizational Commitment	15	0,9068	0,000	Reliabel
<i>Turnover Intention</i>	5	0,9216	0,000	Reliabel

Instrument reliability testing uses the Alpha Cronbach formula, with the following criteria: if the alpha value is > 0.9 , it means perfect reliability; if the alpha value is $0.7 - 0.9$ it means high reliability; if the alpha value is $0.5 - 0.7$ it means moderate reliability; if the alpha value < 0.5 means low reliability. The results of the reliability test in Table 6 show that the alpha value of all variables in this study is > 0.9 , which means that reliability is in the perfect category. Results of Path Analysis (Path Analysis). Path 1: Effect of Individual Values on Organizational Commitment. The equation that will be formed in this path is: $Z = a + bX + e$, where Z is the notation of Organizational Commitment; a is the notation of Constants; b is the notation of the Regression Coefficient; X is the notation of Individual Value and e is the notation of Error.

Table 7. The influence of individual values on organizational commitment.

Model 1	Unstandardized Coefficients		Standardized Coefficients	t	Sig
	B	Std Error	Beta		
Constant	39,641	3,457		11,465	,000
Value Individual (X)	,200	,053	,340	3,791	,000
R			,340		
R Square			,116		
Adjusted R Square			,108		
Std.Error of the Estimate		8,575			

The equation formed from this analysis is presented as follows:

$$Z = 39,641 + 0,200b + e$$

This equation means that individual values have a positive effect on organizational commitment. This means that the more important individual values are for respondents, the higher organizational commitment will be. While the coefficient of determination from this

analysis is shown by the R Square value of 0.116 which means that the ability of individual value variables to explain the organizational commitment variable is 11.6% and the remaining 88.4% is explained by other variables not present in this research model.

Hypothesis Testing 1. To test hypothesis 1, a hypothesis statement is made as follows. Ho: Individual values have no significant effect on organizational commitment; Ha: Individual values have a significant effect on organizational commitment. With the criteria for accepting or rejecting the hypothesis: If $t \text{ count} < t \text{ table}$ or $-t \text{ count} < -t \text{ table}$, Ho is accepted and Ha is rejected; conversely if $t \text{ count} \geq t \text{ table}$ or $-t \text{ count} \geq -t \text{ table}$, Ha is accepted and Ho is rejected. The results of the partial hypothesis test can be explained from the calculated t value at a significant level of 0.05 of 3.791 (0.000) this value is greater than the t table of 1.980. Thus Ha, which states that individual values have a significant effect on organizational commitment, can be accepted as true.

Path 2: The Effect of Organizational Commitment on Turnover Intention. The equation that will be formed in line 2 is $Y = a + bZ + e$; where Y is the notation of Turnover Intention; a is the notation of Constants; b notation of the regression coefficient; Z is the notation of Organizational Commitment and e is the notation of Error.

Table 8. The effect of organizational commitment on turnover intention.

Model 2	Unstandardized Coefficients		Standardized Coefficients	T	Sig
	B	Std Error	Beta		
Constant	30,203	1,962		15,392	,000
Organizational Commitment (Z)	-,337	,037	-,657	-9,141	,000
R		,657			
R Square		,432			
Adjusted R Square		,427			
Std.Error of the Estimate		3.530			

The equation formed from this analysis is as follows:

$$Y = 30,203 - 0,337Z + e$$

The regression equation shows that organizational commitment has a negative effect on turnover intention. This condition means that the higher the organizational commitment, the lower the turnover intention. The R Square value (Coefficient of Determination) is 0.432, meaning that the ability of the Organizational Commitment variable to explain the Turnover Intention variable is 43.2%, the remaining 56.8% is explained by other variables that are not included in this research model.

Hypothesis Testing 2. To test this hypothesis, a hypothesis statement Ho is made: organizational commitment has no significant effect on turnover intention. Ha: Organizational commitment has a significant effect on turnover intention. The criteria for accepting and rejecting the hypothesis are as follows: If $t \text{ count} < t \text{ table}$ or $-t \text{ count} < -t \text{ table}$, Ho is accepted and Ha is rejected; conversely, if $t \text{ count} \geq t \text{ table}$ or $-t \text{ count} \geq -t \text{ table}$, Ho is rejected and Ha is accepted. The results of the hypothesis test stated that the calculated t value at a significance level of 0.05 was -9.141 (sig.0.000) this value was greater than the t table value of -1.980. This means that the hypothesis which states that organizational commitment has a significant effect on turnover intention can be accepted.

Path 3: Effect of Individual Value on Turnover Intention. In this path, the equation to be formed is $Y = a + bX + e$ where Y is the notation of Turnover Intention, a is the notation of Constants, b is the notation of the Regression Coefficient, X is the notation of Individual Values and e is the notation of Error.

Table 9. Effect of individual value on turnover intention.

Model 3	Unstandardized Coefficients		Standardized Coefficients	T	Sig
	B	Std Error	Beta		
Constant	19,177	1,772		10,823	,000
Individual Value (X)	-,105	,027	-,345	-3,860	,000
R	,345				
R Square	,119				
Adjusted R Square	,111				
Std.Error of the Estimate	4,394				

From the table above, the equations formed are as follows:

$$Y = 19,177 - 0,105X + e$$

This equation shows that individual values have a negative effect on turnover intention. That is, the more important the individual value is for the respondent, the lower the turnover intention. The Coefficient of Determination (R Square) of this equation is 0.119, which means that the ability of individual value variables to explain turnover intention is 11.9%, the remaining 88.1% is explained by other variables not included in the research model.

Hypothesis Testing 3. To test this hypothesis, the following hypothesis statement is made, Ho: Individual value has no significant effect on turnover intention. Ha: Individual values have a significant effect on turnover intention. The criteria for accepting and rejecting the hypothesis with a 2-sided test are formulated as follows: If t count < t table or -t count < -t table, then Ho is accepted and Ha is rejected; conversely if t count ≥ t table or -t count ≥ -t table, then Ho is rejected and Ha is accepted. The results of the hypothesis test show that the calculated t value is -3.860 (sig.0.000) this value is still greater than the t table value of -1.980. This situation means that the hypothesis statement which states that individual values have a significant effect on turnover intention can be accepted as true.

Path 4: Effect of Individual Value on Turnover Intention through Organizational Commitment. The equation that will be formed in the 4th path is $Y = a + bX + bZ + e$; where Y is the Turnover Intention variable; a is the notation of Constants; b is the notation of the regression coefficient of individual values and organizational commitment and e is the notation of Error.

Table 10. Effect of individual value on turnover intention through organizational commitment.

Model 3	Unstandardized Coefficients		Standardized Coefficients	T	Sig
	B	Std Error	Beta		
Constant	31,598	2,087		15,141	,000
Individual Value (X)	-,042	,023	,138	-1,825	,071
Organizational Commitment (Z)	-,313	,039	,610	-8,069	,000
R	,670				
R Square	,449				
Adjusted R Square	,438				
Std.Error of the Estimate	3,493				

The equation formed from the table above is:

$$Y = 31,598 - 0,042X - 0,313Z + e$$

The equation above shows that individual values and organizational commitment have a negative effect on turnover intention. That is, the more important the individual values are for the respondents and the higher the organizational commitment, the lower the turnover intention. The coefficient of determination (R Square) of this equation is 0.449 which means that individual value variables and organizational commitment variables are jointly able to explain the variable turnover intention of 44.9%, the remaining 55.1% is explained by other variables not included in this research model.

Table 11. Effect of total individual value on turnover intention through organizational commitment.

Explanation	Path Coefficient
Effect of individual values on organizational commitment	0,200
The effect of organizational commitment on turnover intention	-0,337
The effect of individual values on turnover intention	-0,105
The effect of individual values on turnover intention through organizational commitment	$(0,200 \times (-0,337)) + (-0,105)$ $= -0,0674 - 0,105 = -0,1724$

From the table above it can be explained that the effect of the total individual value on turnover intention is -0.1724. Meanwhile, the direct effect of individual values on turnover intention is -0.105. This means that the indirect effect has a greater coefficient value than the direct effect, meaning that individual values affect turnover intention through organizational commitment.

Hypothesis Testing 4. To test this hypothesis, the following hypothesis statement is made, Ho: Individual values do not have a significant effect on turnover intention through organizational commitment. Ha: Individual values have a significant effect on turnover intention through organizational commitment. The criteria for accepting and rejecting the hypothesis partially are formulated as follows: If $t \text{ count} < t \text{ table}$ or $-t \text{ count} < -t \text{ table}$, then Ho is accepted and Ha is rejected; conversely if $t \text{ count} \geq t \text{ table}$ or $-t \text{ count} \geq -t \text{ table}$, then Ho is rejected and Ha is accepted.

The results of the two-tailed hypothesis test at a significance level of 0.05 show that the calculated t value for the individual variable value is -1.825 (sig. 0.071) this value is greater than the t table value of -1.660 but not significant. While the calculated t value for the organizational commitment variable is -8.069 (sig. 0.000) this value is greater than the t table value -1.660 and is significant. This means that when organizational commitment is included in the model as a mediating (intervening) variable, this condition causes the direct effect of individual values on turnover intention to be insignificant. This explains that the hypothesis stating that individual values have a significant effect on turnover intention through organizational commitment can be accepted.

5 CONCLUSION

The millennial generation is unique and when they enter the world of work their uniqueness forms their work dynamics. The working atmosphere has changed, colored by values, attitudes, and behaviors that are different from previous generations.

The millennial workforce attaches importance to all the values studied. Spiritual values are the most important values for them to achieve serenity and peace in life. The next value to be achieved is a happy family, achieving self-development through formal and informal education, liking challenging work as a means to show professionalism, liking sports and paying attention to health, preferring to work in groups or teams and meeting people newcomers, want to fulfill their material needs of life and like to join the community to channel their hobbies and existence.

The millennial workforce has an organizational commitment that is neither high nor low but in the sufficient category. This is because most of the millennial workforce studied are

aged 18-27 years, but their working years are still small, namely 1-4 years. This condition explains that they are at their productive age, do not have much work experience, are still trying to find their identity at work, and are not fully convinced of their workplace. This is in line with the findings regarding turnover intention, that this workforce has a high desire to leave the current job.

Path analysis shows the finding that individual values have a positive and significant effect on organizational commitment. Organizational commitment has a negative and significant effect on turnover intention. Individual values have a negative and significant effect on turnover intention. Individual values have a significant effect on turnover intention through organizational commitment.

The results of this study indicate that in maintaining the millennial generation or workforce, attention is needed to their values. If these individual values are fulfilled, it will create high organizational commitment and finally the company can keep them in the company, or in other words the level of turnover intention is low.

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Smart cities in China: Addressing environmental issues

Inda Mustika Permata

Asia Pacific Regional Studies Program, National Dong Hwa University, Taiwan International Relations Department, Universitas of Andalas, Padang, Indonesia

ABSTRACT: This paper aims to explain China's potential to play a role in developing smart cities, especially in overcoming the environment problems. Due to China's significant contribution to carbon emissions and its potential to increase with urbanization, China's attempts to develop smart cities as one of the central national policies can contribute to addressing global environmental issues. This paper uses qualitative methods with secondary data. As a conceptual framework, the author uses Dameri's concept of smartness. The result is that China does have the potential to be influential in handling environmental issues through its smart city projects. In addition, China also desires to become a leader in smart city development. This is because China has developed smart cities as a national priority with various investments in research and technology development that involve the government and the private sector. China also puts forward the effectiveness of its smart city, which benefits the community through ease of service and a sustainable environment.

Keywords: City, China, Environment, Lead, Technology

1 INTRODUCTION

The problem of urbanization in IR studies is a low-political issue, so it is often marginalized from other issues. Based on data from the United Nations, the urban population is predicted to increase to 2.5 billion people by 2050, with the majority of the increase in Africa and Asia (United Nations Department of Economic and Social Affairs Population Division, 2019). This massive urbanization phenomenon requires an innovative way of managing the complexity of urban life because this growth raises problems for land use and the environment (Manville *et al.* 2014). According to Hayat (2016), the impact of globalization and industrialization causes cities to consume three-quarters of the world's natural resources and produce as much pollution and waste as possible. The challenges of urbanization and its impact on cities are obstacles for developing and developed countries, although the definition of environmental problems in question can be different. Developed countries, for example, are more concerned with the issue of global warming, ozone-layer depletion, loss of biodiversity, deforestation, and exhaustion of non-renewable resources. Meanwhile, developing countries are more concerned about basic environmental issues such as water and air pollution, inadequate waste management, and lacking basic services and green areas (Grierson 2007). Apart from the differences in addressing environmental challenges between developed and developing countries, environmental issues as a global challenge cannot be separated from aspects of the locality, such as urban governance. As a result, the city becomes a catalyst and can be a solution to global environmental issues simultaneously.

The smart city then emerged as an innovation in terms of city management to face the challenges of urban life. Smart cities are also considered a solution to environmental problems because the idea of a sustainable environment is part of the elements of smart cities

(Ringenson and Hojer 2016). There is still some debate regarding the definition of the term smart city as it is a relatively new concept. However, one idea regarding this term can be agreed upon is about the city being “smarter” in terms of competitiveness, social and human capital, participation, transport, ICT, natural resources, and quality of life (Walravens and Ballon 2013). From these factors, it can be understood that the challenges of urbanization and the consequences of globalization and current technological developments have led to the creation of smart city projects. The presence of the smart city phenomenon shows that sub-national actors such as cities also have the same opportunities as the state in solving global environmental problems.

Both developed and developing countries then compete to apply the smart city idea in their cities. Referring to the smart city index, currently, there are 118 smart cities identified (The IMD World Competitiveness Center 2021). This number can differ from other datasets, considering the different indicators used. Based on the smart city index data, cities in Singapore, Taiwan, and European countries topped the rankings, while many other smart cities in China were ranked in the 60s. This ranking is quite good as a country that is late to implement the smart city idea. As a latecomer, China has the potential to excel in terms of smart cities (Xuejing 2020). It is interesting to examine China’s potential to play a significant role in smart city development practices. Because China is the most populous country in the world, this condition, according to Li and Qiao (2015), poses a severe urbanization challenge and has implications for environmental security. They also argue that more than a quarter of the world’s solid domestic waste comes from China, mainly contributed by its cities. Besides waste, China is the world’s largest greenhouse gas emitter (Zheng and Kahn 2017). Of course, this condition can be both a challenge and an opportunity for China. Therefore, this paper describes China’s potential to play a role in developing smart cities, especially in overcoming environmental problems.

2 LITERATURE REVIEW

In its development, much literature has discussed the smart city concept. According to Hayat (2016), the term smart city is ambiguous because the features and nature of the smart city itself differ from one country to another, adjusting to geographical conditions, ecosystems, availability of resources, and the main challenges faced. Hayat further differentiates this term into two meanings. First, in a narrow sense, a smart city can be defined as “the city that uses information and communication technologies to deliver services to their citizens. In the broad sense, Information and communication technologies (ICT) in smart city to be more intelligent and efficient in the use of resources, resulting in cost and energy savings, improved serving delivery and quality of life, and reduced environmental footprint – all supporting innovation and a low-carbon economy.” Furthermore, Nam and Pardo (2011) argued that the term smart city is not only related to technology, people, and institutions. From this definition, it can be understood that within the scope of a smart city, ICT must be used as a solution to society’s problems. It must also be supported by government policies. Therefore, according to Højer and Wangel (2015), smart cities should aim to create sustainable cities that can meet the needs of people living in the city by maximizing ICT as a solution to local and global environmental problems. To be able to understand what the “smartness” of a city is, Dameri (2017) highlighted three things that need to be considered, namely (1) effectiveness: the capacity of a city to provide services to every individual in the city; (2) environmental considerations: the capacity of a city to ensure environmental quality is maintained, especially in terms of energy consumption, air, and water pollution, traffic congestion, and land consumption; (3) innovation: the capacity of a city to use technology to improve the quality of life in the city. These three aspects can help identify a city’s capacity as a smart city.

Smart city projects are being created all over the world. Sakuma *et al.* (2021) compared the implementation of smart cities in two developed countries, namely Japan and Sweden. According to them, these two countries develop smart cities with different triggers. Large private corporations usually encourage the planning and implementation of smart cities in Japan, unlike Sweden, where local governments and communities play a role. In addition, both have a different focus of excellence where Japan has experience in preventing natural disasters, and Sweden has experience in preventing cyber-attacks. Then, Iqbal (2021) in his writing explained that Taiwan also has one of the best smart cities in the world, namely Taipei. People in Taipei integrate ICT into almost every aspect of their lives, and government policies facilitate this work. Iqbal takes an example in the health sector; hospitals in Taipei utilize artificial intelligence and big data to maximize service to the community. Furthermore, from the Middle-East region, Virtudes *et al.* (2017) explained that Dubai was the first smart city in an Arab country to adopt the smart city concept quickly. Dubai turned the desert into the most modern city in the world, providing income for the United Arab Emirates. Furthermore, Sonn and Lee (2020) showed that implementing smart cities in South Korea is very helpful in monitoring and controlling the spread of Covid-19 in the community. The four works of literature show that each city has specific goals for implementing smart cities. Then, in the context of China, Veglianti *et al.* (2021) describe the development of a smart city in the Xiongan New Area that pays attention to environmental aspects, is innovative, and produces low carbon. In its development, the authors highlight the central role of government from planning to implementation. Also, Huang *et al.* (2021) provide an overview of the various implementation results of smart city projects in China. They argue that these projects are still developing and there is much room for improvement. These two articles provide an overview of the big picture of the smart city phenomenon in China. Based on the literature above, they discuss the term smart city and its relation to sustainable cities, the capacity of the city as a smart city, and the implementation of smart cities in several countries, including China. However, it has yet to specifically discuss how China's potential is related to developing smart cities to address environmental problems. Therefore, this paper will focus more on exploring the role of states, such as China, in this regard.

3 RESEARCH METHODS

This paper applies a qualitative method. The data used in this paper is secondary. Data is collected from journal articles, books, reports, and news based on keywords such as smart city, sustainable smart city, eco-city, China, global environmental issues, and technology. The data is then analyzed using smartness city capacity. After that, we can conclude the smartness capacity of cities and the role of China as a state in overcoming environmental problems.

4 RESULTS AND DISCUSSION

According to Liao and Chen (2022), the formation of smart cities in China is divided into four phases. First, the 2010–2014 period is considered the exploration phase, marked by using ICT to digitize cities. Second, the period from 2014–2016 is referred to as the adjustment phase, marked by strengthening coordination between institutions related to smart city regulation. Third, the period between 2016 and 2017 is referred to as the strategic phase; in this phase, the government begins to link the smart city concept to the national strategy known as Innovative Smart City. The period from 2017 to the present represents comprehensive smart city development. At this time, the concept of a smart society was introduced, focusing more on the community than the city itself. Based on these phases, it can be understood that China is following a world change that places more emphasis on the use of

technology. In addition, the Xi Jinping administration promoted policies focused on urban development called All-in-One Pilot Cities. This policy is top-down, which is implemented with coordination between institutions and emphasizes green urbanization and technology as a solution in its implementation (Höffken and Limmer 2019). This shows that China is focused on ensuring environmental protection amid high urbanization.

Since Mao, Chinese governments have been concerned about the environment. However, the specifics of including environmental elements in development can be seen in the Hu Jintao Government. During Hu's time, the term "ecological civilization," which promotes environmental awareness, was first mentioned at the CCP Congress. Hu recognized that this principle must be applied to all aspects of China's economic, social, political, and cultural development to achieve its economic miracle. However, during the Xi Jinping Administration, this term was not just a slogan but a well-documented plan and a basis for making decisions regarding development strategies (Geall and Ely 2018). This shows that the protection of the environment and the implementation of development in China are equally significant and cannot be separated. Smart city projects align with the principles of ecological civilization set by China. This paper will identify three aspects of Dameri (2017), described in the previous section, to explain the capacity of smart cities in China. These three aspects do not directly explain China's capabilities as a country. However, Dameri's framework helps show that if smart cities in China have or cannot be smart, it will indirectly have implications for China's potential to address environmental issues locally and globally. Because China is one of the largest carbon emitters and contributes to the world's solid waste, if smart cities in China have smartness capacity, they will undoubtedly positively impact the world.

The first aspect being studied is effectiveness. In terms of services, the Chinese government focuses on transportation, public services, public security, education, health, and environmental protection as the main focus for smart cities (Atha *et al.* 2020). Understanding the smart city's situation and the community's satisfaction is essential to explaining its efficiency. Based on the findings by the China Academy of Information and Communications Technology (2016), of the 15 smart cities in China evaluated for their usefulness, these cities contribute to society with good, average, and more advanced values. According to Shan *et al.* (2021), to evaluate the city, China at the national level conducted two evaluations, namely in 2017 and 2019, by the National Development and Reform Commission and the Cyberspace Administration of the CPC Central Committee and the National Standards Commission. They formulated Evaluation of the Innovative Smarter Cities Indicator. In this evaluation, 220 cities participated in 2017 and 271 cities in 2019. The evaluation results showed improvements in indicators of public services, proper governance, a livable environment, information resources, and indicators of reform and innovation. Additionally, Shan *et al.* reported that regional development is evenly distributed among the cities.

Increasing numbers indicate that China is taking steps to ensure that smart city facilities and services available to individuals in the city conform to established standards. This evaluation is critical because the characteristics of developed smart cities in China must be community-oriented. The principle of community orientation is the basis of smart city development (Yang *et al.* 2021). To ensure this principle has been implemented properly, seeing the community's satisfaction is necessary. Research by G. Huang *et al.* (2022) showed that people in Nanjing are satisfied with smart city services' effectiveness, fluency, comfortability, and affordability. However, Huang also found that smart cities are insufficient to satisfy people's needs. This dissatisfaction may occur because the community is not involved in the planning to the implementation process, and this is also the characteristic of smart cities in China which are more top-down (Fang and Shan 2022). However, the presence of the state, in this case, is a positive thing because the government will have the power to run its administration in the end. Nevertheless, the community must still be given space to provide feedback on each process so that the effectiveness of its implementation can still be realized.

The next aspect being examined is the environmental consideration. As explained in the previous section, China has principle of protecting the environment is the basis for development. Smart cities are built on this principle. A conceptually smart city can improve environmental quality. This is in line with the research results of Yao *et al.* (2020), which state that eco-efficiency, a measure of maximizing economic benefits by minimizing resource consumption and environmental damage, can be significantly improved by implementing smart cities in China. The findings of Qian *et al.* (2021) also show, especially in large urban areas, that there is a positive correlation between the implementation of smart cities in China and economic growth, which reaches 10.91%, energy saving by 2.84%, and reduction of pollutant emissions. However, the percentage is small, namely 0.69%. In urban activities, these three things are always taken into consideration.

In line with Chu *et al.* (2021), research explains that ecological, environmental quality in China can increase China's capacity to reduce urban pollution. According to him, the reason is that there are changes to the urban structure in the development of smart cities to improve the quality of urbanization while reducing pollution. Then, Yu and Zhang (2019) also showed empirically that there is an increase in energy efficiency in cities that implement smart cities in China due to the application of innovative urban development and management models. Regarding the reduction of smog pollution, research by Feng and Hu (2022) showed that although China is currently in the early stages of developing smart cities, Chinese cities show the potential to reduce smog pollution. They also explained that the practice of smart city policy is a solution to the dilemma between pursuing economic progress or protecting the environment that cities always face. Based on the research above, it can be interpreted that China's smart city development generally fulfills the second smart capacity. Even though there are disparities between cities shown in the studies above, it is due to the priorities of local governments in developing smart cities not being met. To create harmony at the national level and contribute actively to solving global problems from a local standpoint, this condition must be addressed. To ensure this can be done, from the studies above, it can be identified that technological advances are the backbone for smart cities to achieve their goals, especially in environmental issues. Therefore, the third aspect being discussed is innovation.

Previously, it was mentioned that the government's role was dominant in developing smart cities, so most of the funding for this project came from the central and local governments. According to Hu and Zheng (2021), cities such as Shanghai and Zhengzhou provide special funding for smart city project development, Beijing gets funding through sponsorships, and Chongqing encourages public-private partnerships to support their smart city projects. The presence of the government has promising implications for innovation related to smart cities. The government's seriousness was more evident in 2015 when Li Keqiang highlighted that smart technologies and smart cities were the two priorities of his administration. To achieve this, China will carry out extensive information technology applications in industrialization, digitization, and smart technologies. This is also supported by The Internet Plus Action Plan to promote the development of e-commerce, industrial networks, internet banking, Internet-based companies, which aim to integrate mobile Internet, cloud computing, big data, and the Internet of things (Yu and Xu 2018). Li Keqiang's statement aligns with China's first national urban plan in 2014 issued by the State Council entitled "National New-Type Urbanization Strategy" (2014–2020). The plan includes a section on smart cities, outlining dimensions of digital networking, planning management, urban infrastructure, public services, hi-tech industry, and social governance (R. Hu 2019). In his 2017 speech in which he used the term 'smart society' to elaborate on his goal of making China an innovative country, President Xi Jinping demonstrated how serious China is about technological innovation, which is applied to smart cities (R. Hu 2019). The government's consistency every year regarding smart city projects is not only a solution to the urbanization phenomenon but also a national interest and strategy to make China a beacon for the world in the context of innovation in smart cities. Therefore, implementing

the smart city system can be applied in other countries. It is proven that since 2013, Chinese companies have installed Chinese smart city systems in 116 countries (Segev 2021). This contract shows that China is already oriented to becoming a leading country in innovation.

Innovation requires effort in this smart city. China is making significant progress in developing and implementing ICT to support its smart city projects. This can be seen through the rapid development of China's Internet of Things (IoT), big data, and computing industries. China's IoT industry increased from 28 billion dollars to 209.8 billion dollars in 2018. The big data industry is expected to grow by 25% in 2019, and the cloud market in China is expected to reach 6.1 billion dollars in 2018, an increase of 65.2% year-on-year (Atha *et al.* 2020). The development of ICT and applications and technological innovation is one of the indicators for measuring the development of smart cities. As China's technology market grows, its cities continue innovating.

China's ambition for technological innovation and its seriousness to invest in research related to technology to be applied to smart cities can also be seen in the New Generation Artificial Intelligence Development Plan announced by the state council in 2017, China will invest 139 billion dollars to make China a leader in Artificial Intelligence technology by 2030 (Atha *et al.* 2020). Smart city innovation in China is attracting the attention of the private sector, such as Huawei, Baidu, Alibaba, Tencent, Cisco, and IBM. Experts estimate that the market value for building smart cities in China will rise from RMB 740 billion in 2014 to RMB 10,500 billion in 2019 and be worth RMB 25,000 billion in 2022 (R. Hu 2019). This figure certainly reflects the profit opportunities for China in terms of developing its smart city projects. In addition, with the significant investment that China has allocated in smart city research and development, it will undoubtedly upgrade the city's capacity to improve the quality of life of individuals in the city.

5 CONCLUSION

As one of the great powers, China faces challenges regarding urbanization and environmental issues. Today's domestic problems and technological developments encourage China to actively develop its smart city projects. The application of technology can increase the smart capacity of a city to solve problems locally, which has positive implications domestically and globally. Since 2014, China has been serious about developing its smart city project. Although China is late compared to other countries in terms of development, China can show that it is capable. The effectiveness, environment, and innovation aspects of smart cities in China evidence this capability. Having ambitions to become a leader in smart city innovation and making a sustainable environment a central part of its smart cities allows China to contribute positively to solving global environmental issues. The government must allow the public to provide feedback so that discrepancies in all aspects can be resolved between smart cities in China.

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Disclosure analysis of Pt Pupuk Indonesia (Persero) sustainability report based on the global reporting initiative for economic and energy development

Agustin Dwi Haryanti & Setu Setyawan
University of Muhammadiyah Malang, Malang, Indonesia

ABSTRACT: The purpose of this research was to analyze disclosure sustainability report of pt pupuk indonesia (persero) based on global reporting initiative (gri). This research uses a descriptive method with a case study. This research uses secondary data form documentation. The results showed that pt pupuk indonesia (persero) in 2021 not completely make disclosure sustainability report in accordance with applicable gri standards. Sustainability report of pt pupuk indonesia (persero) checked by ncsr (national center for sustainability reporting) so get platinum award in 2021. Rate from ncsr that sustainability report of pt pupuk indonesia (persero) has complied gri standards: opsi comprehensive. The research expected to considerations to increase their concern and responsibility for economic and energy disclosure sustainability report in accordance applicable gri standards.

1 INTRODUCTION

Environmental and social responsibility policies are called Corporate Social Responsibility (CSR). The update from CSR is a Sustainability Report (SR). SR contains an overview of the company's sustainability performance, both positive and negative participation by the company in a certain period. The issue of disclosing sustainability reports has become a debate in various circles of society related to environmental accounting. This environmental accounting is related to cases of environmental pollution in social life. There are several companies in the agricultural sector. The issue of disclosing sustainability reports is being debated in various circles of society related to environmental accounting. This environmental accounting is related to cases of environmental pollution in social life. There are several companies in the agricultural sector. This problem is symptomatic of the company's lack of concern for environmental and social responsibility and the lack of disclosure of the company's operational activities. With the existence of a sustainability report, it can reveal the company's operational activities and their impact on society, both environmental and social.

In previous research conducted by Annisa and Prof. Eko Ganis (2021) states that companies in the fertilizer industry must report their sustainability performance in a sustainability report every year. SR performance is useful for reporting a company's involvement in sustainable development goals based on the Global Reporting Initiative (GRI). Based on previous research, this research topic is interesting to examine again with reference to Randy Kuswanto's research (2019). However, there are differences with previous researchers. The research object is PT Pupuk Indonesia (Persero), while the previous researcher used a public company object in Indonesia which has published a sustainability report. The quality of the sustainability report is not only measured based on the GRI standards that have been applied. However, it can also be seen from the disclosure of the GRI standards that are applied. Disclosure on the sustainability report essentially includes additional supporting

information. This study will analyze PT Pupuk Indonesia (Persero)'s sustainability report disclosure based on the Global Reporting Initiative (GRI).

2 LITERATUR REVIEW

2.1 *Stakeholder theory*

Stakeholder theory prioritizes corporate accountability over financial performance. Currently, companies are starting to think about social factors as a form of attention to social problems in society. This concern is manifested in the voluntary disclosure of social, environmental and intellectual performance to be recognized by stakeholders. This theory takes into account the existence of the company in the future stakeholder support. Stakeholders have power over the company's human resources. Companies should be able to convince stakeholders that the output produced is environmentally friendly (reuse, reuse, recycle). One solution is to strengthen relations with stakeholders regarding disclosure of social, environmental and intellectual performance as outlined in a sustainability report. Disclosure of sustainability reports is a form of corporate responsibility for stakeholders (Farhana and Adelina 2019).

2.2 *Sustainability report*

Sustainability reports are different from financial reports. Sustainability report contains the company's profile, vision, mission, policies, and developments related to the environment made by the company in a certain period. Sustainability reports are reports published to stakeholders in an accountable and transparent manner whose contents include economic, social, environmental performance, as well as the company's daily operational activities (Farhana and Adelina 2019). Sustainability reports aim to communicate about corporate governance and company performance in which there are social, economic and environmental aspects that can affect the company's sustainability and are useful for all stakeholders, both internal and external. Sustainability reports also provide information regarding explanations of positive and negative participation from business organizations in achieving the Sustainable Development Goals (TPB). Currently, the application of sustainability reports is under government regulations, Law no. 40 of 2007 (Apriliyani *et al.* 2021).

The lack of awareness of companies issuing sustainability reports has forced the Financial Services Authority (OJK) to issue several factors. POJK Number 51/POJK.03/2017 in Chapter IV Article 10 paragraph (1) explains that a limited liability company is required to prepare a sustainability report and Article 10 paragraph (3) explains that companies are required to report a sustainability report to the Financial Services Authority (OJK) every year (Damayanti and Hardiningsih 2016). The Financial Services Authority (OJK) issued POJK Number 51/POJK.03/2017 aimed at increasing initiative and commitment to implementing the principles of sustainability as a form of sustainable development (Putri *et al.* 2022).

2.3 *The global reporting initiative*

The National Center for Sustainability Reporting (NCSR) assesses the disclosure of GRI-guided sustainability reports. The benefits of a sustainability report in accordance with the GRI framework are as follows:

- a. As a benchmark that takes into account statutes, laws, norms and performance standards,
- b. Disclose the company's obligation to sustainable development, and
- c. As material for consideration of the company's performance every year.

3 RESEARCH METHODOLOGY

3.1 *Types of research*

The type of research used in this research is descriptive research. Descriptive research is research that explains a phenomenon by using sentence media as a container. The research method used in this study is the case study method. The case study method is a method in which the process is carried out in detail, clearly and in depth.

3.2 *Data types and sources*

The type of data in this study is secondary data sourced from the Sustainability Report 2021 PT Pupuk Indonesia (Persero) which has been published on its official website. Other data sources in this study are GRI standard documents.

3.3 *Data collection technique*

The method of collecting data in this study is in the form of documentation and literature study. The method in the form of documentation is the collection of data in the form of explanatory text, photos, graphs and tables.

3.4 *Data analysis technique*

The data analysis technique of this research is content analysis which consists of three stages. According to Nursapia Harahap (2020) there are three stages of conducting content analysis techniques, including:

3.4.1 *Data reduction*

PT Pupuk Indonesia (Persero) discloses a sustainability report in which there are various kinds of information ranging from company profiles to sustainability reports. Not all of this information is included in the research discussion. Researchers will classify and discard data information that is not needed. The classification of information data will be adjusted to the GRI standard that the researcher uses.

3.4.2 *Presentation of data*

The researcher presents the data using the sustainability report disclosure table according to the GRI standard. The GRI standards are used to analyze general disclosures, strategy, ethics and integrity, governance, stakeholder engagement, reporting practices, economic performance, market presence, indirect economic impact, to marketing and labeling.

3.4.3 *Draw conclusions*

Researchers will draw conclusions from the results of presenting the data in the form of tables. Conclusions are drawn by calculating the percentage of disclosures that have been made by PT Pupuk Indonesia (Persero).

4 RESULT AND DISCUSSION

PT Pupuk Indonesia (Persero) originated from PT Pupuk Sriwidjaja (Persero) the name change took place in 2012. PT Pupuk Indonesia (Persero) currently has 10 subsidiary companies engaged in the fields of fertilizer, logistics, food, utilities and trading. PT Pupuk Indonesia (Persero) initially had a role as a strategic holding then changed to an activist holding, which means that PT Pupuk Indonesia (Persero) plays a more active role in the

company's business activities. This change has also made PT Pupuk Indonesia (Persero) a customer centric or consumer center.

PT Pupuk Indonesia (Persero) provides the best quality fertilizer produced by the nation's children in complete types, distributed throughout Indonesia and exported abroad. Fertilizer products produced by PT Pupuk Indonesia (Persero) consist of two types, namely subsidized fertilizers (urea, NPK, SP-36, ZA, ZK) and non-subsidized fertilizers (retail urea and NPK with single branding). While other products, namely ammonia products, innovative products in the form of organic fertilizers, slow release fertilizers, biological fertilizers, special hydroponic fertilizers, complete nutritional fertilizers, plant specific fertilizers, to agricultural bioproducts. Not only producing products, PT Pupuk Indonesia also provides services such as construction services, general trading, shipping services and sea transportation services, trade services through PT Mega Eltra, and utility services by PT Pupuk Indonesia Utilitas.

PT Pupuk Indonesia (Persero) publishes a sustainability report with the aim of being a form of corporate responsibility to stakeholders. To find out whether the sustainability report complies with applicable standards or not, disclosure is required. PT Pupuk Indonesia (Persero)'s sustainability report disclosure is adjusted in OJK Regulation No. 51/POJK. 03/2017 of 2017. PT Pupuk Indonesia (Persero)'s sustainability report is adjusted to GRI standards: a comprehensive choice. The comprehensive option was chosen because it makes it easier for the reader by providing GRI numbers in red at the end of the disclosure. Sustainability report is prepared with principles.

Transparency and accuracy to ensure credibility so that PT Pupuk Indonesia (Persero) appointed an outside party as an independent assurer. Disclosure of sustainability reports that are good and correct are adjusted to the current GRI standards. Following are the results of PT Pupuk Indonesia (Persero)'s 2021 sustainability report disclosure in accordance with GRI standards.

No.	GRI Disclosure #	Disclosure Title	Page # (where Statement is seen)	Brief Description	GRI Standards Applicability (A/NA)
Economic Performance	201-1	Direct economic value generated and distributed	61	As one of the most well-developed players in the Fertilizer industry in the Asia Pacific market, PT Pupuk Indonesia (Persero) targets Fertilizer exigencies both for Indonesian needs and for export. In 2020, PT Pupuk Indonesia (Persero) recorded its highest Fertilizer production record of 12,263,833 tons, or 117% of the set target.	Applied
201 Economic Performance	201-2	Financial implications and other risks and opportunities due to climate change	68	Climate change also affects the business aspects of PT Pupuk Indonesia (Persero), although indirectly, through: (1) Changes in harvest time that affect farmers' need for Fertilizer; thus, the adjustments are required in Fertilizer distribution. To circumvent stock accumulation in line III warehouses due to reduced	Applied

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No.	GRI Disclosure #	Disclosure Title	Page # (where Statement is seen)	Brief Description	GRI Standards Applicability (A/NA)
				<p>absorption due to shifts in the harvest period, PT Pupuk Indonesia (Persero) will optimise the delivery plan to line III warehouses in accordance with the availability of warehouse space and minimum stock requirements.</p> <p>(2) The narrowing of agricultural land leads to reduced demand for Fertilizers. The Ministry of Agrarian and Spatial Planning/ National Defense Agency noted that there was a conversion of paddy fields of 150,000-200,000 ha/year while the expansion of paddy fields was only 40,000 ha/year. Therefore, PT Pupuk Indonesia (Persero) is expanding its marketing target to the horticultural plantation sector and increasing exports</p> <p>(3) Climate change further causes flooding which disrupts the Fertilizer distribution process. To overcome this circumstance, we buffer stock from other locations and augment Fertilizer delivery modes.</p> <p>(4) Climate change, both in the form of high rainfall and prolonged drought, affects the fertility of agricultural land. This can result in the inhibition of nutrient absorption by plants; thus, the effectiveness and efficiency of Fertilizer is reduced. The Company endeavours to cope with this through the introduction and implementation of innovative products, such as organic Fertilizers, bio-decomposers, and biological Fertilizers that can increase organic matter and soil fertility as well as microbes that help increase nutrient uptake by plants so as to increase productivity. In addition to these conditions, the Company is further advancing Enhanced Efficiency Fertilizer products</p>	

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No.	GRI Disclosure #	Disclosure Title	Page # (where Statement is seen)	Brief Description	GRI Standards Applicability (A/NA)
201 Economic Performance	201-3	Defined benefit plan obligations and other retirement plans	67	(such as Controlled Release Fertilizer and Urea N Stabilized) which snowball Fertilizer efficiency and decrease losses to the environment as well as develop land-specific products that are adaptable to drought stress. As a State-Owned Enterprise, Pupuk Indonesia shares are fully owned by the Government of the Republic of Indonesia with a paid-up capital of Rp25 trillion and an authorized capital of Rp100 trillion. Other assistance is in the form of Fertilizer subsidies; thus, the price of Fertilizer can be affordable by farmers. In carrying through the duties of maintaining Indonesian food security, Pupuk Indonesia has all of the responsibilities of a PSO (Public Service Obligation), namely, to provide products at a certain price. For this reason, the government purveys compensation for the costs incurred by SOEs, including the expected margin.	Applied
201 Economic Performance	201-4	Financial assistance received from government	67	As a State-Owned Enterprise, Pupuk Indonesia shares are fully owned by the Government of the Republic of Indonesia with a paid-up capital of Rp25 trillion and an authorized capital of Rp100 trillion. Other assistance is in the form of Fertilizer subsidies; thus, the price of Fertilizer can be affordable by farmers.	Applied
203 Indirect Economic Impacts	203-1	Infrastructure investments and services supported	115	Through the CSR Program, the Company contributes to infrastructure investment and service support. Infrastructure development is very important because its existence will greatly assist community access and mobility, which will have an impact on the welfare and economic life of the community. Infrastructure investment assistance and support services are provided on a voluntary or pro bono basis and are not commercial in nature. SOE Ministerial Regulation No. PER-02/MBU/04/2020 regulated seven sectors that are entitled to	Applied

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No.	GRI Disclosure #	Disclosure Title	Page # (where Statement is seen)	Brief Description	GRI Standards Applicability (A/NA)
203 Indirect Economic Impacts	203-2	Significant indirect economic impacts	66, 116, 125	<p>receive the allocation of funds. The allocation of funds related to infrastructure development and service support includes public facilities and infrastructure sector. In 2020, the total amount of financing for infrastructure development was Rp9,913 billion.</p> <p>The CSR program implemented by the Company has an indirect but significant economic impact on the economy of the local community around the Company's operational areas. Program initiations such as the Partnership Program and other Poverty Alleviation Programs are carried out to increase community productivity, improve community skills and competencies, and build the economy in areas with high poverty rates.</p> <p>Partnership Program The Partnership Program is a Corporate Social Responsibility program that aims to improve the ability of small businesses to become strong and independent through the use of funds from a portion of the profits earned by SOEs. Small business in question is a small-scale people's economic activity with the criteria regulated in Ministerial Regulation no. PER-02/MBU/04/2020. The strategic targets that need accomplishing through the Partnership Program are to promote small entrepreneurs and expand employment opportunities, thereby contributing to the local economy.</p> <p>Community and Environmental Development Fund The Community Development Program is a program to empower the social condition of the community around the Company's operational areas, which is carried out through the use of grant funds. Funds are allocated through eight sectors as stipulated in the Minister of SOEs No. PER-02/ MBU/04/2020 :</p>	Applied

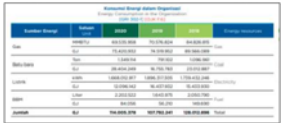
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No.	GRI Disclosure #	Disclosure Title	Page # (where Statement is seen)	Brief Description	GRI Standards Applicability (A/NA)
				<p>(1) Assistance for victims of natural disasters and nonnatural disasters, including those caused by epidemics.</p> <p>(2) Assistance for Education. the assistance may be in the form of training, educational infrastructure, and facilities.</p> <p>(3) Health improvement assistance.</p> <p>(4) Assistance for the development of public infrastructure and/or facilities.</p> <p>(5) Assistance for worship facilities.</p> <p>(6) Assistance for nature conservation.</p> <p>(7) Assistance for community needs in the context of poverty alleviation, including for:</p> <ul style="list-style-type: none"> ● Electrification. ● Provision of clean water facilities. ● Provision of sanitation facilities. ● Education, training, apprenticeship assistance. ● Promotion and other forms of assistance related to efforts to increase the economic independence of small businesses other than the Partners of the Partnership Program. ● House improvement for the poor. ● Nursery assistance for agriculture, animal husbandry and fisheries; or ● Business equipment assistance. In the reporting year, the realization of the disbursement of Community Development Program funds amounted to Rp38.27 billion, a decrease of 12% compared to the previous year. The largest portion was channelled to the Poverty Alleviation Sector, amounting to Rp16.735 billion (32%). 	


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No.	GRI Disclosure #	Disclosure Title	Page # (where Statement is seen)	Brief Description	GRI Standards Applicability (A/NA)
204 Procurement Practices	204-1	Proportion of spending on local suppliers	64	Pupuk Indonesia's commitment to the regional economy is realized by prioritizing local suppliers, namely suppliers domiciled in Indonesia/provinces where our factories are located, for the procurement of goods and services. In the reporting year, the procurement of goods and services absorbed by local suppliers amounted to around Rp55,988 billion rupiah (87% of the total procurement value) while international suppliers reached Rp8,000 billion.	Applied
Energy 302 Energy	302-1	Energy consumption within the organization	133	Energy sources spent for plant operations come from non-renewable energy sources in the form of gas, coal, electricity, and petroleum. The following is the energy consumption in the organization: 	Applied
302 Energy	302-2	Energy consumption outside of the organization	134	There is still no record of energy consumption outside the organization	Applied
302 Energy	302-3	Energy intensity	134	Energy intensity calculates the amount of energy used to produce a unit of production. The lower the energy intensity, the less energy is used to produce one unit of production. Ammonia energy intensity in 2020 was 37.06 GJ/ton or down from the previous year while urea intensity in 2020 was 28.36 GJ/ton which also fell off by 2% due to increased energy efficiency in line with increased operating rates. This energy intensity calculates the total energy in the organization in GJ and is divided by the unit of production of urea and ammonia Fertilizers, that is measured in tons. We draw a distinction of the energy intensity for ammonia and urea production, for that is the Company's KPI from the Ministry of SOEs	Applied

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No.	GRI Disclosure #	Disclosure Title	Page # (where Statement is seen)	Brief Description	GRI Standards Applicability (A/NA)
302 Energy	302-4	Reduction of energy consumption	135	<p>Not only is reducing energy consumption favourable for reducing GHG emissions and improving people's quality of life, but it is also imperative to deal with the crisis caused by the pandemic. Energy efficiency increases profits and productivity. Therefore, Pupuk Indonesia will always endeavour to shrink energy consumption through targeted strategies, such as:</p> <ol style="list-style-type: none"> (1) Modifying and interconnecting links amongst factories. (2) Replacing ordinary lamps with LED lamps for street lighting. (3) Modifying/replacing air-conditioning equipment. (4) Turning off electrical equipment when not in use. (5) Efficiency in the use of gas raw materials. (6) Carrying out a factory revitalisation program. (7) Replacing an old engine that wastes gas consumption with a new engine that is more efficient. <p>On this account, in the reporting year, we were able to save 17,446,752 GJ of energy from electricity, gas, coal, and fuel savings. The calculation method is conducted with an approach that calculates the efficiency/conservation value of each program.</p>	Applied
302 Energy	302-5	Reductions in energy requirements of products and services	135	<p>The reduction in energy required for the product calculates the energy reduction of each ton of product in 2020 compared to the product in 2019.</p> 	Applied

5 CONCLUSION

PT Pupuk Indonesia (Persero) has made disclosures in accordance with GRI standards as a whole on economic and energy development. In 2021 PT Pupuk Indonesia (Persero)'s

sustainability report is prepared based on GRI standards. The implication of the results of the analysis and drawing conclusions is that sustainability reports are very important for companies that prepare reports based on the Comprehensive Option. This is intended as a form of corporate responsibility to stakeholders in the economic, social and environmental aspects. It also aims at decision making by stakeholders.

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The content language integrated learning (Clil) approach is an effort to improve speaking skills at the beginner level of UMM BIPA students

Faizin, Setya Yuwana, Syamsul Sodiq & Suhartono
Language and Literature Education, Surabaya State University, Indonesia

ABSTRACT: In successful learning, the use of the teaching language is a factor that also determines the success of teaching. How the teacher patterns the language used in teaching becomes the teacher's obligation to facilitate student understanding. The CLIL approach is a language learning approach that can relate language and content by developing linguistic competence. In this case, the focus is on learning speaking classes at the BIPA KNB class at the University of Muhammadiyah Malang (UMM) or the elementary level. Furthermore, Puffer (2007) said that he views teachers in the context of CLIL, which can be integrated with various language learning support strategies which refer to forms of teaching towards two focuses equally well on understanding the language itself and the language content. This means that the first focus is learning Indonesian and the second focus is Indonesian, which is used as teaching. This pattern should be done in the UMM BIPA speaking class. In BIPA learning in the beginner-level speaking class in the KNB program at BIPA UMM, there was a fairly high dominance of the use of English as an introduction to teaching conducted by two instructors who were informants. Of the two teachers, it was found that there was a fairly high dominance in the use of English, even in the context of simple languages, such as the word good job 'good' as often expressed by the teacher or informant F. In addition, the second informant, M, often uses English for some simple vocabulary 'hear'. Informant M repeated several times during the lesson. BIPA students are ideally taught in Indonesian and no longer use English or other foreign languages. It will be better when that target language becomes a surgical tool in understanding L2. In this case, the target language is Indonesian.

Keywords: CLIL Concept, BIPA, Target Language, Learning, Teaching

1 INTRODUCTION

The CLIL approach is a language learning approach that can relate language and content by developing linguistic competence. This means that teaching the language can be done with the target language. Within the conceptual framework mentioned by Coyle, namely, the more specific objectives summarized in the 4CS concept. First, Content (content); Second, Communication (communication); Third, Cognition (cognition); and fourth, Culture (culture). The content focuses on building subject skills or lesson content. Communication focuses on improving the overall competence of the target language. Cognition aims to develop thinking skills. Meanwhile, culture has the goal of building intercultural knowledge and understanding. From the CLIL Approach paradigm, the dimension of language is related to the role of CLIL, which emphasizes language competence in general and therefore includes reading, writing, speaking, and listening skills, as well as adding to language experience through the integration of language and non-language teaching. Spratt (2012)

stated that, in general, the purpose of CLIL is to improve students' knowledge and skills in a subject, and their ability in the language being taught.

BIPA (Indonesian Language for Foreign Speakers) learning is ideally taught in Indonesian to provide initial input for understanding Indonesian. This means it does not dominate the use of English as an introduction to BIPA learning. In successful learning, the use of the teaching language is a factor that also determines the success of teaching. How the teacher patterns the language used in teaching becomes the teacher's obligation to facilitate student understanding. BIPA learning can be taught by anyone who can speak Indonesian. However, special skills and strategies are needed in teaching. Today, not a few BIPA teachers come from various disciplines to foreigners who have Indonesian language skills. This means that the basic competence of teaching BIPA is not considered difficult. However, when looking at the level of success, it is necessary to conduct an in-depth evaluation of the methods or concepts applied in teaching. Compared to BIPA teachers with a scientific background in English or other non-linguistic knowledge with teachers who come from a scientific background in Indonesian, there will be differences in linguistic patterns in their teaching practices.

This is a CLIL conceptual framework that relates to various cultural aspects and BIPA teaching schemes. The University of Muhammadiyah Malang organizes BIPA learning specifically for the Developing Countries Partnership (KNB) scholarship program. This program is a degree scholarship for international students to study at various selected and reputable universities in Indonesia. The background of KNB students is that the dominant student candidates will continue their Masters in Indonesia. Before taking their master's degree, KNB students must take part in the BIPA program for 1 (one) year to strengthen their Indonesian language as a provision for their degree study. The learning of the Indonesian language is divided into various levels, depending on the level of proficiency in the Indonesian language that is mastered. Starting from elementary, intermediate, to advanced levels. In this case, the focus is more on the basic class with speaking skills subject in 2 (two) classes and different teachers. In the elementary class, BIPA students will be taught 4 (four) language skills: listening, speaking, reading, and writing.

2 RESEARCH METHODS

The method used in this study was descriptive qualitative using a case study approach carried out in the context of basic-level BIPA teaching for speaking material conducted at BIPA University of Muhammadiyah Malang (UMM). The primary data source comes from two key informants, F, a BIPA teacher from an English scientific background. F received his tertiary education in Australia and other educational experiences in the USA. The informant M is a BIPA teacher who has a background in Mathematics education from undergraduate to masters. The duration of the teaching experience of two informants has taught BIPA for 7 years.

The background of the informant's educational experience is the criterion for determining the source. Data retrieval by documentation, interviews, and observations are then analyzed by following several stages, namely data collection through several methods of data collection, data reduction, analysis to concluding. Secondary data is obtained from books, theories, articles, and research that has been done before. The data is in the form of speech by BIPA teachers who predominantly use English as the language of instruction in speaking materials for the beginner or basic level of KNB classes at BIPA, University of Muhammadiyah Malang. It is necessary to collect official electronic documents such as writing, videos, photos, and other electronic records.

This was collected during the beginner-level BIPA learning process for speaking skills material at the BIPA Muhammadiyah University of Malang. Furthermore, it is analyzed in certain ways that are used by researchers to understand the problems of linguistic units that are appointed as research objects (Sudaryanto via Udayani 2011: 40). The data analysis techniques used were as follows: (1) virtual collection of teaching and learning process data

for beginner classes with speaking material at BIPA UMM through recording techniques, (2) data reduction by grouping relevant data and describing forms of dominance in the use of English by teachers in explaining Indonesian words or sentences, (3) systematic presentation of data so that it is easy to understand as categories of forms, patterns, and teacher strategies in providing an understanding of Indonesian to BIPA students, (4) grouping data based on the type of English and Indonesian used by BIPA teachers, (5) analyzing how the dominance of the use of English and Indonesian by BIPA teachers for basic speaking classes, (6) conclusions on the data that has been analyzed and discussed (Miles *et al.* 2014).

3 RESULTS AND DISCUSSION

The language teaching model can be influenced by the culture of the language, according to Coyle (2006). Within the CLIL framework, culture has the following components of the approach.

- (a) Especially relevant for classes with students who bring diverse language and cultural experiences.
- (b) It is an appropriate vehicle for exploring the relationship between language and cultural identity, examining behavior, attitudes, and values.
- (c) Involve context and content that enriches students' understanding of their culture and others.
- (d) Strengthen intercultural understanding.

Departing from the various aspects above, this study aims to find the dominance of the use of the target language used as the teaching language based on the CLIL concept. In teaching BIPA, does the teacher explain Indonesian language material using a foreign language or Indonesian. This is seen from various influencing factors, such as the language culture owned by the teacher, the language knowledge possessed by the teacher, to the limits of the teacher's language ability. When using Indonesian as an introduction to teaching BIPA, it will be able to improve students' speaking skills.

The form of sample data from each informant is as follows.

Table of quotations from informant F

Lecturer/ Informant	Teaching Sentences in the Form of Explanations in English	Participant Name	Participant Response
F Please go ahead, spell it ... no no no ...	Lames	Ah, ok
	After, after that ...		
	Can you repet egain ...		
	Yes, shoe. What is it? What is it shoe?	Nok	eee ... no idea
	No ide, nok, how know shoe is?		That shoes?
	That thing they you wer use, that's to use to go other please.		
	What number? Which number? Number?	Gatnos	
	Good job, good ...		
	Sayid, which number? What Number?	Sayid	Number five
	Good job		
Everybody knows? What trousers is?			
Thanks you Farid Good job	Farid	Yeh yeh	

Screenshot of BIPA Learning (online) with Informant M

zoom.us/rec/play/Hcax3-HIEKJN2Q2YdDsdvYj2plGn3Sn0OmdaFJ90uJnZRWX17_yCZVkiHyJskC8eX-0TLzjr3emZE_ANx89RA8a3o5q... Update

zoom BIPA Kelas A (Berbicara) - Shared screen with speaker view Download (3 files)

JUAL BELI
(Membeli Makanan) Berbicara-A1
Peremuan 4

0:21:10
00:21:06 / 01:19:36 Speed

Chat Messages

- UPT Bahasa Indonesia Untuk Penutur Asing 22:04 sudah makan?
- UPT Bahasa Indonesia Untuk Penutur Asing 22:53 suka makan apa?
- UPT Bahasa Indonesia Untuk Penutur Asing 25:31 Anda di mana sekarang?
- UPT Bahasa Indonesia Untuk Penutur Asing 27:06 sehat?
- UPT Bahasa Indonesia Untuk Penutur Asing 28:55

zoom.us/rec/play/Hcax3-HIEKJN2Q2YdDsdvYj2plGn3Sn0OmdaFJ90uJnZRWX17_yCZVkiHyJskC8eX-0TLzjr3emZE_ANx89RA8a3o5q... Update

zoom BIPA Kelas A (Berbicara) - Shared screen with speaker view Download (3 files)

Membeli Makanan

Pasar tradisional
Pasar Modern
Warung makan
Restoran

Chat Messages

- UPT Bahasa Indonesia Untuk Penutur Asing 22:04 sudah makan?
- UPT Bahasa Indonesia Untuk Penutur Asing 22:53 suka makan apa?
- UPT Bahasa Indonesia Untuk Penutur Asing 25:31 Anda di mana sekarang?
- UPT Bahasa Indonesia Untuk Penutur Asing 27:06 sehat?
- UPT Bahasa Indonesia Untuk Penutur Asing 28:55 homework = tugas

3.1 CLIL in BIPA learning

CLIL is a learning approach adopted in learning in Europe around 1994. The emergence of CLIL was influenced by bilingual or dual language orientation initiatives and developed in Canada to design and adapt language learning as expressed by Marsh (2002). This approach focuses on the integration aspects of a learning material linked to the learner's language skills. In BIPA learning, understanding the content being studied is very important so that you don't just know the meaning of a word or sentence but understand the meaning of the word or sentence as a whole. As Puffer (2007) says, he views teachers in the context of CLIL as being integrated with various language learning support strategies that refer to forms of teaching that focus equally on understanding the language itself and the content of that language.

Because this focus will be able to influence BIPA students in language competence as well as an understanding of socio-culture. For example, like the variety of greetings or greetings spoken by Indonesians. Good morning, good afternoon, good night, and *Assalamualaikum*, which is used by the Muslim community in Indonesia. Here they understand how Indonesian culture, which Muslims dominate, uses greetings as initial greetings, and that is equally understood by people, not only Muslims but also other non-Muslims.

3.2 *Indonesian as an introduction to BIPA learning*

CLIL becomes a language approach that focuses more on aspects of the learning material. Even so, the components of the conceptual framework in this approach depend on strategic aspects, especially the most dominant aspects of communication and cognition. Strategy is important in teaching BIPA because students' learning characteristics differ from Indonesians in general. Differences in language, cultural, and learning backgrounds certainly also influence BIPA students understanding Indonesian.

Looking at previous studies on research related to the application of CLIL in the context of learning Indonesian, quite a lot has been done. Several studies include research by Febriani (2015), Dewi and Zulaeha (2016), and Utami and Sadya (2019) which show that CLIL provides solutions to assist in actualizing students' top-level thinking activities in communicating their creative products in Indonesian. So that the process of thinking in BIPA learning can be realized through how to teach Indonesian to foreigners by using Indonesian, meaning without introducing other foreign languages. Furthermore, there will be a thinking process for BIPA students to understand Indonesian without an automatic process, like finding the translation of a word and sentence in a dictionary. As also explained by Nuny (2012) that understanding of the language for BIPA students is obtained without using a dictionary or translation.

Most BIPA students prefer instant teaching, such as explanations in Indonesian using English or other foreign languages. However, this is not very good because it will make the understanding of the Indonesian language too "instant" so it also affects the level of long-term understanding or is easily forgotten.

3.3 *Intralingual language in BIPA learning*

The BIPA learning pattern, as emphasized by Nuny (2012) in the context of understanding a second language (B2), namely that it can be emphasized that:

- (a) B2 is used as the primary referral system
- (b) There is no need for a comparison between L1 and L2 because the characteristics of one language another are different.
- (c) There is no need for translation from and to B2 in BIPA learning
- (d) Using the direct method (direct method) in learning

How does CLIL encourage learning content by understanding aspects of language skills, in this case, BIPA students. They are ideally taught in Indonesian and no longer use English or other foreign languages. Understanding content requires language as an entry point to understand the content. Then it will be better when the target language becomes a surgical tool in understanding L2 because the content being studied is also Indonesian and the target language is Indonesian.

In BIPA learning in the beginner-level speaking class in the KNB program at BIPA UMM, there was a fairly high dominance of the use of English as an introduction to teaching conducted by two instructors who were informants. Of the two teachers, it was found that there was a fairly high dominance in the use of English, even in the context of simple languages, such as the word good job 'good' as often expressed by the teacher or informant F. In addition to the second informant, M, he often used English for some simple vocabulary 'hear'. Informant M repeated several times during the lesson.

Basically, a word that is repeated will be very good, especially if it is repeated in the target language. As in this case the target language is Indonesian. Meanwhile, in this case, the continuous repetition is done in English which is not the target language of learning. This can also happen because of the background in the scientific field between the two instructors with non-Indonesian language backgrounds. Informant M has an educational background

from Bachelor to Masters in Mathematics Education, while informant F has a Bachelors and Masters background in English education and received his education in Australia.

Four components can support the achievement of learning success according to the CLIL concept, namely:

- (a) Content, namely by increasing knowledge, skills, and understanding of the material.
- (b) Communication, namely by using language to learn and learning to use language.
- (c) Cognition, namely by developing thinking skills connecting abstract and concrete concepts and understanding and language.
- (d) Culture, namely by opening new views and sharing understanding to foster awareness of oneself and others.

At point 2 emphasizes how to learn the language using the language as well. This means it can also be assumed that learning Indonesian also uses an introduction to Indonesian. Meanwhile, at other points, it is more about what content aspects are being studied or the content in the learning.

4 CONCLUSION

The paradigm built on the CLIL concept is to integrate learning related to language. This means that when someone learns something, he will also learn the language, regardless of whether it is the target language, B1 or B2, how the integration of learning is built with the language skills to be achieved. This shows that it does not mean that language learning is only a complementary feature but is equally a main feature, as is the content of the material being studied. Therefore, in learning BIPA, it is necessary to strengthen the introduction of Indonesian in the learning process.

BIPA students are ideally taught in Indonesian and no longer use English or other foreign languages. Understanding content requires language as an entry point to understand the content. Then it will be better when the target language becomes a surgical tool in understanding L2 because the content being studied is also Indonesian. Furthermore, in this case, the target language is Indonesian.

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The effect of managerial ownership and institutional ownership on firm value

Yuwansyari Bayu Pramudyo, Siti Zubaidah & Firda Ayu Amelia

Accounting Departement, Faculty Economic and Business, Univesitas Muhammadiyah Malang

ABSTRACT: This study aims to empirically prove managerial ownership and institutional ownership of firm value in manufacturing companies listed on the Indonesia Stock Exchange (IDX) in 2021. This type of research includes quantitative research with secondary data sources on annual reports. The sampling technique in this study used purposive sampling and obtained a sample of 40 companies from 211 companies in a period of 1 year. The data analysis method used in this study is the multiple linear regression analysis method with the help of SPSS 27 software. The results obtained from this study indicate that managerial ownership and institutional ownership have no effect on firm value.

Keywords: firm value, institutional ownership, managerial ownership.

1 INTRODUCTION

Industry competition forces companies to improve performance so as to increase firm value in each period. With a well-managed company, it can provide more value for the company. Firm value is a certain condition that has been achieved by the company as an illustration of public trust in the company after going through a process of activities that have been carried out for several years, namely since the company was founded until now (Khakim and Yudiantoro 2022). Firm value is a company description of how well the company is performing which can be seen from the growth in stock prices. High firm value will be followed by high shareholder prosperity (Brigham and Houston 2018). In companies that go public, one of the ways to increase firm value is through stock prices. The stock price is a fair price that can be used as a proxy for firm value. The size of stock prices can be seen from prices that are stable and have increased in the long term. The higher the stock price, the higher the firm value. The phenomenon that occurred in one of the manufacturing companies, namely PT Astra Internasional (ASII) TBK, which can be seen in reports from 2017 to 2021, has experienced a decline in share prices. At the beginning of 2017 on the stock market the price was IDR 8,175 and at the end of the year it was closed at IDR 8,200, which was an increase of 0.03%. At the beginning of 2018 on the stock market the price was IDR 8,300 and at the end of the year it was closed at IDR 8,255, which was a decrease of 0.09%. At the beginning of 2019 on the stock market the price was IDR 8,350 and at the end of the year it was closed at IDR 6,925, which was a decrease of 0.17%. At the beginning of 2020 on the stock market the price was IDR 6,950 and at the end of the year it was closed at IDR 6,000, which is a decrease of 0.13%. At the beginning of 2021 on the stock market the price was IDR 6,425 and at the end of the year it was closed at IDR 5,700, which is a decrease of 0.11%.

In general, companies have a goal, which is to generate as much profit as possible and increase the prosperity of shareholders. Managers as company managers are required to innovate, one of which is to make strategies to improve company performance by aligning the interests of investors. Managers of companies that have succeeded in improving performance can be seen by increasing firm value. An increase in firm value can give a positive signal from the company to investors

regarding a high return on investment, so that investors are interested in investing in the company. Ownership structure can affect firm value. The structure of share ownership in a company is categorized into two, namely managerial ownership and institutional ownership. Supervision and control can be through managerial ownership and institutional ownership. Dewi and Sudirgo (2021) managerial ownership is the number of share ownership owned by internal management from outstanding shares, such as: directors, managers or executives who manage the company. If large share ownership is owned by management, then management will try to maximize its performance well. Meanwhile, institutional ownership is the number of shareholdings by companies or institutions, namely: insurance companies, banks, investment companies, state-owned companies and ownership of other institutions (Junardi *et al.* 2022). The existence of institutional investors can carry out the functions of supervision, control and direction to company management in managing company assets properly. This is very useful so that the company's management does not do things that can harm the company which results in a decrease in firm value.

Based on the results of previous studies there were differences in research results, so the authors decided to re-examine the effect of managerial ownership and institutional ownership on firm value. This research was conducted on manufacturing companies listed on the Indonesia Stock Exchange in 2021, because manufacturing companies have the largest number of companies, can help increase domestic or international trade in supporting economic development, and tend to have all companies publish complete annual reports. Research results from Alawiyah *et al* (2022), Rahmadi and Wahyudi (2021), and Sholikhah and Trisnawati (2022) stated that managerial ownership variables have a positive effect on firm values. So the hypothesis obtained is: H1: managerial ownership has an effect on firm value. Research from Rahmadi and Wahyudi (2021) and Sholikhah and Trisnawati (2022) stated that the institutional ownership variable has an effect on firm value. So the hypothesis obtained is: H2: institutional ownership has an effect on firm value. This study aims to empirically prove the influence managerial ownership and institutional ownership of firm value in manufacturing companies listed on the Indonesia Stock Exchange (IDX) in 2021. This research was conducted on manufacturing companies listed on the Indonesia Stock Exchange in 2021, because manufacturing companies have the largest number of companies, can help to increase domestic trade or international in supporting economic development, and it tends to be that all companies have issued a complete annual report. The researcher hopes that this research will have benefits, namely that it can be a theory development and material for consideration for companies in maintaining or increasing firm value in the eyes of potential investors on the stock exchange.

2 LITERATUR REVIEW

2.1 *Signal theory*

Signal theory was first coined by Akerlof (1970) on the results of his work entitled "The Market Lemons". Akerlof's thinking was later developed by Spence (1973) in his research entitled "Job Market Signaling" which defines, signaling theory is a requirement to provide a signal from the sender (owner of the information) to provide pieces of relevant information so that it can be utilized by the recipient and the recipient will adjust his behavior accordingly. with his understanding of the signal. Information of a company is very important for investors as material in decision making. This information is in the form of conditions, records or good descriptions of the company in the past, present and future.

2.2 *Managerial ownership*

Managerial ownership is the number of share ownership owned by internal management from outstanding shares, such as: directors, managers or executives who manage the company (Dewi and Sudirgo 2021). In managerial ownership, directors and managers have a dual role as managers and shareholders. The greater the proportion of management ownership in the company, the greater the interests of managers and shareholders can unite (Jensen and Meckling 1976).

2.3 Institutional ownership

Institutional ownership is the number of shareholdings by companies or institutions, namely: insurance companies, banks, investment companies, state-owned companies and ownership of other institutions (Junardi *et al.* 2022). Institutional ownership has several functions, namely monitoring effectively all activities carried out by the company, and overseeing every decision made by the company's management. Therefore, institutional investors who participate in decision making do not easily believe in the possible manipulation of company profits.

2.4 Firm value

Firm value is the market value due to firm value can provide maximum shareholder prosperity if the company's share price increased (Brigham and Houston 2018). M increase firm value is a long-term goal, so managers are required to be able to manage and prosper holders, so that managers will be judged on the success of their performance. The share price used generally refers to the closing price of the shares, and is the price that occurs when the shares are traded on the market. Firm value can be calculated using the price to book value (PBV) method. This ratio shows how far a company is able to create corporate value to the amount of capital invested. The ratio of stock market price to book value provides a clue to investors' views of the company (Brigham and Houston 2018). The higher the price to book value (PBV), the more confidence investors will have in the company's business capabilities.

2.5 Research method

Research uses associative research. This type of associative research aims to analyze the relationship of one variable with another variable, this relationship is in the form of an ordinary correlation and causality relationship (Ulum and Juanda 2016). The population in this study are manufacturing companies listed on the Indonesia Stock Exchange (IDX) in 2021. The sample used purposive sampling method, which is a sampling method based on certain criteria.

- (1) Manufacturing companies that publish annual reports in 2021.
- (2) Companies that have managerial ownership
- (3) Companies that have institutional ownership.

The data used is secondary data, namely the annual and financial reports of companies listed on the Indonesia Stock Exchange (IDX) in 2021. Data sources were obtained through the company's website and the Indonesia Stock Exchange (www.idx.com).

Table 1. Sample criteria.

No	Description	Amount
1.	Manufacturing company listed on IDX in 2021	211
2.	Companies that do not report annual reports	(5)
3.	Companies that do not have <i>managerial ownership</i>	(122)
4.	Companies that do not have <i>institutional ownership</i>	(44)
	Total sample	40

This study uses independent variables, namely managerial ownership and institutional ownership and the dependent variable, namely firm value, which can be measured using the following formula:

Managerial ownership is the number of share ownership owned by internal management from outstanding shares, such as: directors, managers or executives who manage the company

(Dewi and Sudirgo 2021). Here is the calculation formula:

$$\text{MAN} = \frac{\text{Number of shares owned management}}{\text{Total shares}} \times 100$$

This study uses independent variables, namely managerial ownership and institutional ownership and the dependent variable, namely firm value, which can be measured using the following formula: Institutional ownership is the number of shareholdings by companies or institutions, namely: insurance companies, banks, investment companies, state owned companies and ownership of other institutions (Junardi *et al.* 2022). Here is the calculation formula:

$$\text{INST} = \frac{\text{Number of shares owned institutional}}{\text{Total shares}} \times 100$$

Firm value is the market value due to firm value can provide maximum shareholder prosperity if the company's share price increased (Brigham and Houston 2018). In firm value research, it is proxied by price to book value (PBV). According to Ang (1997) price to book value (PBV) is a market ratio used to measure the performance of stock market prices to their book values. Here is the calculation formula:

$$\text{PBV} = \frac{\text{Price per share}}{\text{book value per shares}}$$

2.6 Data analysis technique

Data analysis was performed with descriptive statistics. While testing the hypothesis using multiple linear analysis using SPSS 27 includes the F test, T test and the coefficient of determination. This test also uses classical assumptions consisting of the Normality Test, Multicollinearity Test and Heteroscedasticity Test. This study examines the effect of managerial ownership (X1), institutional ownership (X2) on firm value (Y). Regression equation as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \epsilon$$

Description:

Y : Firm value

A : Constants

$\beta_1 \beta_2$: Regression coefficient

X1 : Managerial ownership

X2 : Institutional ownership

ϵ : Other variabel

3 RESULT AND DISCUSSION

3.1 Descriptive statistical analysis

Table 2. Descriptive statistical analysis test result.

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
MAN OWNSHP	40	0.001	70.016	10.06715	17.601792
INS OWNSHP	40	2.265	90.873	39.27460	28.037768
PBV	40	0.092	7.533	2.26666	1.987219
Valid N (listwise)	40				

Source. Result of data analylis, 2023.

The results of descriptive statistical analysis of managerial ownership variables show a minimum value of 0.001 for PT Semen Baturaja Tbk and a maximum value of 70.016 for PT Sat Nusapersada Tbk with an average value of 10.067 and a standard deviation of 17.601. The average value of 10.067 indicates that the sample companies have an average managerial ownership of 10.06%. The results of descriptive statistical analysis of institutional ownership variables show a minimum value of 2.265 by PT Wahana Inti Makmur Tbk and a maximum value of 90.873 by PT Alumindo Light Metal Industry Tbk with an average value of 39.274 and a standard deviation of 28.037. The average value of 39.274 indicates that the sample companies have an average institutional ownership of 39.27%. The results of the descriptive statistical analysis of the firm value variable show a minimum value of 0.092 by PT Sat Nusapersada Tbk and the maximum value by PT Indonesian Tobacco Tbk is 7.533 with an average value of 2.266 and has a standard deviation of 1.987. The average value of 2.266 indicates that the sample companies have an average firm value of 2.2.

3.2 Normality test

Table 3. Normality test result.

One-Sample Kolmogorov-Smirnov Test	
Unstandardized Residual	
N	40
Test Statistic	0.064
Asymp. Sig (2-tailed) ^c	0.200 ^d

Source. Result of data analylis, 2023.

The test results can be declared normally distributed if the significant values (sig) > 0.05 and < 0.05 can be declared not normally distributed. Based on the table in above, it can be seen that the results of the normality test obtained a significance value of > 0.05, which is equal to 0.200. The results indicated that the researcher's data was normally distributed.

3.3 Multicollinearity test

Table 4. Multicollinearity test result.

	Coefficients ^a	
	Collinearity Tolerance	Statistics VIF
MAN OWNSHP	0.862	1.160
INS OWNSHP	0.862	1.160

Source. Result of Data Analylis, 2023.

Based on test results in From above, it can be seen that the multicollinearity test obtains tolerance values for variables managerial ownership of 0.862 and institutional ownership of 0.862. The VIF value for managerial ownership is 1.160 and for institutional ownership is 1.160. Test results in above, it can be concluded that all independent variables in the study had a tolerance value of less than 0.10 and a VIF of more than 10 so that this study did not occur multicollinearity between the independent variables.

3.4 Heteroscedasticity test

Table 5. Heteroscedasticity test result.

Coefficients ^a					
	Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
(Constant)	1.114	0.272		4.099	0.000
MAN OWNSHP	0.016	0.039	0.067	0.403	0.690
INS OWNSHP	-0.066	0.037	-0.298	-1.784	0.083

Source. Result of Data Analylis, 2023.

Based on the results of the table test, it can be seen in the Sig variable value managerial ownership has a value of > 0.05 , which is equal to 0.690 and the institutional ownership variable has a value of > 0.05 , which is equal to 0.083 so that it can be concluded that there is no heteroscedasticity.

3.5 Multiple linear analysis

Table 6. Multiple linear analysis test result.

Coefficients ^a					
	Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
(Constant)	0.208	0.505		0.412	0.683
MAN OWNSHP	-0.036	0.072	-0.088	-0.504	0.617
INS OWNSHP	0.052	0.069	0.132	0.758	0.453

Source. Result of Data Analylis, 2023.

Based on the results of the table above, it can be seen that the constant values and regression coefficient values can be translated into the equation formula, namely:

$$Y = a + b_1X_1 + b_2X_2 + \epsilon$$

$$Y = 0.208 - 0.036 + 0.052 + \epsilon$$

This equation can be explained as follows:

The regression equation shows that the constant coefficient value is 0.208, indicating that if all the independent variables are zero or constant, then the firm value is 0.208. The managerial ownership variable has a regression coefficient of -0.0 , a standard variable error of 0.072 and a significant value of 0.617. This value is above the specified significant level of 0.05. So that the managerial ownership regression coefficient no effect on firm values. So the managerial ownership variable has no effect on firm value. The institutional ownership variable has a regression coefficient of 0.052, a standard variable error of 0.069 and a significant value of 0.453. This value is above the specified significant level of 0.05. So the institutional ownership regression coefficient no effect on firm values. Then the institutional ownership variable has no effect on firm value.

3.6 Test the coefficient of determination R

Table 7. Coefficient of determination R test result.

Model Summary ^b				
R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
0.119 ^a	0.014	-0.041	2.01267	1.950

Source. Result of data analylis, 2023.

Based on the table in From above, it is known that the coefficient of determination or adjusted R square is -0.041. Where the result is equal to 0 %. These results explain in this study the sample data of manufacturing companies in 2021, the independent variables, namely managerial ownership and institutional ownership, have no influence on the dependent variable, namely firm value.

3.7 F test

Table 8. F test result

ANOVA ^a					
	Sum of Squares	df	Mean Square	F	Sig.
Regression	1.206	2	0.603	0.645	0.531 ^b
Residual	34.588	37	0.935		
Total	35.794	39			

Source. Result of data analylis, 2023.

Based on the results of the table in above it can be seen that the results of the simultaneous F test obtained a significant value of 0.531. This value is > 0.05 so it can be concluded that the independent variables, namely managerial ownership and institutional ownership, have no simultaneous effect on the dependent variable, namely firm value.

3.8 T test

Table 9. T test result.

Coefficients ^a					
	Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
(Constant)	0.208	0.505		0.412	0.683
MAN OWNSHP	-0.036	0.072	-0.088	-0.504	0.617
INS OWNSHP	0.052	0.069	0.132	0.758	0.453

Source. Result of data analylis, 2023.

Based on the table in above, it can be seen the influence of managerial ownership against firm values with a significant level of variable managerial ownership (X1) to firm value of 0.617 is greater than the probability value of 0.05. This shows that partially managerial ownership no significant effect on firm values. For institutional ownership variables against firm values with a significant level of variable institutional ownership (X2) to firm value of 0.453 is greater than the probability value of 0.05. This shows that partially institutional ownership no significant effect on firm values.

4 DISCUSSION

4.1 *The effect managerial ownership on firm value*

From the results of the tests that have been carried out, the results show that managerial ownership has a significance level value of 0.617. This significant level is greater than 0.05, which means that H1 is rejected, so it can be said that managerial ownership has no effect on firm value in manufacturing companies listed on the Indonesia Stock Exchange in 2021. This result means that the number of shareholdings owned by internal management of outstanding shares, such as: directors, managers or executives who manage the company can be said to be unable to increase firm value. This is not in line with signaling theory or (signaling theory), that there are signals with information that can be used by the recipient to adjust in decision making. If no positive signal is given, then there is no market reaction. In this case, managerial ownership cannot give a positive signal that the existence of shares owned by management can give confidence in the company's future prospects as a profitable investment. The results of this study are in line with the research by Dewi and Sudirgo (2021) and Ritama and Iskandar (2021) which state that managerial ownership has no effect on firm values. This explains that the existence of managerial ownership cannot make management to align the interests of shareholders so that the company's goal of increasing firm value cannot be achieved. In addition, firm value is not only determined by one individual or a manager, but to increase firm value it must involve contributions from the entire management team and company employees.

4.2 *The effect of institutional ownership on firm value*

From the results of the tests that have been carried out, it is obtained that institutional ownership has a significance level value of 0.246. This significant level is greater than 0.05, which means H2 is rejected, so it can be said that institutional ownership has no effect on firm value in manufacturing companies listed on the Indonesia Stock Exchange in 2021. This result means that more and more shares are owned by institutions such as: insurance companies, banks, investment companies, state-owned companies can be said to have not been able to increase firm value. This is not in line with the signaling theory, that there are signals with information that can be used by the recipient to adjust in decision making. If no positive signal is given, then there is no market reaction. In this case, institutional ownership cannot give a positive signal that the existence of shares owned by institutions can give confidence in future prospects as a profitable investment. The results of this study are in line with the research by Dewi and Sudirgo (2021); Ritama and Iskandar (2021) institutional ownership variable has no effect on firm value. This explains that the existence of institutional ownership cannot demonstrate its ability to supervise management in carrying out decisions made to increase firm value. In addition, supervision from institutions with different backgrounds makes the object of supervision of the company not optimal. For example, there are institutional shareholders engaged in the financial sector who own shares in companies in the machinery and heavy equipment sector, their role is not optimal in supervising management to process resources into production results.

5 CONCLUSION

Based on the results of previous research and discussion which aims to determine the effect of managerial ownership and institutional ownership on firm values. The analysis was carried out using multiple linear analysis with the SPSS 27 program. The sample data for this study were taken from 40 manufacturing companies listed on the Indonesia Stock Exchange in 2021. So the following conclusions can be drawn:

- (1) Managerial ownership variable has no effect on firm value in manufacturing companies listed on the Indonesia Stock Exchange (IDX) in 2021.
- (2) Institutional ownership variable has no effect on firm value in manufacturing companies listed on the Indonesia Stock Exchange (IDX) in 2021.

6 LIMITATIONS

In this study there are limitations, namely: there are companies that do not have managerial ownership and institutional ownership information in the annual report. There are 122 companies that do not have managerial ownership and 44 companies that do not have institutional ownership, so that the research sample only represents a small portion of the population in this study.

7 SUGGESTION

The researcher realizes that this research is still far from being perfect, for this reason the researcher provides several suggestions that can be used for further researchers which can be taken into consideration for conducting research with the same discussion, as follows:

- (1) For future researchers, it is hoped that it will be able to expand the sample and research population from all companies listed on the Indonesia Stock Exchange (IDX) not only in manufacturing sector companies and increase the research period so that the results obtained can describe the real conditions that occur in the long term.
- (2) For future researchers, it is hoped that they can add other independent variables in order to find out other factors that can affect firm value.

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The influence of work experience, individual morality and organizational ethical culture on accounting fraud tendencies

Rogi Sugara

University of Muhammadiyah Malang, Indonesia

ABSTRACT: This study aims to empirically prove that work experience, individual morality, and organizational ethical culture influence the tendency of accounting fraud. The population in this study is the Village Head, Village Secretary, and Village Finance staff located in Ploso District and Tembelang District, Jombang Regency. The sampling technique used was a purposive random sampling technique with 82 respondents. The analysis tool used in this study is Wrap PLS 7.0. The results of this study show that variables of work experience, individual morality, and organizational ethical culture affect the tendency of accounting fraud.

1 INTRODUCTION

Jombang has a village fund budget of 112 billion rupiah and prioritizes programs to increase the achievement of SDGs with efforts to recover the national economy which is a social safety net, cash-intensive, MSME empowerment, agricultural sector, and village potential development through BUMdesa. But unfortunately, the budget plan for the use of village funds planned by the Jombang Regent still has misappropriation by some villagers. One of the recent cases is the continuation of the investigation process into the alleged 2015 village fund corruption case against the Tampingmojo Village Head. In addition, the detention of former Head of Mojowarno and former Head of the Panjen due to cases of misappropriation (corruption) of village funds and embezzlement of assets in the form of total state losses amounting to 552 million (Sholawati and Bhilawa 2022). According to jombangnetwork.com. In 2023, the Head of Tanggungkrmat Village has suspected corruption of Village Funds in his village since 2020. Therefore, several villages in Ploso District and Tembelang District, Jombang Regency were chosen as research objects, based on cases of misappropriation of Village funds that had been carried out by Village Heads in Ploso District, namely Tanggungkrmat Village and Tampingmojo Village Heads, Tembelang District.

The tendency of Accounting Fraud (KKA) has been indicated as a form of deliberate actions and policies with the aim of fraud or manipulating so as to harm other parties. One of the accounting frauds that occur is the emergence of criminal acts of corruption. Accounting tendencies are essentially deliberate attempts to exercise the rights of others for personal gain (Sugema Dasuki and Yudawati 2022). There are various factors that influence the tendency of accounting fraud including work experience, individual morality and ethical culture of the organization. Work experience is one of the main assets in addition to the level of education, if someone wants to enter the world of work. Work experience possessed by someone in the world of work is sometimes more needed than a high level of education. So work experience is useful for individual carmatan in providing a perception and through the work experience possessed, the quality of techniques and employee skills is increasing, so that the employee can complete the tasks given effectively and efficiently, so that it will

increase employee work productivity (Pitriyani and Halim 2020). Individual morality is the value of absolutes in the life of society as a whole. Morals can also be seen from the actions / behavior or speech of a person in interacting with humans (Wiwin *et al.* 2021). Organizational ethical culture is a principle of social behavior that contains mutually agreed norms, ethics, and values as guidelines for procedures for behaving and activities in an organization (Awatif and Mulyaning Tyas 2022).

Based on the results of previous research from (Komang *et al.* 2019) and (Soenanto and Pesudo 2020) states that work experience has a positive effect on fraud detection, so the hypothesis obtained is H1: work experience has an effect on the tendency of accounting fraud. Research from (Julia *et al.* 2022) and (Ayu Diah Utari *et al.* 2019) states that individual morality positively affects the tendency to fraud, so the hypothesis obtained is H2: individual morality affects the tendency of accounting fraud. Research from (Yulia *et al.* 2021) and (Putri *et al.* 2018) states that ethical culture has a positive effect on fraud tendencies, so the hypothesis obtained is H3: organizational ethical culture affects accounting fraud tendencies. This study aims to empirically prove that work experience, individual morality, and organizational ethical culture influence the tendency of accounting fraud.

2 LITERATUR REVIEW

2.1 *Fraud hexagon theory*

Fraud Hexagon Theory is a theory that explains six factors, namely *pressure*, *capability*, *opportunity*, *rationalization*, *arrogance*, and *collusion* that can influence someone to commit fraud. This theory is a development of the *Fraud Triangle Theory* proposed by Dr. Donald Cressey. *Fraud triangle theory* contains three elements to detect fraud, namely *pressure*, *opportunity*, and *attitude (rationalization)*. Then in 2019 it was developed by Vousinas by adding collusion elements in detecting fraud (Vousinas 2019).

2.2 *Work experience*

Employee work experience is a description of the level of mastery of knowledge and skills possessed by an employee at work which can be measured from the length of service and type of work of employees. The length of service is how long an employee has worked while the type of work includes the work and position that has been done by the employee (Pitriyani and Halim 2020).

2.3 *Individual morality*

Individual morality is the value of absolutes in the life of society as a whole. Morals can also be seen from the actions / behavior or speech of a person in interacting with humans. If what a person does is in accordance with the taste values prevailing in the community and is acceptable and pleasant in the community, then the person is considered to have good morals, and vice versa. Morals can also be interpreted as attitudes, treatments, actions, actions that someone does when trying to do something based on experience, interpretation, conscience, and advice (Wiwin *et al.* 2021).

2.4 *Ethical culture of the organization*

Organizational culture is an invisible social force that can move people in an organization in carrying out work activities. So it can be defined that the ethical culture of the organization is a principle of social behavior that contains mutually agreed norms, ethics, and values as guidelines for procedures for behaving and activities in an organization (Awatif and Mulyaning Tyas 2022).

2.5 Accounting fraud tendencies

The tendency of Accounting Fraud (KKA) has been indicated as a form of deliberate actions and policies with the aim of fraud or manipulating so as to harm other parties. One of the accounting frauds that occur is the emergence of criminal acts of corruption. Accounting tendencies are essentially deliberate attempts to exercise the rights of others for personal gain (Sugema Dasuki and Yudawati 2022).

3 RESEARCH METHODOLOGY

This study uses a type of quantitative research with an associative approach. Where research using an associative approach is a type of research that looks for relationships with each other. The population of this study is 28 village government offices located in Ploso District and Tembelang District in Jombang Regency. This study used the purposive random sampling method. This research focuses on Village Head, Village Secretary, and finance staff. Data collection techniques used with survey methods. The data collection technique carried out is by distributing questionnaires directly to the Village Government in Jombang Regency. The questionnaire distributed was 84 questionnaire and the questionnaire returned to the researcher was 78 questionnaire.

Information	Entire	Percentage(%)
Distributed Questionnaire	84	100
Questionnaires that do not return	6	5
Return questionnaire	78	66

4 DATA ANALYSIS TECHNIQUE

Data analysis is done with descriptive statistics. While testing the hypothesis using validity and reliability tests, validity tests include convergent validity with a loading factor of 0.5 to 0.6 and discriminant validity with an AVE value greater than 0.5. Reliability test using cronbachs alpha and composite reliability with alpha coefficient value greater than 0.6 (Sanosra *et al.* 2021). The inner testing of the structural model can be in the form of Adjusted R2 and Q2. The higher the Adjusted R2 value, the better the prediction model of the proposed research model. Furthermore, a Q2 value greater than zero indicates good predictiveness (Sholihin and Ratmono 2014)

5 RESULT AND DISCUSSION

Table 1. Descriptive statistical analysis.

Variable	Average	Minimum	Maximum
Work experience	0.678	-3.511	1.466
Work experience	0.716	-4.395	1.324
Ethical culture of the organization	0.679	-4.085	1.480
Tendency of accounting fraud	0.811	-3.178	0.732

The table above explains the descriptive statistics on each variable used in this study. In this study, the number of samples was 78 samples. The results of statistical output on the work experience variable showed the average value of 28 village samples of 0.678 with a minimum

value of -3.511 and a maximum value of 1.466. The results of statistical output on individual morality variables showed the average value of 28 village samples of 0.716 with a minimum value of -4.395 and a maximum value of 1.324. The results of statistical output on organizational ethical culture variables showed the average value of 28 village samples of 0.679 with a minimum value of -4.085 and a maximum value of 1.480.

Table 2. Validity test.

Variable	Indicator	AVE	Loading Value	Cross Loading	P value	conclusion
Work experience	PK11	0.620	0.525	<0.525	0.001	Valid
	PK12		0.677	<0.677	0.052	Valid
	PK13		0.688	<0.688	<0.001	Valid
	PK21		0.659	<0.659	<0.001	Valid
	PK22		0.841	<0.841	<0.001	Valid
	PK31		0.773	<0.773	<0.001	Valid
	PK32		0.581	<0.581	<0.001	Valid
Individual morality	MI11	0.695	0.659	<0.659	<0.001	Valid
	MI12		0.829	<0.829	<0.001	Valid
	MI21		0.859	<0.859	<0.001	Valid
	MI22		0.675	<0.675	<0.001	Valid
	MI31		0.646	<0.646	<0.001	Valid
	MI32		0.631	<0.631	<0.001	Valid
Ethical Culture of the Organization	BE11	0.673	0.651	<0.651	<0.001	Valid
	BE12		0.521	<0.521	0.001	Valid
	BE21		0.537	<0.537	<0.001	Valid
	BE22		0.727	<0.727	<0.001	Valid
	BE31		0.603	<0.603	<0.001	Valid
	BE32		0.829	<0.829	<0.001	Valid
	BE41		0.822	<0.822	<0.001	Valid
	BE42		0.744	<0.744	<0.001	Valid
Tendency of accounting fraud	KKA11	0.795	0.857	<0.857	<0.001	Valid
	KKA12		0.884	<0.884	<0.001	Valid
	KKA21		0.875	<0.875	<0.001	Valid
	KKA22		0.668	<0.668	<0.001	Valid
	KKA31		0.697	<0.697	<0.001	Valid
	KKA32		0.834	<0.834	<0.001	Valid
	KKA41		0.869	<0.869	<0.001	Valid
	KKA42		0.861	<0.861	<0.001	Valid
	KKA51		0.774	<0.774	<0.001	Valid
	KKA52		0.791	<0.791	<0.001	Valid

In the table above, validity test results were obtained on variables of work experience, individual morality, and organizational ethical culture. The work experience variable is divided into 7 points where each point gets a value greater than 0.5 therefore the value is considered sufficient, the individual morality variable is divided into 6 points where each point gets a value greater than 0.5 therefore the value is considered sufficient, the organizational ethical culture variable is divided into 8 points where each point gets a value greater than 0.5 therefore the value is already Considered sufficient and the variable tendency of accounting fraud is divided into 10 points, each point of which gets a value greater than 0.5, therefore the value is considered sufficient.

Table 3. Reliability.

Variable	Cronbachs Alpha	Composite Reliability	Conclusion
Work experience	0.692	0.791	Fulfilled
Individual morality	0.775	0.844	Fulfilled
Ethical Culture of the Organization	0.814	0.862	Fulfilled
Tendency of accounting fraud	0.930	0.943	Fulfilled

In the table above, it can be seen that the results obtained by each variable in this study prove that the work experience variable obtained an alpha cronbachs value of 0.692 and a composite reliability value of 0.791; The individual morality variable obtained a Cronbachs alpha value of 0.775 and a composite reliability of 0.844; The organizational ethical culture variable obtained a Cronbachs alpha value of 0.814 and a composite reliability of 0.862; The accounting fraud tendency variable obtained a Cronbachs alpha value of 0.930 and a composite reliability of 0.943. All variables have values greater than 0.6 so that the requirements of the reliability test have been met.

Table 4. Inner model.

Variable	Adjusted R ²	Q ²
Tendency of accounting fraud	0.219	0.262

The table above shows the overall test results obtained an adjusted R-Square value of 0.219. This shows that work experience, individual morality, organizational ethical culture can explain the disclosure of accounting fraud tendencies by 21.9%, the remaining 78.1% is influenced by other variables outside the research model. Furthermore, the Q2 value is obtained at 0.262. This explains that model estimation shows good predictive validity because the Q2 value is more than zero.

Table 5. Hypothesis test results.

Hypothesis	Explanation	Value of Coefficient path	P Value	Positive/Negative
H1	PK → KKA	0.147	0.09	Positif <10%
H2	MI → KKA	0.196	0.04	Positif
H3	BE → KKA	0.274	<.01	Positif

H1 shows that the work experience variable (X1) obtained a path coefficient value of 0.147 with a p-value of 0.09. H2 shows that the individual morality variable (X2) obtained a path coefficient value of 0.196 with a p-value of 0.04. H3 shows that the organizational ethical culture variable (X3) obtained a path coefficient value of 0.274 with a p-value of <.01.

6 DISCUSSION

6.1 *The effect of work experience on accounting fraud tendencies*

The first hypothesis examines whether work experience has an effect on accounting fraud tendencies. The results showed that the work experience variable (X1) obtained a path coefficient value of 0.147 with a p-value of 0.09. Hypothesis testing in this study looked at the path coefficient and P-value obtained from the WarpPLS application. Because the P-value is less than 10%, it can be concluded that there is a significant influence between work experience and the tendency of accounting fraud.

The results of this study are in line with research conducted by (Komang *et al.* 2019) that is work experience has a positive and significant effect on fraud detection. This can be interpreted as the experience possessed by a supervisor affects the ability to detect fraud. In addition, this research is in line with (Soenanto and Pesudo 2020) that is Work experience has a significant positive influence on fraud detection. This can be interpreted as the more experienced auditors, the deeper the internal auditors have knowledge in fraud detection.

6.2 *The influence of individual morality on accounting fraud tendencies*

The second hypothesis tests whether individual morality has an effect on accounting fraud tendencies. The results showed that the individual morality variable (X2) obtained a path coefficient value of 0.196 with a p-value of 0.04. Hypothesis testing in this study looked at the path coefficient and P-value obtained from the WarpPLS application. Since the P-value is less than equal to 5%, it can be concluded that there is a significant influence between individual morality and the tendency of accounting fraud.

The results of this study are in line with research conducted by (Ayu Diah Utari *et al.* 2019) that is Individual morality positively influences the tendency to cheat. This can be interpreted as individuals who have a low level of morality tend to easily commit cheating, while individuals with a high level of morality tend to be honest. In addition, this research is also in line with research conducted by (Julia *et al.* 2022) that is Individual morality has a significant effect on the variable tendency to fraud. Individual morality is a good attitude and behavior, where a person does not ask for anything in return or selflessly. Morality includes the good and bad of one's attitude.

6.3 *The influence of organizational ethical culture on accounting fraud tendencies*

A third hypothesis examines whether an organization's ethical culture has an effect on fraud tendencies. The results showed that the organizational ethical culture variable (X3) obtained a path coefficient value of 0.274 with a p-value of $<.01$. Hypothesis testing in this study looked at the path coefficient and P-value obtained from the WarpPLS application. Since the P-value is less than equal to 5%, it can be concluded that there is a significant influence between the ethical culture of the organization on the tendency of accounting fraud.

The results of this study are in line with research conducted by (Yulia *et al.* 2021) that is Organizational ethical culture variables influence the tendency of accounting fraud. This means that the better the ethical culture of an organization, the less likely it will be to commit accounting fraud. In addition, this research is also in line with the research conducted (Putri *et al.* 2018) that is Ethical Culture has a significant positive effect on Cheating in State-Owned Companies in the Transportation and Warehousing Sector in Bandung City, meaning that if the ethical culture has been implemented properly, it is expected that the tendency of fraud will decrease.

7 CONCLUSION

Based on the results of the data and discussions carried out, the conclusions of the results of this study are, as follows:

- (1) Work experience has a positive effect on the tendency of accounting fraud. This can be seen from the path coefficient value of 0.147 with a p-value of 0.09 which is less than 10%. From this value, it can be seen that employees in villages in Ploso District and Tembelang District have experience. With this experience, employees can understand about the fraud.
- (2) Individual morality positively affects the tendency of accounting fraud. This can be seen from the path coefficient value of 0.196 with a p-value of 0.04 which is less than 5%. From this value, it can be seen that employees in villages in Ploso District and

Tembelang District already have morality. With this attitude of individual morality, employees will avoid the tendency of curvature.

- (3) The ethical culture of the organization positively influences the tendency of accounting fraud. This can be seen from the path coefficient value of 0.274 with a p-value of $<.01$ which is less than 5%. From this value, it can be seen that employees in villages in Ploso District and Tembelang District already have a good organizational ethical culture. With this ethical culture, employees will avoid fraudulent tendencies.

8 SUGGESTION

It is expected that the next researcher if conducting research at the village government place will give more time to fill out the questionnaire for at least 2 weeks because most village officials are busy with their respective agendas.

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The metafunction of divorce mediation regulations in the Supreme Court Regulation Number 1 of 2016 as stated in the public information text

M. Isnaini, Setya Yuwana Sudikan, Dianita Indawati & Suhartono
Surabaya State University, Indonesia

ABSTRACT: This study aims to describe the meaning of metafunction contained in the text of Supreme Court Regulation Number 1 of 2016 concerning Mediation and the metafunction relationship and social context contained in Supreme Court Regulation Number 1 of 2016 concerning Mediation. The method used in this study is a qualitative method. Qualitative methods are used to answer the first and second problems. This research method is used to obtain data logically and empirically. The data obtained were then analyzed using the metalanguage theory pioneered by Halliday and Martin. The results of this study are that the meaning of metafunction contained in the text of Supreme Court Regulation Number 1 of 2016 consists of three levels: ideational meaning, interpersonal meaning, and textual meaning. In a social context, by looking at the content, involvement, and method. The contents of the text of MA Regulation Number 1 of 2016 concerning mediation is the fulfillment of citizens' rights to justice in obtaining justice and reconciliation in civil law disputes. This shows that civil law processes, especially disputes, can be passed peacefully, namely carrying out the mediation process as a way of the dispute process. This is contained in the first part of the consideration for the formation of the regulation to realize a peaceful dispute resolution method that is appropriate, effective, and can open wider access to the Parties to obtain a satisfactory and fair resolution.

Keywords: Divorce, Mediation, Social Context

1 INTRODUCTION

Text as a linguistic unit has a meaning that cannot be separated from context. Context as a complement to the text, plays an important role in determining the meaning of language. Context is influenced by text because the text is an expression of social behavior in contexts. The meaning of each word is to some degree dependent on context (Malinowski 1946:307 and Firth 1957). In the functional approach, sound and meaning are obtained from metafunctions. Language is analyzed functionally and related to social context, so the functional approach is very relevant for all areas related to language use. Functional analysis will present the complete function of language meaning. This functional analysis is called metafunction (Saragih 2006:7). Systemic functional linguistics (LFS) views language as social semiotics. LFS examines texts that are related to social contexts. According to Halliday and Hasan (1985:11), LSF is concerned with the context and the relationship between language organization and social situations.

The situation context describes the terrain, the participants, and the means of the text. Cultural context explains what genre is used. Ideology is anything that is prohibited and what is allowed to be done. Furthermore, Systemic Functional Linguistics is used to analyze

texts related to the social context by involving speakers, speech communities, speech acts, culture, and social conditions of speech communities as factual phenomena and worthy of study. The linguistic context that greatly influences the meaning of language is the social context. Social context includes situational, cultural, and ideological contexts (Martin 1985). The meaning or content of the message in the linguistic aspect can be known so that it does not cause ambiguity for the recipient or reader. The role of the social context as a companion to the text is needed to analyze a discourse or text. Discourse contains a social context, both written and spoken texts. Written texts such as texts of the Constitution, old prose texts, and other written texts.

Meanwhile, the text is not written or spoken related to the rules and norms that apply in a particular society. This context shows the role played by language in the social interaction of text creation. The mediation regulations in the supreme court rule number 1 of 2016 are very important to understand in depth, considering that this mediation direction positively impacts the application of law in Indonesia. The mediation process is an important tool in the dynamics of positive law because this mediation will make the process of peaceful dispute resolution. So that the regulatory functions in this mediation must become the dominant benchmark in the process of resolving disputes by peaceful means. In this case, it is important to study the contents and functions of these regulations. Because in various cases many dispute cases cannot be resolved peacefully. Mediation in the aspect of divorce is decisive for couples who carry out the divorce process because if the mediation process goes well, it will have an impact on couples who are going to divorce in completing their legal process in the religious court. The results to be obtained when the process of carrying out the mediation is well understood and understood by the plaintiff and the defendant in the divorce process occur in an amicable settlement even when the divorce process does not occur. Because after all, the increase in the divorce process will psychologically impact the family.

Legal language is difficult to understand when compared to other texts. It is important to analyze this with a linguistics approach to find out the meaning of the text by involving multiple contexts. Legal experts and makers of the text also recognize the linguistic complexity of this legal text. Legal language has its own level of complexity, the various uses of non-grammatical sentence structures cause this. In addition to this, the use of lexical elements does not comply with the correct linguistic rules. These various aspects include (1) capital letters; (2) punctuation marks; (3) form and choice of words; (4) wording (Setia 2008, 2018). Understanding the role of legal language as an important part in formulating statutory norms and regulations will provide efficiency, effectiveness and validity in formulating legal norms to achieve the goals and functions of law. is to understand the legal language well for Indonesian legal scientists, with a good understanding of Indonesian as a medium for legal language (Qamar and Djanggih 2017: 346).

1.1 *Systemic functional linguistics (LFS)*

According to Kridalaksana (2008) suggests that systemic functional linguistics is a linguistic breakthrough that structurally, grammatically, and semantically has various functions in society and can carry out these linguistic functions. Some characteristics of systemic functional linguistics include (a) various layers of linguistic functions that receive attention in this study, such as syntax, semantics, and pragmatics. (b) don't change simple changes to words, transformations, and filters. (c) the description of language starts from the formation of the basic layer into the framework of the language structure. (d) language is seen as a coherent expression from semantics, syntax, and pragmatics to expression rules. According to Sinar (2012: 6), LFS is the main theory applied in this study. The theory put forward by M.A.K. Halliday describes an analysis of the relationship between text and social context. So that the system becomes a representation of these two things with a paradigmatic relationship. Meanwhile, functional identifies the semiotic functions of language in various

semiotic dimensions and the realization of functions in structural systems with syntagmatic relationships. Language is not only interpreted in a single way, but is intertwined with other meaning systems. The existence of a system of forms and expressions is interpreted to connect these meanings. According to Saragih (2006: 1), views on LFS are categorized into two concepts: language, which is seen as a social phenomenon with its form as social semiotics, and language in constructual texts. Furthermore, the study of systemic functional linguistics leads to discussing texts in social contexts.

So that the functional boundaries are within the boundaries of the text. Halliday (1994) stated that functional language would give meaning to its users. Thus, texts are not only categorized as grammatical units. According to the social context, the relationship between language and text is a constral relationship. This relationship means that the text determines the social context. With this conceptual explanation, only certain texts can be produced in a social context.

On the other hand, certain texts can also be referred to. In functional linguistics, grammar is strongly influenced by the development of linguistics, so that aspects of the function of language itself become the main study in language research. Thus the use of functional terms refers to the various functions of the language elements. So that the study of systemic functional linguistics has the advantage of various elements of language ranging from phonemes having a function to differences in meaning, and each phoneme that is articulated will carry content and expression so that its use can be seen. At the level of syntax, the use of prepositions and sentence structure refers to a logical and complete understanding. So that this flow study looks at the overall components of language and its functions in inspiring an idea by looking at the structural relations of the language itself and its functions. At the level of phonology and morphology have the same relationship.

1.2 *Metafunction*

In accordance with the statement above, it has been stated that the metafunction of language consists of three areas of ideational meaning, interpersonal, and textual. These three areas of meaning are a unit that cannot be separated. Therefore, these three domains are used simultaneously to analyze text (Halliday and Eggins 1994). Metafunction is defined as a function of language in the process of using language and in every interaction of speakers of languages in speaking, composing, and explaining their experiences and ideas. The three metafunctions are interpreted as communication functions. Thus this function has the meaning of experience (ideational meaning), exchange (interpersonal meaning), and organizing (textual meaning). The exposure consists of exposure to experience (experiential function) and the relationship between experiences (logical function).

1.3 *Ideational Meaning*

Ideational meaning consists of experiential meaning and logical meaning. This meaning is explained as follows.

1.3.1 *Experiential meaning*

Experiential meaning is the meaning of experience. In this scope, experiential discusses transitivity, namely process, participant, and circumstance at the clause level. Process refers to experiences, activities, and activities. The process is referred to as a verb or verb at the traditional grammar level. Participants are objects or people involved in the process. Circumstance is an environment that is a place for processes that involve participants or those that cover the process. The essence of an experience, namely poses.

The process can determine the category of participants and the number of participants (Halliday 1994:168). In addition, the process also determines the circumstance at the

probability level. The experience of language speakers consists of six types of processes, namely material, mental, relational, verbal, existential, or behavioral, as well as the functions of all participants involved in each type of process (actor, sensor, goal, phenomenon, sayer, and so on). (a) Material Process Material process is a process that shows activities, actions, events, and activities carried out by humans. These material processes are real and can be seen and observed by human senses. The first participant in the material process is called an actor (actor), and the second is called a target (goal).

(b) Mental Processes Processes that show activities or activities involving the senses, cognition, emotions, and various perceptions are called mental processes or processes of sensing. (c) Relational Process is a process that functions as an entity's relationship with reality or other environments intensively, circumstance, or ownership by way of (mode) identification or attributes. Circumstantial relations and entities show time, place, and sequence. (d) Behavioral Process Behavioral (behavioral) processes are physiological activities or activities that express human physical behavior. (e) Verbal Process Verbal process indicates an activity or activities that aim to convey information. Verbal processes belong partly to mental processes and partly to relational processes.

1.3.2 *Logical meaning*

In accordance with Halliday's analysis model (1985:192–251), the notations of numbers 1,2,3,4,5,6, and so on state complex clauses that are related paratactically. Greek letters are used to represent hypothetically related complex clauses. The (+) sign indicates addition (extension, elaboration). The equal sign (=) indicates expansion (elaboration, elaboration). Times sign (x) indicates folding (enhancement, enhancement).

Double quotation marks (“”) to indicate elocutionary projections. Single quotation marks (‘’) express the projected idea. colon (:) and semicolon (;) are used to connect one clause with another clause. A simplex clause (simplex) is a clause that contains only one action or one process. Complex clauses are clauses that have paratactic and hypotactic relationships. The paratactic relationship is different from the hypotactic relationship. This difference is expressed by identifying the conjunction (conjunctive). In structural grammar, paratactic is referred to as an equivalent compound sentence. In contrast, hypotactic is a multilevel compound sentence (not equivalent).

1.3.3 *Interpersonal meaning*

In this section, the function of language is used as a tool to exchange experiences. Exchanging experiences is expressed by a system of clauses called the mode (mood). The mode indicates the type of clause used when exchanging experiences. The mode consists of declarative, imperative, and interrogative modes. Declarative mode is a statement, imperative mode is a command, and interrogative mode is a question. Meanwhile, semantically, a clause consists of statements, questions, orders, and offers. The way of conveying the mode affects the meaning of the language.

1.3.4 *Textual meaning*

This textual meaning is generally interpreted as the basis and focus used as the foundation in depicting ideas. The two meanings contained in the theme include. First, the theme as a reference and focus in the efforts made to convey ideas. Thus the themes in the LSF study become the starting point in developing clauses that include clauses and paragraphs. This extends the text into subsections, chapters, and a unified discourse. So that in the unity of the text, something becomes the focus or theme and outside the focus, which is called rheme. The theme is the beginning of a message to be conveyed in the clause (the starting point of the message). In the theme clause, it has an important role in conveying the message and being the starting point for the development of an idea so that it becomes a unitary idea in the text and forms a message or idea.

1.3.5 *Social context*

The social context consists of three elements, namely situation context (register), cultural context (genre), and ideological context (ideology). These three contexts accompany the language or text in stages or strata, and form a multilevel semiotic relationship (Martin 2001). The use of language and various social contexts are interrelated with one another. Discourse in the text is seen as the smallest unit or core unit. The larger scope is seen as the largest unit. First, situational context. Genre creates meaning by forming register variables by conditioning the fields of manner (what happens in a given situational context), tenor (how people relate to each other in which events are situated) and mode (the media and channels chosen for communication) are combined in repeated forms in certain cultures (Martin 2001).

Situation context is context related to three components, namely content (field), involvement (participant), and method (mode). The elements that build the content consist of three aspects, namely the arena/activity, the characteristics of the participants or participants, and the semantic domain. The activity arena refers to a location that specifically shows the characteristics of the activity and the characteristics of the institution that determines it. Second, the Cultural Context The cultural context determines in detail the configuration of content elements, involvement and means. In this case, there will be certain limitations. In this context, the stages that must be passed and the goals to be achieved from a text will also be explained. The stages that each text must pass vary depending on the genre of the text (Martin 1992).

Third, Ideological Context Ideology influences a person to act or do something and interact. Ideology is a social concept that states what should or should not be done as a member of society. The text is the realization of ideology, and can be explored in the text. Kress (1993) said that ideology can be realized with the influence of power on the system of society, political history, values, and literature and culture form society's views so that they believe in a concept. This ideological context includes various values, viewpoints, and various perspectives. In addition, Hassan (1996: 133) sees ideology as something that lives through the daily habitual actions of groups of social actors, both verbal and non-verbal, far from their conscious thoughts about it. Hasan also said that ideology is a socially constructed system of ideas that his followers cannot avoid.

1.3.6 *Metafunction Relations and Social Context*

Globally the models used by LSF experts where they produce conceptual statements and descriptions in formulating models used to analyze discourse and texts. In other words, the field of meaning is closely related to ideational metafunctions. Involvement has a relationship with interpersonal metafunction. This means have a relationship with textual metafunctions. This relationship refers to and determines each other (Sinar 2003: 57). Prayudisti Shinta Pandanwangi carried out previous research related to this with the title Critical Discourse Studies Against Perppu No. 2 of 2017 concerning Community Organizations.

This research examines the Perppu text on CSOs from the modality, transitivity, and appraisal systems. In addition, this study also describes the background to the emergence of the Perpu. The difference with the research that the researcher will conduct is that the researcher will describe the metafunction and the relationship between metafunction and context in the text of the Supreme Court mediation regulation number 1 of 2016 regarding divorce mediation. This study aims to describe the meaning of metafunction contained in the text of Supreme Court Regulation Number 1 of 2016 concerning Mediation and how is the relationship between metafunction and social context contained in Supreme Court Regulation Number 1 of 2016 concerning mediation.

2 RESEARCH METHODS

This study uses a qualitative method. Qualitative methods are used to answer the first and second problems. This research method is used to obtain data logically and empirically. The data obtained were then analyzed using the metalanguage theory pioneered by Halliday and Martin. Thus, data from the text of Supreme Court Regulation Number 1 of 2016 concerning Divorce Mediation is presented in terms of metafunction and social context. The data analyzed in this study are the clauses contained in the text of Supreme Court Regulation Number 1 of 2016 concerning divorce mediation. The data source for this research is the text of Supreme Court Regulation Number 1 of 2016 concerning Divorce Mediation obtained from the official website of the Supreme Court. The data collection method involves recording, writing, grouping, organizing, and interpreting. Data analysis techniques were carried out by coding, presenting, and concluding.

3 RESULT AND DISCUSSION

The Meaning of Metafunctions in the Text of Supreme Court Regulation Number 1 of 2016

The metafunction meaning in the text of Supreme Court Regulation Number 1 of 2016 consists of three levels of meaning: ideational, interpersonal, and textual. As for the discussion of these three matters, we will describe as follows:

3.1 *Edical meaning*

Ideational meaning consists of experiential meaning and logical meaning. The experiential meaning contained in the mediation regulations includes the experiential scope, which discusses transitivity, namely the process (process). In contrast, the processes contained in the text of the mediation regulations include:

First, Material Process Material Process is a process that shows activities, actions, events, and activities carried out by humans.

“Obligation to Attend Mediation”

“Good Faith in Mediation”

In the fourth and fifth parts of the regulation, use the word attend. The intention is a material process that is in the text of MA Number 1 of 2016. Material processes dominate MA Number 1 of 2016. This proves that the text of MA Number 1 of 2016 is a text that contains rules for performing an action. Do something that must be fulfilled if you want the mediation process.

Second, relational processes are categorized as entity relationships with other environments with intensive relationships by identifying attributes. In the Supreme Court Regulation Number 1 of 2016, what is embodied in the word is a relational process to state that there is a relationship between mediation and dispute resolution, so this path is an activity to resolve legal disputes. Then the word becomes in chapter 36.

“The Judge Examining the Case before the Parties will only strengthen the Peace Agreement to become a Peace Deed, if the Settlement Agreement is in accordance with the provisions of Article 27 paragraph (2)”

In this article, the word becomes correlational, that the peace agreement will be converted into a peace deed so that it has legal force so that there will be no more disputes in the future.

Third, mental processes or processes of sensing are called Mental Processes or Processes that show activities involving the senses, cognition, emotions, and perceptions that occur in humans. In this aspect, the word peace and peace is the dominant mental process in the Supreme Court Regulation Number 1 of 2016. This shows that this mediation process has the main objective, namely peace over legal disputes.

Fourth, Verbal Process: The Verbal process shows activities that aim to convey information. In this case, it is found in articles 3 part one and 32 part six in the words inform and order.

“The Mediator must declare that the Mediation has failed to reach an agreement and notify it in writing to the Examining Judge of the Case”.

“The Examining Judge who did not order the Parties to take Mediation so that the Parties did not carry out Mediation had violated the provisions of the laws and regulations governing Mediation in Court”.

In the data, it is emphasized that the mediator owns the verbal process towards the judge in a dispute. The second, namely the examining judge, should order each dispute to take the mediation route. If this is not done, the verbal process from the case judge will not be conveyed to the litigants.

Fifth, the Process of Being The process of being (existential) shows the existence of an entity. In English, the process of being is usually marked with the clause there. A subject separator does not precede the process of being in the Indonesian language. There are many form clauses contained in MA Number 1 of 2016 in article 6 part four.

“The Parties are obliged to attend the Mediation meeting in person with or without being accompanied by legal counsel.”

Thus the process of being in the implementation of mediation becomes an important framework because in this article all disputing parties are obliged to attend the mediation meeting even without and with the presence of legal counsel. This is proof that the presence of the parties will have a clear impact on the ongoing dispute. The presence of the parties will provide a great opportunity for creating a peace process when carried out according to procedures.

3.2 *Interpersonal meaning*

In this section, the function of language is used as a tool to exchange experiences. Exchanging experiences is expressed by a system of clauses called the mode (MOOD). The mode indicates the type of clause used when exchanging experiences. The mode consists of declarative, imperative, and interrogative modes.

First, this declarative mode is in the second part of Article 4.

“All civil disputes submitted to the Court, including cases of resistance (verzet) to verstek decisions and resistance to litigants (partij verzet) and third parties (derden verzet) against the implementation of decisions that have permanent legal force, must first seek a settlement through Mediation”.

This article emphasizes the purpose of notifying all citizens that all civil disputes are legally obligated to carry out the mediation process before proceeding with the civil dispute. In this case, mediation is the first step that can be taken before taking other steps. Many people do not know about this, so they neglect and even carry out this matter at will. Of course, this must be massive information to the public to optimize the way of peace compared to other legal settlements.

Second, the imperative mode is contained in the fourth part of article 6 in points 1 to point 3.

“The Parties are obliged to attend the Mediation meeting in person with or without being accompanied by legal counsel”.

“The presence of the Parties via remote audio-visual communication as referred to in Article 5 paragraph (3) is considered as a direct presence”.

“The absence of the Parties directly in the Mediation process can only be made based on valid reasons”.

In this case, the imperative mode is an order to attend each stage in the mediation process as a form of step that the parties involved in the dispute want peace or justice with various information owned by each dispute to be used as a basis for decision making. The arrival of these parties manifests that the Supreme Court Regulation Number 1 of 2016 concerning mediation is an effective way of resolving disputes.

3.3 Textual meaning

The message contained in the language must be conveyed in a pattern and system. Language has rhythms and rules in conveying messages, so they must be well structured and structured. In the text of the Supreme Court Regulation Number 1 of 2016 concerning mediation, it is well structured and customary. In this case, the theme contained in the text is the topical theme contained in the Considerations and general provisions.

“That in the context of reforming the bureaucracy of the Supreme Court of the Republic of Indonesia which is oriented towards the vision of realizing a great Indonesian judiciary, one of the supporting elements is Mediation as an instrument to increase people’s access to justice as well as to implement the principles of administering justice that is simple, fast and low-cost.”

In this case, the topical theme of administering justice is a bureaucratic step from the Supreme Court of the Republic of Indonesia. In realizing mediation as a concrete step in providing access to justice for all people in Indonesia.

“Mediation is a way of resolving disputes through a negotiation process to obtain an agreement between the Parties assisted by the Mediator”.

This description uses a textual theme as a conjunctive or conjunctive message linking the clause with the clause above it as a consideration in the text of MA Regulation Number 1 of 2016. Thus the settlement of disputes or civil law should be pursued through mediation to obtain an agreement.

The Social Context Contained in the Text of Supreme Court Regulation Number 1 of 2016.

In a social context by looking at content, involvement, and method. The contents of the text of MA Regulation Number 1 of 2016 concerning mediation are the fulfillment of citizens’ rights to justice in obtaining justice and reconciliation in civil law disputes. This shows that civil law processes, especially disputes, can be passed peacefully, namely carrying out the mediation process as a way of the dispute process. This is contained in the first part of the consideration for the formation of the Regulation to realize a peaceful and effective dispute resolution process. To open access to various parties who have disputes to obtain a fair and satisfactory settlement process.

<p>“that in the context of bureaucratic reform of the Supreme Court of the Republic of Indonesia which is oriented towards the vision of realizing a great Indonesian judiciary, one of the supporting elements is Mediation as an instrument to increase people’s access to justice as well as to implement the principles of administering justice that is simple, fast and low-cost”</p>	<p>Justice</p>
<p>“that the applicable civil procedural law provisions, Article 154 of the Procedural Law for Regions Outside Java and Madura (Reglement Tot Regeling Van Het Rechtswezen In De Gewesten Buiten Java En Madura, Staatsblad 1927:227) and Article 130 of the updated Indonesian Regulation (Het Herziene Inlandsch Reglement, Staatsblad 1941:44) encourages the Parties to pursue a peace process that can be utilized through Mediation by integrating it into litigation procedures in Courts”</p>	<p>Peace</p>

In some of the data above, it is very clear how the ideological context of the Republic of Indonesia is contained in the various clauses in the Supreme Court regulations. According to Article 1 paragraph (3) of the 1945 Constitution of the Republic of Indonesia, “the state of Indonesia is a state of law” so that the ideological references of this state reflect the basic ideology of the Republic of Indonesia, namely Pancasila. So that its implementation refers to the various precepts in the sound of Pancasila. In implementing the law, it refers to the fifth precept, namely “Social Justice for All Indonesian People”. So that in the preamble of the 1945 Constitution, it was also emphasized that the Government of the Republic of Indonesia protects the entire Indonesian nation and all of Indonesia’s bloodshed and advances public welfare, educating the nation’s life, and participates in carrying out world order based on freedom, eternal peace, and social justice, the National Independence was drafted. Indonesia is in a Constitution of the State of Indonesia.

4 CONCLUSION

Systemic functional linguistics is a linguistic movement that holds that phonological, grammatical, and semantic structures are determined by the functions performed by society and that language itself has various functions. Furthermore, LFS leads to the discussion of texts in a social context. Text delimitation is part of a functional language. According to Halliday (1994), functional language gives meaning to language users. The meaning of metafunction contained in the text of Supreme Court Regulation Number 1 of 2016 consists of three levels: ideational meaning, interpersonal meaning, and textual meaning.

In a social context by looking at content, involvement, and method. The contents of the text of MA Regulation Number 1 of 2016 concerning Mediation is the fulfillment of citizens’ rights to justice in obtaining justice and reconciliation in civil law disputes. This shows that civil law processes, especially disputes, can be passed in a peaceful way, namely, carrying out the mediation process as a way of the dispute process. This is contained in the first part of the consideration for the formation of the Regulation to realize a peaceful dispute resolution method that is appropriate, effective, and can open wider access to the Parties to obtain a satisfactory and fair resolution. Thus the mediation regulations aim to determine the process of justice for community disputes. In this case, the contained article implies positive things that can be done for the mediation process to produce effective stages and as an implementation process on the principle of conducting justice which is simple, fast, and fairly low cost.

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The existence of local wisdom in waste management using “Teba” modern system

I. Made Dwiantara, Ida Ayu Putu Sri Widnyani & Luh Riniti Rahayu

Post Graduate Program, Universitas Ngurah Rai, Kota Denpasar, Indonesia

ABSTRACT: Garbage is material that is no longer used from the rest of use by humans, animals and plants, whether it can still be used or not. Waste can be divided into organic and inorganic waste. The use of waste can be done in various ways effectively and efficiently carried out on the island of Bali at this time guided by local wisdom, namely the modern guessing system. Cemenggaon Traditional Village in Sukawati District, Gianyar Regency has succeeded in innovating waste management with a modern guessing system. The modern teba system is a pattern of waste management based on sources, with special characteristics in handling routine household organic waste through the use of a save-teng (tebe) composter in each resident’s yard, and its management is based on local wisdom of Balinese traditional culture based on Tri Hita Karana. Local wisdom has an important role in waste management using the modern teba concept, inorganic waste is dominated by the remains of religious ceremonies. The modern teba concept is the management of inorganic waste by utilizing existing land, through the creation of two save tanks. The modern teba concept makes it easy for the community to manage waste more effectively and efficiently.

Keywords: Local Wisdom, Organic Waste, Modern Guess

1 INTRODUCTION

1.1 Background

Bali Island is a tourist destination that is in great demand by tourists, both domestic and foreign tourists. However, the high consumption activity of local people and tourists in the Province of Bali has generated quite a lot of waste. Based on data from the Ministry of Environment and Forestry (KLHK), the province of Bali produced 915.5 thousand tons of waste generation throughout 2021. This makes Bali the 8th largest waste was producing province in Indonesia. As for the breakdown by region, most of the waste generation in Bali comes from Denpasar City, namely 349.5 thousand tons in 2021. Next in line is Gianyar Regency with 141.4 thousand tons of waste, Buleleng Regency with 123.7 thousand tons, Badung Regency 116.7 thousand tons, and Tabanan Regency 84.2 thousand tons. Based on the source, most of the waste in Bali comes from household activities with a portion reaching 40.58 percent of the total waste in the province. It was followed by waste from commercial activities 18.22 percent and 17 percent from the market.

The waste problem is a problem that will never end, because as long as it is still alive, it will always produce waste. Waste production is always directly proportional to the increase while the population increase. The more the population, the higher the waste will be produced. Garbage is often regarded as something that is disturbing, dirty, smelly, difficulties to decompose into soil, disturbing eyesight, disturbing health and even causing flooding. There are various types of waste, including solid waste and liquid waste. For this reason, the first

step is to identify the various types of waste in the environment, then classify them, which ones can still be used, which ones have been used up and which ones can still be processed/recycled because waste actually has many uses. If you want to manage waste seriously and in a good and correct and even professional way then waste is not a problem. Garbage can even produce something that we can use and bring income (money) (Aminudin 2019).

One of the efforts to accelerate the achievement of the Millennium Development Goal (MDG) target is the application of a sorting and processing pattern in community management. The application of this pattern requires the active role of the community as the key actors in waste management at the source (Anggraini 2019). In simple terms, household waste can be divided into 3 categories, namely toxic waste such as used batteries, used light bulbs and items containing chemicals. Then solid waste that cannot be decomposed, such as plastic, bottles, cans. And lastly the items that can still be decomposed by the soil such as leftover vegetables, leaves, and so on. An environmentally friendly lifestyle is also known as the 3R motto: Reduce, Reuse & Recycle. This means reducing the level of need for waste, reusing existing waste and recycling used waste (Aminudin 2019).

Garbage is wasted material that comes from household waste or industrial waste, waste can be used or recycled so that it can be reused (Candrakirana 2015). According to Hasanah (2021), types of waste based on the chemical substances contained in it are divided into two, namely organic waste and inorganic waste. Organic waste is waste that comes from living things which can be divided into wet organic waste and dry organic waste. While materials that are classified as dry organic waste are other organic materials with small water content such as paper, wood or tree branches and dry leaves. Inorganic waste does not come from living things. This waste comes from renewable materials and hazardous and toxic materials. Types that fall into this category can be recycled (recycle), for example, materials made of plastic or metal. There is Non-metallic dry waste (glass cups, glass bottles, cloth, wood, etc) and also soft waste such as dust and ash (Hasanah 2021).

The island of Bali has strong local wisdom in society. Local wisdom is a form of Indonesian cultural heritage, local wisdom contains the values and norms and beliefs of the local community is dynamic, open and up to date, thus local wisdom is always related and related to all human life and its environment (Sufia *et al.* 2016). Mungmachon (2012) had opinion, local wisdom is the main knowledge gained from living in harmony with nature. A very important characteristic of local wisdom comes from life experiences. Experiences received by someone are integrated in the form of body, soul and environment (local wisdom is basic knowledge gained from living in harmony with nature. A very important characteristic of local wisdom comes from life experience. Experience received by someone is integrated in the form of the body, soul and environment). Thus it can be concluded that local wisdom is a culture that is inherent in the local community. Local wisdom arises because of experience in dealing with life. The person's experience is considered correct so that it becomes a habit that is continuously carried out by the local community.

In addition to this description, there is a regulation that discusses local wisdom, namely the Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number 34 of 2017 concerning Recognition and Protection of Local Wisdom in the Management of Natural Resources and the Environment stating that local wisdom is noble values that apply in governance the life of the local community, among others, to protect and manage the environment and natural resources in a sustainable manner. Local wisdom has values that can be upheld in life, including the environment, such as in waste management.

Waste management on the island of Bali adheres to local wisdom using a modern guessing system. The modern teba system is a pattern of waste management based on sources, with special characteristics in handling routine household organic waste through the use of a saveteng (tebe) composter in each resident's yard, and its management is based on local wisdom of Balinese traditional culture based on Tri Hita Karana.

The local wisdom of Balinese traditional culture is based on Tri Hita Karana to create three harmonious relationships, namely the harmonious relationship between humans and

God, the harmonious relationship between humans and humans and the harmonious relationship between humans and the environment. To create this harmonious relationship, waste management is needed that does not harm the environment or damage environmental sustainability. By knowing the technology in waste processing such as modern teba, the community can have knowledge about how to manage waste, then the community can process organic waste into fertilizer so that it can be used as fertilizer on community agricultural land. As a follow-up to this activity, it is hoped that the community will be able to get used to disposing of garbage and managing waste in a modern way so that waste can be used as fertilizer and can preserve the natural environment around it.

Cemenggaon Traditional Village in Sukawati District, Gianyar Regency is one of the villages on the island of Bali that has succeeded in innovating waste management with the modern “Teba” system. The modern teba concept carries the concept of local wisdom by utilizing the existing land around the homes of each community. In traditional Balinese architecture, each house has a teba, which is the back of the house that is devoted to farming and making animal pens. Organic waste dominates because of the many traditions that require canang or daily offerings, which usually consist of flowers and plants. With modern guesswork, 60-70 percent of the waste has been handled. In traditional Balinese architecture, each house has a teba, which is the back of the house that is devoted to farming and making animal pens. Organic waste dominates because of the many traditions that require canang or daily offerings, which usually consist of flowers and plants. With “Teba” work, 60–70 percent of the waste has been handled.

The concept of making “Teba”es is very easy. The process of making modern “Teba” from buis concrete has a diameter of 1 meter and a depth of between 1-2 meters, according to the needs of each household. The depth of the compost well is about 200 cm. The top is placed concrete foam, then still soil underneath to make it easier for these organic decomposing bacteria to live and work to destroy organic material, such as leaves to the rest of the kitchen waste. Generally, this composter is embedded evenly with the soil. There is also above ground level (soaring) where the hole is at the bottom. Usually, the residents who make the towering model of the compost well are used as tables, such as in parks and at schools. There are also those that are square or circular in shape and are embedded in the ground.



Figure 1. Utilization of the “Teba” modern concept.

This modern “Teba” concept provides convenience for the community in waste management, selection of organic and inorganic waste. The processing of organic waste, which mostly originates from remains or ceremonial tools in Bali, shows that there is a basis for local wisdom in environmental preservation.

Based on the description above, the importance of “Teba” modern concept in waste management, so in this writing we will discuss “The Role of Local Wisdom for Waste Management with a “Teba” Modern System”

1.2 *Problem formulation*

Based on the description above, this writing will discuss “How is the existence of local wisdom in waste management with a “Teba” modern system?”

1.3 *Aims of writing*

Based on the description above, the purpose of this writing is to find out the existence of local wisdom in waste management with a “Teba” modern system.

2 DISCUSSION

Garbage is the remains of human daily activities or from natural processes in solid form (RI Law Number 18 of 2008 concerning Waste Management). The existence of legal protection for the rights and obligations of the community in environmental management activities is expected to be able to increase public awareness of environmental cleanliness and use of plastic waste to be valuable. A healthy environment can be realized by complying with government regulations and adhering to the customary village manners. In the concept of Hinduism, we know the teachings of Tri Hita Karana. Where one of the points of his teachings is Palahan, which means good relations between humans and their environment. In this case, public awareness of environmental cleanliness is still lacking, especially in waste management.

Organic waste is divided into dry organic waste and wet organic waste. Dry organic waste is waste that does not decompose naturally. Meanwhile, wet organic waste is waste that naturally decomposes Hasibuan (2016). Dry organic waste has low water content, for example wood or dry twigs and leaves. Meanwhile, wet organic waste has fairly high water content, for example vegetable scraps and fruit peels. Types of organic waste that can be recycled into organic fertilizer are vegetable waste, rice waste, chicken waste, fish waste, egg shell waste and fruit waste. Fruit waste contains various nutrients that are beneficial for plant growth.

Sources of waste according to Gilbert *et al.* in Artiningsih (2015), sources of waste generation are:

- (1) Garbage from people’s homes, in densely populated areas, the waste generated in households is more food waste, both wet and dry.
- (2) Garbage originating from public spaces and places of trade transactions. Public places are places for people to gather and carry out activities that have the potential to generate waste from the activities carried out.
- (3) Garbage from government-owned community service facilities The waste referred to here is for example public entertainment venues, beaches, mosques, hospitals, cinemas, offices and other government facilities that produce dry and wet waste.
- (4) Waste originating from industrial activities either originating from the distribution of raw materials or in the distribution process, waste also in the form of leftover building materials, leftover food ingredients and so on.
- (5) Agricultural waste is waste produced from agricultural activities which is usually in the form of organic waste which can be reprocessed and used for agricultural activities again.

Management of organic waste by utilizing the modern scavenging system in line with local wisdom has been carried out by the Balinese customary law community based on Tri Hita Karana. Customary law communities are groups of people who have lived in certain geographical areas for generations due to ties to ancestral origins, strong relationships with the environment, and a value system that determines economic, political, social and legal institutions that receive recognition, in accordance to statutory provisions. Local wisdom has an important role in life and environmental preservation; therefore it is necessary to protect local wisdom. Protection of local wisdom is a form of state service to the Customary Law Community or the local community in order to ensure the continuity of local wisdom and the existence of the host community, as well as the fulfillment of rights and obligations in protecting and managing the environment, so that they can live, grow and develop as a community group, civil society, participate in accordance with human dignity.

In the Cemenggaon Traditional Village in Sukawati District, Gianyar Regency, all residents now have at least one composting well in their yard. Some even make up to three special composting holes to process organic waste into compost. This is to reduce waste disposal to waste management sites. Modern “Teba” utilizes bacteria to speed up the decomposition process of organic waste. Teba’s innovation is not just a big hole in the ground behind the house, but is modified into a table or bench in the yard that can be used for hanging out or chatting. This concept can also be applied in public places and schools. Waste management through modern “Teba” combines local wisdom from the Traditional Village and Tri Hita Karana. This pattern is then set forth in the form of a Perarem (a decision through a Paruman/traditional meeting). So it was decided in the PES-PEDE program (Rural Independent Garbage Management). Waste management in Cemenggaon Traditional Village was consisting of 60% organic waste and 40% inorganic waste. The steps in making the “Teba” modern concept are:

The first step is to sort waste at each landfill in the household by providing at least 2 trash cans, namely organic and inorganic waste.



Figure 2. Waste segregation.

The organic waste that is more dominant comes from the remnants of ceremonies because most of the facilities are used for religious ceremonies. In Bali and the Cemenggaon

Traditional Village in particular, organic waste dominates because there are many traditions that require canang or daily offerings, which usually consist of flowers and plants.

The second step, providing 2 pieces of save teng in each household. The process of making modern “Teba” from concrete foam has a diameter of 1 meter and a depth of between 12 meters, according to the needs of each household. The depth of the compost well is about 200 cm. The top is placed concrete foam, then still soil underneath to make it easier for these organic decomposing bacteria to live and work to destroy organic material, such as leaves to the rest of the kitchen waste. Generally, this composter is embedded evenly with the soil. There is also above ground level (soaring) where the hole is at the bottom. Usually, the residents who make the towering model of the compost well are used as tables, such as in parks and at schools. There are also those that are square or circular in shape and are embedded in the ground. When the organic waste is full, it will be fermented for 5-6 months, and then used as compost. Furthermore, the fertilizer will be sold for the purposes of ornamental plants. The manufacturing fund is around IDR 500,000. Besides being used as compost, modern “Teba” can be used when heavy rains occur so that the house is never flooded. The method is easy, just open it, cover it and rainwater will be absorbed into the bio pore hole, so that the water will re-enter the ground and can create water reserves in the ground.

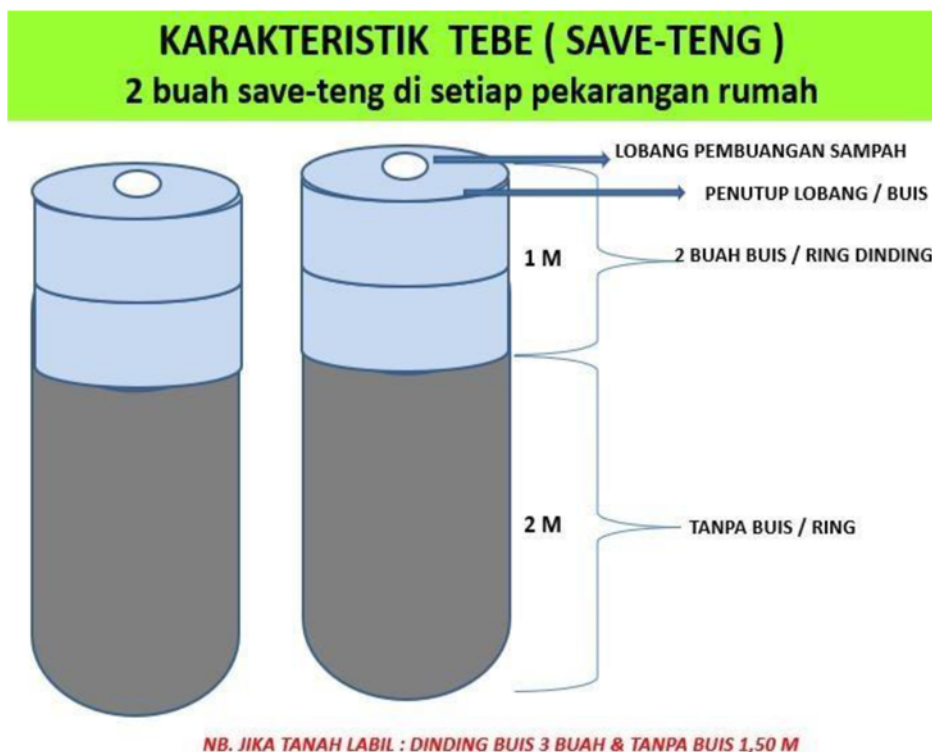


Figure 3. Characteristics of save Teng.

The third step is to provide a traditional village-level composter for handling incidental or sudden organic waste.



Figure 4. Handling of incidental organic waste.

The fourth step, there is an active waste bank in the Traditional Village for handling non-organic waste or recycled plastic.



Figure 5. Garbage bank of traditional village.

The fifth step is handling residual non-organic waste by utilizing landfills services by picking up trash once a week



Figure 6. Traditional village garbage bank.

While organic waste is handled using modern methods, inorganic waste such as plastic, bottles, metal and paper is handed over to the village waste bank for recycling. In addition, residual waste that cannot be recycled such as pads, pampers and Styrofoam is collected for submission to the Temesi Gianyar landfills. Since 2011, Cemenggaon Village has established an Environmental Care Forum and since 2016 has opened its waste bank. All residents are cooperative with this program and received many positive responses. Cemenggaon village is also an example for villages, organizations and schools in Bali to implement a “Teba” modern system. The supporting factor in the implementation of modern waste management is the support and positive response from the community. The results achieved from this activity are that people begin to understand the importance of managing waste. This modern cane manufacture can process organic waste into fertilizer so that it can be used for agriculture, so that air pollution from burning waste can be reduced.

The benefits obtained by the community in waste management with this modern “Teba” concept are:

- (1) Cost efficiency, with the modern concept of guessing 60% of waste is handled at the household without cost, facilities are used unlimited, transport costs are very small and the cost of community retribution is reduced.
- (2) Time-effective, in this case 60% of household waste is resolved through 2 organic waste bins in each yard.
- (3) Obtaining savings, by depositing plastic waste in a scheduled waste bank and obtaining savings.
- (4) Saving family finances
- (5) Maintaining environmental sustainability.

3 CONCLUSION

Local wisdom has an important role in waste management using the “Teba” work concept. 60% of inorganic waste is dominated by remnants of religious ceremonies. “Teba” modern concept is management of inorganic waste by utilizing existing land, through the creation of two save tanks. The modern “Teba” concept makes it easy for the community to manage waste more effectively and efficiently.

By knowing the technology in waste processing such as modern teba, the community can have knowledge about how to manage waste, then the community can process organic waste into fertilizer so that it can be used as fertilizer on community agricultural land. As a follow-up to this activity, it is hoped that the community will be able to get used to disposing of garbage and managing waste in a modern way so that waste can be used as fertilizer and can preserve the natural environment around it. There should be cooperation between village officials and the community to increase awareness to maintain environmental sustainability and use modern waste management.

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Public service of marriage certificate at the service of population and civil registration Badung Regency

Ida Ayu Putu Sri Widnyani, Ni Nyoman Rai Asianingsih & I. Kadek Dede Junaedy
Ngurah Rai University, Denpasar, Indonesia

ABSTRACT: Administrative recording is carried out at the Population and Civil Registration Office (Disdukcapil). The marriage certificate is legal proof that the marriage has been carried out. The Badung Regency Population and Civil Registration Office, hereinafter abbreviated as the Badung Regency Disdukcapil, is the executor of population administration at the district level. People who wish to apply for their marriage certificate must take the time to come to the Disdukcapil Office then fill out the required documents and queue. If there are supporting documents that are incomplete, the submission will be postponed. This situation provides an opportunity for brokers to provide an agreement in the administration of population documents. This paper discusses the inhibiting factors in the service of marriage certificates and how to solve them. This method used is descriptive method with secondary data sources. The theory used is modern bureaucratic theory and the principle of public service. There are factors that hinder the service of marriage certificates through the Akudicari Website, including (1) Some people are still confused and don't understand how to use the online system provided. (2) Not all people in Badung Regency are able and master the use of technology in carrying out their life activities. (3) The final problem is that people still don't care about the importance of special residence documents in marriage certificates. The solution taken in dealing with the existing constraints is that the Disdukcapil of Badung Regency must carry out outreach either through print or electronic media, Disdukcapil must also carry out outreach to the field. Services to villages must also be carried out by Disdukcapil in order to create a society that obeys population administration. Apart from conducting socialization, improvements to online systems are also needed to make it easier for the public to access and input the data needed as administrative completeness.

1 INTRODUCTION

Everyone who lives in a place must have a population identity card, this is intended so that the population administration is orderly. Orderly population administration can provide certainty of legal protection to the community and provide rights as Indonesian citizens. In Law Number 24 of 2013 concerning Amendments to Law Number 23 of 2006 concerning Population Administration it is explained regarding population administration where population administration is a series of documents and population data through population registration, civil registration and information management.

Administrative recording is carried out at the Population and Civil Registration Office (Disdukcapil). Disdukcapil is expected to be able to provide a quality service in accordance with the expectations and desires of the community, from various population documents, one of the documents that must be owned by a husband and wife is a marriage certificate. With a marriage certificate, husband and wife have protection and recognition related to marital status, rights and obligations of each as well as the relationship with the child born.

The Badung Regency Population and Civil Registration Office, hereinafter abbreviated as the Badung Regency Disdukcapil, is the executor of population administration at the district level. The Disdukcapil of Badung Regency has so far provided population administration services in a conventional way, where the applicant must come directly to the Disdukcapil office to follow the procedure for processing the submitted population documents. People who wish to apply for their marriage certificate must come to the Disdukcapil Office then fill out the required documents and queue. If there are supporting documents that are incomplete, the submission will be postponed so that the applicant must come the next day. Such a situation provides an opportunity for irresponsible individuals such as brokers to make offers in managing population documents in the community.

2 LITERATUR REVIEW

2.1 *The concept of public service*

According to Hardiansyah (2018), public service is the provision of services either on behalf of the government or the private sector with the community, this is done to meet the needs and interests of the community. Meanwhile, according to Hayat (2017) that public service is public trust in public services that are carried out responsibly and in accordance with existing rules and regulations. So public service is the provision of services provided by the government or the private sector to the public in order to facilitate the community in carrying out administration.

In Article 3 of Law Number 25 of 2009 concerning Public Services, the objectives of public services are: a) The realization of clear boundaries and relationships regarding the rights, responsibilities, obligations and authorities of all parties related to the administration of public services; b) Realization of a proper public service delivery system in accordance with the general principles of good governance and corporations; c) Fulfillment of the implementation of public services in accordance with statutory regulations; and d) Realization of legal protection and certainty for the public in the administration of public services.

The principles of public service are:

- (a) Simple
Service standards that are easy to understand, easy to follow, easy to implement, easy to measure, with clear processes and affordable costs for the community and organizers.
- (b) Consistency
In preparing and implementing service standards, attention must be paid to provisions in adhering to time, procedures, requirements, and determining affordable service fees.
- (c) Participatory
Preparation of service standards by involving the community and related parties to discuss together and gain alignment on the basis of commitments or agreements.
- (d) Accountable
Matters regulated in service standards must be implemented and consistently accountable to interested parties.
- (e) Continuous
Service standards must apply according to policy developments and the need to improve service quality.
- (f) Transparency
It must be easily accessible and known by the whole community.
- (g) Justice
Service standards must guarantee that the services provided can reach all people of different social status, geographical location distance, and differences in physical and mental capabilities.

2.2 *Marriage registration*

Regarding the registration of marriages, it is determined in Article 2 paragraph (2) of Law Number 1 of 1974 concerning Marriage that “Every marriage is recorded according to the applicable laws and regulations.” What is meant by Article 2 paragraph (2) is that it has the objective of providing protection as well as rights resulting from marriage such as the right to obtain a birth certificate, inheritance rights and so on. The registration of marriages is administrative in nature which explains that the marriage event really existed and occurred, although the registration of the marriage does not determine whether the marriage is valid or not. Marriage registration aims to provide protection and certainty for the parties carrying out the marriage. The parties can defend the marriage before the law and can show authentic evidence regarding the marriage that has taken place (Rachmadi 2017).

2.3 *Public administration theory*

The theories contained in public administration are:

1. Neutralization Theory.

The main goal of this theory is that public administration bodies are not contaminated by politics, so that these bodies can provide fair and responsible services to the public.

2. Bureaucratic Theory (Old Bureaucratic Theory).

This theory was popularized by Max Weber in the 1890s. Weber’s bureaucratic theory is characterized by the characteristics of the existence of rules, writing, hierarchy of authority, administrator responsibilities and organizational implementation based on written documents.

3. Fayol’s Administrative.

Theory Fayol’s administrative theory is known as administrative-management theory. The object of study from the fayol is the top-level administrator.

4. James Q.

Wilson’s Bureaucratic Theory (Modern Bureaucratic Theory) This theory arose because of the weaknesses of Weber’s Bureaucratic Theory, Weber’s Bureaucratic Theory saw the organization from a rigid structural perspective, a rigid emphasis on vertical hierarchy and clear work procedures. Modern bureaucratic theory includes the study of the relationship between how the government bureaucracy is organized, led and managed with the performance of the bureaucracy. This theory disagrees with the assumption that bureaucratic behavior is purely rational and selfish (Studocu: 2022)

3 RESEARCH METHODOLOGY

The research method used in this paper is the descriptive method, namely the research method used to describe problems that occur in the present or are ongoing, aiming to describe what happened as it should at the time of research. The data sources used are secondary data sources, namely data taken indirectly through sources such as taking from documents relevant to this research.

4 RESULT AND DISCUSSION

4.1 *Factors inhibiting the service of marriage certificates through the Akudicari website*

The service for making marriage certificates through the Akudicari Website is an online-based service aimed at the community by the service provider apparatus, namely the

Disdukcapil itself. In this online service, components are needed, namely from the field of technology and devices that provide services for making the marriage certificate. State Civil Apparatus (ASN) who work at Disdukcapil have been provided with special knowledge and training regarding operating online services. With this online registration system, of course, people will still get the right service. Every photo or document uploaded via a cellphone camera must be in a bright place so that it can be read clearly by the officer. If the photo is not clear, it will be returned to the applicant with a notification with the contents of the message to repeat the photo upload process related to the specified requirements.

The time for completing a marriage certificate through the online Akudicari Website is the core of a service provided. The implementation process can be carried out quickly if there are no obstacles such as the lack of required documents or a slow network that hinders the process of issuing a marriage certificate. The timeliness of service is also influenced by the Population Administration Information System (SIAK), because frequent interruptions occur during operation, it will affect the timeliness of service.

There are factors that become obstacles in the service of marriage certificates through the Akudicari Website, including:

1. Some people are still confused and don't understand how to use the online system provided. So they prefer to ask for help from the Head of the Neighborhood or Kalian Banjar to take care of their marriage certificate.
2. Not all people in Badung Regency are able and master to use technology in carrying out their life activities, for example using Android only as a means of communication for telephones only.
3. The main and very common problem that becomes an obstacle for almost all Population and Civil Registration Services in Indonesia is that people still don't care about the importance of population documents, especially in marriage certificates, who feel that people seem relaxed and are not in a hurry to take care of them because they think that the marriage certificate documents can be taken care of later.

4.2 Solutions in facing obstacles that occur

In discussing this paper using James Q. Wilson's Bureaucratic Theory (Modern Bureaucratic Theory) includes the study of the relationship between how the government bureaucracy is organized, led, and managed with the performance of the bureaucracy. So with the Akudicari Website, people can easily access and input data in making marriage certificates. This site also provides a lot of information about procedures and requirements for population administration. In accordance with the principles of public service, the Badung Regency Disdukcapil has provided the best service by providing information in a clear and simple manner that can be understood by the general public. The solutions that can be used in dealing with the obstacles that occur are as follows:

1. Carry out outreach.
Carrying out socialization is one of the important steps that must be carried out by the Badung Regency Disdukcapil either through mass media, print media, the internet or through conventional socialization by going directly to the field;
2. Service reaches the village.
There must be administrative services from the Badung Regency Disdukcapil to villages in Badung Regency. This can make it easier for the public to administer population documents.
3. Website Maintenance.
This maintenance must be carried out so that people can easily input files online.

5 CONCLUSION

There are factors that hinder the service of marriage certificates through the Akudicari Website, including (1) Some people are still confused and don't understand how to use the online system provided. So they prefer to ask for help from the Head of the Neighborhood or Kalian Banjar to take care of their marriage certificate. (2) Not all people in Badung Regency are able and master to use technology in carrying out their life activities, for example using Android only as a means of communication for telephones only. (3) The main and very common problem that becomes an obstacle for almost all Population and Civil Registration Services in Indonesia is that people still don't care about the importance of population documents, especially in marriage certificates, who feel that the community seems relaxed and not in a hurry to take care of it because they think that the marriage certificate document can be taken care of later.

In order to create excellent service, the Badung Regency Disdukcapil must carry out socialization through both print and electronic media, Disdukcapil must also carry out outreach to the field. Services to villages must also be carried out by the Disdukcapil in order to create a society that obeys population administration. Apart from conducting socialization, improvements to online systems are also needed to make it easier for the public to access and input the data needed as administrative completeness.

5.1 *Suggestions*

The suggestions that can be given are:

- (a) For the community, they should carry out and complete population administration in accordance with the provisions that have been determined;
- (b) For the Disdukcapil of Badung Regency, to provide more education regarding the importance of population administration, as well as provide maximum service.

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Implementation TARINGDUKCAPIL website to improve the quality of public services in Denpasar city

Ni Putu Tirka Widanti & Made Dharmayanthi Kusuma Dewi
Magister Administrasi Publik Universitas Ngurah Rai, Denpasar, Indonesia

ABSTRACT: Public service comprises a series of activities conducted to meet the community's service needs in accordance with relevant policies. Leveraging technological advancements and information resources, the government aims to deliver exceptional services to the public, thereby fostering good governance through e-government initiatives. E-government involves utilizing the internet network to disseminate information and provide service facilities that simplify access to services for the public. The City of Denpasar's Department of Population and Civil Registration has introduced e-government initiatives through an online service platform named TARINGDUKCAPIL (Online Civil Registration). The research followed a qualitative descriptive approach, incorporating data collection methods such as observations and literature reviews. The primary aim of the research is to evaluate how the implementation of the TARINGDUKCAPIL website contributes to the improvement of service quality. The execution of the TARINGDUKCAPIL policy, designed to enhance service quality at the Denpasar City Population and Civil Registration Office, has been deemed a success. This assessment is corroborated by favorable feedback from the community, which is evident in the comments section of the official website. Furthermore, the availability of the Automated Civil Registry Machine (ADM) enhances the convenience of self-service document printing for the public. Nonetheless, stakeholders are encouraged to take a more proactive role in disseminating guidelines and tutorials for this self-service system, ensuring its optimal operation."

1 INTRODUCTION

Charles O. Jones (1996) explains the notion of policy implementation as a series of activities aimed at carrying out a program for specific outcomes. Furthermore, Jones divides the main activities in policy implementation into three categories: organization, interpretation, and application. Firstly, the organization of policy implementation involves the formation and arrangement of policy implementation resources, units, and methods used to execute the program. Secondly, the interpretation by policy implementers encompasses activities to formulate the program as a plan and provide appropriate guidance to ensure its successful execution and acceptance. Lastly, the application or implementation of the program by policy implementers includes the routine provisions for carrying out the program in line with the policy objectives.

According to Law Number 25 of 2009, the definition of public service is a series of activities aimed at fulfilling the needs of every citizen and resident for goods, services, and/or administrative assistance provided by public service providers in accordance with the prevailing laws and regulations. As one of the state institutions, local governments play a crucial role in providing excellent public services to their entire community. However, the

public service provided by the government has, until now, been marred by a negative perception in society. The negative stigma arises not without reason, but due to various challenges faced in the field, such as convoluted processes, inefficiencies, slow and unfriendly services, unclear timelines and costs for the required services, and other factors that make it difficult for the public to access decent public services. As a result, there is a tendency among the public to seek shortcuts to obtain the desired public services. If this issue is not addressed promptly, it is feared that various new problems will emerge, including an increase in corrupt practices within government institutions, which will become a significant issue within the government structure. Therefore, the government needs to improve the system and resources for providing public services to enhance and elevate the quality of services offered to the public.

The components of globalization consist of technological and information advancements that are inseparable from the progress of society in the present era. This progress is evident in various aspects of life, including public services. As service providers, the advancements in technology and information in the field of public services have led to significant demands on the government to improve and develop systems that can facilitate more transparent and straightforward delivery of public services. Furthermore, it is anticipated that the government will be forthcoming in granting public access to information in order to promote the idea of good governance. An initiative in pursuit of good governance involves the adoption of e-government.

E-government represents a governmental advancement leveraging the internet for the distribution of information, particularly government services, to the general public. The adoption of e-government serves the purpose of simplifying public access to information and government services, eliminating the need for physical visits to respective government agencies. Since the enactment of Presidential Instruction of the Republic of Indonesia No. 3 of 2003, which details the National Policy and Strategy for E-Government Development, Indonesia has been actively implementing e-government. This policy requires both central and regional government organizations to embrace the concept of e-government at every tier of governance, including the central government, regional authorities, and village-level administrations.

Nugroho (2007) outlines four distinctive phases in the development of E-Government in Indonesia: The initial stage is recognized as “web presence,” during which regional websites are established on the internet. During this phase, the government’s online platform offers fundamental information that is of public interest. The subsequent stage is termed “interaction,” in which regional websites furnish tools for fostering engagement between the public and local government authorities. Throughout this stage, the information made available becomes more diverse in nature. The third phase is referred to as “transaction,” where, in addition to interaction features, regional websites are equipped with government-provided public service transaction capabilities. The ultimate stage, known as “transformation,” signifies a phase in which government services are comprehensively improved and streamlined.

Based on the Presidential Instruction, the province of Bali, particularly the city of Denpasar, began implementing e-government by adopting the smart city concept to provide services to the public. In 2018, the city of Denpasar received an award for its efforts in the Movement Towards a Smart City from the Ministry of Communication and Information Technology, making it the only district/city in Bali Province to receive such recognition. To support the success of the smart city initiative, the Denpasar city government, particularly the Civil Registration and Population Agency (Dinas Kependudukan dan Pencatatan Sipil), also started implementing e-government, particularly in providing administrative services related to population registration. In 2020, the Civil Registration and Population Agency, known as Disdukcapil, began implementing the Tarin website (Online Registration) to ensure the continuity of public services during the Covid- 19 pandemic, and this practice is still ongoing.

Based on the explanation, the TARINGDUKCAPIL website (Online Civil Registration and Population Agency) in Denpasar City provides essential document services required by the public, such as birth certificates, marriage certificates, divorce certificates, and others, making it convenient for the community to handle their needs online. Given this information, the author is interested in researching the implementation of the TARINGDUKCAPIL website in improving the quality of public services in Denpasar City. The research topic aims to examine how the TARINGDUKCAPIL website has been integrated into the public service delivery system and how it has impacted the efficiency and accessibility of civil registration and population services. It could also investigate the level of user satisfaction and the understand how e-government initiatives like TARINGDUKCAPIL contribute to enhancing public service delivery and meeting the needs of the community more effectively.

2 LITERATURE RIVEW

2.1 *Implementing theory*

Understanding of implementation can be connected to a regulation or policy oriented towards the interests of the general public or society. Meter and Horn (Ratri 2014:4) define the implementation of public policy as actions carried out by individuals or groups, both government and private, aimed at achieving the objectives established in previous policy decisions. This means that the implementation process will not occur until the law or regulations are established, and funding is provided to finance the policy implementation process. On the other hand, policy implementation is considered a complex phenomenon that can be understood as a process, output, or outcome.

2.2 *Public service theory*

Ratminto (2005) defines that public service or general service can be defined as any form of service, whether in the form of public goods or public services, which in principle is the responsibility and is carried out by government agencies at the central, regional, and state-owned or regional-owned enterprises, in order to fulfill the needs of the public as well as to implement legal regulations.

3 METHOD

This study employs a qualitative descriptive approach, a method commonly applied in the fields of social and educational research. Qualitative research, as defined by Moleong (2007), involves gathering descriptive data in the form of written or spoken words, derived from observations of individuals or their behaviors. In this research, the methodology entails a comprehensive examination of the TARINGDUKCAPIL website belonging to the Civil Registration and Population Agency in Denpasar City. Additionally, a literature review is conducted to compile pertinent information from sources such as books, research reports, academic journals, and various electronic documents. The data analysis process in this research follows three steps as outlined by Miles and Huberman: 1) Data reduction, 2) Data presentation, and 3) Drawing conclusions. (Sugiyono 2018). The research aims to investigate the implementation of the TARINGDUKCAPIL website and its impact on enhancing the quality of public services in Denpasar City. Through qualitative analysis, the study seeks to provide an in-depth understanding of how the website has been integrated into the public service delivery system, its efficiency, accessibility, user satisfaction, and any challenges faced during the implementation process. By using a descriptive qualitative approach, the research aims to provide rich and detailed insights into the functioning and effectiveness of the TARINGDUKCAPIL website in improving public service delivery for the community.

4 DISCUSSION

In 2018, the city of Denpasar received an award in the Movement Towards a Smart City from the Ministry of Communication and Information Technology, and it was the only district/city in Bali Province to receive this recognition. The term “smart city” started to develop in Indonesia around 2016, and Denpasar city began developing the smart city concept in 2017. Although the implementation had already begun, Denpasar city has been moving forward with programs aligned with the smart city concept. The implementation of the smart city concept is also supported by the issuance of Presidential Instruction of the Republic of Indonesia No. 3 of 2003 concerning the National Policy and Strategy for E-Government Development and Denpasar Mayor Regulation No. 35 of 2014 concerning the Implementation of Electronic within the body of the text is mandatory; they should not be grouped together at the paper’s conclusion. It is of utmost importance to maintain precision in the numbering of these components, as any discrepancies may necessitate revisions. We kindly request that you meticulously review the numbering of these elements before submitting your paper to your proceedings editor. Charles O. Jones (1996) defines policy implementation as a series of activities aimed at operating a program, with a focus on three main activities: organization, interpretation, and application (implementation). Related to Charles O. Jones’ theory, the researcher is interested in using this policy implementation theory to investigate how the TARINGDUKCAPIL website is implemented to enhance the quality of public services in Denpasar City, through indicators such as organization, interpretation, and application, as discussed in the following research results:

- (1) Organization refers to the establishment or reorganization of resources, units, and methods to support the program’s operation. The success of policy implementation depends on the organization or institution overseeing it. The Civil Registration and Population Agency (Disdukcapil) is one of the Local Government Organizations that have started implementing electronic-based services. Disdukcapil is tasked with providing excellent services in the field of civil registration and population to the public. Based on the research findings, it can be assessed that the implementation of e-government, particularly the TARINGDUKCAPIL website, aligns with the implementation indicators outlined by Charles O. Jones. As a supporting factor for the program’s successful implementation, the suprastructural component, in the form of appropriate institutions and policies/regulations to meet government needs, is available. This is evident from the Disdukcapil Performance Report, which shows that designated units, such as the Head of the Population Registration Service Division, the Head of Civil Registration Service Division, the Head of Information Management of Civil Registration Administration, and the Head of Data Utilization and Service Innovation Division, are already in place to facilitate the program’s execution.
- (2) Interpretation involves analyzing how a program is derived from a plan and how it is appropriately and acceptably directed and implemented. The successful implementation of a policy, in this case, the TARINGDUKCAPIL website, requires a shared understanding among all relevant parties regarding the implementation guidelines. This understanding is crucial to ensure cooperation and coordination among the implementing personnel. In this research, interpretation is demonstrated through the planning and launch of a website. Considering the high prevalence of the pandemic in 2020 and the ongoing stay-at-home orders and activity restrictions, the TARINGDUKCAPIL website named “TARING” (Online Registration) was launched on June 8, 2020, through the AKUWARAS website access. The aim was to ensure the continuity of public services during the Covid-19 pandemic and to be accepted by the public. Several provisions were included, such as the website being accessible 24 hours, allowing applicants to register and submit applications at any time. However, for legalizations conducted offline at the Disdukcapil office and new account verification, they are done

during working hours. The service hours for these activities are from 08:00 AM to 01:00 PM WITA on Mondays to Thursdays, and from 08:00 AM to 11:00 AM WITA on Frid.

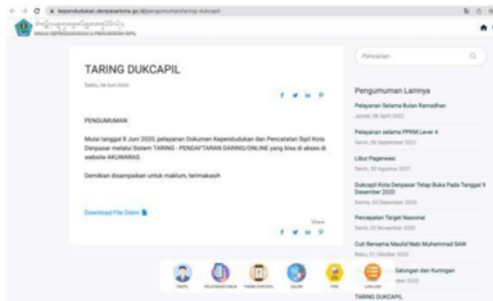


Figure 1. Official announcement on the civil registration and population agency website.



Figure 2. Flow and procedure for online registration (TARINGDUKCAPIL).



Figure 3. Front page display of the taringdukcapil website.

In Figure 2 and Figure 3, several services provided or accessed through the TARINGDUKCAPIL website are explained, including: Birth Certificate Package, Marriage Certificate Package, Divorce Certificate Package, Death Certificate Package, Family Card (KK), Electronic Identity Card (KTPel), Residence Certificate (SKPWNI, SKPDA, SKPLN), Child Identity Card (KIA), Data Synchronization, and other Civil Registration and Population Agency services. Applicants can choose one of the services they need, but before proceeding with registration, they are required to log in to their account. If they do not have an account yet, they will be directed to create one first. If applicants encounter any difficulties during the online registration, they can watch

tutorials provided by the Civil Registration and Population Agency of Denpasar City in the top right corner of the TARINGDUKCAPIL website page.

- (3) Application refers to the execution of routine activities, including the provision of goods and services. A policy can be considered successful when it is effectively applied. Based on the research findings from the Government Agency Performance Report of the Civil Registration and Population Agency in 2021, the implementation of electronic-based services through the website has been successfully applied. Its purpose is to ensure the efficiency of service processes during the Covid- 19 pandemic and to regain public trust while eliminating the negative stigma associated with convoluted services. During the implementation of the Disdukcapil website, efforts are continuously made to address obstacles and limitations, such as the limited number of human resources and the need to allocate funds for transparent, accountable, fair, and effective services in accordance with applicable regulations. Below are some achievements in 2021 from several Key Performance Indicators:
- (a) The percentage of Family Card (KK) printing reached 100%.
 - (b) The percentage of Electronic Identity Card (KTP) printing reached 98.58%.
 - (c) The percentage of birth certificate printing reached 111%.
 - (d) The percentage of completed death certificates for deceased individuals reached 143%.



Figure 4. Public reviews on civil registration and population agency services.

No	Nama	Alamat	No Telp	Status
1	Ditanggapi
2	Ditanggapi
3	Ditanggapi
4	Ditanggapi
5	Ditanggapi
6	Ditanggapi
7	Ditanggapi
8	Ditanggapi
9	Ditanggapi
10	Ditanggapi
11	Ditanggapi
12	Ditanggapi
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94	Ditanggapi
95	Ditanggapi
96	Ditanggapi
97	Ditanggapi
98	Ditanggapi
99	Ditanggapi
100	Ditanggapi

Figure 5. Complaint results through pro Denpasar in 2021.

The implementation of TARINGDUKCAPIL represents an innovation in improving the quality of public services, particularly in Denpasar City. However, in its application, the launched TARINGDUKCAPIL website does not always receive positive responses from the public. Based on the reviews posted by the public on Google and complaints submitted through Pro Denpasar, as shown in Figure 4 and Figure 5, we can see that some individuals give positive reviews, while others provide criticism and even lodge complaints through Pro Denpasar. One common criticism is related to the offline verification process at Disdukcapil. Some individuals are required to wait and queue again during the verification process, which can be frustrating. Despite this, it is important to note that the majority of criticisms are aimed at the offline verification aspect. However, overall, TARINGDUKCAPIL seems to be well- implemented, considering its accessibility, which

allows 24-hour access, and the ability for individuals to independently print documents using the Anjungan Dukcapil Mandiri (ADM) machine. The ADM machine has advantages in issuing 23 types of documents, including Electronic Identity Card (KTP), Child Identity Card (KIA), birth certificates, divorce certificates, and death certificates. Each ADM machine can accommodate 100 blank Electronic Identity Cards and 500 blank certificates.

5 CONCLUSION

The conclusion of the discussion and research conducted is that the implementation of the TARINGDUKCAPIL website to improve the quality of public services has been successful. The presence of the Anjungan Dukcapil Mandiri (ADM) machine has further facilitated the public in the document printing process, enabling self-service for all. However, there is still a need for the authorities to conduct socialization regarding guidelines and tutorials for the public, so that they can gradually become more proficient in using self-service, starting from online registration to document printing. Several recommendations can be made. The government is expected to continue innovating in the development and comprehensive implementation of e-government, especially in Denpasar City. This will impact the integrity of the government, leading to a reduction in administrative obstacles and an improvement in the quality of governance.

In conclusion, the implementation of the TARINGDUKCAPIL website has been effective in enhancing public service quality, and the ADM machine has made self-service document printing more accessible. However, the authorities should focus on conducting effective socialization to ensure that the public can utilize self-service features, from online registration to document printing. It is recommended that the government continues to innovate and fully implement e-government throughout the administration, particularly in Denpasar City, as this will improve governance integrity, reduce administrative hurdles, and enhance the overall quality of governance.

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The effectiveness of the implementation of SIPD in efforts to support financial administration in Buleleng Regency government

L.S. Mendriadi, I.A.P.S. Widnyani & N.D.U. Dewi
Ngurah Rai University, Denpasar, Indonesia

ABSTRACT: The implementation of the administration and reporting of financial accountability is required to use SIPD to obtain effective, efficient, accurate and accountable regional financial information. The method used in this research is a qualitative descriptive approach. The results of this study indicate that: 1) The effectiveness of SIPD implementation in an effort to support financial administration in the Buleleng Regency Government, seen from: a) the source approach indicator is not yet effective, b) seen from the process approach indicator is already effective, and c) seen from the indicator the goals approach is already effective, 2) The obstacles to the application of SIPD in an effort to support financial administration in the Buleleng Regency Government are seen from: a) the source approach indicator is a lack of understanding of human resources, especially in implementing business flows from financial administration reports, b) seen from indicators the process approach is that the internet network is not good, and c) seen from the indicators of the goals target, the features in the SIPD application are incomplete, and 3) The efforts made in overcoming obstacles when implementing SIPD, seen from: a) indicators the source approach is to provide guidance and technical guidance, so that human resources have a better understanding of financial management, b) the process approach indicator is to coordinate with the Ministry of Home Affairs, so that they can answer the problems faced in financial administration, and c) the goals target indicator is to provide input to the Ministry of Home Affairs to add new features needed for the implementation of administration.

1 INTRODUCTION

In this era of globalization, the role of management information systems in dealing with the increasing development of science and technology greatly affects human needs. This development is marked by the emergence of innovations that facilitate human needs. The Internet has become one of the most trusted technologies today and is a factor that makes it easy for leaders to get the latest information. Management information system is a tool capable of processing information from various sources. The management information system is a means of disseminating information that can reach all industries as long as the recipients of the information can be accessed (Deseverians and Wulandari 2020).

The government will continue to make efforts to improve programs in all aspects as a means to deliver real and perfect information in its service to the community, with the development of technological knowledge. The Ministry of Home Affairs in an effort to improve government programs issued Regulation of the Minister of Home Affairs of the Republic of Indonesia No. 70 of 2019 concerning Sistem Informasi Pemerintah Daerah (SIPD) which automatically replaces the previous Permendagri, namely Regulation of the Minister of Home Affairs of the Republic of Indonesia Number 98 of 2018 concerning Regional Development Information Systems for innovative and fast government

administration on 14 October 2019. This SIPD contains information systems regional development planning and regional financial systems, as well as other local government systems such as regional guidance and supervision systems (Permendagri 2019). In implementing this web-shaped application, it aims to speed up and facilitate the implementation of supervision and evaluation of government public services in Indonesia. SIPD is a bridge connecting the transportation system for Indonesia's digitization with one Indonesian data, but running this program is not easy because it requires cooperation and hard work from every stakeholder involved.

SIPD is a system that documents, administers, and processes regional development data into information that is presented to the public and decision-making materials in the framework planning, implementing, evaluating local government performance. After the issuance of Minister of Home Affairs Regulation Number 70 of 2019 and Minister of Home Affairs Regulation Number 90 of 2019, all local governments in Indonesian territory must implement a technology-based administration system, in this case the SIPD application.

The OPD of the Buleleng Regency Government encountered many obstacles in using the SIPD application. Difficulties in access to servers where there are still frequent errors, and there are still many improvements and developments in the implementation of the SIPD application, especially in the regional financial system in the field of administration. In addition, the competence possessed by regional financial system officers or operators in the area of administration in running the regional financial system in the area of administration is also not optimal, where officers or operators in charge of the regional financial system still make mistakes in the SIPD application. In addition, other obstacles are the lack of outreach and guidance in using the SIPD application and the lack of help desk services provided by the government if an error occurs. Due to these constraints, delays in payment of spending on SKPD and financial management information have not all been output through SIPD as one of the goals of the SIPD program.

However, due to demands from the central government to continue using SIPD to integrate one data on Indonesian financial management, Buleleng Regency Government in 2022 will try again to implement the SIPD application in administration so that it succeeds in obtaining accountability for financial implementation through the SIPD application even though there are still many obstacles encountered. The following table reveals that there are still many obstacles encountered in the implementation of the SIPD application to support the implementation of financial management throughout Indonesia and also in district areas throughout the Province of Bali.

Based on the description of the problems mentioned above, the following problems can be identified: 1) difficulty accessing the server where errors are still frequent because there are still many improvements and developments in the implementation of the SIPD application, especially in the regional financial system in the area of administration, 2) human resources that manage the system regional financial administration is still limited, 3) lack of outreach and guidance in using the SIPD application and lack of help desk services provided by the central government, and 4) not all financial information is generated from the electronic system.

2 LITERATURE REVIEW

Evaluation of the effectiveness of a program needs to be done to determine the extent of the impact and benefits generated by the program or the description of success in achieving the set targets. So effectiveness describes the entire input, process and output cycle which refers to the results of an organization, program or activity which states the extent to which the objectives (quality, quantity and time) have been achieved. An organization, program and activity is said to be effective if the desired goals or objectives can be achieved in accordance with the plan and can provide the desired impact, results or benefits.

According to Steers (Zuliyati 2005) the factors that influence the achievement of work effectiveness are:

- (1) Organizational characteristics
Organizational characteristics consist of organizational structure and technology. Structure is a way for an organization to structure its people to create an organization that includes a number of job specializations, decentralized control for work completion. Technology is an organization for converting raw inputs into finished output.
- (2) Environmental characteristics
The environment includes two related aspects, namely the internal and external environment. The internal environment is known as organizational climate which includes work environment attributes such as satisfaction and achievement. The external environment concerns forces that arise outside the boundaries of the organization that affect actions within the organization, such as government regulations.
- (3) Characteristics of workers
Workers have different views, goals, needs and abilities that will cause differences in behavior between one person and another. Achievement is the main capital in the organization that will have a major influence on effectiveness, because even though the technology used is sophisticated without achievement it is useless.
- (4) Management policy and practice
Managers play a central role in the success of an organization through planning, coordinating and expediting activities. So that managers are obliged to ensure the organizational structure is consistent and profitable for the existing technology and environment. In addition, managers are also responsible for establishing an appropriate reward system so that it can satisfy employee needs and personal goals in pursuing organizational goals.

Work effectiveness is a condition that shows the level of success of management activities in achieving goals including the quantity of work, quality of work, and timeliness in completing work and good quality of work (Hasibuan 2016). Some indicators of work effectiveness are:

- (1) Working quantity
The quantity of work is the volume of work produced under normal conditions. This can be seen from the amount of workload and conditions that are obtained or experienced during work. Every company always tries to improve the work effectiveness of its employees. Therefore, a company always tries to make every employee have high work morale.
- (2) Quality of work
Quality of work is the attitude shown by employees in the form of work results in the form of neatness, accuracy, and relevance of results without ignoring the volume of work in carrying out work.
- (3) Time utilization
Every employee must be able to use time as efficiently as possible, especially by coming to the office on time and trying to complete assignments as well as possible by utilizing the time during working period according to company policy.
- (4) Improving the quality of human resources
Required to realize the results expected by each company. Every employee should be directed to further increase the effectiveness of their work through various business stages to the fullest. So that the utilization of human resources will be more potential and more supportive of the success of achieving company goals.

There are three approaches needed in assessing effectiveness namely:

- (1) Source approach, namely measuring effectiveness through input. The approach emphasizes the success of the organization in order to obtain resources, both physical and non-physical, that are aligned with the needs of the organization.

- (2) Process approach, namely to find out how far the effectiveness of program implementation of all internal process activities or organizational mechanisms.
- (3) The goals approach, namely where the focus is on output, assessing the success of the organization in achieving results (output) in accordance with the plan (Martani and Lubis 2009)

From a number of definitions of measuring the level of effectiveness mentioned above, the authors convey that in this study the authors use the effectiveness theory expressed by Martani and Lubis by using approach indicators including the resource approach, process approach, and goals approach because this theory is able to measure the effectiveness of implementing SIPD in effort to support the financial administration of the Buleleng Regency Government.

3 RESEARCH METHODS

This study used descriptive qualitative method. This research is located in Buleleng Regency Government. The consideration for choosing the research location is because from the results of initial observations the researchers assumed that the SIPD objectives were not achieved in the Buleleng Regency Government in supporting regional financial administration and this research is a new study in Buleleng Regency Government which examines the application of SIPD in supporting the implementation of financial administration in the Regency Government Buleleng. The instrument used in this study was an interview guide which contained a number of questions that had to be answered by predetermined informants regarding facts and problems as well as constraints experienced and felt in the field so that the data obtained was accurate data for this research. Informants in this study were: Head of the BPKPD of Regency Government Buleleng, Head of Accounting & Reporting Division of the BPKPD of Regency Government Buleleng, SKPD Expenditure Treasurer of Regency Government Buleleng, SKPD Receipt Treasurer of Regency Government Buleleng, SKPD Finance Administration Officer of Regency Government Buleleng, and BPKPD Staff of Regency Government Buleleng. In this study, qualitative data analysis techniques were used with an interactive model, namely the data reduction component and data presentation together with data collection.

4 RESULT AND DISCUSSION

SIPD is a system that documents, administers, and processes regional development data into information that is presented to the public and as material for decision-making in the framework of planning, implementing, and evaluating local government performance. Minister of Home Affairs Regulation Number 70 of 2019 concerning Regional Government Information Systems explains that “management of regional development information, regional financial information, and other regional government information that are interconnected to be utilized in implementing regional development”. Every district/city to provincial government is expected to implement this information system in regional financial governance. Its application aims to achieve efficient and effective financial governance in good governance and to realize the Financial Audit Agency’s (BPK) assessment of the presentation of regional financial reports.

SIPD plays an important role in supporting the availability of up-to-date, accurate and accountable regional development data and information. In addition, SIPD also plays a role in encouraging data synchronization between the center and regions to achieve a single national database. Therefore, the use of SIPD must be optimized to support the achievement of effective and efficient central and regional development synchronization (Winarno *et al.*

2019). SIPD provides many benefits in regional financial management in Buleleng Regency Government, namely facilitating data input, accuracy in calculations, speed of data processing, efficiency in time and costs, budget transparency, and speeding up the process of preparing financial reports which are used as a decision-making tool by the leadership. However, in reality, there are still obstacles in the application of the information system where the effectiveness of the application of the SIPD application in an effort to support financial administration in the Buleleng Regency Government, seen from: a) the source approach indicator is already effective, b) seen from the process approach indicator is already effective, and c) in terms of indicators the goals target is quite effective.

In the source approach indicator, SIPD implementation has not been effective because there are not enough human resources with sufficient competence. The ability to produce effective, efficient, accurate and accountable financial reports is one of which must be supported by human resources, in the results of activities carried out human resources have fulfilled and are in accordance with their duties and functions. Meanwhile, from the indicators of the process approach, the application of SIPD has been effective because the SIPD application is quite easy to apply for inputting financial reports and also in this SIPD application, each user already has their own responsibilities and functions. Finally, from the goals approach indicator to implementing the SIPD application in an effort to support financial administration in the Buleleng Regency Government, it can be seen from the indicators that the goals target is effective because there is much that can be produced from SIPD, such as the treasurer's general cash book, the treasurer's functional accountability report, the tax book, the SPP register book, SPM and SP2D, although some cannot be produced from SIPD such as panjar books, activity control books, BKU BUD already exists but not perfect, online SP2D is not yet integrated with the bank so it is still manually brought to the bank and so on.

Effectiveness is a key element of activity to achieve predetermined goals or objectives. In other words, an organization is said to be effective if the predetermined goals or objectives are achieved. So, effectiveness as a very important concept in the organization because it is a measure of the success of the organization in achieving its goals. Therefore, measuring effectiveness is not a simple thing considering the differences in the goals of each organization and the diversity of the goals of the organization itself. The availability of human resources in the operation of SIPD is absolutely necessary. The important role of human resources is one of the benchmarks for achieving the effectiveness of an effective SIPD implementation. In addition, infrastructure in a government organization is very important to note in relation to the implementation of SIPD, especially a good internet network.

In terms of the process approach to measure the effectiveness of internal processes or organizational mechanisms. Measuring effectiveness through the process approach in government organizations is important because with this approach, it can be known to what extent the organization understands its duties and functions, and can understand the process of a service that exists in the government organization. The target to be achieved by a government organization that carries out its functions is customer satisfaction both internal and external. Viewed from the internal organization, the goals can be achieved properly in accordance with the expectations of the organization through the application of SIPD.

The results of this study are in line with Adisi's research (2022) which states that SIPD is an information system used by BPKAD as a system that documents, administers, and processes regional development data into information that is presented to the public and as material for decision making. The results of this study are that the SIPD program at BPKAD is quite effective.

Other research that supports this research is Irwan's research (2022) which shows that the City of Tidore Islands has succeeded in carrying out instructions from the Ministry of Home Affairs related to the implementation of SIPD, although there are still several obstacles and obstacles encountered but they have been handled properly so that the implementation of local government information systems can run quite well.

The achievement of program objectives is a goal that an organization or government wants to achieve in implementing a program, as well as in the implementation of the SIPD program who want more professional, transparent, innovative local government information and monitoring can be done from just one application. However, the implementation of SIPD in the Buleleng Regency Government is still experiencing obstacles.

Among the obstacles encountered, seen from the indicators of the source approach, is a lack of understanding of human resources, especially in implementing the business flow of financial administration reports seen from the indicators of the process approach, the internet network is not good enough to support the financial administration process. And, from the indicators of the goals target, the features in the SIPD application are incomplete so that financial reports are still made manually.

The inhibiting factors found were still network errors, unable to create templates so that the use of SIPD at BPKAD still used companion applications as measured by indicators of program understanding, right on target, on time, goal attainment and real change. Other research that supports this research is research conducted by Wahida which states that system changes, lack of socialization, delays in decision making, and human error (Wahida 2022).

The application of SIPD still needs special attention to all employees who manage the application because they do not really understand the business flow of the system so that further understanding is needed to improve human resources, because the work in it is related to finance not everyone is easy and understands finance. In addition, the process of inputting financial reports must be supported by available facilities and infrastructure, both wifi networks, computers and other supporting tools so that the inputting of financial reports can run smoothly and not be hampered.

SIPD is an integrated application developed by the Ministry of Home Affairs as a tool for regional governments in order to increase the effectiveness of implementing accountable and transparent regional financial management. The author found an important there are still obstacles in the implementation of SIPD. Therefore, efforts are needed to overcome these obstacles.

The efforts made in overcoming obstacles when implementing the SIPD application in an effort to support financial administration in the Buleleng Regency Government, seen from: the source approach indicator is to provide technical guidance and guidance involving the Ministry of Home Affairs as the owner of the application, so that HR has a good understanding enough in financial management. With coaching and technical guidance, employees can understand and be able to apply the SIPD application well. The process approach indicator is coordinating with the Ministry of Home Affairs, in order to be able to answer the problems faced in financial administration. Direct coordination by visiting the Ministry of Home Affairs or coming to the Ministry of Home Affairs is very effective but it costs money and takes a long time to follow up on data correction errors. Meanwhile, from the indicators the goals target is to provide input to the Ministry of Home Affairs to complete regional proposals and generate budgets per sub-unit, control cards per spending account, online SP2D, digital sign SP2D, advance books, and BKU BUD.

This research is in line with Wijaya's research which states that the expenditure treasurer at the Tombariri District Office has carried out financial management in accordance with applicable regulations, although there are still several obstacles faced by the expenditure treasurer in carrying out administration and accountability and delivery. In this regard, the Tombariri District Office continues to strive to create good governance by participating in various seminars and training organized by the government (Wijaya 2022).

5 CONCLUSION

The effectiveness of SIPD implementation in an effort to support financial administration in the Buleleng Regency Government, seen from: a) the source approach indicator is not yet

effective, b) seen from the process approach indicator is already effective, and c) seen from the goals target indicator is already effective. Obstacles to the implementation of SIPD in an effort to support financial administration in the Buleleng Regency Government are seen from: a) the source approach indicator is a lack of understanding of human resources, especially in implementing the business flow of implementing financial administration, b) seen from the process approach indicator is a poor internet network in supporting the financial administration process, and c) seen from the indicators of the goals target, the features in the SIPD application are incomplete so that financial reports are still made manually. Efforts made in overcoming obstacles when implementing SIPD in an effort to support financial administration in the Buleleng Regency Government, seen from: a) the source approach indicator is to provide guidance and technical guidance which involves the Ministry of Home Affairs as the owner of the application, so that human resources have an understanding sufficient in financial management, b) the indicator of the process approach is coordinating with the Ministry of Home Affairs, in order to be able to answer the problems faced in financial administration, and c) the indicator of the goals target is to provide input to the Ministry of Home Affairs to complete regional proposals to add features incomplete features such as raising budget per sub-unit, Control per shopping account, online SP2D, digital sign for SP2D, and improvement of BKU BUD.

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Family communication strategy to improve gender equality for girl in Coastal Province Bali

Ni Kadek Pina Riantini, Nyoman Diah Utari Dewi & Ida Ayu Putu Sri Widnyani
Ngurah Rai University, Denpasar, Indonesia

ABSTRACT: Education of coastal communities still needs serious attention, because girls do not become a priority for continuing education. Assuming that the boy would become heads of the family, in charge of the family and became a central figure in the family community. The family is the central point to provide gender equality for girls to pursue higher education is equal to boys through family communication approach. the the purpose of this study was to understand the communication strategy of the family in promoting gender equality for girls in the coastal areas. The research method used mixed-method research that combines qualitative and quantitative research. Sources of data become the subject of research are the parents and the girls, then the data through observation, interviews, and questionnaires. Research shows that family communication strategy to promote gender equality of girls in coastal areas is the context of communication between parents and children as an effort to change cultural stereotypes of ethnic Bali and poverty. family communication strategy refers to the communication patterns of openness, empathetic attitude, supportive attitude, a positive attitude and the attitude of equality in communication of family members for the sake of equality and fairness girls. based family communication strategy for the achievements of gender equality more viable livelihoods and improving the welfare of poor families living on the coast of Bali.

Keywords: communication strategy family, gender equality, ethnicity Bali, coastal

1 INTRODUCTION

Inequality gender related with problems of oppression and exploitation, violence, and equal rights in the family and society. Various factors are interrelated, among others because relatively high rates of poverty and unemployment, as well as low level education Woman in coastal area. The extent of the coastal area and very variety culture public cause condition and problem poverty in Bali being very diverse with its local traits strong and different experiences of poverty between Woman And man.

In family, life somebody started when a child gets protection with comfortable, a wife/mother do task, get right And do tasks her motherhood. Temporary a father/husband give comfort, serenity, And do his duties as head family. Lots matter started from House, child grow And develop, know himself, Father And her mother, his brothers And Study understand all something Which happen in around environment coast that beach identical with poverty.

Reason matter the is lack of communication between family members, social construction And cultural Which understood And embraced by public Which No based on principle gender equality. Understanding of subject-object, dominant-no dominant, superior-imperial as well as distribution roles Which No balanced between male family members (father, son) and Woman (Mother, child Woman) often position man more get rights privileged, while

women as part of the class second. Even in certain groups of people (middle class and educated, for example) relations built between women and men already more Good, but If reviewed more Far, on most of society's other groups, relations balanced between women and men still Far from hope.

Report Situation Child World Fund Union Nations For Child (UNICEF) year 2007 Which themed "*Women and Children: the Double Devided of Gender Equality*" called out equality gender as agenda important century This (Hartiningsih 2007). Report That confirm, equality of power relations between the two sexes not only socially constructed (gender). is right moral, but Also base very important for progress man And continuity development in meaning wide.

Discrimination to Woman Which Keep going happening in various parts of the world still shows that understanding as well as efforts For realize equality gender Still Lots find an obstacle. The patriarchal culture is still strong(culture Which based on power man)still positions women in stereotypes, roles, and marginalized position. In fact, the relationship that balanced (equality gender) between man And Woman in all aspect life can push acceleration process development Which based values humanity Which tall without exists superiority One type sex in One side And superiority type sex in side other (Fardus 2011:24).

Expected change from mainstreaming gender between other change individual, public or institution Which at first blind And bias gender, increase become responsive gender And Finally be gender sensitive. Gender blindness is a condition someone, society simply does not understand understanding gender And problem gender. bias gender is condition Which profitable on Wrong One type sex Which caused appearanceproblem gender. Neutral gender is conditionwhich is not in favor of either gender. Gender responsive is a condition that pays attentionvarious considerations for the realization of equality & justice on various aspect life between boy and girl. While gender sensitive is the ability and sensitivity in seeing and evaluate various aspect life And results development from a gender perspective (there are differences aspirations, needs, and experiences among men and women).

For example, in access education inCoastal communities are still very strong. In Lots family, child Woman No becomepriority for continuing education. At school vocational education, there is a stereotype that female students are notsuitable with school vocational technology. On college tall student Woman looked at more suitable with sciences gentle, like knowledge social, economy, literature; And not enough suitable with technology. In the view of this society, menconsidered to have a higher "economic value". so it is not surprising that the majority of people parents tend to attach importance to the education of boys man. Moreover, there is a strong assumption that boys man will become head family, become responsible for the family and become a central figure in the family community. Not to mention injustice gender often happen on education formal. kindly No aware Teacher give role Andchance Which more on student man compared to with students Woman.

Matter Which most dominant is obstacle economy, that is limitations cost For school so that family poor forced school boys than girls. This is source from problem poverty Woman located in patriarchal culture men as superior and Woman as subordinate. Culture patriarchy like This reflected Good in life family, socialize, nor patriotic, Andbecome source justification to system gender biased distribution of resources. Beside problem economy, person poor No school his son No only Because the cost No affordable, But Also Because theyargue that school No ensure that their children will later get a good job worthy.

Problem This Also experienced by public poorin area coast beach province Bali. the cause is range on phenomenon "Circle Demon Poverty". Income low, education low, nutrition even not fulfilled, Then growth doesn't work, the quality of human capital doesn't well, the way of thinking becomes less creative and no productive so that unemployment increase, And income low. Seen here that problem going round and round Keep going there. Circle demon That If Finally happen Also on descendants they sothe more hard to get out from poverty.

Alternative solution Can filed is application strategy communication family in increase equality gender. Method communication family is form communication most ideal, Because level between parent and child exists but does not cause formality communication in between them. Family communication strategy can be started from person old with educate, get used to, stimulate, and motivating child for keep going go to school. Family communication strategy, can not be separated from the role of parents who are very dominant and quality children's communication is greatly influenced by the extent to which parents communicate to him, the role of parents active communicate for his son for school so that upgrade access education for child woman can go out from circle poverty in area coast Province Bali.

Negative stereotypes of girls towards boys in general always give rise to injustice, especially in coastal areas (Puspitasari 2013:12). Matter This resulted happening discrimination And various injustice which harms women. Problems that appear For studied in a manner deep based on explanation background behind in on is strategy communication family increase inequality gender of girls in the coastal areas of Bali. Gender introduced by para scientist social to explain the differences between men and women which is innate as God's creation and which characteristic formation culture which studied and socialized since early age. This distinction is very important, because so far it has often been very mixed up which characteristics of boys are normal and which are not (gender). The differences in gender roles really help us to rethink the distribution of roles that have been considered inherent in men and women to build a picture of gender relations that are dynamic and appropriate and in accordance with the realities that exist in society.

Gender is a variety of attributes and behaviors attached to women and men and is shaped by culture. This is where the idea of views that are appropriate for both men and women emerge. For example, there is still controversy when women hold the reins of leadership, even though the position is held by men, this is not the case. This fact is influenced by paternalistic social culture. The impact of this system is that gender-biased birth product laws tend to disadvantage women more. For example birth policies that result in gender disparities and discrimination against women as discussed in this paper. Another example, there are still very few women in decision-making positions to fight for the interests and needs of women (Edriana 2013).

Difference draft gender in a manner social has gave birth to differences in the roles of women and men in society. kindly common gender has give birth to difference role, not quite enough answer, even room place Where man activity. So apparently difference gender This attached in our eyes, so that we often forget as if about thing it is something permanent and eternal as permanent and eternal characteristics biological Which owned by Woman And man.

In other words, gender as different roles, function, status and responsibility in men and Woman as results from formation (construction) embedded social culture through the process of socialization from One generation to generation next. With thereby gender is results agreement between unnatural human being. Therefore gender varies from place to place and from one time to next time. Gender doesn't characteristic natural, can changed And can exchanged from one human to another depending on time and local culture (Puspitasari 2012:1).

The understanding of gender equality is a condition women and men enjoy equal status and have the conditions to manifest in full human rights and their potential for development in all field life. Matter This possible Because difference role And status social community.

Definition from USAID like quoted by Puspitasari (2013) mention that "Genders Equality permits women and men equal enjoyment of human rights, socially valued goods, opportunities, resources and the benefits from development results (equality gender give chance Good on Woman nor man For in a manner equal/equal/comparable enjoy their rights as man, in a manner social have objects, opportunities, resources and enjoy the benefits of development results). Gender equality is a process to be fair, kind to women nor man. For ensure exists fair, must available something size For compensate historical and social

losses that prevent it Woman And man from validity something stages game. Strategy justice gender on Finally used For increase equalitygender. Justice is equality isresult.

Equality gender according to Report UNICEF 2007 (Puspitasari 2013) will produce “dividend” double. Woman Which Healthy, educated, Empower will own children Woman And man Which Healthy, educated And believe self. Influence Woman Which big within the household, has shown an impact Which positive on nutrition, maintenance health, And education children they.

So effort Which must done is strengthening gender *mainstreaming* is something strategy For reach justice and gender equality in all aspects of life social social. Mainstreaming genderis set process And strategy Which aims to change the gender gap process can reduced.

The gender gap is identified and overcome through policy, program And services Which continuous. Meaning use it mainstreaming gender is For ensure so Woman And man You're welcome obtain benefit development so that gap gender is abolished. Expected change from mainstreaming gender between other change individual, public or institution Which at first blind And bias gender, increase become responsive gender And Finally be gender sensitive. Gender blindness is a condition somebody, public Where No understand understanding gender And problem gender. bias gender is condition Which profitable on Wrong One type sex Which caused appearanceproblem gender.

Family communication is an activity that Certain happen in life family. Without. communication, leave family life from activities speak, dialogue, exchange thought will is lost. As a result, vulnerability connection between member family is hard to avoid. Hence the communication between husband and wife, communication between parents with children need to be built in harmony within rangaka build connection Which Good infamily (Djamarah 2004:38).

Understanding other communication family isformation pattern life family Where in which there are elements of education, formation attitudes and behavior of children who influence child development (Hurlock 1997:198). Understanding this explains that family communication plays a role in the process of changing knowledge, attitudes and behavior in family.

Ties with family are tenuous and contacts family Which reduce, decrease work Which done in House, child more Lots spend time outside the home than in a home, divorce or marriage second or third is increasing. Parents or fathers play a greater role in upbringing children, parents have bigger ambitions for children and willing to sacrifice personal interests them for the sake of children's education in preparing them in the future and sometimes more interactions with outsiders rather than family members(Hurlock 1997: 200). Furthermore Hurlock (1997:200) state that relationship with family members, be foundation of attitudes towards people and life in general general. With thereby so somebody Study adapt self on life on baseregulation in family. Role family very important to development social child, No only limited on situation social the economy orstructural integrity and interactions. It is easyaccepted if group social with objective-objective, norms, dynamics group includinghis leadership Which very influence the lives of the individuals who make up the group between child.

Communication Which expected is communication Which effective, Because communication Which effective can cause understanding, pleasure, influence on attitude, connection Which more Good And action. Likewise in the family environment is expectedfostered effective communication between parents and teenagers, so there will be a full relationship affection and with a harmonious relationship between person old And teenager, expected exists openness between person old And teenager in talk about problem And difficulty Which experienced by teenagers (Mulandar 2003: 23).

Strategy communication Which effective need built and developed in the family. Some factors important For determine clear nope information Which communicated in in family can direct on strategy communication Which effective namely (Irwanto 2001:85):

- Consistency, information Which be delivered in a manner consistent can trusted And relatively more clearcompared to with information Which alwayschanged. No consistency Which make children Confused in interpret informationthe.
- Firmness (*assertiveness*). Stress doesn't matter authoritarian firmness help convincing child-child or member family Which other that communicator truly believes mark or attitude. When the behavior of parents want to be imitated by child, so firmness will give guarantee that expects children to behave Which in accordance Which behave Which in accordance expected.
- Believe (*thrust*). Factor believe (*thrust*) is Which most important Because believe determine effectiveness communication, increase communication interpersonal Because open channel communication, clarify delivery And reception information as well as expand opportunity communicate For reach It means, until trust on person other will hinder development connection interpersonal ones familiar.
- Attitude Open. Attitude open push open mutual understanding, mutual respect, each other develop quality connection interpersonal (Rachmat 2002: 16).
- Behave Positive. behave in a manner positive includes attention or a positive outlookto self person, feeling positive for communicate.

2 METODOLOGY RESEARCH

Type study qualitative descriptive is research with a method or case study approach communication, leave family life from activities speak, dialogue, exchange thought will is lost. As a result, vulnerability connection between member family is hard to avoid. Hence the communication between husband and wife, communication between parents with children need to be built in harmony within rangaka build connection Which Good infamily (Djamarah 2004:38).

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3 METODOLOGY RESEARCH

Type study qualitative descriptive is research with a method or case study approach(*case study*). Study This concentrate self in a mannerintensively on one particular object that studies itas a case. Case study data can be obtained of all parties concerned, in other words in this study collected from various source.

Study This conveniently located in region Bali. Bali has a people who live in the coastal area. Besides that, own level life economy low And generally subsistence as fisherman. Based on consideration, chosen two regencycity, that is Regency Blonde And Municipality Parepere. Second location the is at in region coast beach Bali.

Subject perpetrator action is second person old fisherman. While girls as subjects research that helps in data collection. Technique collection data is interview, observation, And documentation. Furthermore, data Which collected was analyzed and concluded use approach induction.

Approach induction focus attention on that data in the field so everything about theory Which relate with study become not important. Data is very important while the theory is built based on the findings of the data in field. Data is everything Which can solve all problem study. Positionresearchers really explore the data, and if researcher in a manner as it happens has own theoretical understanding of the data in the research, process making theory That must done. Researcher believe that data must especially formerly obtained For disclose mystery study and new theory is learned when all the data is collected obtained (Bungin 2001:31). Next with reduction data, analysis data in study takes place simultaneously with the collection process data. Among them is through reduction data, presentation data, and verification.

4 RESULTS AND DISCUSSION

Family communication strategy to improve equality gender in area coast toinequality gender child Woman happen because presumption child Woman Which always encouraged to

yield, be gentle and accept leadership And guidance man make them always question consent from party man For advances And opportunities Which they get.

Communication in the family should be not only serves as a reflector of social reality but Also *agent of change* Which expected become constructor ideology change, it turns out precisely become a preserver of patriarchal ideology. It is revealed because communication in family Still conserve draft femininity traditional Which place women only in the domestic sphere or burden Woman with burden double. They also participated in harassing women because often use Woman as commodity or tool colonize.

This is also exacerbated by the role or existence media mass Which claim as media mass Woman, No escape from ideology patriarchy Which very often ridden also ideology. Films, telenovelas, soap operas, comic or novel Which Lots watched clan Woman Also has follow as well as conserve draft-draft the in on, so that truth patriarchy reconfirmed through the text they watch. The results of this study reveal the role family is very important to minimize gender inequality through the process communication built in the environment family. Role family central formation attitude positive in efforts to gender equality of children Woman specifically in area coast beach. Results collection data disclose importance role family For give understanding field education to para family members, especially for girls. Most or 78 people (70.91%) state role communication family very important. Furthermore state category Enough important a number 23 person (20.91%) And the rest Which state No important only amount 9 people (8.18%).

The indications show that the consciousness of the people parents to provide formal education for their children quite positive. This attitude gives a hope for the heads of poor families who are coastal areas to motivate children to go to school. Cost factors and conditions especially those being an aspect they couldn't especially overcome for parents who are only fishing rods their income is just enough for life daily.

The results of the study also revealed that the assumption child Woman Enough stay in House just help parents and husband as many as 13 people (11.82%). presumption form stereotype culture coastal communities image of individuals who No in accordance with reality empirical Which There is. Labeling negative in a manner general always give birth to injustice. One of the growing stereotypes based on the notion of gender, namely occurring towards Woman. Matter This resulted happening discrimination And various injustice Which harm the race Woman.

Strategy communication family effective in area coast against gender inequality of children women need to continue. For example, openness information, strategy beginning communication in family. Openness is attitude can accept input from others, as well as regarding convey information important to person other. In process communication interpersonal, openness become Wrong One attitude positive. Matter This caused, with openness, so communication interpersonal going on in a manner fair, transparent, two direction, And acceptable to all parties children women need to continue. For example, openness information, strategy beginning communication in family. Openness is attitude can accept input from others, as well as regarding convey information important to person other. In process communication interpersonal, openness become Wrong One attitude positive. Matter This caused, with openness, so communication interpersonal going on in a manner fair, transparent, two direction, And acceptable to all parties communicating. Own attitude Enough empathic in communication family 59.09 %, Then category very empathic 28.18% And the rest 12.73% argue No need empathize. Attitude empathy person old to children they is ability For feel if you become a child, you can understand something Which currently experienced child they, can feel what is felt, and can understand something problem from corner view a child.

Then, For communication family between person old And child Woman For category behave positive. Attitude positive (*positiveness*) shown in the form of attitudes and behavior. Attitude positive can showed with various type behavior and attitudes, among others; respect for others, think positively towards others, do not put excessively suspicious,

believing in the importance of people other, And give praise And award. Furthermore, equality (*equality*) is confession that second split party own interest, both parties are equally valuable and valuable, and need each other. Equality indicators include; put self equivalent with person other, realize exists interest Which different, confess importance presence person other, No coercion, two-way communication, and mutual need. Individual Also communicate on level interpersonal different depending on Who they involved in communication. As example, If somebody communicate with member family, communication Possible different from type communication Which used when involved in action communicative with Friend or important other.

Strategy communication in family effective when in a person there is a “supportive” behavior. It means somebody in face something problem No behave survive/defensive. Openness And empathy No can going on in atmosphere Which No supportive. Devito (2001) mention three behavior that lead to supportive behavior, namely descriptive, spontaneity And provisionalism. In behavior descriptive characterized by evaluation behavior, strategy And certainty. Descriptive, It means somebody Which own characteristic This more Lots request information or description about something matter.

In atmosphere like This usually person No feel insulted or challenged, but feel valued. Temporary, person Which own characteristic evaluative tend to judge and criticize others with mention weaknesses behavior. Spontaneity is an individual open And Keep going clear about his thoughts. Usually people like That responded to with open And Keep going bright. Provisionalism is an individual who has an attitude think open, There is will For hearview Which different And willing accept opinion of others when his opinion is wrong. Person Which own characteristic This No endure with his own opinion while people who have characteristic certainty feel that He has know all something And feel Certain that his opinion is most Correct.

5 CONCLUSION

Family communication strategies to improve gender equality of girls in coastal areas beach is context communication between person old And child in something effort process change stereotype culture ethnic Bali And factor coil poverty. Strategy communication family refer on pattern communication openness, attitude empathetic, supportive attitude, positive attitude and equality attitude in communicating within the environment or members family by equality And justice child Woman in area coast beach Bali.

Strategy communication family achieved If something the process of communication in the justice-based family gender intention For achievement livelihood Which more Good And enhancement well-being life family poor on the coast Bali Beach.

Something process change Which want done should continuity strategy communication family improve and provide educational services informal in family in a manner more wide And diverse, making it accessible to all parents especially equality child Woman For access education in area coast beach. For That expected relation gender in family can built If each individual each other understand difference And need Which owned as well as being able to provide equal opportunities without discriminate between gender roles.

Another thing that needs to be initiated is the availability of facilities formal and informal education services closer to where the child lives. The goal is in order to reduce the child's reluctance to go to school or object person old For school children can too lower cost Which people have to get out old.

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The implementation of local e-catalog policy in procurement of goods and services for MSMEs in Buleleng Regency

N.M.I. Widiyanti, I.A.P.S. Widnyani & N.D.U. Dewi
Ngrurah Rai Univeristy, Denpasar, Indonesia

ABSTRACT: The presence of a local e-catalog is a form of the seriousness of the Regional Government of Buleleng Regency in encouraging MSMEs to be better known, competitive and able to develop further. This research method uses a qualitative descriptive approach. The results of this study indicate that the implementation of local e-catalog policies in the procurement of goods and services for MSMEs in Buleleng Regency has been well implemented because the implementation of local e-catalogs will create an accountable procurement climate while still providing opportunities for local MSMEs to play an active role as goods providers services in Buleleng Regency and there is synergy between MSME actors and the government in the procurement of goods and services. The obstacles to implementing local e-catalog policies in the procurement of goods and services for MSMEs in Buleleng Regency are the many MSMEs in Buleleng Regency who do not understand information technology related to the procurement of goods and services through e-catalogs and MSMEs with limited capital have difficulty meeting technological requirements or the necessary infrastructure to participate in local e-catalogs, and the presence of policy instability, i.e. continuous policy changes. Efforts made to overcome the obstacles to implementing local e-catalog policies in the procurement of goods and services for MSMEs in Buleleng Regency require strong support and policies from stakeholders to help ensure the smooth implementation of local e-catalog implementation policies.

1 INTRODUCTION

Procurement of government goods and services is a very important activity in realizing development. Viewed from various perspectives, Indonesia's progress cannot be separated from these activities. In the economic sector, the development of facilities and infrastructure to support economic growth is realized through the mechanism of government procurement of goods and services in the social sector, the procurement of government goods and services to improve health, education and poverty alleviation facilities also helps overcome some social problems. As Indonesia's rapid economic growth is accompanied by the development of regional autonomy, the government's need for governance is also increasing. The government's needs can be material or non-material. This need is represented through the procurement process of goods/services (Hasibuan 2016).

In order to keep abreast of developments in technology and information, especially in the sector of government procurement of goods/services, to obtain government procurement of goods/services quickly, precisely, transparently and efficiently, the government issued Presidential Regulation No. 54 of 2010 concerning Government Procurement of Goods/Services. Through this Presidential Decree, the procurement of government goods/services has been regulated electronically or e-procurement. Changes in auction procedures from manual or non-e-tendering to e-procurement in 2010 more or less had a significant impact on

improving the process of procurement/goods/services. There has been an increase in the efficiency of saving state money and increased transparency in the process of procuring goods/services compared to before (Arifin 2017).

Implementation of procurement of government goods/services regulated in Presidential Decree No. 54 of 2010 regulates planning, budgeting, tender preparation, self-estimated price determination, auction announcement, auction implementation, announcement of auction winner, contract signing, execution of work up to handover work up to the handing over of work. The efficiency and effectiveness of the procurement process is essentially very dependent on the procedure for selecting providers. Selection of the right provider will produce goods/services that are in accordance with the needs and received at the right time. Purchasing goods/services that already have standards and are available in the market in sufficient quantity, can be done electronically, also known as e-purchasing. The e-purchasing application uses an e-catalog, which is an electronic information system that contains lists, types, technical specifications and prices of certain goods from various government goods/service providers.

The government through Presidential Regulation Number 4 of 2015 concerning the Fourth Amendment to Presidential Regulation No. 54 of 2010 concerning Procurement of Goods/Services The Government has begun to regulate more deeply the implementation of e-catalogs in the government goods/services procurement process carried out by the Government Goods/Services Procurement Policy Agency. With the enactment of the Presidential Decree, the process of procuring government goods/services can be carried out through e-catalogs. According to Presidential regulation No. 4 of 2015, electronic catalogs or e-catalogs are electronic information systems that contain lists, types, technical specifications and prices of certain goods from various Government Goods/Services Providers. The implementation of procurement of goods/services through e-catalogs is getting stronger after the issuance of Presidential Regulation Number 16 of 2018 concerning Government Procurement of Goods/Services. Article 50 paragraph (5), that the implementation of e-purchasing must be carried out for goods/services that involve meeting national and/or strategic needs determined by the minister, head of institution, or head of region. Therefore, for goods/services that are outside the criteria for meeting national and/or strategic needs, the procurement of goods/services is not mandatory through the e-purchasing method. This is supported by a theory which states that currently in Indonesia, online shops are booming in the form of online markets (e-commerce). This e-commerce is a gathering place for sellers and buyers on a website (Serfiyani *et al.* 2013).

Indonesia is one of the developing countries where economic growth in Indonesia is growing rapidly materially and non-materially, these needs can be in the form of procurement of goods/services. Micro, small and medium enterprises (MSMEs) are one of the activities that involve the people of Indonesia, these MSMEs have contributed to employment, the formation of Gross Domestic Product (GDP), the value of national exports and national investment (Suryono *et al.* 2022). In the strategy to accelerate the increase in the use of domestic products, one of the steps taken by the Indonesian government is to ensure that products made by domestic children can always be at the forefront of the digital market. Therefore economic actors, especially MSMEs which have contributed a lot in creating jobs in various regions, must not be treated unfairly on digital platforms.

One of the things the government has done is to provide space for local products in the digital market through the Government Goods/Services Procurement Policy Agency (LKPP). LKPP provides opportunities for MSME economic actors who mainly have production activities to advertise their products and services in the electronic catalog application (e-catalog) which can be accessed at <https://e-katalog.lkpp.go.id>. The application developed by LKPP provides various kinds of MSME products including commodities, goods and services needed by both the central government and local governments. In this e-catalog there are three storefronts, namely the national e-catalog managed by LKPP, sectoral e-catalog managed by ministries, and local e-catalog managed by regional governments. The

existence of the local government in developing local e-catalogs is useful in the context of encouraging and empowering MSMEs in various regions to upgrade and be competitive with imported products, and at the same time develop small to medium to large businesses.

LKPP itself continues to work with local governments to be involved in e-catalog development, and encourage superior products to be included in electronic catalogs. For business actors, especially MSMEs who wish to provide their products and services in an electronic catalog, they are required to follow a number of registration processes through the Electronic Procurement Service (LPSE), then fill out the qualifications in the Provider Performance System (SAKIP).

Buleleng Regency is one of the districts in the Province of Bali. Buleleng is bordered by the Java Sea to the north, the Bali Strait to the west, Karangasem Regency to the east, Jembrana, Bangli, Tabanan and Badung Regencies to the south. The area of Buleleng Regency is 1,366 km². Buleleng Regency consists of 9 Districts, 19 Villages and 129 Villages. In Buleleng Regency from 2020 to 2022 there are 356,044 MSMEs spread across 9 sub-districts. The MSMEs consist of Micro Enterprises, Small Enterprises and Medium Enterprises. The presence of local e-catalogs or online shopping applications issued by the Government Goods/Services Procurement Policy Agency (LKPP) specifically for each Regional Government is a great opportunity that can be utilized by local micro, small and medium enterprises in Buleleng Regency. The presence of this e-catalog is a form of the seriousness of the Regional Government of Buleleng Regency in encouraging MSMEs to be better known, competitive and able to develop further. In the local e-catalog, LKPP provides an opportunity for each Regional Government not only to offer services and goods for large industrial products, but also to provide equal opportunities for all MSMEs to offer products and will be accessed by local governments throughout Indonesia.

The products in the e-catalog cannot be freely accessed by the general public, in contrast to the marketplace where every item of goods is free to enter to be marketed. The products in the e-catalog have gone through strict curation carried out by the Goods/Services Procurement Policy Agency (LKPP) and goods/services providers under contract with LKPP and only products that meet the characteristics and are needed by the government will be included in the e-catalog. This has resulted in not all MSME actors in Buleleng Regency being able to enter this government program. It could be because it does not match the characteristics or does not meet the needs of the Buleleng Regency government. MSME actors who have passed various selections carried out by LKPP for the Buleleng Regency area. In the local e-catalog in Buleleng Regency, there are 34 storefronts and many providers are included in the local e-catalog for Buleleng Regency, for example, the food and beverage window in Buleleng Regency, where the provider comes from Buleleng Regency, the office stationery shop window, the provider comes from Buleleng Regency. storefronts for equipment, computer equipment and networks for the regional government of Buleleng district whose providers come from Buleleng district, but the number of MSMEs in Buleleng Regency is not comparable to the number of MSMEs that have been registered in the local e-Catalog. The number of MSMEs in Buleleng Regency is disproportionate to the number of MSMEs that have been registered in the local e-Catalog because the implementation was only implemented in June 2022 where the Buleleng district government has just started to socialize to providers who are often invited to collaborate with SKPDs. Previously, in 2020 and 2021 there were already providers who registered at SPSE whose use was for the Tender Method, EPL, or Direct (Manual) Procurement.

Based on some of the above evidence, the identification of problems in this study are: 1) Regulations and policies in meeting the needs of local e-catalog implementation, 2) infrastructure conditions and arrangements for e-catalog support systems, 3) technological capabilities of users and service providers, 4) level of human resource capability, 5) socialization to the parties involved, and 6) other elements that influence the success of the e-catalog process. The implementation of the procurement of goods and services is still not optimal.

2 LITERATURE REVIEW

Policies that have been recommended for selection by policy makers are not a guarantee that these policies will surely succeed in their implementation. There are many variables that can affect the success of policy implementation both individually and in groups or institutions. The implementation of a program involves the efforts of policy makers to influence the behavior of bureaucrats as policy implementers. The bureaucracy as an extension of the government functions as a policy implementer. The bureaucracy carrying out the duties and functions of the government from day to day certainly has an impact on its citizens. The role of the bureaucracy determines the success of the programs set by the government. The synergy between policy makers and the bureaucracy or in other words the agency as an implementer is very important for achieving policy goals.

Policy implementation is a legal administration tool where various actors, organizations, procedures, and techniques work together to implement policies to achieve the desired impact or goal (Winarno 2012). This definition explains that policy implementation is the implementation of administrative activities that have legal legitimacy. Implementation of the policy involves various elements and is expected to work together to realize the goals that have been set. The implementation phase does not start when the goals and objectives of public policy are set, but the new implementation phase occurs as long as the legitimacy process is passed and the allocation of resources and funds has been agreed (wahab 2005). The study of policy implementation emphasizes examining the factors that influence the success or failure of achieving policy objectives. Policy implementation in principle is a way for a policy to achieve its goals (Dwijowijoto 2003). Implementation of the policy according to the opinion above is nothing but related to how the policy can achieve the objectives of the policy through the form of programs and through derivatives. The derivative or derivative of the intended public policy is through intervention projects and intervention activities.

From the explanations above it can be concluded that policy implementation will not begin before the goals and objectives are set or identified by policy decisions. So implementation is a process of activities carried out by various actors so that in the end it will get a result that is in accordance with the goals or objectives of the policy itself. When implementing a policy, you must first analyze the existing problems to find out whether or not the problem is easily solved. After that identify what factors are needed in the implementation process and the policy environment that influences it both internally and externally.

According to van Meter and van Horn, there are six variables that affect implementation performance, namely: 1) policy standards and targets must be clear and measurable so that they can be realized, 2) policy implementation needs the support of resources, both human and non-human resources, 3) inter-organizational relations means that a program needs support and coordination with other agencies, 4) Characteristics of implementing agents, which include bureaucratic structures, norms, and patterns of relationships that occur within the bureaucracy, which will affect the implementation of a program, 5) social conditions, politics, and economics which includes environmental economic resources, interest groups that provide support, the characteristics of the participants, the nature of public opinion, and 6) the disposition of the implementor which includes the implementer's response, understanding of the policy and the preference of values owned by the implementer (Subarsono 2013).

Based on the explanation above, it can be concluded that in implementing a policy there must be clarity of policy standards and objectives, fulfillment of the required resources, strong coordination both between individuals within an organization and with other agencies, the disposition of a good implementer, and the environmental conditions that affect it.

3 RESEARCH METHODS

The approach used in this study is a descriptive approach with qualitative methods. This research is located in the Regional Government of Buleleng Regency. The consideration for choosing the research location was because from the results of initial observations the researchers assumed that there had been a number of problems regarding the large number of MSMEs in Buleleng Regency who had not been able to enter the Buleleng Regency local e-catalog platform. The research instruments used in this research were interview guides, interview recorders and picture/portraits taken during the interviews. In this study, qualitative data analysis techniques were used with an interactive model, namely the data reduction component and data presentation together with data collection.

4 RESULT AND DISCUSSIONS

The implementation of local e-catalog policies in the procurement of goods and services for MSMEs in Buleleng Regency can be assessed based on several aspects. Local e-catalog policies must include clear and transparent standards and procedures for procuring goods and services. This will help ensure that the entire procurement process is fair, open and efficient. The main objective of this policy is to support MSMEs. Implementation must ensure that MSMEs are actively involved in the e-catalog and have equal opportunities to win contracts for the procurement of goods and services. Implementation has the following properties: implementation will be influenced by the extent to which policies deviate from previous policies, the implementation process will be affected by the number of organizational changes required (Arbiani 2019). Policy implementation runs linearly from public policy, implementers and public policy performance. This implementation model is called a model of policy implementation process, which links policy issues with implementation and a conceptual model that links policy with performance.

The implementation process will only begin if the goals and objectives have been set, the program of activities has been structured and the funds are ready and distributed to achieve the targets. If this understanding is directed at the locus and focus (change) where the policy is implemented it will be in line with the views of Van Meter and van Horn that policy implementation is an action taken by government and private organizations both individually and as a group intended to achieve goals (Akib 2010).

This implementation process is an abstraction or performance of a policy embodiment which is basically deliberately carried out to achieve high policy implementation performance that takes place in the relationship of various variables. This model assumes that policy implementation runs linearly from political decisions, implementation and performance of public policies. In line with the variable model that allows policy implementation to run well, Van Meter and Van Horn explain that the success of policy implementation is highly dependent on these variables, namely: 1) policy standards and targets must be clear and measurable, 2) policy implementation needs resource support, 3) the relationship between organizations, 4) the characteristics of implementing agents that will affect the implementation of a program, 5) the social, economic, and political environment, and 6) the disposition of the implementor which includes the implementor's response, understanding of the policy and the preference of values owned by the implementer (Agustino 2008). Standards and policy objectives must be clear and measurable because unclear standards and policy objectives have the potential to cause multiple interpretations which will ultimately have implications for the difficulty of policy implementation (Suharno 2013).

Based on the findings in the field, in the implementation of local e-catalogs in Buleleng Regency there is already a standard that serves as a reference or legal umbrella. Thus, regarding the objectives in this policy, it is in accordance with what was said by Van Meter and Van Horn which stated that in a policy there must be clear standards, in this case

referring to Buleleng Regent Regulation Number 52 of 2022 concerning Guidelines for the Administration and Accountability of the Revenue Budget. and Regional Expenditures. Local e-catalog policies can be successful if they involve close collaboration between local governments, MSMEs and the private sector. This collaboration will ensure that the policy can support and utilize the potential of all stakeholders involved. By ensuring the implementation of the local e-catalog policy in Buleleng Regency is in accordance with the standards and objectives set, it is hoped that this policy can contribute positively to strengthening the MSME sector, local economic growth, and achieving the set policy goals.

In addition to basic measures and policy objectives, what needs attention in the policy implementation process is the available resources. Sources deserve attention because they support the success of policy implementation, namely human resources and financial resources. If we look at the Van Meter and Van Horn resource indicators, it can be said that the readiness of technological infrastructure is a key factor in implementing local e-catalogs. Buleleng Regency needs to ensure the availability of adequate infrastructure, including stable and fast internet access, as well as the necessary hardware and software support. MSME business actors need to be empowered with adequate knowledge and skills in using the e-catalog platform. Training and assistance needs to be provided so that MSMEs can participate effectively in the procurement of goods and services through local e-catalogs.

A synergistic cooperative relationship is needed so that the relevant agencies can support the successful implementation of the policy. As a reality of the policy program, it is necessary to have good relations between related agencies, namely communication and coordination support. Coordination between Regional Governments and MSMEs requires effective communication between local governments as organizers of e-catalogs and MSMEs as suppliers of goods and services. This coordination will help understand the needs and challenges faced by MSMEs, so that policies can be adjusted to provide optimal benefits for them. Clear and timely communication regarding implementation of local e-catalogs should be provided to SMEs. In addition, training related to the use of the catalog platform and the process of procuring goods and services must be held regularly to ensure that MSMEs can participate properly. A policy implementation in order to achieve maximum success must be identified and known to implementing agents which include the bureaucratic structure, norms, and patterns of relationships that occur within the bureaucracy. Local e-catalogs should be designed to increase MSME access to the public market, including local governments. This goal can be achieved by providing complete information about MSME products and services in an e-catalog.

In addition, this research is also in line with research which states that the role of digital marketing itself is based on the internet, where the influence of the role of digital marketing is very large (Rahmah and Nawawi 2022). Because it encourages other people to obtain accurate information for MSMEs in Medan City about the product marketing process so that there is a high increase in profits in Medan City. Even so, there are obstacles seen in MSMEs so that the use of this technology is quite good. MSMEs in Medan City are not aware of the development or growth in digital marketing, because it is caused by their lack of knowledge about the world of digital markets.

5 CONCLUSION

Implementation of local e-catalog policies in the procurement of goods and services for MSMEs in Buleleng Regency, seen from : a) standard indicators and policy objectives must be clear and measurable, that is, they have been implemented properly because the application of local e-catalogs has created an accountable procurement climate while still providing opportunities for local MSMEs to play an active role as providers of goods and services in Buleleng Regency, b) indicators Policy implementation needs resource support is not implemented properly because it needs to involve synergies between financial,

technological, human, information, and effective oversight resources to achieve the stated policy objectives, c) indicators of inter-organizational relations are well implemented because there is effective communication between SKPDs in charge of procurement of goods and services so that they can overcome challenges and increase efficiency and transparency in the process of procuring goods and services, d) indicators of the characteristics of implementing agencies are that they have been implemented properly due to the synergy between MSME actors and the government in goods procurement and services, but there are still some business owners who have not or do not want to register their business in the local e-catalog, e) the indicator of the implementor's disposition is that it has been implemented properly because the implementation of the local e-catalog policy in the procurement of goods and services in Buleleng Regency has been running well proven with the implementation of the local e-catalog policy by procurement agents in Buleleng Regency, and f) environmental indicators of social, economic and political conditions have been implemented properly because the implementation of local e-catalog policies can be directed to be more inclusive, have a positive impact in MSMEs, and support sustainable economic growth in a conducive environment.

Obstacles in implementing local e-catalog policies in the procurement of goods and services for MSMEs in Buleleng Regency, seen from: a) standard indicators and policy objectives must be clear and measurable, namely the unclear rules and procedures so that it becomes an obstacle for MSMEs to understand the steps which must be followed in procurement, b) indicators of policy implementation that need resource support are the many MSMEs in Buleleng Regency who do not understand information technology related to the procurement of goods and services through e-catalogs, c) indicators of inter-organizational relations are the existence of obstacles including PA/KPA/PPK not all of them know the procedures for implementing the procurement of goods and services through e-catalogs so that implementation through e-catalogs is still difficult to implement, d) the characteristic indicator of implementing agents is the lack of technical skills of implementing agents who are responsible for managing the e-catalog platform, and e) the disposition indicators of implementers are the policy of each OPD PA/KPA/KKP leader in stipulating that all procurement of goods/services is carried out using local products with higher domestic component level (TKDN) values, but in practice it is considered difficult and becomes an obstacle in the procurement process, and f) indicators environmental social, economic, and political conditions are that MSMEs in Buleleng Regency have not yet realized the benefits and opportunities offered by the local e-catalog policy, MSMEs with limited capital may have difficulty meeting the technological or infrastructure requirements needed to participate in local e-catalogs, and the existence of policy instability, namely policy changes continuously.

Efforts made to overcome the obstacles to implementing local e-catalog policies in the procurement of goods and services for MSMEs in Buleleng Regency are seen from: a) standard indicators and policy objectives must be clear and measurable. determined through evaluation and refinement of policies, b) indicators of policy implementation that need resource support is that local governments can utilize local resources, such as skilled human resources in the field of technology, to support the management and development of local e-catalogs, c) indicators of inter-organizational relations is to form a communication and coordination forum between local government, MSMEs, and related private parties (if any) will help improve mutual understanding and understanding of local e-catalog policies, d) indicators of the characteristics of implementing agencies are implementing agents must routinely carry out performance evaluations and the policy implementation process, and e) the disposition indicator of the implementor is the need for a positive and proactive attitude from the implementor to help achieve policy goals more effectively and provide greater benefits for MSMEs and the local economy in Buleleng Regency, and f) environmental indicators of social, economic conditions, and politics is involving the community actively in the implementation of local e-catalog policies, from the economic aspect it is a major concern because MSMEs may require increased technological and financial readiness to

participate in e-catalogs where local governments can provide financial support or technical training to help MSMEs in this preparation, and the need for strong support and policies from local policy makers and politicians will help ensure the smooth implementation of local e-catalog implementation policies.

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Netizen sentiment on Ferdy Sambo case on Twitter (August 6–15, 2022)

Adlyn Maurilla Aprianza, Moch Fuad Nasvian & M. Faizin Firmansyah
Communication Science Department, University of Muhammadiyah Malang, Malang, Indonesia

ABSTRACT: The death of Brigadier J (Nofriansyah Yosua Hutabarat) caught public attention as he died of gunshot wounds at his Ferdy Sambo, the head of the Propam Police Division, official house. People demanded for transparency in investigating the case as many unusual circumstances were found. This led to the dissemination of information, opinion, and speculation on Twitter. This study aims at explaining the social network formed about the case, the actors involved, and the netizen sentiments on the case. The data set crawled using Netlytic.org found 44.200 tweets on the case. Most netizens were indicated to have negative sentiments on the case, though some of them still support and believe the Indonesian Police. Furthermore, the centralization rate between actors in the network structure shows that there are actors who influenced others though the influence is minor. Additionally, this study highlights the crucial role of the network theory in comprehending the intricacies of communication patterns within the digital landscape.

Keywords: Netizen Sentiment, Ferdy Sambo, Social Media, Social Media Analysis

1 INTRODUCTION

On July 8, 2022, Brigadier J (Nofriansyah Yosua Hutabarat) was pronounced dead because of gunshot wounds at Ferdy Sambo, the head of the Propam Police Division, official house. However, the incident had not caught people's attention until July 11, 2022, when the case was made public. Furthermore, the case went viral as there were unusual circumstances, such as the delayed news, missing CCTV footage, and the sexual assault accusation of Putri Candrawati, Ferdy Sambo's wife, that was perpetrated by the late Brigadier J (Hidayat & Winardi 2022). After several investigations, it was found that the case was a premeditated murder orchestrated by Ferdy Sambo (Ulfiana 2022). As a result, Ferdy Sambo was pronounced guilty and was sentenced to death by the South Jakarta courthouse (The Jakarta Globe 2023).

The case of Ferdy Sambo has brought public faith in the National Police on the edge. The media coverage of the case mostly questioned the police explanations and investigations (Setiawan 2022). Moreover, Sugeng Santoso, the chairman of Indonesia Police Watch, stated that this case is the worst scandal in the National Police's history since those who should enforce the law are voluntarily breaking the law (Janti & Lai 2022).

Public reaction to the Ferdy Sambo case has not only become the talk of the town in real life but also on social media. On many platforms, people tried to communicate their opinions and hypotheses about the case. This is understandable since social media has significantly impacted communication dynamics (Fatmawari, 202, allowing the public to express reactions and provide direct feedback after receiving information (Fatmawati 2021). It fosters two-way communication as well as facilitating engagement between the content creators and their audiences (RG 2020). Indeed, it provides a mechanism for every user to connect, communicate, and interact with others (Carr & Hayes 2015; Cheng *et al.* 2017; Correa *et al.* 2010).

In Indonesia, the number of active social media users has shown a steady increase, reaching 191 million in January 2022, indicating the growing importance of these platforms for social interactions (Mahdi 2022). As social media advances as an information source, it has become an integral part of social interactions and conversations (Situmorang *et al.* 2018), where users can access, connect, and share information easily and ubiquitously (Keshavarz 2020).

In the Ferdy Sambo case, social media do not only play as an information source but have also triggered speculations. The dissemination of diverse information sources has contributed to uncertainties and anxieties among the public (Nurmansyah & Yasir 2022; Tsaaniatun 2022). Furthermore, through various social media posts, it was found that people's impression of the National Police has worsened. Many, if not the most, suspect that the law enforcement institution merely favors the rich (Danang & Sadewo 2019). Saiful Anam, a legal political analyst, stated that the case has tarnished the National Police image since it involved one of the higher ups position (Ahmad 2022). Consequently, the National Police credibility has declined as most social media contents expose the institution's negative side.

Twitter is one of the social media that people use when discussing the case of Ferdy Sambo. Twitter itself is a microblogging platform where users can interact, share, and give comments directly to other users through the so-called "tweets" (Nasvian *et al.* 2023; Sultanatta & Maryam 2019). As a social media, Twitter becomes the third platform in Indonesia with the most activity usage (Muqsih & Mulyasari 2019). Also, Twitter is commonly used as a research subject on politics and public policy (Imtiyazi *et al.* 2016).

Study of netizens' sentiment has been conducted. A study entitled "Day 7 of Kanjuruhan Tragedy: Twitter Data Analysis" examined Digital Movement Opinion (DMO) which was created on social media through the hashtags #KanjuruhanDisaster #UsutTuntas #PrayforKanjuruhan and #Aremania. The result of the study shows that there were a high number of neutral sentiments indicating that the netizen is still in the phase of mourning and using neutral language to make sarcastic comments on the authority (Nasvian *et al.* 2023).

Since the case of Ferdy Sambo came into light, it has become a trending topic on Twitter. As trust in the National Police institution declines, it becomes essential to understand the underlying factors shaping public perceptions and explore potential strategies to rebuild trust. This research aims to investigate the influence of social media on public perceptions and communication patterns, focusing on the broader context of communication dynamics in Indonesia. By examining this relationship, we can gain valuable insights into the dynamics of information sharing and its impact on public trust and perceptions.

2 METHODOLOGY

The use of online social networks has made notable progress as the Internet becomes widespread worldwide. As a result, huge amounts of data is available on platforms where millions people connect with each other through social networks (Can & Alatas 2019). With such a huge amount of available data, measuring through social media can be utilized when a researcher wants to find out people's opinion (Suratnoaji *et al.* 2019). Moreover, all human-system interactions in social media are recorded, creating digital traces (Baldauf & Magali Ollagnier-Beldame 2017). It means that, in this case, users' opinion can be recorded well. In this study, the researchers use Twitter data which includes the users' data, responses, and its networks (Suratnoaji *et al.* 2019).

The data is then analyzed by using Social Network Analysis (SNA) and sentiment analysis. Social Network Analysis is used as it can map and measure the relationships and flows between people, organizations, groups, computers, or other information (Can and Alatas 2019). It investigates social interactions and is able to reveal semantic aspects behind the network topology (Abdelsadek *et al.* 2018). Furthermore, SNA is used in various areas ranging from sociology, economics, education, as well as computer sciences (Can and Alatas 2019).

Sentiment analysis, on the other hand, is a computational study of people's opinions, feelings, sentiments, appraisals, and attitudes towards entities such as services, products,

individuals, events, topics, and their attributes (Zhang *et al.* 2018). Furthermore, it aims at detecting sentiment polarity (Giachanou and Crestani 2016). In the context of sentiment analysis on social media, it focuses on examining whether a certain text or posts is assigned a positive or negative sentiment.

In the Ferdy Sambo case, the researchers will first crawl Twitter data which portrays users' sentiment networks about it by using Netlytic. Furthermore, the researchers crawl Twitter by inputting several keywords, namely “@Listyosigitp”, “Ferdy Sambo”, “Brigjen J”, “Kepercayaan Masyarakat”, and “Polri”. In this study, the researchers crawl the Twitter data of August, 9, 2022, when Ferdy Sambo's name became a trending topic as he was named as a suspect with a total of 44.200 tweets. The researchers, then, conducted a cleansing process followed by data analysis. The data is analyzed in three stages. First, the researcher conducted web structure analysis to depict the structure and shape of the network. Secondly, the researcher categorized the groups within the web to find out how actors created a certain group that was different from others. Third, the researchers identified the actors' position on the networks and described the dominant actors. After the data analysis was done, the researchers conducted sentiment analysis on the tweets.

3 RESULT

3.1 Social network analysis

The researchers crawled Twitter data of Ferdy Sambo's case on August 9, 2022, when he was announced as a suspect and became a trending topic on Twitter. The keywords used in data crawling were “@ListyoSigitP”, “Feirdy Sambo”, “Brigjein J”, “Keipeircayaan Masyarakat”, and “Polri”. As a result, 44.200 tweets were obtained.

After gaining the data using the aforementioned keywords, below is the network structure obtained from Netlytic.

Table 1. Network structure.

Analysis	Data
Diameiteir	3
Deinsity	0.001698
Reiciprocity	0.000000
Centralization	0.366900
Modularity	0.440400

Source: Weib Neitlytic 2022.

On the above table, the first thing that can be seen is the diameter, length of the longest path between one actor (a certain Twitter user) and the other actor in the network (Takes & Kosters 2011). The smaller the diameter in the network means that the distance is shorter, thus, it is considered easier for actors within the network to communicate to each. In this case, the diameter is 3. It means that the paths among the actors are close which enables interactions.

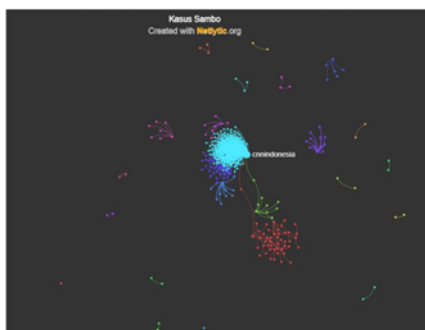
Secondly, the network structure shows density and reciprocity. Density is a relation tightness which measures communication intensity of nodes within the structure (Hawe *et al.* 2004). The density measurement, at 0.001698, reflects the proportion of existing connections compared to the total possible connections in the network. In this context, the low density value indicates that the network is relatively sparse, with only a small fraction of potential connections being realized. This could imply that information sharing and interactions are not widespread across the network. The reciprocity metric, with a value of 0.000000, indicates a complete absence of mutual relationships between pairs of nodes in the network. To put it simply, when one node establishes a connection with another, there is no reciprocal connection from the latter. This highlights a unidirectional flow of communication or information.

The next is centralization which measures the extent to which the ties of a network are concentrated on a single actor or group of actors. The centralization value of 0.366900 denotes the degree of centralization present in the network. This suggests that certain nodes hold a relatively higher number of connections compared to others, implying a hierarchy or influence gradient among nodes. Within the context of this research, it may imply nodes that act as key communicators in Ferdy Sambo’s case, even though their influence was minor.

The network structure also shows modularity, a grouping of actors (social media accounts) within the network (Murniyati *et al.* 2021). The modularity coefficient of 0.440400 reflects the degree to which the network can be divided into discrete communities or clusters, where nodes within each cluster are more interconnected with one another than with nodes outside the cluster. In the context of this study, this suggests the presence of distinct groups of nodes with stronger internal connections, potentially indicating different thematic or functional clusters.

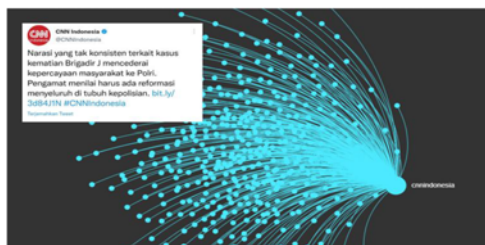
3.2 The clusters in Ferdy Sambo’s network structure

When analyzing the data, the researcher used keywords “@ListyoSigitP”, “Feirdy Sambo”, “Brigjein J”, “Keipeircayaan Masyarakat”, and “Polri”. From those keywords, the researcher found five main clusters of the Ferdy Sambo’s case network structure.



Picture 1. Network structure.
Source: Weib Neitlytic 2022.

First Cluster: News from CNN



Picture 2. Actor 1.
Sumbeir: Twitter & Weib Neitlytic 2022.

3.3 The first cluster came from @cnnindonesia which tweeted

“Narasi yang tak konsistein teirkait kasus kematian Brigadir J meinceideirai keipeircayaan masyarakat kei Polri. Peingamat meinilai harus ada reiformasi meinyeiluruh ditubuh keipolisian <https://t.co/VGJG11KSmu> #cnnindonesia <https://t.co/OBZXXAEiEiRW>”

@cnnindonesia tweet emphasized the inconsistent narration of Brigadir J death which hurt public trust on Polri. The tweet was retweeted 513 times. It also got 1613 likes, and 67 replies. Most replies were from Twitter users who demand transparency from Polri in handling the case.

3.4 Second cluster: Netizen demand for thorough investigation



Picture 3. Actor 2.
Source: Twitteir & Weib Neitlytic 2022.

@yulitasaarii__ tweeted on August 8, 2022, and included a video of President Jokowi’s statement advising Polri to investigate the case thoroughly and to ensure that the truth be revealed so that public trust on Polri will not decline. The complete tweet is as follows.

“Sejaka awal Preisidein @Jokowi sudah meinyampaikan utk meingusut tuntas kasus peineimbakan Brigadir Josua dirumah dinas Irjein Feirdy Sambo Ungkap keibeinaran apa adanya, jangan sampai meinurunkan keipeircayaan masyarakat teirhadap Polri.”

The tweet was retweeted 8 times and got 17 likes from other Twitter users. It means that 25 Twitter users agree and want to disseminate the information.

3.5 Third cluster: Society’s Support for Polri



Picture 4. Actor 3.
Source: Twitteir & Weib Neitlytic 2022.

@detik.com tweeted on August 9, 2022, when Ferdy Sambo was announced a suspect. In the tweet, Listyo Sigit stated that society’s support encouraged Polri to make the case clear. The tweet is as follows:

“Jeindeiral Sigit Meinilai dukungan masyarakat meinjadi seimangat Polri dalam meimbuat teirang-beindeirang kasus peineimbakan Brigadir J. Beigini katanya.”

https://news.deitik.com/beiritald-6225566/ikapolri-beirteirima-kasih-atas-dukungan-masyarakat-di-kasus-feirdy-sambo?utm_content=deitikcom&utm_term=eichobox&utm_medium=oa&utm_campaign=deitikcomsocmeid&utm_source=Twitter# Eichobox=166004874-1

The tweet was retweeted 33 times and got 331 likes. It means that 361 Twitter users agree with the statement and were willing to disseminate the information to their followers.

3.6 Fourth cluster: Ferdy Sambo as Suspect



Picture 5. Actor 4.

Source: Twitter & Weib Neitlytic 2022.

i@lanyallamm1, an account of DPD RI leader, posted a tweet about Polri who were doing their best to bring Ferdy Sambo's case into the light and finally was able to show the hardwork as Ferdy Sambo was announced a suspect. The tweet is as follows.

"Teirimakasih keiputusan institusi Polri dalam meineitapkan Irjein feirdy Sambo seibagai teirsangka kasus teiwasnya Brigadir J. Langkah teirseibut meimunjukan Polri beirsungguh-sungguh dalam meingungkap kasus yang meinjadi ateinsi Preisidein dan sorotan tajam di masyarakat. @ListyoSigitP #LaNyalla"

The tweet was retweeted 13 times and had 14 likes. It means that there are 27 accounts who agreed and wanted to disseminate the information to their followers.

3.7 Fifth cluster: Public doubt on Polri



Picture 6. Actor 5.

Source: Twitter & Weib Neitlytic 2022.

@YasonnaB tweeted on August 12, 2022, stating that announcing Ferdy Sambo as a suspect will not make Polri better. He advised Indonesian Police (*Polri*) to also investigate other cases.

*“itu tidak cukup utk Meimpreibaiki Reiputasi Polri. Klo mau dipeircaya masyarakat lagi. Peinjarakan Geirombolan Peinista Agama dan tukang adu domba seimacam Deinsi, Abu Jeimvut, ArmanDOG dll #FadilHarusDicopot”*The tweet had 9 retweets and 105 likes on Twitter. It means that 114 Twitter users agreed about it and wanted to disseminate such information to their followers.

From the aforementioned clusters, the researchers analyzed Twitter users’ sentiment on Ferdy Sambo’s case. Furthermore, the data of the sentiment can be seen as follows.

Table 2. Number of sentiment.

No	Source	Sentiments		
		Positive	Neiutral	Neigative
1	TF-IDF: Azurei Machinei Leiarning	58	27	544
2	Coder 1	149	25	455
3	Coder 2	130	21	478

Source: The Researchers.

The first sentiment data was taken from Azure Machine Learning which shows that there were 544 negative sentiments, followed by Second Coder, Irfani, with 478 negative sentiments and First Coder, Alif Reda, with 455 negative sentiments. From the data above, it can be said that all sources agree that Ferdy Sambo’s case is dominated by negative sentiments with a total of 1477 (78,6%), followed by positive sentiment with a total of 337 (17,9%), and neutral with a total of 73 (3,8%).

4 DISCUSSION

The network structure of Ferdy Sambo’s case shows that the case successfully triggers Twitter users to give their opinion, either to demand transparency or to merely give the latest updates. Twitter, in this case, becomes a source of news and opinions on current events (Hernández-fuentes *et al.* 2020) as the platform provides access to information (Moreno-sandoval *et al.* 2018). As people give their opinion, Twitter also becomes an important public opinion tool (Beckers *et al.* 2016) where people freely give their perspectives regarding a particular event around them, and in this study is the Ferdy Sambo’s case.

The data collected from various clusters of Twitter accounts provides an insight into how social media discourse unfolds regarding the case of Ferdy Sambo. Actor clusters exhibited distinct behavior in disseminating information and opinions. Cluster 1, represented by @cnnindonesia, engaged with discussions on the inconsistency of narratives surrounding Brigadier J’s death, attracting considerable retweets, replies, and likes. Similarly, clusters 2 to 5 (@yulitasarii_, @detikcom, @lanyallamm1, and @YasonnaB) played unique roles in expressing sentiments and opinions, generating retweets and likes.

Such result strengthens previous arguments stating that social media plays an important role in manifesting public opinion which is impossible to ignore. For news media accounts such as @cnnindonesia and @detik.com, posting information related to the current viral news, Ferdy Sambo’s case, become a support to an argument stating that journalists, with their news coverage, use social media to construct and represent public opinion (Mcgregor

2019). Also, Twitter is an important journalistic tool because it reflects the general news agenda and can reveal changes in angles within the public opinion, bringing nuances and complexity in the understanding of it (Hermida 2010; Hernández-fuentes *et al.* 2020).

The sentiment analysis revealed an overwhelming prevalence of negative sentiments across different sources. The data indicates that a substantial portion of Indonesian society lacks trust in the police's handling of the Ferdy Sambo case. The inconsistent narrative that emerged from the inception of the case until Ferdy's designation as a suspect seems to have contributed to this negative sentiment. This is confirmed by survey from Kata Data stating that public trust on Indonesian police decreased to 69,6% on August 2022 (Pahlevi 2023).

The findings of this study contribute to understanding the broader dynamics of information sharing and its impact on public trust and perceptions. The interplay of different actors, the dissemination of information, and the ensuing sentiments provide a complex picture of how social media shapes public discourse. It is in line with a statement stating that that opinions expressed online reflect the opinions of the general population (Ross *et al.* 2019).

5 CONCLUSION

In conclusion, this study has provided evidence that the Ferdy Sambo's case is characterized by a high number of negative sentiments. Such findings suggest that netizens are skeptical of the capability of Indonesian Police in investigating the case, thus leading to the decline of public trust in the institution. Although it is dominated by negative sentiments, many netizens still believe and support Indonesian Police to bring the case into the light. This is proven by the fact that one of the main clusters in the network consists of support for the Indonesian Police. The centralization rate of 0.366900 suggests that certain actors have a high number of connections compared to others, implying a hierarchy among nodes. It can be concluded that there are key communicators in the case although their influence is relatively minor. This research provides valuable insights into the role of social media in shaping public opinion when talking about tragedy happening within a notable institution. Additionally, as a tool for understanding the nuances of communication dynamics, SNA provides researchers and stakeholders valuable insight into the intricate web of interactions in a digital age.

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The effect of quality of information technology disclosure and open innovation on firm value companies in the financial sector companies in Bei period 2020–2022

Muhammad Wildan Affan, Oktafia Cahya Purnama & Tri Wahyu Oktavendi
Accounting Department, Faculty of Economics and Business, University of Muhammadiyah Malang, Malang, Indonesia

ABSTRACT: This study aims to test and obtain empirical evidence that the Quality of Information Technology Disclosure and Open Innovation has an effect on Firm Value. The objects of this research are all financial sector companies listed on the Indonesia Stock Exchange in 2020–2022. The sampling technique used is a purposive sampling method with a total sample of 36 companies. The data analysis technique in this study used the panel data regression testing method with the STATA statistical tool version 15. The results of this study partially show that the quality of information technology disclosure has no effect on firm value, and open innovation has an effect on firm value. The results of the study simultaneously show that together the variables quality of information technology disclosure and open innovation have a significant effect on firm value.

Keywords: Information Technology Disclosure Quality, Firm Value, Open Innovation

1 INTRODUCTION

The development of information technology and innovation has changed people's lifestyles and the world of work. The urge to create innovations that provide *convenience* for people has also affected the financial sector. Apart from providing online services and launching mobile apps, digital transformation in the financial sector also focuses on improving customer experience by integrating digital technology into interactions with them (Mutiasari 2020).

According to MNC Sekuritas analyst, Tirta Widi Gilang Citradi in the online news page *Liputan6.com*, in 2020–2021, stocks related to Old Money were not in high demand because these companies were suffering from the pandemic. So investors started to target New Economy stocks such as digital banks whose share prices had boomed even when the digital banks didn't have digital application products yet. In 2022, the factors that supported the rise of digital bank stocks began to fade and the products or technology supplied were unable to keep up with the increasing demand trend. As a digital bank, such as PT Bank Jago Tbk (ARTO) with a stock price decreased from Rp16,000 to Rp3,720, PT Bank Raya Tbk (AGRO) with a closing stock price from Rp1,810 to Rp404 and PT Bank Neo Commerce Tbk (BBYB) with a closing stock price from Rp2,630 to Rp645. The phenomenon of digital trends that have become stronger since the pandemic has had an impact on investor interest and the share prices of companies in the financial sector.

Since 2019, banks have been adapting and starting to use the Open Banking system, which is a system that provides data on financial institutions and can be accessed by various parties such as application developers and fintech through the Application Programming Interface

(API) (Muqorobin *et al.* 2021). The system allows banks to collaborate and partner with businesses such as fintech in developing new financial services. As an example of collaboration, PT Bank Rakyat Indonesia Tbk in collaboration with PT Visionet Internasional (OVO) launched the OVO U Card credit card for millennials. In addition, PT Bank MNC Internasional Tbk partnered with Kredit Pintar to provide lending features in the MotionBanking application. With this collaboration phenomenon, banks are not only relying on their internal resources but also working with external partners to improve the capabilities and quality of financial services offered to the public.

Information technology investment is the expenditure of a large number of funds to add or invest in IT including products and services such as hardware, software, telecommunications, human resource development and training, IT consulting and outsourcing. (Farouk and Dandago 1970). The use of IT can change the way companies compete in maintaining their business (Alalie *et al.* 2018). Companies that follow technological developments will adopt IT as an opportunity to gain profits with the products or services provided.

Open Innovation is a process where companies start using external knowledge to facilitate innovation activities and establish relationships and cooperation with external partners (Sengupta and Sena 2020). Many firms are now switching from closed innovation to open innovation, where firms start looking for entities as business partners in achieving profits in the development of old product innovations and the creation of new products. In addition, intangible assets play an important role in the success of open innovation both as a product and as a facilitator of innovation because the actors involved in open innovation are influenced by intangible features such as human resources (consultants) and partnerships in collaboration activities. (Grimaldi *et al.* 2017).

If the investment is made by a company in the field of information technology to advance the company, the investment may be used to ensure the stability and sustainability of a business (Karim *et al.* 2022). The company's annual report that discloses information technology can be a signal for external parties. The signal reflects the company's ability to use technology to improve service quality to customers and maintain data security. This is a consideration for external parties in making investments.

Access to external resources and collaborating with external partners is an important element as it allows for a combination of new resources and more agile commercialization of innovations (Witell *et al.* 2017). Open innovation as a positive signal shows openness to ideas, collaboration ability, and the company's commitment to innovation. With open innovation, companies can develop old products and create new products through collaboration to increase firm value.

There is previous research that results in information technology affecting firm value such as research by Risa and Hermanto (2023) dan Bardhan *et al.* (2013). In contrast to the research conducted by Andrayani and Dewi (2014) which found that IT Spending does not affect firm value.

Research conducted by Emeneka and Okerekeoti (2022) dan Berzkalne and Zelgalve (2013) found that innovation in intangible assets affects firm value. In contrast to research conducted by Fitri *et al.* (2023) dan Ionita and Dinu (2021) which found that innovation does not affect firm value.

This study aims to reveal how much the role of the quality of Information Technology disclosure and Open Innovation on Company Value, from the description above there are several differences in the results of previous studies, so it encourages researchers to research to strengthen previous research using financial sector companies listed on the IDX for the period 2020–2022.

1.1 *Theoretical studies signaling theory*

This theory describes the behavior of two parties when there is a difference in access to information, with signaling to refer to actions taken by the signal owner to influence the views and behavior of the signal receiver (Spence 1973). A signal can be an observable

action that aims to show the hidden characteristics of the signaler and the type of information that is considered a positive signal for external parties is the annual report or financial report (Ulum *et al.* 2021). Based on the explanation above, it can be concluded that signaling theory is a theory that explains that the sender sends signals in the form of information that describes the current condition and sustainability of the company in the future.

Theoretical studies signaling theory

1.2 *Quality of information technology disclosure*

Information technology is a technological tool used by a company to create, process and transmit information in various forms (Primawanti and Ali 2021). Jadi, Information technology is considered important as a tool that supports companies in providing services to customers and accelerating the transformation towards digital companies that will attract public attention in purchasing stocks and increasing firm value.

1.3 *Open innovation*

According to Chesbrough (2003), open innovation is defined as a process in which a company can get ideas, technology, knowledge, and skills from sources external to the company. External sources can share new ideas with internal sources, and vice versa. By collaborating with external partners, companies can utilize the partner's knowledge to create new innovative products or develop new services that attract investors to invest. Andrews and De Serres (2012) state that innovation-based growth is supported by intangible assets including organizational knowledge and various kinds of intellectual property. In addition, intangible assets such as computer software, patents, copyrights, customer lists, licenses, customer relationships and supplier relationships are considered indicators of innovation as well (Berzkalne and Zelgalve 2013).

1.4 *Firm value*

Firm value is the expectation of investors as the party who invests in the company, usually, investors see the value of the company from the stock price (Maharani and Puspitasari 2022). The better the management's ability, the better the company will signal to investors and stakeholders. It is expected that the market will react and influence the stock price.

2 FORMULATION OF HYPOTHESIS

2.1 *Quality of information technology disclosure on firm value*

Every company is required to be able to provide solutions and benefits of the products and services to the public as a form of their seriousness towards the sustainability of their business (Pertiwi and Suhartini 2022). The disclosure of the company's information technology investment reflects a positive signal that the company is serious about developing its business in the era of digital technology that affects society's daily activities.

Furthermore, based on research conducted by Risa and Hermanto (2023) states that the better and more advanced the technology used by the company, the more people are interested in the company. This means that if the company does not keep up with the development of information technology, the company will lose interest from the public which can affect the firm's value. Previous research has found that information technology affects firm value (Bardhan *et al.* 2013; Risa and Hermanto 2023).

H₁: The Quality of Information Technology Disclosure affects Firm Value.

2.2 Open innovation on firm value

The company will receive positive feedback from investors if the innovative actions taken have an impact on the company's profitability so the feedback also increases the firm's value (Fitri *et al.* 2023). Innovative actions are carried out to assist companies in fulfilling customer needs to gain investor trust and interest in the company.

Collaboration with external partners such as suppliers, customers, and other companies tends to be beneficial for companies, especially in terms of innovation due to a combination of complementary capabilities and a common goal of developing new services (Mazzola *et al.* 2016). The collaboration that companies do is a sign to external parties regarding the company's ability to fulfill customer needs for digital services. This is expected to attract many communities to invest and has a positive impact on firm value. The results of previous studies found that innovation affects firm value (Berzkalne and Zelgalve 2013; Choi *et al.* 2022; Emeneka and Okerekeoti 2022).

H₂: Open Innovation has an effect on Firm Value.

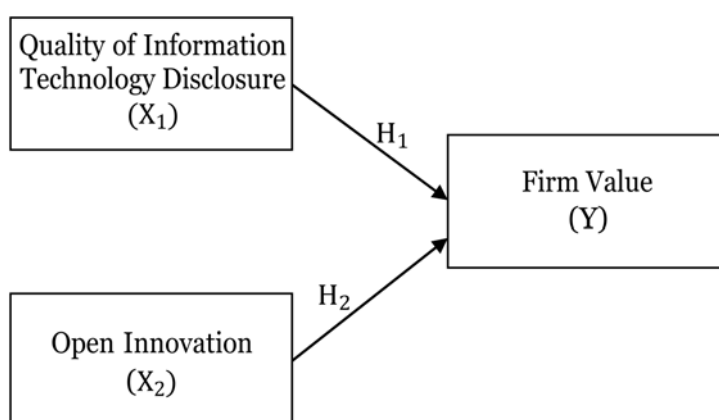


Figure 1. Research conceptual framework.

3 METHODOLOGY

This research is associative research by using the object of all go-public companies in the financial sector. The data is obtained from the annual report through the website www.idx.com and the official website of each company in the 2020–2022 period using documentation techniques. The sampling technique used purposive sampling with 3 criteria as follows:

- (1) Companies in the financial sector that have been listed on the Indonesia Stock Exchange in 2020–2022
- (2) Companies that publish annual reports
- (3) Companies that have the required data in the study

Based on these criteria, 36 annual reports of financial sector companies were selected during the 2020–2022 period, thus obtaining 108 observation data.

3.1 Operational definition of variables

3.1.1 Quality of information technology disclosure

Information technology is defined as a branch of technology that is related to the knowledge, use and process of data in automatic collection, storing and organizing (Alalie *et al.* 2018).

This variable is measured by using the disclosure of information technology investment adapted from research conducted by (Kim and Lim 2011).

Table 1. Information technology investment disclosure index.

No	Items	Description
Quantitative Disclosure		
1.	IT Spending	It includes past, current or future IT spending, changes in IT spending, percentage of other performance measures and comparison with competitors' spending.
2.	IT Productivity	Included actual achievements of IT development, e.g. output, efficiency, and decrease in machine time or human resources.
3.	IT Returns	Considering actual IT management achievements beyond IT development, such as revenue, growth, profitability, market returns and other accounting ratios.
Qualitative Disclosure		
1.	IT Status Project	Through the proposed timing of the IT launch, estimated time of completion, progress or testing phase.
2.	IT Acquisition	Information technology is acquired by companies through purchase, adoption or development.
3.	Potential	Potential opportunities or risks from technology, strategy and organizational prospects.
4.	Market	The influence of market and environmental conditions that lead companies to invest in IT, for example through legal compliance, company- or market-specific needs, or economic trends.
5.	Market	Competition at the industry level. For example, the estimated market size for IT projects.
6.	Contract	Potential achievements from contractual relationships with customers or suppliers.

Source: Kim and Lim (2011).

The quality index of information technology investment disclosure is measured using an unweighted dichotomous scale with the following formula:

$$\text{IT ID} = \frac{\text{Number of disclosures made by the company}}{\text{Total number of disclosures that should be}} \times 100\%$$

3.1.2 *Open innovation*

Open Innovation is a process where companies can obtain ideas, technology, knowledge and skills from external parties such as academics, communities and other companies. This variable is measured using the formula adopted from research conducted by Berzkalne and Zelgalve (2013):

$$\text{Innovation} = \frac{\text{Intangible Assets}}{\text{Total Assets of the Company}}$$

3.1.3 *Firm value*

Firm value reflects investors' views of the company, measured through the stock price represented by Tobin's Q ratio. The measurement formula for the firm value variable is adopted from research conducted by Rinofah *et al.* (2023).

$$\text{Tobin's Q} = \frac{\text{MVE} + \text{D}}{\text{TA}}$$

Explanation:

Q = Tobin's Q

MVE = Market value (year-end closing stock price x number of shares outstanding at year-end)

D = Total debt (liabilities)

TA = Total assets

This study used a panel data regression analysis technique and was conducted using STATA version 15 test software for each test conducted. The data analysis process is carried out in the following steps:

- (1) Tabulate the research data.
- (2) Perform descriptive statistics.
- (3) Determining the panel data regression model using three approaches, namely the Chow test, Hausman test and Lagrange Multiplier test.
- (4) Conduct a classic assumption test. In this study, the classic assumption test used is the multicollinearity test, because the best model in this study is Random Effect. The Random Effect model uses the Generalized Least Square (GLS) approach, where the GLS approach does not need to use the classical assumption test because it is considered the Best Linear Unbiased Estimator (BLUE) (Napitupulu *et al.* 2021).
- (5) Conduct a Goodness of Fit test of the regression model used.

4 RESULTS AND DISCUSSION

4.1 Descriptive statistical test results

Table 2. Descriptive statistical test results.

Variable	Obs.	Mean	Median	Std. Dev	Min	Max
Y NP	108	1.533192	1.007103	2.086276	0.7346515	18.49779
X1 TI	108	0.404321	0.4444444	0.1667243	0.1111111	0.7777778
X2 OI	108	0.0040451	0.0028331	0.0041846	0.0000553	0.0273227

Source. Data processed, 2023.

The results for the first independent variable, the Quality of Information Technology Disclosure, have a mean of 0.404321 and a standard deviation of 0.1667243, which means that as many as 40% of companies have disclosed information about information technology.

The second independent variable, Open Innovation, has a mean of 0.0040451 or 0.4% with a standard deviation of 0.0041846.

The dependent variable, Firm Value, obtained the highest mean result of 1,533192 with a standard deviation of 2,086276.

4.2 Determination of panel data regression model Chow test

Table 3. Chow test results.

Effect Test	Probability
Prob > F	0.0007

Source. Data processed, 2023.

If the resulting value in $\text{Prob} > F >$ the significance level, it means that the suitable model to use is the Common Effect Model, and vice versa. Based on the table above, it can be seen that the $\text{Prob} > F$ value = $0.0007 < 0.05$, meaning that the best choice is the Fixed Effect Model so it is continued with the Hausman test.

4.3 Hausman test

Table 4. Hausman test results.

Effect Test	Probability
Prob > chi2	0.0859

Source. Data processed, 2023.

Based on the data results shown in Table 4. by looking at $\text{Prob} > \text{chi}2 = 0.0859 > 0.05$ which means that the probability is bigger than the 5% significance level so the best model is used by the Random Effect Model.

4.4 Lagrange multiplier test

Table 5. Lagrange multiplier test results.

Effect Test	Probability
Prob > chibar2	0.0018

Source. Data processed, 2023.

Based on the data results displayed in Table 5. by looking at $\text{Prob} > \text{chibar}2 = 0.0018 > 0.05$ which means that the probability is smaller than the 5% significance level so the best model is used by the Random Effect Model.

4.5 Classical assumption test multicollinearity test

The multicollinearity test aims to test whether the regression model found a correlation between independent variables (independent). The way to detect multicollinearity in the regression model is to look at the strength of the correlation between the independent variables, if there is a correlation between the independent variables > 0.90 , it can indicate the presence of multicollinearity.

Table 6. Multicollinearity test results.

correlate TI OI (obs = 108)		
TI	OI TI	OI
TI	1.0000	
OI	0.1329	1.0000

Source. Data processed, 2023.

Based on the table above, it can be seen that the correlation between X1 (TI) and X2 (OI) is $0.1329 < 0.90$, which means that the regression model does not have multicollinearity.

4.6 Goodness of fit panel data regression model

Based on the test on determining the panel data regression model through 3 tests, it is known that the suitable model used in this study is the Random Effect Model.

Table 7. Random effect regression test model results.

Variabel	Coefficient	T-stat	Prob.	Keputusan
X1 TI	-1.58518	-1.30	0.195	H_1 Rejected
X2 OI	135.3901	2.52	0.012	H_2 Accepted
_cons	1.626448	2.88	0.004	
Weighted Statistics				
Adj. R Squared			0.1301	
F-statistic			7.18	
Prob. (F-statistic)			0.0275	

Source. Data processed, 2023.

4.6 Coefficient of determination (R^2)

The coefficient of determination (R^2) is used to measure how far the model's ability to explain variations in the dependent variable. Based on the data in Table 7, it is stated that the value of the coefficient of determination is 0.1301, which means that there is a relationship between the independent variable and the dependent variable. The value of Adj. R-Square value is 0.1301, which means that all the independent variables used in this study can explain the dependent variable by 0.1301 or 13%.

4.7 Hypothesis test simultaneous test (F test)

Based on the data shown in Table 7, it is known that the probability value of the F-statistic is $0.0275 < 0.05$. With the acceptance of H_1 , it can be interpreted that the Quality of Information Technology Disclosure and Open Innovation simultaneously affect the Firm's Value.

4.8 Partial test (t Test)

The test is conducted on the population regression coefficient, whether it is equal to zero, which means that the independent variable has no significant effect on the dependent variable. The explanation for Table 7 is below:

4.8.1 Quality of information technology disclosure

The first hypothesis shows that the variable quality of information technology disclosure does not affect firm value. The probability value is 0.195 and the value is bigger than 0.05. It can be concluded that the independent variable, the quality of information technology disclosure with 108 samples of financial sector companies used, does not affect firm value.

4.8.2 Open innovation

The second hypothesis shows that the Open Innovation variable affects firm value. The probability value is $0.012 < 0.05$. It can be concluded, the independent variable, Open Innovation with 108 samples of financial sector companies used influences firm value.

4.9 The effect of information technology disclosure quality on firm value

Financial sector companies tend to be the first to adopt information technology compared to other sectors because the financial industry is highly dependent on information (Achjari and

Wahyuningtyas 2014). Therefore, financial sector companies tend to invest and announce information about IT more frequently than non-financial companies. However, the signals provided by companies through annual reports about information technology investment are not considered by investors so the research results on this variable have no impact on firm value. This is supported by a statement from Achjari and Wahyuningtyas (2014) that, unlike foreign investors, investors in Indonesia do not see IT investment announcements as a basis for investment decisions. So, it can be concluded that investors do not consider the information provided by the company in developing digital. Therefore, information about IT investment has not been able to convince investors so it does not have an impact on firm value.

Although PT Bank Mandiri Tbk has disclosed higher IT investments totaling 5 to 7 items from a total of 9 items, it is not followed by an increase in firm value. In contrast, PT Allo Bank Indonesia Tbk which tends to disclose 1 to 4 items for 3 years has a high firm value. Therefore, whether many or few disclose information about IT investment, it does not necessarily have an impact on increasing the company value of an issuer. The results of this study are supported by research conducted by Andrayani and Dewi (2014).

4.10 *The effect of open innovation on firm value*

Investors tend to be interested in companies that have a competitive advantage to maintain their position and gain profit from the investment they make. (Aditya and Kaswar 2022). In addition, investors also tend to be interested in companies that manage their invested funds well, especially if the funds are allocated for innovation activities (Nohong 2016).

Where if the value of the intangible asset ratio is 1% or more than 1%, innovation can increase the value of the firm (Berzkalne and Zelgalve 2013). 37 samples have intangible asset ratio values of 1% or more than 1%. Research results from Emeneka and Okerekeoti (2022) and Berzkalne and Zelgalve (2013) also found that innovation in intangible assets has a significant effect on firm value. In addition, the same results were found by Choi *et al.* (2022) which shows that Open Innovation has a significant effect on firm value.

5 CONCLUSION

Based on the results of the goal formulation and hypothesis testing in this study, it can be concluded that the quality of information technology disclosure is unable to influence firm value. because investors do not consider disclosure of information related to information technology in the future so they rarely see important factors such as investments made by companies as long-term efforts to increase their firm value in the future.

Open Innovation has a significant effect on firm value. Investors get positive signals from the company regarding collaboration with partners in developing new product or service innovations, which attracts them to invest and 37 samples produce a value of 1% or more than 1%. This can be interpreted that open innovation, which is collaborating with external partners by the company, increases the firm's value.

This study has limitations, which is the measurement of the variable quality of information technology disclosure using an unweighted dichotomous scale (1 and 0) for each disclosure item even though the way of disclosing the information is not the same so that the results obtained have no effect due to the lack of strength of the measurements used. So that further research can use the same measurement but use a different scale, that is with a rating scale, such as giving a value of 1 to briefly disclose one item, a value of 2 to disclose and provide a qualitative explanation, a value of 3 if the item is disclosed, given a qualitative explanation and mentions a nominal number and so on.

This study focuses on measuring Open Innovation using intangible assets because, in the financial sector, not all companies disclose R&D costs which are often used as a proxy for

measuring firm innovation. However, many companies do not disclose their intangible assets, which also reduces the population in this study. So that further research can use other measurements such as using R&D costs, dummy variables for market partnerships and science partnerships and so on to get stronger results to prove the effect of Open Innovation on firm value.

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Ease of use perception, trust, risk and transactions using e-money intention; a case study on MSME in Malang Indonesia

Junike Widiawara Nur'aini, Widayat & Novi Puji Lestari
University of Muhammadiyah Malang, Indonesia

ABSTRACT: The research analyzes the effect of perception ease of use, trust, and risk on interest in transactions using e-money. The sampling technique uses simple random sampling with a sample of 100 MSME owners. Methods of data collection use questionnaires. The data was analyzed using multiple linear regression analysis using SPSS version 25. The result of the perception of ease of use and trust has a positive and significant effect on interest in a transaction using e-money, and risk has a negative and no significant impact on appeal in a transaction using e-money.

Keywords: Perception Ease of Use, Trust, Risk, Interest in Transaction Using E-money

1 INTRODUCTION

The development of digital technology creates many new opportunities and innovations, one of which is financial technology, often known as financial technology (fintech). This development is supported by the increasing use of smartphones and the Internet, which are increasing daily. The Internet provides a new way of doing business, especially in online payment systems in the form of electronic money (emoney). According to Bank Indonesia Regulation No.11/12/PBI/2009, electronic money is the value stored electronically on a media server or chip that can be used to make payment transactions and transfer funds. There are two types of electronic money issued by banks, namely electronic money in the form of chips using cards in transactions and electronic money in digital applications such as OVO, Go-Pay, and QRIS. The number of financial technology (fintech) companies in Indonesia continues to increase yearly. The number of financial technology companies continues to grow because more and more people have internet access to use financial technology. Indonesia was recorded as having 440 fintech companies in 2017. Then it increased by 32.5% to 583 companies in 2018. Fintech companies again increased to 691 companies in 2019 and 758 companies in 2020. The number of companies rose 3.56% to 785 fintech companies as of September 2021.

The application of electronic money can help Micro, Small, and Medium Enterprises (MSMEs) in making transactions more efficient in transactions. This will be an option in transactions because MSME players tend to choose a system that provides convenience and time efficiency. Even so, some people consider electronic money more effective than cash because of the ease of registration, filling in balances, and how to operate electronic money services (Prasetya and Putra 2020). The increase in digital payments and electronic money has forced MSME actors to adapt. MSMEs are required to be able to use electronic money because it can increase sales profits and be able to compete with existing competitors. Electronic money makes operating easier for MSMEs because it can be used via a smartphone. The convenience that exists in electronic money will make MSME players interested in using electronic money. The results of a survey conducted by the Center of Reform on Economics (CORE) in Indonesia, the number of MSMEs using electronic money has increased by an average of 132% per year. 73%

of MSMEs already use electronic money, 15% use credit or debit cards, and 12% use virtual accounts. Kepanjen is one of the sub-districts in Malang Regency and has MSMEs in various sectors, namely the food and beverage, batik, and craft sectors. Kepanjen District consists of 18 villages and sub-districts comprised of 14 towns and four sub-districts. It has 17,590 MSMEs (DKUM 2022) in various sectors, namely the food and beverage sector, batik, and craft, comprising 5,990 Small scales, 11,548 Micro scales, and 52 middle scales. Several MSMEs indicate that not all, and even a tiny portion, use electronic money for transactions.

The phenomenon of adopting electronic money in MSMEs in transactions is fascinating to study. The inconsistency of research findings makes this theme interesting to review. Various existing research shows that there is more than one factor behind MSMEs using electronic money for transactions. Perceived ease of use is the extent to which a person can easily understand and operate technology (Davis 1989). Every technology is created to make it easier for users to carry out activities so that when technology is easy to use, more and more people are interested in using technology. Research conducted by Romadloniyah and Prayitno (2018) shows that perceived ease of use affects interest in using e-money. However, electronic money in Kepanjen District has not been fully implemented because MSME actors still use cash to make transactions.

Another factor that can affect interest in transactions using electronic money is trust. Trust is a person's judgment about the product to be used, whether it is profitable or not (Jogiyanto 2007). When someone makes a payment online, and the transaction is protected, it can benefit the user, thereby making the person trust the services provided (Wibowo *et al.* 2015). Pratama and Suputra's (2019) research shows trust results affect interest in using electronic money. This indicates that many people still do not believe in the services they get when using electronic money.

The use of electronic money will also pose a risk. Risk is an uncertain condition or consequence that may occur when using electronic money. In Yogananda and Dirgantara's research (2017), risk results do not affect interest in using electronic money instruments. However, research conducted by Syahril and Rikumahu (2019) shows that risk results influence interest in using e-money. Many people still don't understand the risks that will be borne when using electronic money.

Based on the background described, it is interesting to do regarding the Effect of Perceived Ease of Use, Trust, and Risk on Interest in Transactions Using E-money.

2 LITERATURE REVIEW

An explanation regarding the interest in using electronic money for transactions, especially for MSME actors, can be based on the theoretical basis and empirical studies. Several fundamental theories are worth using as a basis. Technology Acceptance Model (TAM) is a theory that explains a person's acceptance of technology. TAM was developed by Davis (1989) based on the Theory of Reasoned Action (TRA) model. The TAM theory provides a basis for knowing external factors on beliefs, attitudes, and goals for using technology (Davis 1989). The Technology Acceptance Model (TAM) model analyzes perceived ease of use and usability. The theory of Planned Behavior (TPB) is another theory that can explain individual acceptance of using technology. The TPB theory discusses risks and beliefs that can influence a person's interest or desire to use technology (Ajzen 1991). This theory was introduced by Ajzen in 1991 and has been widely used to explain the behavior of using technology. The advantage of this theory is that it can analyze conditions where a person has no self-control over his actions (Jogiyanto 2007).

According to Davis (1986), interest is a behavior defined as a person's desire to do something. Interest is also interpreted as an urge to do something, but a person's interests can change over time (Jogiyanto 2007). When someone assesses the perceived convenience when using technology, it will generate a desire to use it. Meanwhile, perceived ease of use is defined as the extent to which a person can easily understand and operate technology. Perceived ease of use is an individual's belief in using technology to facilitate their activities (Jogiyanto 2007). If someone thinks the technology system is easy to use and operate, that person will be

interested in using it. On the other hand, if the technology system is difficult to use and manage, the person will not be interested in using technology (Prasetya and Putra 2020).

Trust is a person's judgment about the product to be used, whether it is profitable or not. According to Jogiyanto (2007), fear and suspicion will decrease when someone believes in something. A business transaction between two or more parties will occur if there is mutual trust. Trust explains that human action is directed by three kinds of beliefs: behavioral, normative, and control. In comparison, risk is an uncertain or unwanted condition from using a product or service (Featherman and Pavlou 2002). Risk is the uncertainty that someone will receive when using fintech. Risk can be divided into five dimensions, including psychological risk, performance risk (functional risk), physical risk (physical risk), financial risk (financial risk), and social risk.

Pratama and Suputra's research (2019), which discusses interest in using electronic money with the independent variable perceived ease of use, shows that perceived ease of use influences interest in using electronic money. Prasetya and Putra's research (2020) which discusses interest in using e-money with perceived ease of use, shows that perceived ease of use influences interest in using e-money. Based on this description, the hypothesis proposed is:

H1: Perceived ease of use influences interest in transacting using e-money

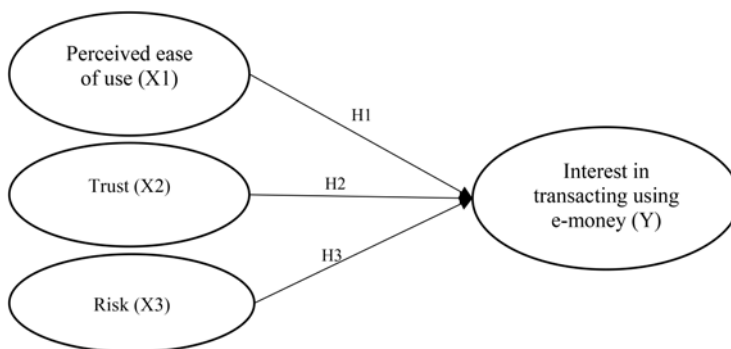
In the research by Wibowo *et al.* (2015), which discussed interest in using e-money cards with trust as the dependent variable, the results showed that faith affected interest in using e-money cards. Yogananda and Dirgantara's research (2017), which discusses interest in using electronic money instruments with the trust variable, shows that trust influences interest in using electronic money instruments. Based on this description, the hypothesis proposed is:

H2: Trust affects an interest in transacting using e-money

Syahril and Rikumahu's research (2019) with the Technology Acceptance Model (TAM) model in the analysis of behavioral interest in using e-money shows that risk influences behavioral intention to use e-money. Priyono's research (2017) which discusses the interest in using electronic wallets with the risk variable, shows that risk affects an interest in using electronic wallets. Based on this description, the hypothesis proposed is:

H3: Risk affects an interest in transacting using e-money

From the description of the theory and empirical studies, it can be drawn a model of interest in transacting using e-money (Y), with independent variables, perceived ease of use (X1), trust (X2), and risk (X3). The framework used is as follows:



3 RESEARCH METHODS

This type of research uses a quantitative approach. The population used in this study is MSME owners in Kepanjen District. This study used probability sampling with simple random selection with a sample size of 100 MSME owners. Methods of data collection using a questionnaire. Measurement of the research variable scale using a Likert scale. The data analysis used in this study was multiple linear regression analysis with SPSS version 25. The instrument test used validity and reliability tests. The classic assumption tests used are normality, multicollinearity, and heteroscedasticity tests. Test the hypothesis using the t-test.

The instrument used is in the form of a written questionnaire that has been tested for validity and reliability. The validity test results on the statement items can be seen in Tables 1 and 2.

Table 1. Validity test results.

Variable	Items	R count	R table	Description
Perceived ease of use (X1)	X1.1	0,786	0,195	Valid
	X1.2	0,790	0,195	Valid
	X1.3	0,733	0,195	Valid
Trust (X2)	X2.1	0,764	0,195	Valid
	X2.2	0,825	0,195	Valid
	X2.3	0,846	0,195	Valid
Risk (X3)	X3.1	0,877	0,195	Valid
	X3.2	0,927	0,195	Valid
	X3.3	0,919	0,195	Valid
Interest in transacting using e-money (Y)	Y.1	0,808	0,195	Valid
	Y.2	0,844	0,195	Valid
	Y.3	0,804	0,195	Valid

Source. Data processed by SPSS (2023).

From the results of the data above, it can be seen that the statement of each variable is declared valid because it has a significance value below 0.05 and the importance of the r count is bigger than the r table. The results of the reliability test on the statement items that have been distributed to 100 MSME owners indicated that:

Table 2. Reliability test results.

Variable	Results <i>Cronbach Alpha</i>	Description
Perceived ease of use (X1)	0,652	Reliable
Trust (X2)	0,741	Reliable
Risk (X3)	0,893	Reliable
Interest in transacting using e-money (Y)	0,751	Reliable

Source. Data processed by SPSS (2023).

The data above shows that each variable is declared reliable because the Cronbach Alpha value is more significant than 0.6.

4 RESEARCH RESULT

4.1 *Characteristics of respondents*

The sample respondents in this study were 100 MSME actors. These samples can describe its demographic characteristics. There are 59% women and 42% men. This indicates more

female MSME owners in Kepanjen District than men because female MSME owners have easier access to related information. This research can provide more answers, compared to the owner MSMEs are male. Based on age, it can be seen that MSME owners are aged less than 30 years of, 42 people with a percentage of 42%, ages 31–40 of 26 people with a rate of 26%, aged 41–50 years, 20 people with a ratio of 20%, aged 51–60 years by ten people with a percentage of 10% and the remaining aged over 61 years by two people with a portion of 2%. This shows that MSME owners in the District Kepanjen, who is fast in understanding the use of e-money, are an MSME owner less than 30 years old.

Based on the business category, it can be seen that there are 72 people in the small business category with a percentage of 72%, in the micro business category, there are 17 people with a portion of 17%, and the remaining 11 people in the medium business category with an 11% percentage. This shows that the MSMEs in Kepanjen District who use e-money are primarily small businesses. While based on the duration of using e-money, it can be seen that MSME owners who use e-money for less than three months are 41 people with a percentage of 41% and use e-money for more than three months by 59 people with a share of 59%. This shows that more MSME owners in Kepanjen District have used e-money for more than three months because MSME owners trust the services provided by e-money.

Based on the type of e-money used, it can be seen that 30 people used Go-Pay with a percentage of 30%, 28 people used OVO with a ratio of 28%, 20 people used LinkAja with a portion of 20%, and ShopeePay with ten people with a percentage of 10% and Others as many as 12 respondents with a share of 12%. This is because Go-Pay and OVO are widely known among MSMEs in the Kepanjen District, so MSME owners can efficiently operate the existing features. Based on the need to use emoney, it can be seen that for transaction purposes in shops, there are 54 people with a percentage of 54%; for needs in places to eat it is 38 people with a portion of 38% and for other purposes, there are eight people with a percentage of 8%. This shows that transactions using e-money in shops help MSME activities in Kepanjen District.

4.2 Regression analysis

4.2.1 Classic assumption test

The normality test shows that the resulting significance value is 0.097. This figure is higher than the significance level of 5% (0.05), so it can be stated that all variables in this study are typically distributed. The multicollinearity test shows that the perceived ease of use variable (X1) has a tolerance value of 0.936 and a VIF value of 1,069, trust (X2) has a tolerance value of 0.915 and a VIF value of 1,093 and risk (X3) has a tolerance value of 0.977 and a VIF value of 1,024. It can be concluded that each independent variable has a tolerance value > 0.10 and a VIF value < 10, so it can be supposed that there is no multicollinearity. The heteroscedasticity test uses the Glejser test with the results of perceived ease of use (X1) having a significant value of 0.584, trust (X2) having a substantial weight of 0.505, and risk (X3) having a significant deal of 0.225. It can be concluded that the variables in this study did not have symptoms of heteroscedasticity.

The results of multiple linear regression analysis tests in this study are as follows:

Table 3. Multiple linear regression analysis test results.

Independent Variable	Regression Coefficient	T count	Sig.
Constant	3,506	2,290	0,024
Perceived ease of use (X1)	0,490	4,774	0,000
Trust (X2)	0,265	3,023	0,003
Risk (X3)	-0,61	-1,296	0,198

Source. Data processed by SPSS (2023).

Based on Table 3, the multiple linear regression equation is:

$$Y = 3.506 + 0.490(X1) + 0.265(X2) - 0.61(X3) + e$$

From the equation above, it can be described that a constant value of 3.506 means that if the variable perceived ease of use, trust, and risk has a zero value, then the interest in transacting using e-money is 3.506. The regression coefficient value of the perceived ease of use variable is 0.490, which indicates that if the perceived ease of use is easier to understand, learn, and operate, the interest of MSME owners in transacting using e-money will increase. The regression coefficient value of the trust variable is 0.265, which indicates that if MSME owners' trust in e-money services increases, the interest of MSME owners in transacting using e-money will increase. The regression coefficient value is -0.61 and has a negative sign on the independent variables. This shows that the lower the risks posed, the interest of MSME owners in transacting using e-money decreases.

4.2.2 Hypothesis testing

The results of the hypothesis test in this study are as follows:

Table 4. T test results.

Independent Variable	T table	T count	Sig.	Description
Perceived ease of use (X1)	1,984	4,774	0,000	Significant
Trust (X2)	1,984	3,023	0,003	Significant
Risk (X3)	1,984	-1,296	0,198	Not significant

Source. Data processed by SPSS (2023).

Based on Table 3, it can be concluded that the perceived ease of use variable has a positive and significant effect on the interest in transacting using e-money with a t_{count} value of $4,774 > 1,984$ and a significance value of $0.000 < 0.05$, trust has a positive and significant effect on interest in transacting using e-money with the t_{count} value is $3.023 > 1.984$ and the significance value is $0.003 < 0.05$. The risk has a negative and insignificant effect on the intention to transact using e-money with a t_{count} value of $1.296 < 1.984$ and a significance value of $0.198 > 0.05$.

5 DISCUSSION

Based on the results of the data analysis research above, the discussion of the research results can be described as follows:

5.1 Effect of perceived ease of use on interest in transacting using e-money

Based on the results of the partial test of the effect of perceived ease of use on interest in transacting using e-money, it shows that the t_{count} value of the perceived ease of use variable is 4.774. This means that the value is greater than the t_{table} value, which is 1.984, with a significance value of 0.000, which is smaller than the alpha value of 0.05. So it can be concluded that the perceived ease of use variable has a positive and significant effect on the interest in transacting using e-money, meaning that the first hypothesis is accepted. The results of this study support the results of previous research conducted by Pratama and Suputra (2019), which stated that the perceived ease of use variable had a positive and significant effect on the intention to use electronic money and research conducted by Prasetya and Putra (2020)

which showed that perceived ease of use had an impact substantial and positive towards the use of e-money.

5.2 *The effect of trust on interest in transacting using e-money*

Based on the results of the partial test of the effect of trust on the interest in transacting using emoney, it shows that the t_{count} value of the trust variable is 3.023. This means that the value is greater than the t_{table} value, which is 1.984, with a significance value of 0.003, which is smaller than the alpha value of 0.05. So it can be concluded that the trust variable has a positive and significant effect on the interest in transacting using e-money, meaning that the second hypothesis is accepted. The results of this study support the results of previous research conducted by Wibowo *et al.* (2015), which stated that the variable of trust has a significant effect on interest in using emoney cards and study by Yogananda and Dirgantara (2017), which shows that faith has a positive and significant impact on interest in using instruments electronic money.

5.3 *The effect of risk on interest in transacting using e-money*

Based on the results of the partial test of the effect of risk on the interest in transacting using emoney, it shows that the t_{count} value of the risk variable is -1.296 . This means that the matter is smaller than the t_{table} value, which is 1.984, with a significance value of 0.198, which is greater than the alpha value of 0.05. So it can be concluded that the risk variable has a negative and insignificant effect on the interest in transacting using e-money, meaning that the third hypothesis is rejected. Research conducted by Syahril and Rikumahu (2019) states that risk influences interest in the behavior of using e-money. Priyono's study (2017) shows that risk affects an interest in using electronic wallets and in contrast to the results of Prasetya and Putra's research (2020), indicating that the risk variable has a negative effect and Yogananda and Dirgantara's research (2017) which states that the risk variable has a negative and insignificant effect on the intention to use electronic money instruments. Based on the results of the research that has been done show that the risk variable does not have a significant effect on the interest in transacting using e-money, which means that the level of risk involved in e-money services does not affect the welfare of MSME owners in transacting using e-money. Therefore the results of this study support the results of previous research conducted by Yogananda and Dirgantara (2017); this is due to a lack of understanding of the risks that will occur to MSME owners to increase their interest in transacting using e-money.

6 CONCLUSION

The data analysis results in the study showed that the perceived ease of use variable partially had a positive and significant effect on the intention to transact using e-money. This means that the higher the ease of use, the higher the interest of MSME owners in transacting using e-money. Trust partially has a positive and significant effect on the intention to transact using e-money. This means that the higher the level of faith, the greater the interest of MSME owners in transacting using e-money. Partial risk has a negative and insignificant effect on the intention to transact using e-money. This means that the lower the risk, the interest of MSME owners in transacting using e-money will decrease.

From the conclusions outlined in the research, there are several suggestions, namely that MSME owners are expected to be able to learn about electronic payment instruments because, over time, electronic payment instruments will continue to innovate. The objects in this study are MSME owners in Kepanjen District, Malang Regency, where space The scope of the respondents in this study is less broad; for further researchers, they can conduct research by expanding the size of the respondents.

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The effect of self-control and future orientation on personal financial management behavior with income as a moderation in generation Z

Novita Ratna Satiti, Vicky Della Nabilla & Widayat
University of Muhammadiyah Malang, Malang, Indonesia

ABSTRACT: This study investigates the financial management behavior of Generation Z, aged 18–25 years. This study also analyzes the relationship between self-control, future orientation, and self-control and future orientation moderated by income. The object of this research is Generation Z in Malang City, and it uses a simple random sampling technique. The number of respondents obtained was 100 by distributing questionnaires offline and online. This study uses multiple linear regression analysis techniques and moderation regression analysis. The results of the survey show that self-control and future orientation have a positive and significant effect on the financial management behavior of Generation Z. Still if selfcontrol and future direction are moderated by income, they have no impact on the financial management behavior of Generation Z. This is due to the level of income and the number of dependents. Different for each individual. Besides that, high income does not guarantee the individual has a future orientation from now on.

Keywords: Self-Control, Future Orientation, Financial Management Behavior, Income, Generation Z

1 INTRODUCTION

Gen Z is the generation born between 1997–2012. In Malang, this generation is the second largest generation after the millennial generation. Two views have become a trend in this generation: You Only Live Once (YOLO) and Fear of Missing Out (FOMO). The YOLO view encourages them to spend their income to finance vacations to places that are trending, while FOMO encourages them to spend money to buy things that are not needed; this is done so that the current trends do not leave them behind.

Research conducted by Zigi. Id revealed that 59.4% of Gen Z respondents experienced expenses more significant than income. This figure is the largest compared to other generations. Lack of self-control in increasing revenue is one of the reasons most people manage all their income without thinking about long-term finances. Self-control is the ability to direct one's behavior related to the individual's capacity to resist the urge to avoid unwise behavior.

Financial management is the ability of individuals to manage their finances, from fundraising and daily fund management to budgeting for the future. Success in financial management is marked by achieving financial freedom in the sense that money is no longer the goal of life. All life activities and decisions are no longer centered on money; money is seen as a means to achieve more important goals (Yulianti and Silvy 2013). One of the reasons someone fails to plan for retirement properly is a lack of future orientation.

Future orientation is a person's picture of himself in the future and how he formulates and develops a vision and mission for the future by dividing the orientation into short, medium, and long-term orientation. Research conducted by Zigi. Id revealed that 77.9% of Generation

Z respondents invested with medium-term goals, namely to prepare for the future within five years, such as education and marriage. However, there are still a few from Generation Z who are preparing for retirement funds because the majority think they will continue to work until they are 50. Pension funds can be prepared if it is nearing that period. Based on the exciting problem introduction, "The Effect of Self-Control and Future Orientation on Personal Financial Management Behavior with Income as a Moderating Variable in Generation Z."

2 LITERATURE REVIEW

The theory of planned behavior is a theory that predicts behavioral considerations because human behavior can be intended and considered. The idea of planned behavior has advantages over other personality theories. The reason is that the theory of planned behavior is a theory that can identify a person's belief in control over something that will happen from human behavior so that this can distinguish between desired human behavior and unwanted human behavior.

According to Kholilah and Iramani (2013), Financial management behavior is a person's ability to manage, namely managing planning, budgeting, checking, executing, controlling, searching, and storing financial funds daily. The magnitude of the individual's desire to meet the necessities of life following the level of per capita income triggers the emergence of financial management behavior.

Self-control is an individual's perspective on an event, whether he can or cannot control the events that happen to him. (Gufron and Risnawati 2017). Self-control related to finances is activity towards spending savings by reducing impulsive consumption. Impulse consumption is a purchase not planned beforehand but because of the desire to buy these goods to fulfill their desires immediately (Putra *et al.* 2013).

Future orientation is an individual's view of future expectations to determine goals to be achieved and resolve problems that may arise. Future orientation is an individual's image of themselves concerning the future. The basis for setting goals, planning, and evaluating the extent to which these goals can be achieved, especially in education, career, and family (Nurmi 2004).

According to Badan Pusat Statistik (BPS), income includes wages and salaries for hours worked or work completed, overtime wages, bonuses, allowances, bonuses paid irregularly, awards, and the value of similar payments.

Research by Samporna and Haryono (2021), which discusses self-control with the independent variable of financial management behavior, shows that self-control affects financial management behavior. Novita Sari's research (2021), which examines the locus of control over financial management behavior, shows that the locus of control influences financial management behavior.

2.1 *H1: Self-control influences financial management behavior*

The research of Rudy Ansar *et al.* (2019), which discusses future orientation with the independent variable personal financial management, shows that future exposure affects personal financial management. Research by Nurfauzah *et al.* (2020) which discusses future direction with the independent variable of financial management, shows that future orientation has a significant simultaneous and partial effect on financial management.

2.2 *H2: Future orientation influences financial management behavior*

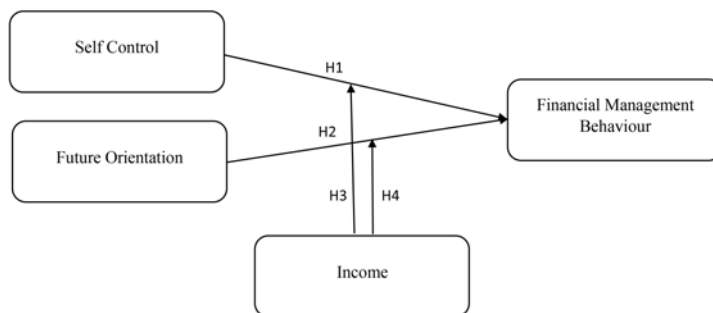
Income moderates self-control of Gen Z financial management behavior

2.3 *H3: Income can moderate self-control of Gen Z financial management behavior*

Income moderates future direction toward Gen Z financial management behavior

2.4 H4: Income can reconcile the future orientation of Gen Z's financial management behavior

From the description of the theory and empirical studies, it can be drawn a model of the independent variable of financial management behavior (Y), with the independent variable perception of self-control (X1) and future orientation (X2) and income (Z) as moderating variables. The framework used is as follows:



3 RESEARCH METHODS

This type of research uses a quantitative approach that is associative. The population used in this study is Generation Z of Malang City. Sampling was used in this study using probability sampling with the type of simple random sampling with a total sample of 100 people aged 18 to 25 years. Methods of data collection using a questionnaire. Measurement of the research variable scale uses a Likert scale for financial management, self-control, and future orientation and an interval scale for income variables. Data analysis used in this study was multiple linear regression analysis and moderated regression analysis with SPSS version 25. The instrument test used validity and reliability tests. The classic assumption tests used are normality, multicollinearity, and heteroscedasticity tests. Test the hypothesis using the t-test. And test the coefficient of determination.

The instrument used is a written questionnaire that has been tested for validity and reliability. The validity test results for the statement items can be seen in Tables 1 and 2.

Table 1. Validity test results.

Variable	Item	R count	R table	Description
Self Control (X1)	X1.1	0,843	0,195	Valid
	X1.2	0,806	0,195	Valid
	X1.3	0,740	0,195	Valid
Future Orientation (X2)	X2.1	0,750	0,195	Valid
	X2.2	0,756	0,195	Valid
	X2.3	0,786	0,195	Valid
Financial Management Behaviour (Y)	Y1	0,750	0,195	Valid
	Y2	0,719	0,195	Valid
	Y3	0,689	0,195	Valid
	Y4	0,670	0,195	Valid
	Y5	0,685	0,195	Valid
	Y6	0,620	0,195	Valid
	Y7	0,695	0,195	Valid
	Y8	0,732	0,195	Valid

Sumber data. Data processed by SPSS, 2023.

From the results of the data above, it can be seen that the statement of each variable is declared valid because it has a calculated r-value greater than the r table. The results of the reliability test on statement items that have been distributed to 100 Z-generation respondents are as follows:

Table 2. Reliability test results.

Variable	<i>Cronbach's Alpha</i>	Description
Self Control (X1)	0,713	Reliable
Future Orientation (X2)	0,619	Reliable
Financial Management Behaviour (Y)	0,820	Reliable

Sumber. data processed by SPSS, 2023.

The data above shows that each variable's statement is reliable because Cronbach's alpha value is above 0.6.

4 RESEARCH RESULT

4.1 *Characteristics of respondents*

The sample of respondents in this study was 100 people belonging to Generation Z. From this sample, and it can be described that the characteristics of the respondents based on gender were 39% male and 61% female. This illustrates that the majority of Generation Z in Malang are female.

Based on age characteristics, it can be seen that Generation Z is aged 21–22 years, as many as 65 people with a percentage of 65%, aged 23–24 years, as many as 14 people with a percentage of 14%, aged 19–20 years as many as 13 people with a percentage of 13% and aged 25 years as many as 8 people with a percentage of 8%. This shows that generation Z in Malang is dominated by the ages of 21 to 22 years.

Based on the income category, it can be seen that in the Rp.1,500,000 – 2,500,000 income category there are 36 people with a percentage of 36%, in the Rp.2,500,000 – 3,500,000 income category there are 23 people with a percentage of 23%, in the income category more than Rp. .3,500,000 there are 21 people with a percentage of 21%, and in the category of income less than Rp.1,500,000 there are 20 people with a percentage of 20%. This shows that most of the Z generation have an income of around IDR 1,500,000 – 2,500,000.

Meanwhile, based on work, it can be seen that there are 31 private employees with a percentage of 31%, part time there are 24 people with a percentage of 24%, freelancers have 22 people with a percentage of 22%, entrepreneurs have 16 people with a percentage of 16% and other jobs such as traders, content creators as many as 7 people with a percentage of 7%. This shows that the majority of generation Z jobs are private employees.

4.2 *Regression analysis*

4.2.1 *Classic assumption test*

The normality test shows a significance value of 0.100. This figure is higher than the significance level of 5% (0.05), so that it can be stated that all variables in this study are normally distributed. The multicollinearity test shows that the self-control variable (X1) and future orientation (X2) have a tolerance value of 0.899 and a VIF value of 1.112. it can be

concluded that each independent variable has a tolerance value of >0.10 and a VIF value <10 so that in this study there was no multicollinearity. The heteroscedasticity test uses the Glesjer test with self-control results (X1) having a significant value of 0.927 and future orientation (X2) having a significant value of 0.485. It can be concluded that the variables in this study do not have symptoms of heteroscedasticity.

The results of the multiple linear regression analysis test in this study are as follows:

Table 3. Multiple linear regression analysis test results.

Variable	Regression Coefficient	T count	Sig.
Constant	22,199	8,438	0,000
Self Control (X1)	0,418	2,250	0,027
Future Orientation (X2)	0,695	3,954	0,000

Source. Data processed by SPSS, 2023.

Based on Table 3, the multiple linear regression equation in this study is:

$$Y = 22,199 + 0,418(X1) + 0,695(X2) + e$$

From the equation above, it can be described that the constant value is 22.199, which is an estimate of the financial management of Gen Z in Malang City. These results indicate that if the variables of selfcontrol and future orientation are 0, then Gen Z's financial management is 22.199. The regression coefficient value of the self-control variable is 0.418, which indicates that if self-control increases, then gen z financial management will also increase. The regression coefficient value of the future orientation variable is 0.695, meaning that if the future orientation increases, the financial management of Gen Z will also increase.

4.2.2 Moderation regression analysis

This study's moderation regression analysis test results are as follows:

Table 4. Hasil uji analisis regresi moderasi.

Variable	Regression Coefficient	T count	Sig
Constant	16,538	2,283	0,25
Income (Z)	3,360	1,127	0,262
Self Control (X1)	1,048	2,361	0,020
Future Orientation (X2)	0,265	0,545	0,587
X1Z	-0,258	-1,520	0,132
X2Z	0,088	0,462	0,654

Source. Data processed by SPSS, 2023.

Based on Table 4, the moderated linear regression equation in this study is:

$$Y = 16,538 - 1,048(X1) + 0,265(X2) - 3,360(Z) - 0,258(X1Z) + 0,088(X2Z) + e$$

From the equation above, it can be described that the constant value is 16.538, which means that if selfcontrol (X1), future orientation (X2), income (Z), interaction of self-control with income (X1Z), exchange of future exposure with income (X2Z) then financial management (Y) is worth 16.538. The coefficient of self-control (X1) is 1.048 on financial

management (Y), provided that future orientation (X2), income (Z), and interaction of self-control with income (X1Z) are constant or equal to zero. The self-control regression coefficient is positive, indicating that self-control positively affects financial management (Y).

The future orientation coefficient value (X2) is 0.265 on financial management with the condition that self-control (X1), income (Z), interaction of self-control with income (X1Z), and exchange of future orientation with income (X2Z) is constant or equal to zero. The future orientation regression coefficient has a positive sign indicating that future exposure positively affects financial management (Y). The value of the income coefficient (Z) is 3.360 on financial management (Y) with the condition of selfcontrol (X1), the interaction of self-control with income (X1Z), and the interaction of future orientation with income(X2Z) is constant or equal to zero. The income regression coefficient is positive, indicating that income positively affects financial management (Y).

The self-control coefficient value with income is -0.258 on financial management (Y), provided that self-control (X1), income (Z), self-control interaction with income (X1Z), and future orientation interaction with income (X2Z) are constant or the same with zero. The regression coefficient of the interaction of self-control with income (X1Z) is negative, indicating that income weakens the effect of self-control on financial management. self-control interaction with income(X1Z), and future orientation interaction with income(X2Z) is constant or equal to zero. The regression coefficient of self-control interaction with income (X1Z) is positive, indicating that income strengthens the effect of future orientation on financial management.

4.2.3 Hypothesis test

The results of the hypothesis test in this study are as follows:

Table 5. T-test results.

Variable	T table	T count	Sig	Description
Self Control (X1)	1,989	2,250	0,027	Significant
Future Orientation (X2)	1,989	3,954	0,000	Significant
X1Z	1,989	-1,520	0,132	Not significant
X2Z	1,989	0,462	0,645	Not significant

Source. Data processed by SPSS, 2023.

Based on Table 5, it can be concluded that the self-control variable has a positive and significant effect on financial management because $thitung > ttabel$ is $2.250 > 1.989$ and a significance value of $0.027 < 0.05$. This means that the first hypothesis is accepted, namely, self-control significantly affects Generation Z's financial management in Malang City. The future orientation variable has a positive and significant effect on financial management because $thitung > ttabel$ is $3.954 > 1.989$ and a significance value of $0.000 < 0.05$. This means that the second hypothesis is accepted; namely, future orientation significantly affects Generation Z's financial management in Malang City.

The self-control variable moderated by income has a negative value on financial management because $thitung < ttabel$, namely $-1.520 < 1.989$ and a significance value of $0.132 > 0.05$. This means that the third hypothesis is rejected: income can moderate self-control of the financial management of Gen Z in Malang City. The orientation variable moderated by income has a negative value on financial management because $thitung < ttabel$, which is $0.462 < 1.989$ and a significance value of $0.645 > 0.05$. This means that the fourth hypothesis is rejected; namely, income can moderate future orientation toward the financial management of Gen Z in Malang City.

4.2.4 Coefficient determination (R^2)

The results of this study's Coefficient of Determination Test (R^2) are as follows:

Table 6. Hasil uji koefisien determinasi (R^2).

Model	R Square (R^2)
X1,X2 -> M1	.232
X1*Z, X2*Z -> M2	.331

Source. Data processed by SPSS, 2023.

Based on Table 6, it can be concluded that self-control and future orientation variables can explain the financial management variable with a value of 0.232 or 23.2%. In comparison, other variables explain the remaining 76.8%. As for the self-control variable, the income-moderated future orientation variable can explain the financial management variable with a value of 0.331 or 33.1%, while other variables outside this research model explain 66.9%.

5 DISCUSSION

Based on the results of the above data analysis research, the discussion of the research results can be described as follows:

5.1 Generation Z self-control and future orientation

IN THIS STUDY, Generation Z's self-control and future orientation are pretty good, evidenced by the number of respondents who strongly agree on the self-control and future-oriented statement items. Generation Z is starting to be able to control itself in terms of financial management, evidenced by the large number of respondents who spend money according to the needs and benefits of goods, start saving, and keep records of expenses. Generation Z has begun planning financial goals for future orientation within 3 and 5 years. In addition, some of the Generation Z respondents have also started investing, even in simple forms such as gold.

5.2 The effect of self-control on generation Z financial management

Based on the results of the research analysis, self-control variables partially influence the financial management of Generation Z in Malang City, which means that Generation Z, who have good selfcontrol, will improve their financial management. Respondents' answers about self-control are good because they can control various expenses deemed unimportant and hinder financial management that has been determined. Gen Z of the poor city also has a high awareness that their future is determined by themselves.

This also makes good financial management because the individual will be encouraged to organize his finances by planning, budgeting, and keeping records of expenses. This is in line with previous research conducted (Rizkiawati and Asandimitra 2018), which stated that current financial conditions are caused by the abilities and skills possessed by individuals in completing and controlling their expenses.

5.3 The effect of future orientation on Generation Z financial management

The analysis results in this study show that future orientation has a significant positive effect on financial management. The better an individual's future direction, his current financial

management will be better. Most Gen Z in Malang already has plans/processes for their finances for the next few years; apart from that, they have also evaluated the strategies undertaken; it's just that they lack the motivation to achieve predetermined targets.

Future orientation describes how individuals contribute to future-oriented behaviors such as planning and saving. A good mindset about the future will trigger individuals to increase their financial knowledge. This increase in knowledge will have a positive impact in the form of intention and behavior in orderly and careful financial management. This is in line with previous research conducted by (Ani 2018), which states that a promising, comfortable, and peaceful future can be achieved with regular financial management from now on.

5.4 *The effect of income-moderated self-control on generation Z financial management*

Based on the test results of the impact of self-control moderated by income on financial management, it can be concluded that self-control after being moderated by income does not affect financial management. This is possible because the respondents in this study are people with different income levels and different numbers of dependents. So individuals with high income do not necessarily have better self-control than individuals with low income. The regression coefficient for this hypothesis is -1.459 , indicating that when the level of income increases, self-control in financial management will decrease. This is possible because respondents consider that they have an adequate allocation of funds, and the remaining portion of funds can be used to make impulsive purchases.

This is also in line with the research of Arifa, J., and Setiyani, R. (2020), which states that income does not affect a person's self-control. Individuals with higher incomes tend to have poor financial management, while lower-income individuals show better management. This indicates that low-income individuals will control themselves and use their income carefully.

5.5 *Effect of income-moderated future orientation on the financial management of generation Z*

Based on the test results of the relationship between future orientation moderated by income on financial management, it can be concluded that future exposure after being moderated by income has no impact on financial management. This shows that even though an individual has a high income, it does not guarantee that the individual will have a future orientation from now on. This is because the Z generation respondents, who are around 19–27 years old, have the mindset that it is too early to prepare for the future, starting now at their relatively young age; many respondents think that it is better to think about the future if they are over 30 years old. In addition, the majority of respondents in this study have an income of less than Rp. 3,500,000, which is only enough to meet daily needs. This is in line with the research by Husna, N. A., and Lutfi, L. (2021), which states that income does not guarantee that an individual has good management. This is possible because of the number of dependents. The greater the number of dependents, the more likely a person uses most of the income he earns for his own and his family's routine needs so that he cannot set aside his income for future finances such as saving, investing, and emergency funds.

6 CONCLUSION

The test results show that the control variable partially has a positive and significant influence on the financial management of Generation Z, which indicates that Gen Z, who has good self-control, will be able to manage their finances. Future orientation partially has a positive and significant influence on the financial management of Generation Z, indicating that Gen Z, who is future-oriented well, will be able to manage their finances.

Self-control moderated by income does not affect Generation Z's financial management, indicating that the payment size cannot encourage self-control in Generation Z's financial management. And incomemoderated future orientation does not affect Generation Z's financial management, meaning that the size of the income cannot encourage a future direction in the financial management of Generation Z.

From the conclusions outlined in the research, there are several suggestions: For further researchers, it is hoped that they can use income as a mediating variable in financial management. Because in this study, income used as a moderating variable proved to not affect financial management.

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Performance analysis of Conventional Banks and Sharia Commercial Banks in Indonesia (Study on banking listed on the Indonesia stock exchange for the 2017–2021 period)

Ade Maharini Adiandari & I. Wayan Suprpta

Faculty of Economics and Business, Universitas Ngurah Rai, Denpasar, Indonesia

ABSTRACT: Banking makes an important contribution to the economy in Indonesia. For this reason, it is necessary to have effective guidance and supervision from banking institutions in achieving national development goals, so that banking institutions in Indonesia are able to function efficiently, soundly, fairly, and are able to protect raised public funds, as well as being able to channel the community funds properly. This study aims to determine the performance comparison of Conventional Banks and Islamic Commercial Banks listed on the Indonesia Stock Exchange (IDX) by conducting different tests on financial ratios based on CAMEL aspects, which include aspects of Capital, Asset Quality, Management, Earnings and Liquidity. The ratios used are CAR, PPAP, KAP, NPM, ROA, BOPO, and LDR/FDR ratios. The research method is quantitative approach and uses secondary data sourced from the annual reports of Conventional Banks and Islamic Commercial Banks from 2017–2021. The research sample is a saturated sample with the census method. The total sample is 46 banks, consisting of 42 conventional banks and 4 Islamic commercial banks. The results showed that there was a significant difference in the CAR ratio and there was no significant difference between the PPAP, KAP, NPM, ROA, BOPO and LDR/FDR ratios of Conventional Banks and Islamic Commercial Banks. Conventional Banks have better performance than Islamic Commercial Banks on KAP, BOPO, LDR/FDR ratios, while Islamic Commercial Banks have better performance on CAR, PPAP, NPM, ROA ratios.

1 INTRODUCTION

The banking industry is one of the industries that makes an important contribution to the economy in Indonesia, with its function as a collector, distributor and service provider in payment traffic and money circulation in society, and its objective is to support national development. This shows that the role of banking is very vital in increasing equity, economic growth and national stability towards increasing people's welfare (Izza 2017). In general, banking is everything related to institutions and bank business activities. In Indonesia, banks are divided into two, namely Conventional Banks and Islamic Commercial Banks, the difference is based on interest payments or profit sharing (Dwi Sari *et al.* 2016; Maghfuriyah *et al.* 2019). The existence of these two types of banking triggers competition between banks which demands bank management to be extra hard in improving its performance (Budiartini *et al.* 2017). The financial performance of Conventional Banks and Sharia Commercial Banks listed on the Indonesian Stock Exchange (IDX) for 2017–2021 based on existing financial ratios can be seen in Tables 1 and 2 as follows:

Table 1. Conventional Bank financial ratios for the 2017–2021 period.

Ratio	2021	2020	2019	2018	2017	Means
ROA	0.64	0.35	0.9	1.12	1.02	0.81
BOPO	101.87	99.11	93.6	89.76	89.47	94.76
LDR	80.27	85.62	91.7	90.37	84.86	86.56

Table 2. Sharia Bank financial ratios for the 2017–2021 period.

Ratio	2021	2020	2019	2018	2017	Means
ROA	-0.8	3.81	6.61	1.55	1.61	2.25
BOPO	192.89	78.15	81.45	114.31	116.23	116.6
FDR	69.03	70.93	126716.8	106295.9	84.31	46647.38

Based on the data in Tables 1 and 2 above, the ROA ratio of Conventional Banks and Islamic Commercial Banks fluctuates every year. Furthermore, in terms of the Mean value, the performance of Islamic Commercial Banks is better than Conventional Banks. In terms of ROA, the performance of Conventional Banks is in a bad position because it is below the standard set by BI, which should be above 1.5%. In the BOPO ratio, Conventional Banks have increased rates and Islamic Commercial Banks' rates fluctuated every year. When viewed from the Mean value for BOPO, both banks show unfavorable conditions because they are above the BOPO standard set by BI, which is below 92%. Furthermore, for the LDR/FDR ratio, the two banks still experience fluctuations every year with the LDR ratio of Conventional Banks meeting BI standards and the FDR ratio of Islamic Commercial Banks being higher than the stipulated provisions. These risks causing banks difficulties in fulfilling their short-term obligations (Agustina & Wijaya 2013), because according to BI, the LDR/FDR standard is 78%–92%.

Given the important function of banks as supporting the economy of a country, it is very important to analyze bank financial performance continuously. Moreover, there is data on bank financial performance that does not meet the standards set by Bank Indonesia (BI), such as some of the performances described above. One way to evaluate a bank's performance is to measure its soundness level which refers to the provisions set by BI by using CAMEL analysis (Capital, Assets quality, Management, Earnings, and Liquidity) (Subandi and Ghazali 2014). Bank capital performance can be measured using the CAR ratio (Capital Adequacy Ratio), namely the adequacy of bank capital in supporting risky assets (Chou and Buchdadi 2016). The performance of a bank's assets quality can be measured through the quality of its earning assets by using the KAP (Earning Assets Quality) and PPAP (Earning Assets Allowance) ratios. Bank management performance can be measured using the ratio of NPM (Net Profit Margin), namely the level of bank profits compared to income received from operational activities. Bank's earning performance can be measured through the level of business efficiency and bank profitability by using the ROA ratio, namely the return on assets owned and the BOPO ratio, namely the comparison of Operational Costs with the company's Operating Income. Meanwhile, bank liquidity performance can be measured using the LDR/FDR ratio, namely comparing credit/financing distributed with third party funds (Marozva 2015).

Several previous studies can be explained briefly, including research by Riftiasari and Sugiarti (2020) concerning the Financial Performance Analysis of Conventional BCA Banks and BCA Syariah Banks Due to the Impact of the Covid-19 Pandemic, there are significant differences in the CAR ratio, and BCA Syariah Banks have a CAR that is better than conventional BCA banks. The results of this study are different from the results of research by Rachman *et al.* (2020) which states that the CAR ratio of Conventional Commercial Banks is better than Islamic Commercial Banks. Further research by Budiartini *et al.* (2017) states that

there is a significant difference in the KAP ratio of Conventional Banks and Islamic Commercial Banks and the KAP ratio at Conventional Banks is better than Islamic Commercial Banks. These results differ from research conducted by Prihatin (2019) which states that there is no significant difference in the ratio of KAP of Conventional Banks to Islamic Commercial Banks and the ratio of KAP to Conventional Banks is better than that of Islamic Commercial Banks. Regarding PPAP, research conducted by Budiartini *et al.* (2017) shows that there is a significant difference between the PPAP ratio of Conventional Banks and Islamic Commercial Banks and the financial performance of Conventional Banks is better than Islamic Commercial Banks. Different results were shown by Kurniasari (2015) which stated that there was no significant difference between the PPAP ratio of conventional banks and Islamic commercial banks. Furthermore, the results of research by Riftiasari and Sugiarti (2020), Rachman *et al.* (2020) and Fitri (2020) state that there is a significant difference in the ROA ratio of conventional banks and Islamic commercial banks and conventional banks are better than Islamic commercial banks. In contrast to the research conducted by Thayib (2017) which shows the results that there is no significant difference in the ROA ratio of Conventional Banks and Islamic Commercial Banks. Regarding BOPO, Rustendi's (2019) research results show that there are differences in the BOPO ratio of Conventional Banks and Islamic Commercial Banks. Finally, research conducted by Rachman *et al.* (2020) states that there is no significant difference in the LDR/FDR ratio of Conventional Banks and Islamic Commercial Banks. In contrast to the research conducted by Fitri (2020) which states that there are differences in the LDR/FDR ratio of Conventional Banks and Islamic Commercial Banks.

Based on the problem in data presented in Tables 1 and 2 above and that there is still empirical debate in previous studies, it is necessary to carry out further research, especially regarding differences in financial performance between Conventional Banks and Islamic Commercial Banks. Hence, this study is conducted with the research title: "Bank Performance Analysis Conventional and Sharia Commercial Banks in Indonesia (Study on Banking Listed on the Indonesia Stock Exchange Period 2017–2021)". Furthermore, the research objective is to compare the financial performance of Conventional Banks and Islamic Commercial Banks. This comparison is to find out whether Conventional Banks have the same or different financial performance with Islamic Commercial Banks.

2 RESEARCH HYPOTHESIS

2.1 *There is a difference in the CAR ratio of Conventional Banks and Islamic Commercial Banks*

The CAR ratio is a comparison of the total bank capital to the total RWA. Conventional Bank capital markets have freer capital circulation. In contrast to conventional banks, the capital market for Islamic commercial banks only includes stocks, bonds and mutual funds which are adjusted to the all binding sharia laws. Sharia Commercial Bank capital turnover is based on sharia principles and strict usury rules. Research conducted by Fitri (2020), Fauzan (2021), Riftiasari and Sugiarti (2020) shows that there is a significant difference in the CAR ratio of Conventional Banks and Islamic Commercial Banks. Based on this explanation, the following hypothesis can be obtained:

H1: There is a significant difference in the CAR ratio of Conventional Banks and Islamic Commercial Banks.

2.2 *There is a difference in the KAP ratio of Conventional Banks and Islamic Commercial Banks*

In Conventional Banks, productive assets are classified as distributed loans, which means transactions will occur with freer lending and more focus on seeking profits based on laws

established by the country and agreed loan contracts. In contrast, Islamic Commercial Banks use financing based on a murabahah contract in accordance with sharia law so that the financing carried out is halal and far from usury. Research conducted by Budiartini (2017) states that there is a significant difference in the KAP ratio of conventional banks and Islamic commercial banks. Based on this explanation, the following hypothesis can be obtained:

H2: There is a significant difference in the KAP ratio of Conventional Banks and Islamic Commercial Banks.

2.3 There is a difference in the PPAP ratio of Conventional Banks and Islamic Commercial Banks

Special reserves in the formation of PPAP for Islamic Commercial Banks that are formed are determined to be the same as those required for Conventional Banks. However, the obligation to provide allowance for earning assets losses for Islamic Commercial Banks does not apply to earning assets for leasing transactions in the form of Ijarah contracts or rental transactions with the transfer of ownership in the form of IMBT contracts (Ijarah Muntakiya Bittamlik contracts). In the formation of PPAP, buildings are also taken into account. Conventional Banks do not use gold as bank collateral. In contrast, Islamic Commercial Banks allow gold as bank collateral (Fatwa No. 26/DSN-MUI/III/2002 concerning Rahn Emas, and BI Circular Letter No. 14/7/DPBS Year 2012). Research conducted by Budiartini (2017) states that there is a significant difference in the PPAP ratio of Conventional Banks and Islamic Commercial Banks. Based on this explanation, the following hypothesis can be obtained:

H3: There is a significant difference in the PPAP ratio of Conventional Banks and Islamic Commercial Banks.

2.4 There is a difference in the NPM ratio of Conventional Banks and Islamic Commercial Banks

The fundamental difference in the management of Conventional Banks and Islamic Commercial Banks is the existence of a Sharia Supervisory Board (DPS) in Islamic banking. Whereas in Conventional Banks there is none because Conventional Banks use procedures or laws set by the state. The sharia supervisory board is a board of economic experts and scholars who master the field of fiqh mu'amalah which stands alone in charge of observing, supervising bank operations and all of their products so that they comply with Islamic sharia provisions. The existence of DPS is to prevent usury in operations carried out and to increase the operating income at Islamic Commercial Banks. Research conducted by Budiartini (2017) states that there are differences in the NPM ratio of Conventional Banks and Islamic Commercial Banks.

H4: There is a significant difference in the NPM ratio of Conventional Banks and Islamic Commercial Banks.

2.5 There is a difference in the ROA ratio of Conventional Banks and Islamic Commercial Banks

Conventional Banks in using their assets are more focused on seeking profits and have a freer rotation direction that can give rise to usury. Whereas in Islamic Commercial Banks the use of their assets in obtaining income is more organized and avoids usury because it is based on sharia law. Research conducted by Riftiasari and Sugiarti (2020) shows the results that there is a significant difference in the ROA ratio of Conventional Banks and Islamic Commercial Banks. Based on this explanation, the following hypothesis can be obtained:

H5: There is a significant difference in the ROA ratio of Conventional Banks and Islamic Commercial Banks.

2.6 *There is a difference in the BOPO ratio of Conventional Banks and Islamic Commercial Banks*

The operational costs and expenses for Conventional Banks and Islamic Commercial Banks are almost the same, the difference is that for Islamic Commercial Banks there are operational expenses issued to the Sharia Supervisory Board. Revenue from Conventional Banks comes from the interest rate set. Meanwhile, income from Islamic Commercial Banks comes from business profit sharing from financing the procurement of al-murabaha goods, leasing, al-bai bitsaman ajil, and al-ijarah in the form of mark-ups, from providing loans in the form of administration fees, and from using facilities in the form of fees. The income of Islamic Commercial Banks has a limited scope because they must be based on sharia principles. Research conducted by Rustendi (2019) shows that there are differences in the BOPO ratio between Conventional Banks and Islamic Commercial Banks.

H6: There is a significant difference in the BOPO ratio of Conventional Banks and Islamic Commercial Banks.

2.7 *There is a difference in the LDR/FDR ratio of Conventional Banks and Islamic Commercial Banks*

At conventional banks, credit is used based on a loan contract, where the customer has an obligation to repay the loan and interest in the future. In contrast, Islamic Commercial Banks use sharia principles with murabaha and leasing contracts which are terminated by a change in ownership from the owner of the goods to the lessee or musyarakah mutanaqishah. Conventional Banks use market interest rates, namely floating and flat. Meanwhile, Islamic Commercial Banks do not recognize interest rates because they use the principle of profit sharing. The profits obtained by Islamic Commercial Banks will be determined at the beginning with a certain range. Research conducted by Fitri (2020) states that there is a significant difference in the LDR/FDR ratio of Conventional Banks and Islamic Commercial Banks.

H7: There is a significant difference in the LDR/FDR ratio of Conventional Banks and Islamic Commercial Banks.

2.8 *Which financial performance is better between Conventional Banks and Islamic Commercial Banks?*

Previous research conducted by Rachman *et al.* (2020) shows that CAR at Conventional Banks is better than Islamic Commercial Banks, this is similar to research conducted by Rosmini and Suarni (2019) which shows the results that the Financial Performance of Conventional Banks is better than Islamic Commercial Banks. Research conducted by Budiartini (2017) also shows the results that the KAP, PPAP and LDR/FDR ratios of Conventional Banks are better than Islamic Commercial Banks. Based on this explanation, the following hypothesis can be obtained:

H8: The Financial Performance of Conventional Banks is better than Islamic Commercial Banks.

3 METHODS

This research uses a quantitative approach based on data from the Indonesia Stock Exchange. The population is 46 banks and the method of determining the sample is to use a saturated sample through the census method. The number of samples is 42 Conventional Banks and 4 Islamic Commercial Banks. The type of data used is secondary data sourced from the annual reports of Conventional Banks and Islamic Commercial Banks which are accessed via idx.co.id and the official website of each bank. The method of collecting data uses non-participant observation methods. The data analysis technique uses the Mann Whitney test analysis and the two average difference test.

4 RESULTS AND DISCUSSION

4.1 Hypothesis testing

Hypothesis testing was carried out with the Mann Whitney test because the data came from different or unpaired groups. The Mann Whitney test is used to determine whether to accept or reject the hypothesis that has been made. The Mann Whitney test results can be seen in the following table:

Table 3. Mann Whitney statistical test results.

	CAR	PPAP	HOOD	NPM	ROA	BOPO	LDR or FDR
Mann-Whitney U	1354,000	1771,000	1938,500	2003,000	1844,000	2031,000	1846,000
Wilcoxon W	23509000	23926000	24093500	24158,000	23999,000	2241,000	24001000
Z	-2,624	-1,157	-.568	-.341	-.900	-.243	-.893
asympt. Sig. (2-tailed)	.009	.247	.570	.733	.368	.808	.372

4.1.1 Analysis of differences in the CAR ratio of Conventional Banks and Islamic Commercial Banks

Table 3 shows the results of the Mann Whitney statistical test show a significance value of 0.009 (< 0.05), so the hypothesis is accepted. This means that there is a significant difference in the CAR ratio of Conventional Banks and Islamic Commercial Banks. Conventional Banks and Islamic Commercial Banks in managing their companies have different capabilities in terms of capital adequacy. The difference is based on the source of funds in the capital of Conventional Banks and Islamic Commercial Banks which have different implementation procedures and conditions therein. At Islamic Commercial Banks there are procedures for using sharia principles, namely using a wadi'ah contract or mudharabah contract or even other contracts. Conventional Bank funding sources are more focused on seeking profits in their operational systems.

4.1.2 Analysis of differences in the KAP ratio of Conventional Banks and Islamic Commercial Banks

Table 3 shows the results of the Mann Whitney statistical test showing a significance value of 0.57 (> 0.05), so the hypothesis is rejected and H_0 is accepted. This shows that there is no significant difference between the KAP ratio of Conventional Banks and Islamic Commercial Banks. The results of empirical research prove that conventional banks and Islamic commercial banks have the same criteria and assess the quality of earning assets based on the level of collectability, namely current, special mention, substandard, doubtful and loss.

4.1.3 Analysis of differences in the PPAP ratio of Conventional Banks and Islamic Commercial Banks

Table 3 shows the results of the Mann Whitney statistical test showing a significance value of 0.247 (> 0.05), so the hypothesis is rejected and H_0 is accepted. This shows that there is no significant difference between the PPAP ratio of Conventional Banks and Islamic Commercial Banks. The results of empirical research prove that conventional banks and Islamic commercial banks in managing their companies both use the collectability level of productive assets as the basis for the formation of PPAP which is formed in the form of general reserves and special reserves to cover the risk of possible losses.

4.1.4 Analysis of differences in the NPM ratio of Conventional Banks and Islamic Commercial Banks

Table 3 shows the results of the Mann Whitney statistical test showing a significance value of 0.733 (> 0.05), so the hypothesis is rejected and H_0 is accepted. This shows that there is no significant difference between the NPM ratio of Conventional Banks and Islamic Commercial

Banks. The empirical research results prove that Conventional Banks and Islamic Commercial Banks have the same ability to manage the profit margin applied to both banks. This means that Conventional Banks and Islamic Commercial Banks have similarities in the operational costs incurred by the bank from the income received. There are costs that are the same as fixed costs such as salary payments, insurance payments, rent payments, and other payments that must be paid no matter what, as well as depreciation costs from assets owned.

4.1.5 *Analysis of differences in the ROA ratio of Conventional Banks and Islamic Commercial Banks*

Table 3 shows the results of the Mann Whitney statistical test showing a significance value of 0.332 (> 0.05), so the hypothesis is rejected and H_0 is accepted. This shows that there is no significant difference between the ROA ratio of Conventional Banks and Islamic Commercial Banks. The results of empirical research prove that conventional banks and Islamic commercial banks have similarities in using their assets to generate income. Returns from the assets of Conventional Banks and Islamic Commercial Banks come from the same sources which are deposits, vacant land, securities, and investments.

4.1.6 *Analysis of differences in the BOPO ratio of Conventional Banks and Islamic Commercial Banks*

Table 3 shows the results of the Mann Whitney statistical test showing a significance value of 0.808 (> 0.05), so the hypothesis is rejected and H_0 is accepted. This shows that there is no significant difference between the BOPO ratio of Conventional Banks and Islamic Commercial Banks. Conventional Banks and Islamic Commercial Banks use the same principles in managing operational costs and operating income, namely using a Cash Basis and Accrual Basis which can make it easier for banks to manage receipts and disbursements at any time.

4.1.7 *Analysis of differences in the LDR/FDR ratio of Conventional Banks and Islamic Commercial Banks*

Table 3 shows the results of the Mann Whitney statistical test showing a significance value of 0.372 (> 0.05), so the hypothesis is rejected and H_0 is accepted. This shows that there is no significant difference between the LDR/FDR ratio of Conventional Banks and Islamic Commercial Banks. This means that there are similarities in the distribution of funds made by both types of banks. Principles in credit agreements at Conventional Banks and in financing contracts at Islamic Commercial Banks are in principle similar, namely adhering to the principles of ordinary agreements in good faith and special principles in the relationship between the bank and the customer. Guarantee institutions that are used in Conventional Banks are also used in Islamic Commercial Banks such as mortgage and fiduciary guarantee institutions.

4.1.8 *Analysis of differences in the financial performance of Conventional Banks and Islamic Commercial Banks*

Table 4. The average value of the ratio of Conventional Banks and Sharia Commercial Banks.

No	Ratio	Conventional Banks	Sharia Commercial Banks
1	CAR	28.63	81.4
2	PPAP	155.31	1022.73
3	HOOD	4.57	5.77
4	NPM	-10.65	2.7
5	ROA	0.67	2.56
6	BOPO	94.76	116.6
7	LDR/FDR	86.56	46647.38

Based on Table 4, it can be seen that the average CAR of Conventional Banks is 28.63 and that of Islamic Commercial Banks is 81.4. The average CAR of Islamic Commercial Banks is greater than Conventional Banks, which means that Islamic Commercial Banks have better capabilities than Conventional Banks because the greater the CAR ratio, the better the bank's performance in providing minimum capital adequacy. The high capital adequacy ratio of Islamic Commercial Banks was caused by changes in the majority shares and the offering of new shares made by PT. Bank Aladin Syariah Tbk.

The average PPAP value for Conventional Banks is 155.31 and for Islamic Commercial Banks is 1022.73. The average PPAP of Islamic Commercial Banks is greater than Conventional Banks, which means that Islamic Commercial Banks are better than Conventional Banks in terms of Allowance for Earning Assets Losses, because the greater the PPAP ratio, the less problematic the Bank is. The PPAP ratio of Islamic Commercial Banks is better than Conventional Banks because Islamic Commercial Banks make higher reserves to overcome potential medium-term bad financing.

The average KAP value of Conventional Banks is 4.57 and KAP of Islamic Commercial Banks is 5.77. The average KAP of Conventional Banks is smaller than the average value of Islamic Commercial Banks, which means that Conventional Banks are better than Islamic Commercial Banks because the smaller the KAP ratio, the better the bank's performance in terms of maintaining Earning Assets Quality. The greater the value of credit/financing disbursed has the potential to increase bank profits but also carries the risk of non-performing credit/financing. In line with the large value of ROA in Islamic Commercial Banks, the level of credit/financing risk increases.

The average value of NPM for Conventional Banks is -10.65 and for Islamic Commercial Banks is 2.7. These results show that the average NPM value of Conventional Banks is smaller than that of Islamic Commercial Banks, which means that Islamic Commercial Banks have a better ability to generate net profits than Conventional Banks. Because the greater the NPM, the more productive the banking performance. The NPM of Islamic Commercial Banks is superior because Islamic Banks are able to control their financial stability. In contrast to conventional banks, which have a negative NPM ratio because many conventional banks experience losses.

The average ROA value for Conventional Banks is 0.67 and for Islamic Commercial Banks is 2.56. Islamic Commercial Banks have better ROA performance than conventional Banks in generating overall profits because the greater the ROA ratio indicates the better ability of bank management in terms of managing assets to increase income. ROA of Islamic Commercial Banks is superior because Islamic Commercial Banks are able to maximize their assets in generating profits. One of them, namely PT Bank BTPN Syariah Tbk, has an average ROA of 11.09 during the year of research. Whereas Conventional Banks have ROA ratios below Bank Indonesia standards because many conventional banks have made losses during the years of research.

The average BOPO value of Conventional Banks is 94.76 and that of Islamic Commercial Banks is 116.6. Conventional Banks have better BOPO performance than Islamic Commercial Banks because the smaller the BOPO ratio reflects the more efficient the bank's management of operational costs. The high BOPO ratio of Islamic Commercial Banks is caused by operational expenses which are still high and reserves formed due to problematic financing.

The average LDR/FDR value of Conventional Banks is 86.56 and that of Islamic Commercial Banks is 46647.38. Conventional Banks have better LDR/FDR performance because the greater the LDR/FDR ratio indicates the lower the bank's liquidity capacity. Credit at Conventional Banks has stable fluctuations during the study period. The high ratio of LDR/FDR in Islamic Commercial Banks is because one of the Islamic Commercial Banks, namely PT. Bank Aladin Syariah Tbk has a very high financing composition in 2018 and 2019. The financing policy of PT. Bank Aladin Syariah Tbk since 2018 which has

focused on improving asset quality and obtaining recovery from the settlement of problem financing, especially those that have been written off.

5 CONCLUSION

Based on the results of the study it can be concluded that there is a significant difference in the CAR ratio and there is no significant difference in the KAP, PPAP, NPM, ROA, BOPO, LDR/FDR ratios of Conventional Banks and Islamic Commercial Banks. The Financial Performance of Islamic Commercial Banks is better than Conventional Banks.

6 SUGGESTIONS

Suggestions for further research should use other financial ratios as a benchmark for a bank's financial performance. Suggestions for investors before investing in Islamic banking or conventional banking companies are to consider financial ratios before making a decision to invest, especially on profitability ratios. Suggestions for companies to improve financial performance and to maintain the level of financial ratios are as follows:

- It is expected that the bank will maintain the CAR ratio level which is a measure of the bank's capital adequacy. In order to be useful and not to settle, Islamic Commercial Banks can allocate their capital through financing to MSME businesses and other investments.
- It is hoped that the bank will maintain the BOPO ratio level so that it does not exceed the standard, which is above 92% because this is directly related to operating income which has an impact on the level of liquidity. Improving BOPO performance can be done by minimizing operating expenses and increasing operating income.

To increase profitability, banks are expected to increase lending/financing because increasing credit/financing will increase the return on assets owned, but this must be balanced by increasing reserves to deal with credit/financing problems.

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Regional macro policies for people's happiness

Ida Nuraini

University of Brawijaya Malang, Malang, Indonesia
University of Muhammadiyah Malang, Malang, Indonesia

Candra Fajri Ananda, Sri Mulyaningsih & Setyo Tri Wahyudi

University of Brawijaya Malang, Malang, Indonesia

ABSTRACT: This study aims to determine the effect of per capita income, minimum wage, income inequality and education on the Happiness Index in Indonesia. The object of research is 34 provinces in Indonesia. The data used are secondary data for 2015, 2017 and 2021. The data source is the Central Statistics Agency which was obtained by means of documentation. By using the panel data regression analysis technique, the results show that per capita income, income inequality, minimum wage and education together have a significant effect on the happiness index, and partially the per capita income variable has no significant positive effect on the happiness index while income inequality has no significant negative effect on the happiness index, conversely the minimum wage variable and gross enrollment rate have a significant positive effect on the happiness index in Indonesia. In order to increase the happiness index, it is recommended that the provincial government periodically review the minimum wage policy, increase the gross enrollment rate and increase per capita income and reduce income inequality.

1 INTRODUCTION

Currently macroeconomic indicators such as Gross Domestic Product per Capita have not been able to provide an adequate picture in describing the living conditions or welfare of individuals in a society. Meanwhile, in its development the indicator to see welfare no longer uses per capita Gross Domestic Product but uses the Human Development Index because the Human Development Index is considered to have the advantage of multidimensional human development which includes the dimensions of living standards, education and health (Paliova *et al.* 2019). However, in its development, welfare can no longer be measured from macro indicators such as health, education and standard of living. Welfare is seen more in terms of subjective welfare indicators in the form of happiness. The currently developing happiness indicator is the happiness index (well being index). The happiness index is the level of happiness or life satisfaction of the Indonesian population on a scale of 0-100 (Al 2018). The 2014 happiness index method is a composite index that measures the level of satisfaction with 10 important elements in life, namely 1) health, 2) education, 3) employment, 4) household income, 5) family harmony, 6) availability of free time, 7) social relations, 8) housing and asset conditions, 9) environmental conditions, and security conditions. 10) security conditions. (Badan Pusat Statistik 2015)

The level of community happiness is a benchmark in determining the achievement of development. Communities in countries with high levels of welfare tend to be happier because welfare indicates the fulfillment of people's desires, so that the possibility of people's hopes for happiness is greater (Kumalasari and Wayan Murjana 2020).

Happiness includes living a happy life means having pleasant living conditions, being healthy and having a meaningful life. (Badan Penelitian dan Pengembangan Kota Magelang 2018). Below is a graph of the Indonesian people's happiness index based on the survey results for 2014, 2017 and 2021.

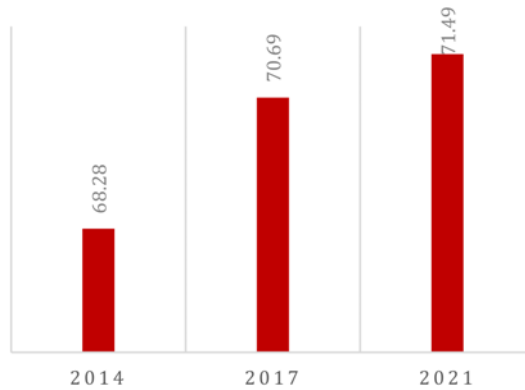


Figure 1. Happiness index in Indonesia.

Source. Central Bureau of Statistics, data processed.

The graph above shows the development of the happiness index which continues to increase from 68.28 in 2014 to 70.69 in 2017 and 71.49 in 2021. Based on the list of the happiest countries in the world, Indonesia is ranked 84 out of 137 countries. The greater the happiness index value indicates the higher the happiness level of the population. Conversely, when the index value is lower, the level of happiness of the population will also be lower (Harumi and Bachtiar 2022).

The World Happiness Index states that an individual's condition to reach a point of happiness or misery is influenced by two factors, namely external or environmental factors such as income level and type of work and internal factors or individual conditions such as physical or mental health, family experience, level of education and gender. (Helliwell *et al.* 2012).

Apart from that, from the point of view of economic development, such as gross domestic product (GDP), inflation rate, and economic growth cannot be used to describe the level of happiness of a society or individual. This is because the happiness index is influenced by material and non-material aspects. The material aspect is the fulfillment of basic needs, namely clothing, food and shelter, while the non-material aspect is education or social relations with various levels of society (Landiyanto *et al.* 2011). Many studies have been conducted to analyze the factors that influence welfare, one of which is per capita income. Azhar (2021) in his research stated that the Per Capita Gross Regional Domestic Product (GRDP) did not have a significant effect on the happiness index in Indonesia. Therefore, per capita GDP statistics have not been able to influence the level of happiness in Indonesia. This means that people who have high incomes are not necessarily accompanied by happiness. Gross Domestic Product as a measure of government economic performance can be generally recognized, but Gross Domestic Product as a single measure does not provide sufficiently accurate information for policy makers about how the economy works for its citizens. For this reason, it is important for policy makers to identify areas that need priority (OECD 2019b).

The results of the analysis of the relationship between the Gini ratio and happiness explain that the Gini ratio variable (inequality) has a negative and insignificant effect on the level of happiness in Indonesia. Every 1% increase in the gini ratio will have an impact on decreasing the happiness index by 22%. In other words, the higher the inequality or gap, the lower the level of individual or community happiness. (Purwanti 2022). The occurrence of inequality is caused, among others, by the existence of government policies that are less impartial so that there are some groups of people who cannot enjoy the benefits of development compared to other groups of people. Happiness is also positively influenced by the level of education. The higher the education the higher the acceptance or income. If income is still an important element in determining happiness, then the higher the education, the higher the income and

happiness. (Rahayu *et al.* 2016). Research on how education increases happiness in East Asia, namely Japan, South Korea, Taiwan and China, reveals that individuals who receive more education have wider social networks, these living conditions are positively related to happiness. By increasing one's ability and tendency to connect with the wider social world and education will be able to improve one's subjective well-being (Chen 2012).

Income has an important function in influencing welfare. Higher income will increase happiness. Happiness is influenced by several multidimensional factors such as the environment, regular work, income, and recreational activities (Januwarsono 2015). Welfare is subjective/not related to income but positively related to satisfaction with basic needs. (Fuentes and Rojas 2001).

From the description above, it shows that regional macro conditions such as income inequality, regional economic growth, inflation and the quality of human resources can affect subjective well-being. In this case, it means that the government is required to prosper the people through the policies that are implemented. Helliwell (2006) in his research findings said that the quality of government will have an effect on welfare. The size of social capital, especially trust, both general and specific, will affect welfare. Based on the background previously described, this study aims to measure the effect of regional macro variables on the level of people's happiness. The regional macro variables include GRDP per capita, the gini ratio, the provincial minimum wage and the education level of the population. If some of these macro variables are known, they can be used as material for government consideration in making public policies so as to achieve prosperity.

2 LITERATUR REVIEW

The Basic Theory of Happiness Easterlin (1974) explains the existence of the Set Point theory in psychology. The existence of a set point or level of happiness will be influenced by various life events such as marriage, job loss and accidents. In addition, with social comparison, a person will judge the quality of his life relatively and not absolutely by comparing it with other people. When a person gets a salary/income increase it doesn't necessarily increase his happiness because he will compare it to other people's income. (Easterlin and O'Connor 2020).

Population welfare indicators can be seen from two types of indicators, namely subjective well-being indicators and objective well-being indicators. Policy makers both in terms of development planning and evaluation in various countries basically agree to use welfare indicators with a larger portion than macroeconomic indicators because welfare indicators better reflect the real condition of people's welfare. (OECD 2019a). Welfare measures should include various factors that significantly affect life and well-being (Stiglitz J 2009). Some of the various theories quoted from Crisp (2021) include:

1. The theory of hedonism from Jeremy Bentham, one of the famous hedonists, says that "Nature has placed mankind under the rule of two sovereign rulers, namely pain and pleasure". According to this theory what we should do depends on pain and pleasure. The more pleasure one can put into one's life, the better it will be, and the more pain one encounters, the worse it will become.
2. Desire theory. Economists see human well-being as consisting in the satisfaction of preferences or wants. This satisfaction will depend on the choices made by the individual so that it will allow preference ranking. Development of "utility functions" for individuals and methods for assessing preference-satisfaction values, for example, using money as a standard.
3. Goal list theory. This theory is usually understood as a theory that includes items that make up well-being that do not consist solely of pleasurable experiences or desire-satisfaction. A list of goals theory need not involve authoritarianism or perfectionism because a person may want to include autonomy in his list, claiming that his informed

and reflective life is for himself a good and any welfare theory in itself has no direct moral implications.

2.1 *Related research*

The Gross Regional Domestic Product (GRDP) has no significant effect on the happiness index in Indonesia (Wiyanti *et al.* 2022). This shows that high-income people do not necessarily have a high level of happiness. And conversely, people with low incomes do not necessarily feel unhappy.

The Gini ratio variable which shows the level of income inequality has a negative and insignificant effect on the level of happiness in Indonesia and in general the income of individuals in big cities is relatively higher than the income of individuals in regions or small towns, but high income is followed by high living costs and competition. Life that has an impact on the level of happiness. Therefore, income inequality (the gini ratio) does not directly or significantly affect happiness in Indonesia (Purwanti 2022). The results of this study indicate that income does not affect individual or community happiness, but because the regression coefficient is negative, it means that the higher income inequality will reduce the level of individual or community happiness.

Happiness is also positively influenced by the level of education. The higher the education the higher a person's income. This shows that income is still an important element in determining happiness, the higher the education, the higher the income and the higher happiness (Rahayu *et al.* 2016). Highly educated individuals have wider social networks, these living conditions are positively related to happiness. Income is positively related to other measures of subjective well-being, including happiness. Income plays an important role in influencing well-being, higher income will be able to increase happiness. (Sacks *et al.* 2010).

3 RESEARCH METHODOLOGY

The object of research is the 34 provinces in Indonesia using time series data for 2014, 2017 and 2021 obtained through documentation from the Indonesian Central Bureau of Statistics. The reason for choosing 2014, 2017 and 2021 was based on the availability of complete survey data in all provinces and the survey was conducted in those years. The analytical tool used is panel data regression with 102 observations. Panel data is a combination of cross section data and time series data. The cross section data is in the form of 34 provinces and the time series data is in the form of data for the years of observation, namely 2014, 2017 and 2021. The regression analysis model used is to choose the appropriate model whether the Common Effect Model, Fixed Effect Model and Random Effect Model which is carried out by carrying out three stages of testing namely the chow test, Hausman test and Lagrange multiplier test. The dependent variable in this study is the happiness index, the independent variables are per capita Gross Domestic Regional Product, minimum wage, gini ratio and gross enrollment rate.

To determine the suitability of the model, a chow test was carried out. If the probability of cross section (F) > 0.05 then the common effect model is more appropriate to use, conversely the probability of cross section (F) < 0.05 then the fixed effect model is more appropriate. The next test is the Hausman test. If the results of the cross section probability (F) > 0.05 then the random effect model is used, if the cross section probability (F) < 0.05 then the fixed effect model is more appropriate to use. The Lagrange Multiplier test is used to test the model between the common effect and random effect models. If probability Breusch Pagan value > 0.05 using the Common Effect model. Conversely, if the probability < 0.05 , then the Random Effects Model is selected.

4 RESULTS AND DISCUSSION

Indonesia's happiness index in 2014 was 68.28 on a scale of 0-100 which was carried out using a life satisfaction approach. This happiness index increased compared to 2013 of 65.11. The measurement of the happiness index was carried out through a Happiness Index Measurement Survey with a sample coverage of 70,631 heads of households in all provinces. The composition of respondents is greater in urban areas than in rural areas with a composition of 57.84% of respondents in urban areas and 42.1.6% of respondents in rural areas with balanced gender, namely 50.98% male and 49.02% female. The three aspects of life that gave the highest contribution were household income (14.64%), housing and asset conditions (13.22%) and employment (13.12%). The productive age population (25-40) has a higher happiness index than the population over 65 years of 66.24%. (Badan Pusat Statistik 2017).

Indonesia's happiness index in 2017 increased to 70.69. The measurement of the happiness index in 2017 experienced a change in dimensions compared to 2014. The happiness index in 2014 only used the dimensions of life satisfaction, so that in 2017 the dimensions of feeling (Affect) and the dimension of the meaning of life (eudaimonia) were added. Another change is that life satisfaction is divided into two sub-dimensions, namely the personal life satisfaction sub-dimension and the social life satisfaction sub-dimension. The male happiness index is greater than the female and the older the age, the lower the happiness index. Meanwhile, the older a person is, the higher the feeling dimension (affect) until the age of 64 and after that it will decrease. Likewise, the sub-dimensional social satisfaction will increase with increasing age of a person up to 64 years. (Badan Pusat Statistik 2017)

The happiness index for 2021 was 71.47 or an increase compared to 2017. In 2021, a new method was used for measuring the index, where 2017 became the basic year for measuring happiness due to the development of the happiness index framework, which in 2014 only had one dimension, which changed to 3 dimensions in 2017. and in 2021, there will be an addition of the Feeling dimension and the Meaning of Life dimension to the Happiness Index measure. In 2021 it remains consistent with 2017 that urban residents have a higher happiness index than rural residents, and male residents have a higher happiness index than female residents.

One of the determinants of the happiness index is income per capita. Based on the provinces in Indonesia, the high per capita income of the Indonesian people can be seen in the following graph:

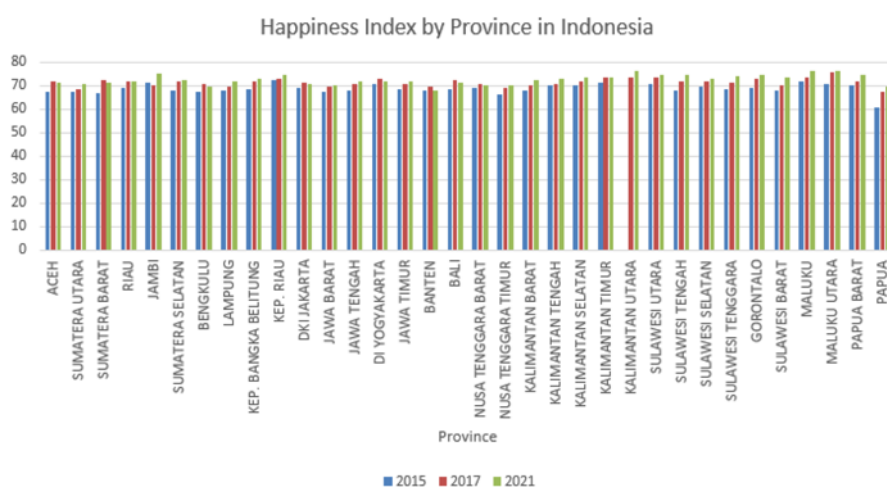


Figure 2. Happiness Index by Provinces in Indonesia
 Source. Central Bureau of Statistics, data processed.

Gross Domestic Product Per Capita of Indonesia in 2015 is Rp. 35,161,890, - in 2017 amounting to Rp. 37,851,370, - and 2021 of Rp. 40.780.310,-. Based on the GDP Per Capita chart, in 2021 there are only a few provinces in Indonesia whose GRDP is above Indonesia's GDP Per Capita, such as the Provinces of Bali, Riau Islands, DKI Jakarta, East Kalimantan, North Kalimantan, Central Sulawesi and West Papua. DKI Jakarta is the province with the highest per capita income, in 2021 it has a GRDP per capita of Rp. 174,941,720.- The province with the lowest GRDP is East Nusa Tenggara, which is Rp.13,092,810.- The graph above shows high inequality in income per capita in Indonesia. It is suspected that this inequality of income per capita has an impact on inequality of social welfare. Regarding the happiness index of the Indonesian people, it can be seen in the following graph:

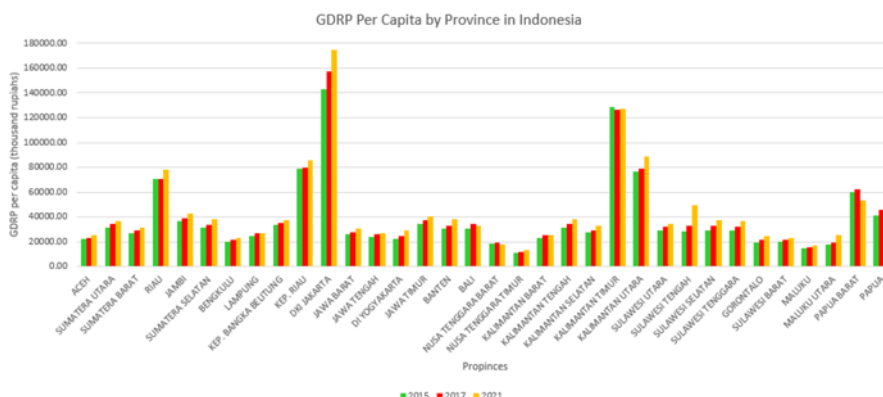


Figure 3. Gross regional domestic product per capita by province 2015, 2017, 2021.

Source. Central Bureau of Statistics, data processed.

The graph of the Indonesian people's happiness index above shows an increase in the happiness index in all provinces from 2015 to 2017 and 2021. In 2021 there are 10 provinces with the highest happiness index in a row as follows: North Maluku (76.34), Kalimantan North (76.33), Maluku (76.28), Jambi (75.17), North Sulawesi (74.96), Riau Islands (74.78), Gorontalo (74.77), West Papua (74.52), Central Sulawesi (74.46) and Southeast Sulawesi (73.98). Of the 10 provinces, none of the provinces on the island of Java are included in the top 10 of the highest happiness index. If it is related to per capita income in Figure 2, such as DKI Jakarta with the highest per capita income, the people's happiness index will only be 70.68 in 2021 and Maluku, North Maluku and Gorontalo which have low per capita income but their people's happiness index is higher than other provinces. This indicates that the happiness index has nothing to do with income. However, this is only limited to a sample of several provinces, for statistical proof a test must be carried out as will be explained below.

To test several variables that affect the happiness index such as per capita income, minimum wage, income inequality and education level, regression is used, and to determine the appropriate regression model whether Fixed effect model, Common effect model or Random effect model is done by Chow test, Hausman test and Lagrange multiplier test. The test results can be seen in the following table:

Table 1. Chow test, Hausman test and Lagrange Multiplier test.

	Statistic	d.f	Prob.
Chow test	120.092528	33	0.0000
Hausman test	5.871480	4	0.2090
Lagrange Multiplier test	0.0000	0.6337	0.0000

Based on the Chow test, probability $F = 0.0000$ is obtained. This value is less than 0.05 , so it can be said that the Fixed Effect model is more suitable. In the Hausman test, the probability $F > 0.05$ is obtained, so the random effect model is more suitable than the fixed effect. The lagrange multiplier test shows that the probability $F < 0.05$ means that the random effect model is more suitable than the common effect.

Table 2. Regression results of the random effect model.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	57.65737	3.154003	18.28070	0.0000
GRDP Per capita (X1)	4.34E-06	5.67E-06	0.765682	0.4457
Minimum Wage (X2)_	1.38E-06	3.01E-07	4.577240	0.0000
Gini Ratio (X3)_	-7.737551	5.087764	-1.520816	0.1316
Gross enrollment rate (X4)_	0.156875	0.026454	5.930096	0.0000
Weighted Statistics				
Root MSE	1.161911	R-squared	0.654174	
Mean dependent var	33.36565	Adjusted R-squared	0.639913	
S.D. dependent var	1.985561	S.E. of regression	1.191481	
Sum squared resid	137.7037	F-statistic	45.87191	
Durbin-Watson stat	2.005255	Prob(F-statistic)	0.000000	

Based on the results of the best model selection test, it was found that the random effect model was the best model based on Table 1. So a hypothesis test was carried out with the random effect model. So the model equation is obtained as follows:

$$Happiness\ index = 57.65737 + 4.34X1 + 1.38X2 - 7.737551X3 + 0.156875X4 + 1,191481$$

The model equation explains that a constant value of 57.65737 means that if all other variables are assumed to be zero, then the happiness index in Indonesia is 57.65737 .

The per capita GRDP variable (X1) has a positive and insignificant coefficient, meaning that every 1% increase in per capita GRDP will increase the happiness index by 4.34, but this effect is not significant. The regression coefficient of the minimum wage variable (X2) is also positive, meaning that every 1% increase in the minimum wage will significantly increase the happiness index by 1.38 and each increase in the Gini ratio index 1 (X3) will decrease the happiness index by 7.73 but this effect is not significant. A significant increase in the gross enrollment rate (X4) of 1 will increase the happiness index by 0.15. GRDP per capita has no effect on the happiness index because the probability is greater than 0.05 . These results are in accordance with Malia and Hamzah (2017) which proves that GRDP per capita has a positive but not significant effect on the happiness index. This means that during the periods of 2014, 2017 and 2021, the GRDP per capita has not been able to increase the happiness index. In this case macro indicators cannot be fully used in measuring the welfare or happiness of the population because per capita income which is calculated from national income divided by the total population still has weaknesses and does not reflect the actual per capita income. In theory, income is not the only thing that can determine one's happiness. There are other non-material factors that contribute to determining happiness such as health, peace, feelings and many other factors. Per capita income on the one hand has weaknesses in measuring happiness, but the government must not be complacent by continuing to increase economic growth so that per capita income increases. Various countries have proven that there is a close correlation between per capita income and welfare. Bannister and Mourmouras (2018) in his research in 151 countries said that there is a close relationship between per capita income and Gross Domestic Product. For this reason, in adopting

development policies, especially in the context of improving people's welfare, the government cannot only focus on increasing gross domestic product or economic growth, but must consider non-material aspects such as improving the quality of health, education, security, peace and quality of public services. Data from two large-scale studies show a weak correlation between income and happiness, but there is a difference in average happiness between the rich and the poor. (Lucas and Schimmack 2009). From this it can be concluded that happiness is still related to income.

The minimum wage has a significant positive effect on the happiness index, this is in accordance with research by Fuentes and Rojas (2001) which says that well-being is subjective/well-being is not related to income but is positively related to a sense of satisfaction with basic needs. When a person gets an increase in income it will not necessarily increase his happiness because he will compare it with other people's income (Easterlin and O'Connor 2020). In Law Number 13 of 2003 concerning Manpower, article 89 paragraph (3) says that the Minimum Wage based on the provincial area is determined by the Governor by taking into account the recommendations from the Provincial Wage Council and/or Regents/Mayors. The aim is to avoid arbitrary actions by employers in providing wages to their workers so that the welfare of workers is not guaranteed. With the existence of a minimum wage policy, the government can protect workers in order to pay attention to their welfare. For this reason, the role of the government in adopting a minimum wage policy must be careful because on the one hand there are the interests of employers that must also be considered. If the minimum wage policy is very burdensome for employers, it can have an impact on termination of employment which results in increased unemployment thereby reducing people's welfare. For this reason, the government's role in adopting a minimum wage policy must be careful because on the one hand there are the interests of employers that must also be considered. If the minimum wage policy is very burdensome for employers, it can have an impact on termination of employment which results in increased unemployment thereby reducing the absorbed workforce. Sulistiawati (2012) research results conclude that the minimum wage has a negative effect on employment. So that if the minimum wage increases, the absorbed workforce will decrease or have an impact on increasing unemployment.

Based on Table 2 it can be seen that the probability value of the gini ratio variable has a t-statistic of 0.1316 or > 0.05 , so it is said that the Gini ratio variable does not affect the happiness index. Wahyudi and Tiara (2022) in his research stated that income inequality using the Gini ratio index tool has a negative and significant effect on the level of happiness of the population. If an area is more unequal in income distribution, it means that there is a large difference in income in society and differences in participation so that the level of happiness is lower. The results, using aggregated data from all rounds of the European and World Values Surveys between 1981 and 2004, found that income inequality was negatively correlated with life satisfaction. (He 2022). This means that the higher the income inequality, the lower the life satisfaction.

The probability value of the t-statistic gross enrollment rate is 0.0000 or < 0.05 , which means that the gross enrollment rate variable has a significant effect on the happiness index. The gross enrollment rate reflects the percentage of the population attending school at a certain level of education (regardless of age) to the total school-age population corresponding to that level of education. Education is the main thing that is very important for the sustainability of a country (Yasir *et al.* 2022). Each individual also has factors that bring happiness to him, these factors include money, marital status, social life, age, health, negative emotions, education, climate, race, gender and religion or one's religious level (Zhahira and Utami 2021). The higher the education the higher the welfare, because education can increase access to economic resources that are not alienated and paid work can increase the sense of control over life, as well as the stability of social relations, especially marriage, which increases social support. (Ross and Willigen 1997)

Based on this output, it can be seen that the probability value of the F-statistic is 0.000000 or <0.05 , so it can be interpreted that the Variable GRDP per capita, minimum wage, gini ratio and gross enrollment rate jointly affect the Happiness Index. This is in line with the statement of the Central Bureau of Statistics which stipulates that the happiness index consists of 10 essential aspects of life. The 10 aspects are: health, education, employment, household income, family harmony, availability of free time, social relations, housing and assets, environmental conditions and security conditions.

The regression results above show that 63.99% of the happiness index can be explained by the variables of GRDP per capita, minimum wage, gini ratio and gross enrollment rate while the remaining 36.01% of the Happiness Index is explained by other variables outside this research variable. The results of this study are in line with the statement of the Badan Pusat Statistik, (2015) using the 2014 happiness index method, which is a composite index that measures the level of satisfaction with 10 important elements in life, namely 1) health, 2) education, 3) employment, 4) household income, 5) family harmony, 6) availability of free time, 7) social relations, 8) housing and asset conditions, 9) environmental conditions, and security conditions. 10) security conditions.

5 CONCLUSION

The happiness index is one of the newest indicators used to measure people's welfare. This happiness index approach is more subjective. The happiness index is formed from 3 main dimensions, namely the dimension of life satisfaction, the dimension of feelings and the dimension of the meaning of life. Welfare surveys in Indonesia have been conducted 3 times, namely in 2014 with an index value of 68.28 and in 2017 with an index of 70.69 and in 2021 with an index value of 71.47.

The results of the study show that several variables that affect the happiness index are regional per capita gross domestic product, regional minimum wage, income inequality and education. The four variables together have a significant effect on the happiness index, but partially only two variables have a significant effect, namely the regional minimum wage and education. Per capita income and income inequality have no effect on the happiness index, but per capita income has a direct relationship with the happiness index and income inequality has an inverse relationship with the happiness index.

Regional macro policy models in increasing the happiness index that need attention are wage policies or policies on setting minimum wages and increasing public education. Meanwhile, an increase in economic growth is needed because it has a positive relationship with people's happiness. Likewise, income inequality which has a negative relationship with happiness means that income distribution policies need to get a priority portion besides growth policies.

5.1 *Suggestions*

From the results of the research that has been done, it is suggested especially to the provincial regional government that increasing the index of people's happiness can be done through a wage policy. The minimum wage setting policy must be carried out carefully and the minimum wage setting should always adjust to the increase in the inflation rate for each region. Don't let the minimum wage policy burden one party, whether it's just the workers or the employers. Wage policies that favor one of the interested parties will cause the market to not work efficiently, can create tension between workers and employers so that it can have an impact on termination of employment or have an impact on waves of protests that disrupt economic and political stability.

Another suggestion to the local government is a policy to improve the quality of public education by increasing the gross enrollment rate or increasing the percentage of the

population attending school. This can be done by increasing education subsidies, improving educational facilities and infrastructure so that education at all levels can be reached by all levels of society.

Another thing to increase the happiness index is with policies to increase economic growth followed by equity. Policies that only focus on economic growth will not be able to increase welfare. Between growth and equity must go hand in hand.

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Protodiplomacy in Ukraina

Dyah Estu Kurniawati & Syaprin Zahidi
University of Muhammadiyah Malang, Malang, Indonesia

ABSTRACT: The separatist movement in a country can be strengthened if it has good foreign relations with foreign parties known as protodiplomacy. For countries that are multiethnic and have a slice of identity with their neighbors, they have a very big opportunity for independence. This is what happened in Ukraine because some of its regions broke away because of close relations with Russia. This research will explore how the protodiplomacy model in Ukraine triggered the war between Russia and Ukraine. The research was conducted by studying documentation from various journals and media reports and was qualitatively descriptive.

Keywords: protodiplomacy, separatist movement, Russia–Ukraine War, ethnic conflict

1 INTRODUCTION

Ukraine was one of the breakaway countries of the Soviet Union and neighbors Russia and Belarus. In eastern Ukraine there are two regions that are pro-Russian because they have a majority of ethnic Russian populations. After Russia recognized the independence of the Autonomous Republic of Crimea in 2014, Russian President Vladimir Putin recognized the independence of the two regions in eastern Ukraine, the Donetsk People’s Republic (DPR) and the Lugansk People’s Republic (LPR), after signing a decree on February 24, 2021. In September 2014, a survey conducted in Russian-speaking regions such as the cities of Odessa and Kharkiv showed 87% of residents wanted their territory to remain under Ukraine, 3% wanted to join Russia, 2% wanted to join “Novorossiya,” and 8% were undecided. A December 2014 poll showed 88.3% of Ukrainians refused to join Russia (Bin-Nashwan *et al.* 2022). (Payette 2020)

It turned out that eight years later conditions reversed. The pro-Russian movement in both regions has strengthened, causing the Ukraine vs. Russia conflict to escalate. As a result of claims to protect these self-ruled pro-Russian regions, Russia invaded Ukraine. From the facts above, it is interesting to study further why there was a change in decision from 2 regions that previously wanted to remain part of Ukraine to want to join Russia, was there a protodiplomacy movement carried out by the Separatists in the Ukrainian region to Russia to decide to independence from Ukraine? This research is important to be a lesson for Indonesia which also has a history of separatism movements in several regions.

Protodiplomacy is another term for paradiplomacy that is still relatively new phenomenon in the study of international relations. Paradiplomacy refers to the behavior and capacity of conducting foreign relations with foreign parties carried out by ‘sub-state’ entities, in the framework of their specific interests, for example in the economic, socio-cultural, and other non-political issues (Lequesne and Paquin 2017). While protodiplomacy is more towards cooperation in the political field which tends to lead to secession from its parent country.

The practice of paradiplomacy in general and protodiplomacy in particular are part of the continuing history of integration in developed countries (Lecours 2002). According to

Lecours, their practice of paradiplomacy can be categorized into 3 groups, namely, first, relations and cooperation of regional governments or 'sub-states' which are only oriented for economic goals such as market expansion, development of investment abroad, and mutual investment. This relationship does not involve complex motives at all, such as politics or culture. This type of transnational interaction is commonly practiced by states in the United States and Australia. Second, paradiplomacy involving various fields of cooperation or 'multipurpose', between economy, culture, education, health and technology transfer and so on. The concept of this relationship refers to a decentralized model of foreign cooperation or 'decentralized cooperation'. Some provinces in Germany or 'landers', practice this model of relationship, as well as the regional government of Rhone-Alpes, France, establish relations with several states in Africa such as Mali, Senegal and Tunisia, as well as provinces in Vietnam and Poland.

The third category is complex paradiplomacy involving region-specific political motives and nationalist identities. They seek to forge international relations with an enormous zeal to express the national identity of their specific and autonomous region that is different from most regions of their country. Those who practice this model include Flanders-Belgium, Catalonia-Spain, Quebec-Canada and the Basque Country. This third model is called protodiplomacy (Brown and Groen 1994). Therefore, the current researcher aims to complement and update data from previous researchers in the form of the last variable slices.

2 LITERATUR REVIEW

2.1 *Paradiplomacy*

Paradiplomacy refers to the behavior and capacity of conducting foreign relations with foreign parties carried out by 'sub-state' entities, in the framework of their specific interests, for example in the economic, socio-cultural, and other non-political issues (Clemente 2018). While protodiplomacy is more towards cooperation in the political field which tends to lead to secession from its parent country (Munira and Purnomob 2019; Tavares 2016).

2.2 *Protodiplomacy*

Protodiplomacy is another term for paradiplomacy that is still relatively new phenomenon in the study of international relations. Paradiplomacy refers to the behavior and capacity of conducting foreign relations with foreign parties carried out by 'sub-state' entities, in the framework of their specific interests, for example in the economic, socio-cultural, and other non-political issues. While protodiplomacy is more towards cooperation in the political field which tends to lead to secession from its parent country (Kovačević 2022).

2.3 *Separatism*

Separatism takes many forms and is conceptualized variously. Separatism refers to very broad social categories such as gender separatism, which reflects, for example, the aspiration of women to sever their relationship with men. So is the case with racial separatism, which reflects, for example, the desire of Blacks to protest their integration with Whites. When separatism involves these broad social categories, this concept is not interpreted as a conflict between certain groups and the government or state, but rather a conflict between groups in a society. Separatism also refers to narrower social categories such as ethnic, religious, or cultural groups fighting for autonomy within, or complete independence from, a sovereign state. This type of separatism is characterized by diverse motives and demands. These motifs can be broadly grouped into two categories: realistic motives and identity motives. Realistic motives revolve around economic and power problems that reflect the separatist group's aspiration to

be able to independently manage and cultivate natural resources and hold control over their own territorial sovereignty. Meanwhile, identity motives are related to social problems and cultural issues where separatist groups want to enforce a unique identity related to their language, ethnicity and religion. Related to demands, most separatist groups fight for complete political separation from a country, but some separatist groups only seek greater autonomy. Researchers use this theory as a supporter of the theory of nationalism seen from the point of view of Luhansk and Donetsk who disintegrated Ukraine through separatism movements. Separatism in this paper is focused on a narrow social categorization, so the term or concept refers to political movements fought by certain ethnic, religious, or cultural groups that call for complete autonomy or independence from a country (Inui 1996).

3 RESEARCH METHODOLOGY

The research method is a systematic way to solve the problems raised by researchers. It is important for researchers to understand about research methodology, not only the technique. The type of research used by the author is qualitative research, containing explanations and explanations of the problems raised in the research. In this type of research, researchers are required to submit the results of the research conducted which are summarized descriptively. Researchers choose the type of qualitative research because the data and problems raised are qualitative (Ipa *et al.* 2018). The source of the retrieved data is secondary data. Secondary data is obtained from news and previous research. The author chose the object of the Luhansk and Donetsk separatists in 2022. The data collection technique used is literature review (Chaerani *et al.* 2023). Technical data analysis is carried out in sequence, namely data reduction, data presentation, and data verification. So that it is credible and easier for readers to understand. This research uses data collection techniques through documentation studies in reputable journals and online media coverage. The material limit was protodiplomacy in Donetsk and Lugansk, Ukraine, until it broke away and became one of the triggers for the war between Russia and Ukraine. The time limit is from 2014–2022 since the referendum that initially joined Ukraine in 2014 but changed to secede from Ukraine in 2022. The current research will use multiple linear regression modelling. At this moment, the framework of thinking:

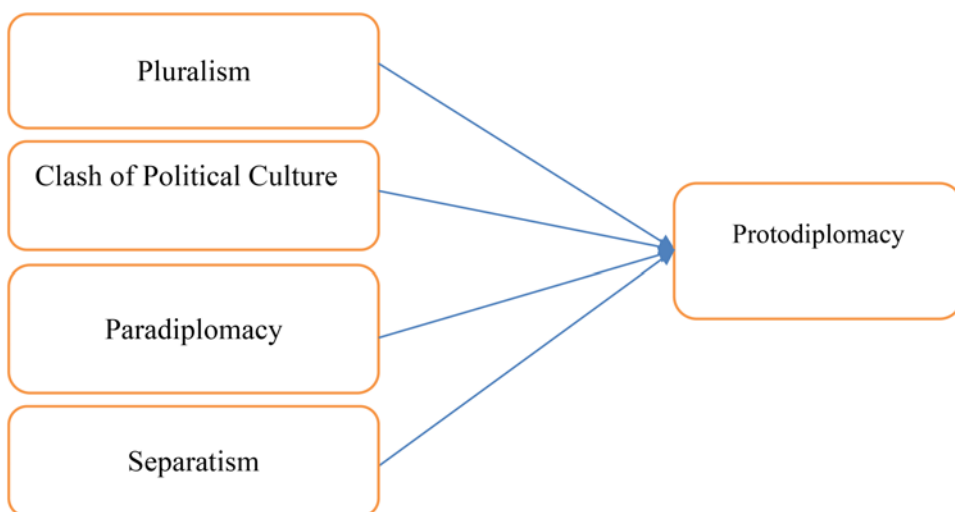


Figure 1. The framework of thinking.

4 RESULTS AND DISCUSSION

4.1 *Dynamics of Ukrainian-Russian relations*

The Ukraine crisis in 2014 made the international community focus on the Eastern European region. The Ukrainian conflict itself involves state and non-state actors, with the superiority of state sovereignty represented by Russia and Ukraine and non-state actors represented by the Azov Battalion on the Ukrainian side, and pro-Russian militants whose majority of actions are in eastern Ukraine and cover the Crimean Peninsula. Not only that, this conflict also involves other countries such as the United States and some European Union countries to participate in handling the conflict and received a considerable response by the United Nations (UN) (Peters 2020).

The phenomenon of Crimea's self-determination to join another country, namely Russia, has been carried out through an International Referendum based on the value of International Law although there remains controversy and international condemnation to this day. Crimea's accession to Russia is a demand of the Crimean people in getting security and guarantees of a better future because there is no security stability in Ukraine. On the Russian side, the joining of Crimea increases the value of Russian superiority on the geopolitical side in Eastern Europe and the international world and benefits economically from the natural and human resources owned by Crimea even though it still faces criticism from other parties. The Crimean phenomenon apparently continued in Donetsk and Luhansk (Swain 2007).

Donetsk and Luhansk are two self-proclaimed rebel regions as republics. Both are located in eastern Ukraine and escaped Kiev's control in 2014. Russia on Monday (2/21/2022) recognized Donetsk and Luhansk as independent, triggering international condemnation. More than 14,000 people have been killed in fighting between the Ukrainian army and Russian-backed separatists there. Donetsk and Luhansk were recognized as independent regions by Russian President Vladimir Putin on that day. Donetsk, whose territory is surrounded by slag piles, is the main city in the Donbass mining basin. According to the website of Indonesia's National Nuclear Energy Agency (Batan), slag is a molten mixture of metal oxides and silicates, sometimes also present phosphates and borates, sulfites, carbides, and halides. Slag is obtained from the smelting of minerals. Donetsk used to be called Stalino and was a sandy industrial center dominated by mining. The area of two million people is also one of Ukraine's major steel-producing hubs (Resler 1994).

Luhansk, formerly Voroshilovgrad, is also an industrial city of 1.5 million. Luhansk is in a basin, the border with Russia on the northern edge of the Black Sea, which is the location of large reserves of coal. The existence of Russian speakers arose because many Russian workers were sent there after World War II during the Soviet era. Donetsk and Luhansk have been locked in armed conflict with Kiev's army since a Kremlin-backed uprising, following Russia's annexation of Crimea in 2014. Their independence proclaimed after the referendum was not recognized by the world. Kiev and Western countries say Russia is inciting an uprising in the east, supplying weapons and troops across the border to support them.

Russian President Vladimir Putin on February 21, 2022 recognized the independence of Donetsk and Luhansk. Donbass is also at the heart of a cultural battle between Kiev and Moscow, which says the region, which includes much of eastern Ukraine, is Russian-speaking and needs to be protected from Ukrainian nationalism. Efforts to resolve the conflict in eastern Ukraine stipulated in the 2015 Minsk Agreements have reached an impasse. Ukraine and separatists accuse each other of abuses. A series of ceasefires failed to be enforced due to repeated violations by the warring parties. The political groove of the deal, which plans a large degree of autonomy for rebel regions and local elections under Ukrainian law, has only stalled on paper. Each side blamed the other for the failure. Meanwhile, British Prime Minister Boris Johnson denounced Russia's recognition of the separatist republic as a flagrant violation of Ukraine's sovereignty and integrity.

4.2 *Population conditions of Luhansk and Donets*

Luhansk and Donets are countries located in the Donbass region of eastern Ukraine. Donbass itself stands for Donetsk Basin which means coal mining in eastern Ukraine. The Luhansk and Donets regions are shaped like basins and there is a flow of water from the Don river that flows from the highlands and flows into the Azov Sea. Ukrainians call this place Donetsk'kyi Bassein which means rich area full of coal, while Russians call it Donetskii Bassein which means plain that has abundant coal. In the eyes of the world, this place is called by the name Donbass (Klinova 2014).

Geographically, the area of the Donbass region is about 23,000 square km. The mining area in the Luhansk and Donets regions is known as "Old Donbass". The total area of the Old Donbass mining area is about 60 square km. The mining area is wider than the Donbass region, this is because Old Donbass spreads from the western Donbass region to the east of the Donbass river (Mykhnenko 2014). The Donbass mainland is divided into 2 Oblasts, which include the Donetsk Oblast and Luhansk Oblast. Donetsk is the fifth largest city in Ukraine (Ukraine Census 2016). Oblast itself is the administrative division of a country. Donetsk is an industrial city near the Kalmus River, with a population of about 953,217 people (Ukraine Government 2017).

The initial name of the city of Donetsk was "Stalino", then in 1961 it changed its name to Donetsk (Eastern Research Group 2020). The founder of the city of Donetsk was a steel and coal mining entrepreneur from Russia. The second oblast of Donbass named Luhansk was discovered in 1759, which had the initial name "Yuzovka". In his time, Yuzovka became one of the important regions of Ukraine.

In addition to the geographical conditions of the strategic Donetsk and Luhansk regions that are in great demand by other countries, the condition of the residents of Donetsk and Luhansk also influences. The eastern region of Ukraine, which borders Russia, makes the spread of the Donetsk and Luhansk regions come from the Russian race. The colloquial language spoken by residents of Donetsk and Luhansk is also Russian. The population of Donetsk and Luhansk is predominantly orthodox Christian, as is the religious majority of the population in Russia. This is one of the factors that makes Russia insist on controlling the Donetsk and Luhansk regions.

4.3 *Clash of political cultures*

The year 1917, was one of the historic years for Russia because at that time there was a Bolshevik revolution and Donbass which was then under Russian rule was also affected. The Bholshevik Revolution is also called the October Revolution or the Russian Revolution. At the time of the revolution, parties emerged who wanted to fight for power (Materisma 2011). The power struggle was between the empire and the communists. This revolution became one of the important events because it changed the shape of the Russian empire into the Russian Communist Republic. In 1920, Donbass was incorporated into a form of government of the Ukrainian Republic of the Soviet Union under the administration of the Russian Soviet Union. In 1932 Donbass is again included in Ukraine, with 2 Oblasts, namely Donetsk and Luhansk. This form of government is an early form that has survived until now (Karacsonyi 2014).

During the revolution, there was an unforgettable work between Donbass and Ukraine. At that time there was a famine or Holodomor. In the event of famine, about 3 million people died. (Valasek 2018). The famine occurred due to lack of food stocks, also influenced by the bad climate resulting in crop failure. Other sources say that the event was indeed a planned strategy carried out by Russia to annihilate Ukraine (Valasek 2018). Since then, the two Donbass oblasts of Luhansk and Donetsk have become a hotly contested region between Russia and Ukraine. The dynamic continues. Starting from the ceasefire in Crimea which then spread also to Donetsk and Luhansk. This war of arms occurred because of differences in the way of view of political culture between Russia and Russia.

Russia wants the Donetsk and Luhansk regions to enter the country because they are still one race and one language. Donetsk and Luhansk want to be separated from Ukraine because of racial and linguistic clashes. The Donbass region wants a sovereign government and state so that it is easier for them to govern their own country, without interference from other countries. Indirectly, this affects the national conditions of Donetsk and Luhansk. There is instability in the national conditions of Donetsk and Luhansk. The nationalism of Donetsk and Luhansk must be faced with a condition of separatism, where Donetsk and Luhansk must think of the secession separatism movement from Ukraine and Russia in order to maintain its own Donbass nationalism.

4.4 *Local government policy and community response*

The continuing revolution and ceasefire in the Donbass region intensified, prompting the Donetsk and Luhansk governments to take action. The two oblasts, Luhansk and Donetsk, agreed to proclaim themselves republics. In the uprising, at least 14,000 people died in the fighting. Despite this, the independence actions of the Donetsk and Luhansk regions were not recognized by the world (Bleber 2014). Instead, Russia incited an uprising in the east, supplying weapons and troops across the border to support them. Russian President Vladimir Putin on February 21, 2022 recognized the independence of Donetsk and Luhansk (BBC 2022). Donetsk and Luhansk are also at the heart of a cultural battle between Kiev and Moscow, which says the region, which includes much of eastern Ukraine, is Russian-speaking and needs to be protected from Ukrainian nationalism. Efforts to resolve the conflict in eastern Ukraine stipulated in the 2015 Minsk Agreements have reached an impasse. Ukraine and separatists accuse each other of abuses. A series of ceasefires failed to be enforced due to repeated violations by the warring parties (Valasek 2018). The political groove of the deal, which plans a large degree of autonomy for rebel regions and local elections under Ukrainian law, has only stalled on paper. Each side blamed the other for the failure. Meanwhile, British Prime Minister Boris Johnson denounced Russia's recognition of the separatist republic as a flagrant violation of Ukraine's sovereignty and integrity (Eastern Research Group 2020). The internal turmoil of the Luhansk and Donetsk governments demanded that the government issue policies so that people would not be in a state of dilemma. The government decided to form itself a sovereign republic, independent of Ukraine.

The government's desire for independence from Ukraine has failed. In February 2022, the Russian government recognized the independence of Donetsk and Luhansk. The people of Donetsk and Luhansk also want independence. But unfortunately, this has received a lot of criticism from powerful countries. In fact, the UN is ready to impose severe sanctions on Russia if this recognition is not withdrawn. According to the United Nations and other countries, the move taken by Russia is one of Russia's strategies to invade Ukraine, which if left unchecked could disrupt world peace. In March 2022, the governments of Donetsk and Luhansk took a policy of reviewing the decision to join Russia.

A strong reason why Luhansk and Donetsk want to separate from Ukraine is that their culture and language are more Russian-leaning. The Russian president admitted that allegations made by the Ukrainian government against the Donetsk and Luhansk regions amounted to the crime of genocide. Ukraine's discrimination against Donetsk and Luhansk is evident from its Russophobia, where they oppose the use of the Russian language outside Russian territory. The colloquial language in Donetsk and Luhansk is Russian (BBC 2022). This has caused insecurity for the people of Donetsk and Luhansk.

Separatism is defined as "a political movement that fights for the autonomy and sovereignty of a nation within a country" (Sullivan 2009). Luhansk and Donetsk carried out separatist movements to secede from the Russian State in order to have state independence and sovereignty, where in this case the separatism carried out by Luhansk and Donetsk aimed to maintain the nationalism of the two regions of the country. According to Halliday

(1997), nationalism provides a new set of values, a new system of legitimacy that supports the current state system in which in this case it appears that the people of Luhansk and Donetsk entrusted new leaders in their regions to liberate themselves into a republic. Second, as an essential component that is important for building the state and forming a common consciousness and identity in society. The people of Donetsk and Luhansk have a high nationalist sense who want a personal “identity” for the region, regardless of interference from other countries. Third, it provides a powerful impetus for redrawing the international map. The existence of separatism that, if successful, the Donetsk and Luhansk regions will change the map of the world, no longer on Ukrainian territory, but into Russia. And lastly, fourth, often nationalism in the international system has been a source of conflict and war. The nationalism shared by Donetsk and Luhansk resulted in separatism to secede from Ukraine’s home region, which until recently triggered international tensions.

The sense of nationalism and belonging between the people of Donetsk and Luhansk towards the region and its culture is strengthening. Ethnic nationalism was also seen in the reasons for the exit of Donetsk and Luhansk from Ukraine. The loyalty of residents of Donetsk and Luhansk to the region where they live is very high. And it is seen that loyalty is derived based on race and ethnicity. A sense of nationalism grows from certain ethnic groups and tends to be authoritarian. This nationalism binds people together not because of the equality of political rights but rather the ethnic characteristics that existed before. This can be seen from the demonstrations carried out to urge independence. In fact, the people of Donetsk and Luhansk made separatist movements in order to stand alone with existing autonomy, in order to maintain their nationalist feelings. Nationalism in this case acted as a movement, the high nationalist feeling shared by Luhansk and Donetsk led to a separatist movement which they eventually did. Social separatist movements carried out by Donetsk and Luhansk refer to political movements that fight for their ethnicity and culture calling for autonomy or complete independence from a country.

4.5 *Separatism of Donetsk and Luhansk*

Donetsk and Luhansk with their problems becoming increasingly heated, it is difficult to find common ground. Two neighboring countries namely Russia and Ukraine continue to seek control of the Donetsk and Luhansk regions. Russia has its own interests in Ukrainian territory, especially in Crimea and Donbass. Russia’s desire to control eastern Ukraine is because it has a strategic position in the Black Sea region. Mineral resources are abundant there. In the early days, Russia and Ukraine had a very close relationship due to cultural similarities between the two countries, but things began to change when Russia tried to control border areas in Ukraine. Russia is doing everything it can to gain control of Ukrainian territory.

The eastern region of Ukraine, which borders Russia, bears many similarities between the countries of the border and Russia. Donbass and Crimea are regions in eastern Ukraine where most of the population is of Russian origin and speaks Russian as a daily language. This difference has led to discrimination among Donbass, which is divided into pro-Russian and pro-Ukrainian groups. In addition to the state of society, the condition of natural resources with abundant coal in Donetsk and Luhansk became a separate point for the countries fighting over Donetsk and Luhansk.

Conditions in Donbass and Crimea, which are areas on the border of Russia and Ukraine, are hit by daily conflict. Things continued to heat up when president Victor Yanukovich chose to accept funding from Russia and refused funding from the European Union. Residents of Luhansk and Donetsk feel that the Ukrainian president is starting to go pro against Russia. It was this impartial nature of Russia that resulted in Yanukovich’s dismissal. It all started with Russia’s annexation of Crimea, which is also a border state near Donbass. Russia’s annexation of Crimea resulted in Crimea being under de facto Russian Federation government control, although it has not been legally recognized by the United Nations (Bleber 2014).

The case in Crimea occurred after the Eurosquare or Euromaidan, a wave of demonstrations in Ukraine that occurred on November 21, 2013. Euromaidan wants Ukraine to merge and integrate with Europe. The demonstration widened its importance not only to pressure the Ukrainian government to integrate with Europe, but also to want President Viktor Yanukovich and his allies to abdicate (Kartini 2014). This was done by Ukraine because the president and his staff were considered pro-Russian. The demonstration also targeted ideological and geopolitical issues that divide Ukraine in two views, namely “Europe vs Russia” or “forward to the West vs back to the USSR” (Ryabchuk 2014).

The demonstrations reached a climax in mid-February 2014. This comes as Ukrainian police respond to confrontational pro-EU demonstrations. The response actually resulted in the demonstration getting bigger. The consequence of this response was that President Viktor Yanukovich was forced to leave Kiev as the capital of Ukraine on February 21, 2014 (Kartini 2014). As events unfolded, President Viktor Yanukovich was dismissed by the Ukrainian Parliament and elected Arseniy Yatsenyuk as interim president. Following the appointment, President Arseniy formed an interim government with reinforcement from the United Nations and the European Union. Russia, which is a party to the European back, views the government of President Arseniy Yatsenyuk as illegal and a form of coup. Russia considers the United States and the European Union to be cheating and leading to the Ukrainian revolution. Russia does not want to recognize Yatsenyuk as president of Ukraine (Korostelina 2013).

This change of president was motivated because President Yanukovich was pro-Russian government. This dismissal caused relations between Ukraine and Russia to become tenuous (BBC 2022). Russia also recalled its ambassador from Ukraine and canceled economic aid and gas rebates made with Yanukovich. In addition, there is another impact that Ukraine must face, namely Yanukovich supporters, mostly from southern and eastern Ukraine, cannot accept this and protest (BBC 2022).

Pro-Russian forces began trying to seize control of the Crimean Peninsula on February 26, 2014. Many consider the action carried out by the Russian army. When the action took place, the Crimean parliament voted to dismiss the Crimean government. On 16 March 2014, a referendum on Crimea’s political stance on integration with Russia was voted 96.77% for Crimea and 95.6% for Sevastopol. The referendum has been opposed by the European Union, the United States, Ukraine, and the Crimean Tatars. This is because the referendum conducted is seen as contrary to applicable international law (Kartini 2014). On March 17, 2014 the Crimean government declared independence.

The Crimean separatist movement to gain independence from Russia through a referendum became one of the factors influencing the Luhansk and Donetsk regions to help maintain state nationalism through separatist movements, freeing themselves from Russian influence. The desire of Donetsk and Luhansk to secede from the territory of Ukraine belongs to the point of social category separatism. This is because racial differences between Ukraine and Donetsk and Luhansk lead to discrimination. Therefore, Donetsk and Luhansk want full independence and autonomy to govern their own territories.

The domino effect of Russia’s annexation of Crimea extends to the Donbass region as well. Residents in Donbass have begun demonstrations to demand a referendum on secession from Ukraine. The demonstrations began in March 2014 (Voice of Vietnam Radio 2016). Demonstrations by pro-Russian communities began to heat up and anarchy as demonstrators broke into government centers and broke into police surveillance. Many government buildings were vandalized by demonstrators. The demonstration aimed to urge the new government to immediately hold a referendum. This is done because it is related to the future of the Donbass region.

The demonstrations continued as about 2,000 pro-Russian protesters decried the central city of Donetsk to demand a referendum. The demand of the demonstration is that if it does not immediately conduct a referendum, the people will take over by force government power on the basis of a people’s mandate (Radio Suara Vietnam 2016). The demonstrators are still

trying to occupy parliamentary seats. After capturing the government building, pro-Russian mobs met and voted for a referendum on Ukraine. On April 7, 2014 a proclamation of the Donetsk People's Republic (DPR) was held. Residents in Luhansk and Donetsk day by day continue to make efforts to be able to secede and form republics.

Diplomats from Russia, the United States, the European Union and Ukraine met in Geneva, Switzerland held talks that resulted in an agreement to stop the conflict. The negotiations then resulted in an agreement, namely the Geneva agreement (BBC 2022). The contents of the Geneva agreement are:

- (1) Ukrainian separatists and forces must cease all forms of violence in an effort to avoid casualties.
- (2) The separatists must lay down their arms and leave the buildings that have been occupied.
- (3) The Ukrainian government must grant amnesty to the pro-Russian masses, unless found guilty and punished.

This agreement is expected to be a bright spot for any prolonged conflict in Ukraine, especially in the Donbass region. The demand for a referendum on independence from Ukraine further shows that the Donbass region is strong enough to maintain nationalism with the separatist movement carried out and disintegrate against Russia. The success experienced by Crimea became one of the spearheads also for Luhansk and Donetsk to be able to maintain their nationalism through the movement of separatism. The desire of Luhansk and Donetsk to be sovereign and form a republic should be tolerated by two countries, namely Ukraine and Russia. Luhansk and Donetsk have many resources with which to survive, should their demands be met. Attempts to secede could at least reduce the conflict between Russia and Ukraine.

The people of Luhansk and Donetsk want to secede from Ukraine because of discrimination. The Ukrainian government only wants coal mines in Luhansk and Donetsk, without thinking about the fate of the residents there. This is the main reason the people of Luhansk and Donetsk want independence. The sense of nationalism formed between the residents of Donetsk and Luhansk triggered the movement. From the point of view of this theory, it can be seen that Luhans and Donetsk insisted on maintaining nationalism and territorial independence, which led to conflict. Conflicts and wars that occur because of social separatism movements carried out, due to racial discrimination in Luhansk and Donetsk. It was the nationalism and separatist movements carried out by Luhansk and Donetsk that ultimately led to the split between Ukraine and Russia as two bordering regions. The theory of nationalism took full control in this case, where the ethnic nationalism that grew and developed in the people of Donetsk and Luhansk was not based on demands, but was derived because of a sense of belonging to the race and language they used every day. The sense of belonging and racial equality that existed between the inhabitants of Luhansk and Donetsk gave rise to a movement for independence, which was marked by separatism. The social separatist movements fought by Luhansk and Donetsk have demands for independence and autonomy of their own regions. This is in accordance with the concept of social separatism which in this movement is marked by many motives and demands, just as Luhansk and Donetsk demanded independence separate from Ukraine and form their own republics.

5 CONCLUSION

The protodiplomacy that developed into the separatism movements of Donetsk and Luhansk to defend their nationalism is shown by the strong determination seen from the existing demonstrations. The governments of Donetsk and Luhansk took action to gain independence and were briefly recognized by Russia. This separatism movement is based on discrimination against Donetsk and Luhansk residents who are still of Russian race. The

policies taken by the Ukrainian government are considered irrelevant for the Donetsk and Luhansk regions. Ukraine wants only natural resources, with no improvement in human resources in Donetsk and Luhansk. On the contrary, Russia is determined to advance Donetsk and Luhansk, but what happens is that this is only used as one of the tricks to destroy Ukraine and Russia can be in full power. The protodiplomacy that developed into the separatist movements of Donetsk and Luhansk to defend their nationalism is shown by the strong determination seen from the existing demonstrations. The governments of Donetsk and Luhansk took action to gain independence and were briefly recognized by Russia. This separatist movement is based on discrimination against Donetsk and Luhansk residents who are still of Russian race. The policies taken by the Ukrainian government are considered irrelevant for the Donetsk and Luhansk regions. Ukraine wants only natural resources, with no improvement in human resources in Donetsk and Luhansk. On the contrary, Russia is determined to advance Donetsk and Luhansk, but what happens is that this is only used as one of the tricks to destroy Ukraine and Russia can be in full power.

The people of Luhansk and Donetsk are discriminated against in economic, socio-political, and cultural terms. Socially, the people of Luhansk and Donetsk feel alienated because they have a different language and race from the average Ukrainian society. The people of Luhansk and Donetsk also do not get full political terms, they only have the full right to vote, but limited in choice. The culture in Donetsk and Luhansk is more Russian, even though Ukrainian people have Russophobic views, where they reject the use of Russian outside Russian territory. The people of Donetsk and Luhansk have a strong nationalist sense who want a personal “identity” for the region, regardless of interference by other countries. The nationalism shared by Donetsk and Luhansk resulted in separatism to secede from Ukraine’s home region, which until recently triggered international tensions. Their desire to fight for sovereignty led to a separatist movement based on discrimination by Ukraine. Subsequently, this movement led to divisions and quarrels between Ukraine and Russia.

5.1 Suggestions

The experience of protodiplomacy in Ukraine is very important for Indonesia not to experience the same thing. The plurality owned by both is both a strength and a weakness if not managed properly because it can be used by separatist groups to liberate areas that have the potential for conflict. Decentralization magnifies that potential.

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The impact of macroeconomics and the monetary system on inflation as a result of financial system stability

R.I.M. Yafie, J. Lumintang, M.K. Fuddin & M. Firmansyah
University of Muhammadiyah Malang, Indonesia

ABSTRACT: Inflation is a problem that often affects various countries, including Indonesia. The increase and decrease in inflation need to be controlled so that it does not become a severe problem that can influence people's purchasing power and will impact the macroeconomy. Therefore, it is necessary to maintain the inflation rate by implementing monetary policy, which is expected to control the circulation of money in society. On the other hand, inflation volatility can also be influenced by macroeconomics. This study aims to analyse the influence of Foreign Direct Investment (FDI), Third Party Funds (TPF), Bank Indonesia 7 Day Repo Rates (BI7DRR), and the Rupiah Exchange Rate against the United States Dollar. The research tool was *evIEWS10*, using multiple linear regression analysis with time series data types. The data used in this assessment comes from Badan Koordinasi Penanaman Modal (BKPM), Organization for Economic Co-Operation and Development (CEIC), and Bank Indonesia (BI), with a period from 2015 Q1 to 2022 Q4. Based on the research, it was found that there are variables that simultaneously and partially influence inflation and the condition of inflation in Indonesia.

1 INTRODUCTION

Inflation is a phenomenon of increasing prices for goods and services continuously. The statement regarding inflation is one of the main problems of every country in the economy, characterised by continuous price increases and a simultaneous decrease in people's purchasing power. When inflation increases continuously, it will cause an economic crisis, or recession is the worst possibility. Opinion-based Blanchard *et al.* (2015) The recession accompanied by an increase in inflation came more from shocks originating from demand and supply. Therefore, Law no. 23 of 1999 states that Bank Indonesia, as the monetary authority, has a function to maintain the internal stability of the Rupiah as seen from the inflation rate. According to John Sambiri *et al.* (2014), Inflation mostly comes from monetary policy, currency devaluation, and other structural variables. Monetary policy related to the inflation rate has positive and negative implications for the macroeconomy. Setting high and unpredictable inflation rates tends to reduce public consumption because a sudden price increase causes people's purchasing power to decrease, and people prefer to hold money physically rather than place it in an account. As a result of this behaviour, bank reserves will decrease through withdrawing customer balances or third-party funds (TPF). Then the high inflation rate also affects the company's productivity, which triggers an increase in production costs so that the products produced cannot compete. An increase in unstable inflation will also create uncertainty in financial markets, especially regarding investment. However, lower inflation can be fresh air in the export-import sector. This relates to Foreign Direct Investment (FDI) and the exchange rate in that country.

Investment is a country's first stage in productivity, and investment activity is the first stage in achieving economic development (Rizky *et al.* 2016). Every country certainly wants

an increase in the economy in their country. Countries use various ways to obtain production capital, such as creating an environment that supports the investment cycle. Investment is divided into two types. The first is local or domestic investment, and the second is foreign investment or capital invested by foreign parties. Foreign investors make investments to benefit from establishing businesses in other countries (Kaveh *et al.* 2020).

FDI can fill the gap between saving and investment because investment embedded in a country will provide benefits and benefits. For example, FDI has access to financial markets and mobilises domestic savings. This reason makes developing countries like Indonesia try to attract FDI (Thanh *et al.* 2019). Foreign Direct Investment (FDI), or what can be said Foreign Investment serves as an alternative problem to the economic crisis. Through FDI capital flows, it is hoped that it will trigger growth and increase investment in Indonesia, so it is imperative to carry out an in-depth study of the factors affecting FDI in Indonesia (Made *et al.* 2016).

Investment flows by foreign countries that have entered Indonesia can be used by the government to implement economic development plans. Indonesia has the maximum advantage regarding abundant natural resource wealth and cheap labour wages. If it is in line with the influx of Investment funds, it will help maintain higher growth rates in terms of production and trade (Masiku *et al.* 2017).

Apart from outside investment, investment can also be obtained from within the country through channelling bank financing. Banks, as financial institutions, certainly need adequate cash reserves to finance the economy. Therefore, banks manage Third Party Funds (TPF), which means funds obtained or collected from the community, both in the community as individuals, corporations or companies, government, housing households, cooperatives, foundations, and others. In some or the majority of banks, TPF is the largest fund owned by banks (Jeni Susyanti 2016). As a fundraising institution, the bank has several instruments to raise funds (Veithzal Rivai 2013). Second, time deposits which meantime deposits that can be liquidated over some time according to the agreement between the deposit holder and the bank. The term for withdrawing deposits starts from one month, three months, six months, and up to twelve months (IKIT 2015). Third, Current Accounts are savings or public deposits in the form of rupiah and foreign currency at banks, transactions through checks, demand deposits, etc. (Veithzal Rivai 2013).

Apart from the aspect of capital that supports a country's economic development, other elements play an essential role in achieving this, namely the exchange rate. Determining the exchange rate system significantly influences the country's monetary policy. Indonesia currently adheres to a monetary policy free-floating *exchange rate* where the role of demand and supply in the foreign exchange market determines the exchange rate. However, Indonesia does not fully surrender the exchange rate to market conditions. Reference (BI7DRR), besides that monetary policy, can also use the determination of the Minimum Statutory Reserves for banks. The advantage of implementing this system is that it is free of international capital entry (FDI) and does not require large foreign exchange reserves. The exchange rate can significantly impact inflation on a contemporary, annual, or long-term basis. In line with that, Gustav Cassel, with his theory of Purchasing Power Parity (PPP), describes that exchange rates and price levels over a long period tend to move in the same direction. These movements impact the total demand and supply and affect prices and the amount of output produced. Then what happened was that the price increase for imported products automatically raised domestic products, which then brought inflation to a higher direction even though there was no aggregate demand.

What underlies researchers in researching inflation is that the phenomenon of inflation is a benchmark for achieving financial system stability. Therefore, inflation is an interesting topic to be discussed and compared with foreign investment, third-party funds, Bank Indonesia reference interest rates, and exchange rates. Articles or media that focus on financial themes always make inflation a topic that is always linked to economic phenomena that occur in society, and this has prompted current researchers to conduct research entitled

The Impact of Macroeconomics and the Monetary System on Inflation as Achievements of Financial System Stability.

Previous studies, such as those conducted by Mustafa (2019), explain the effect of FDI on inflation. Meanwhile, Nnadi & Soobaroyen (2015) describes the impact of interest rates on withdrawal rights, precisely, market size, level of economic development, FDI, open market, human capital, infrastructure, on inflation. Firmansyah (2022) conducted research using the variables BI7DRR, investment loans, working capital loans, JCI, and TPF against Inflation. The other researchers, namely Taufiq (2015), explain the effect of TPF on credit through inflation as a moderating variable. Moroşan *et al.* (2015) researched interest and exchange rates on inflation. At the same time, researchers Widiarsih & Romanda (2020) conducted research using e-money variables, exchange rates, and BI7DRR on inflation. The discussion on the variables of Foreign Investment (FDI), Third Party Funds (TPF), Exchange Rates, and Reference Interest Rates for the Inflation rate is carried out separately. There is no study linking the variables of FDI, TPF, Exchange Rates, and Reference Interest Rate, which in this study is shown by the BI-7 Day Reserve Repo Rate (BI7DRR) to Inflation. Therefore, the current researcher aims to complement and update data from previous researchers in the form of the last variable slices.

2 LITERATURE REVIEW

2.1 Fisher theory

Irving Fisher's theory says that inflation usually occurs when the volume of money increases. When the money supply does not increase, inflation will slowly decrease, so inflation can be overcome by regulating the amount of money in circulation. In addition, Fisher's theory also explains the long-term relationship between nominal interest rates, inflation rates, and actual interest rates. Inflation must match the long-run difference in nominal and actual interest rates. According to Fisher's hypothesis, the main inflation factor is interest rates. When interest rates increase by one percent, so does inflation at the same level. Several researchers who tested Fisher's theory included J.M Keynes, R.W Garrison or M. Friedman, Robert Mundell, James Tobin, etc. Not agreeing with Fisher's theory, Robert Mundell and James Tobin have different views where changes in actual interest rates change the inflation rate in the opposite direction. An increase in inflation reduces the actual value of the investment. When investment is sluggish, people tend to save more. Increase in savings When high inflation reduces compensating profits, and thus the real interest rate decreases.

2.2 Keynesian theory

According to Keynesian, inflation occurs because a society wants to live outside its economic limits, where inflation is said to be the process of society obtaining a larger share than the community itself can provide through demand for goods and services which then raises prices. This struggle process is called the inflationary gap, where aggregate demand exceeds aggregate supply. Correspondingly, inflation will increase as long as the amount of practical need in society exceeds the output the community can provide. The limited inventory shows the effect of the balance of payments flows on the exchange rate. Where the market and monetary assets influence the balance of payments. In 1976, Dornbusch deepened the Keynesian model and found an inverse relationship between exchange and interest rates.

2.3 Monetary theory

The monetarist theory emphasises people's expectations and the critical role of money in increasing prices so that it can trigger inflation. The basis for this theory is that inflation can occur when an additional volume in the circulation of money exceeds the capacity for inflation movement, as seen through public expectations of future price increases. According

to monetarist theory, the exchange rate between two currencies is influenced by the supply and demand for money in the money market. When there is an oversupply of cash, it will lead to depreciation, and conversely, when there is a shortage of supply of money, it will encourage appreciation. In addition, monetarist theory explains that rising prices (inflation) cause additional demand for currency, impacting currency appreciation.

2.4 Neo-classical theory

The Neo-Classical theory of investment is optimal capital accumulation. The investment value depends on the price of capital goods, interest rates, and corporate tax attitudes, so that changes will affect the capital stock and the desired investment. What needs to be considered in the neo-classical theory is that the interest rate determines the preferred stock of capital. Therefore, a comprehensive monetary policy is required. Then this explains that the influx of investment positively impacts both foreign investment because foreign investment is considered very beneficial for the home country. This is because foreign capital brought to the recipient country of money will encourage domestic money, which will likely be used for various businesses and increase economic growth and national development.

3 RESEARCH METHODOLOGY

The method is a working technique that aims to produce something. Meanwhile, the research method can be described as working together on a process or research activity, extracting data, and deciphering a phenomenon. (Zulkarnaen *et al.* 2020). This type of research will use descriptive quantitative, which is an analysis of the data by using data in the form of numbers or values that describe the data, then carried out and provided sentences so that quantitative data can be explained. This study's data were secondary as time series data on a quarter or quarter scale. The data required is Foreign Direct Investment (FDI) collected from the Badan Koordinasi Penanaman Modal (BKPM), Third Party Funds (TPF) collected from Indonesian Banking Statistics by the Otoritas Jasa Keuangan (OJK), BI Rate 7 Day Reverse Repo Rate (BI7DRR) compiled from Bank Indonesia (BI), the Rupiah exchange rate against the United States Dollar collected from Bank Indonesia (BI), as well as Indonesian Inflation data collected from the Badan Pusat Statistik (BPS). The timeframe for the data required in this study is from 2015 Q1 to 2022 Q4. The current research will use multiple linear regression modelling. At this moment, the framework of thinking:

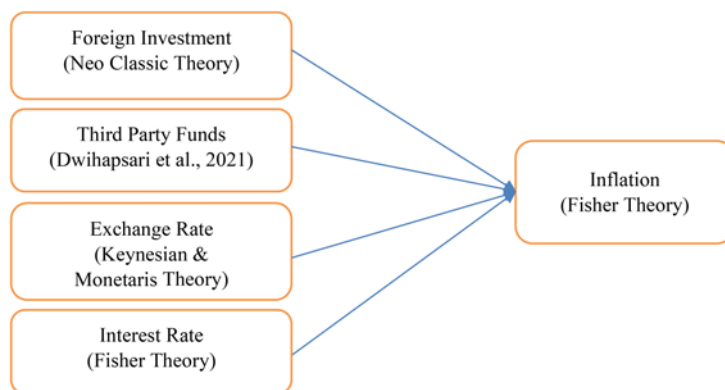


Figure 1. The framework of thinking.

The theory used in this study is based on Quantity Theory (Irving Fisher), Keynesian Theory, and Monetary Theory. On Third Party Funds, using the results of research by (Dwihapsari *et al.* 2021) explained that when banks want an increase in the amount of savings or public savings, they must increase interest rates. When people's savings are collected, it is necessary to lower interest rates so that the financing provided is higher, which will then have an impact on increasing the circulation of money in the community, automatically affecting the inflation rate.

4 RESULTS AND DISCUSSION

Uncontrolled inflation will result in the price of domestic goods and services becoming more expensive, thereby reducing the buying power of the people. Bank Indonesia, as the Central Bank through Law no. 3 of 2004 article 7, aims to control the inflation rate through the inflation targeting strategic framework established in 2005.

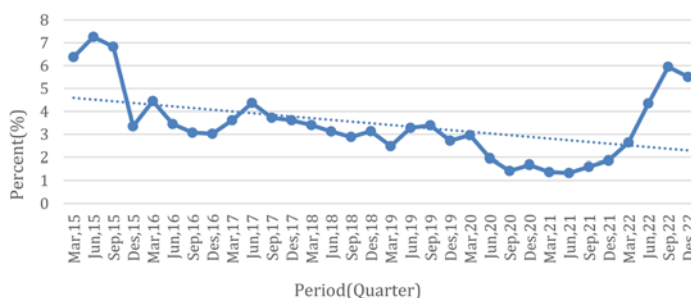


Figure 2. Indonesia's Inflation Rate for 2015–2022.
Source: Bank Indonesia, processed.

Based on data from Bank Indonesia for the 2015–2022 period, the highest peak of inflation was in 2015, to be precise in June 2015 at 7.26%. Based on the coverage of 6 and CNN Indonesia, inflation is at its peak due to increased prices for essential commodities ahead of Ramadan. During 2015–2022, inflation experienced a sharp decline from September 2015 to December 2015 of 3.48%. Then inflation experienced a downward trendline, which peaked in June 2021. Based on BPS Indonesia, there was a price decline in several expenditure group indices in June, resulting in deflation. Then in June 2021, inflation reached 1.33 percent, far below the target set by the government through Ministry of Finance Regulation No. 124/PMK.010/2017 for the 2019–2021 period, established in 2021 at three percent.

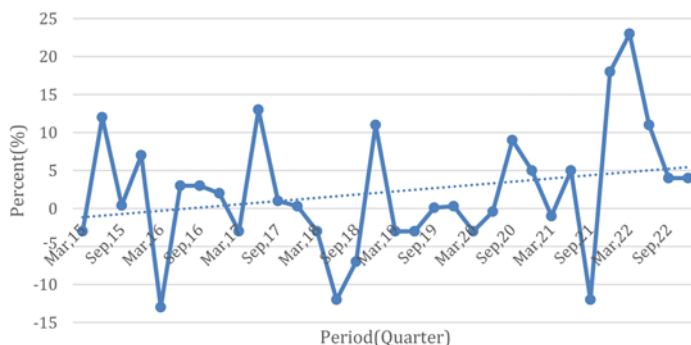


Figure 3. The rate of foreign direct investment (FDI) in Indonesia in 2015–2022.
Source: National Single Window for Investment (NSWi), Badan Koordinasi Penanaman Modal (BKPM), processed.

Based on data from the Badan Koordinasi Penanaman Modal (BKPM) for the 2015–2022 period, the decline in FDI peaked in 2016, March 2016 to be precise, at -13% . Based on the BBC News article, this is because foreign investors consider investing in Indonesia, especially the e-commerce sector, to have more complicated regulations compared to other Asian countries. During the 2015–2022 period, FDI experienced a sharp increase from September 2021 to December 2021, an increase of 30% . Then FDI experienced an increasing trendline, which peaked in 2022. To be precise, in March 2022, FDI reached 23% . Based on articles from the Ministry of Industry, Indonesia and Korea, they cooperated in industrial resources in March, especially nickel and silicon.

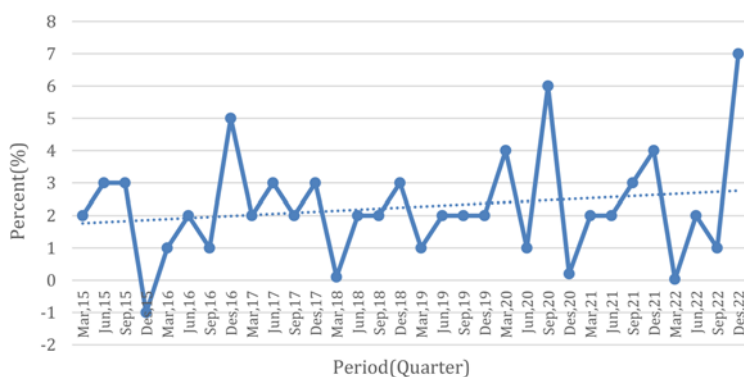


Figure 4. Rate of third party funds (TPF) in Indonesia in 2015–2022.
Source: Otoritas Jasa Keuangan, processed.

Based on data obtained by the Financial Services Authority for the 2015–2022 period, the peak decline in TPF was 2015 in December 2015, to be precise at -1% . During the 2015–2022 period, TPF experienced a sharp increase from September 2022 to December 2022, an increase of 6% . Then TPF shared an increasing trendline, which peaked in 2022, December 2022 to be exact; TPF reached 7% .

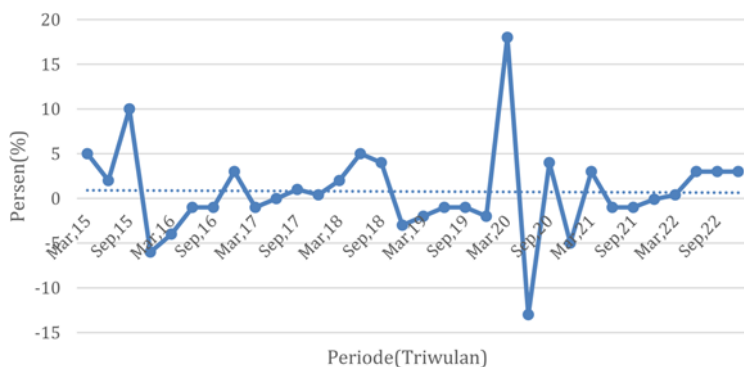


Figure 5. Rupiah exchange rate against United States Dollar (Rp-\$USD) in Indonesia in 2015–2022.
Source: Bank Indonesia, processed.

Based on data obtained from Bank Indonesia for the 2015–2022 period, the peak in decline in the Exchange Rate will be in 2020, to be precise in June at -13% . Based on CNBC Indonesia, the rupiah exchange rate against the dollar in June 2020 was the weakest in Asia, and the Covid-19 pandemic caused this. During the 2015–2022 period, the exchange rate

experienced the sharpest increase from December 2019 to March 2020 of 16%, followed by the sharpest decline from March 2020 to June 2020 of 31%. Then the exchange rate tends to have a stable pattern, the peak of which will be in 2020. To be precise, in March 2020, the exchange rate reached 18%.

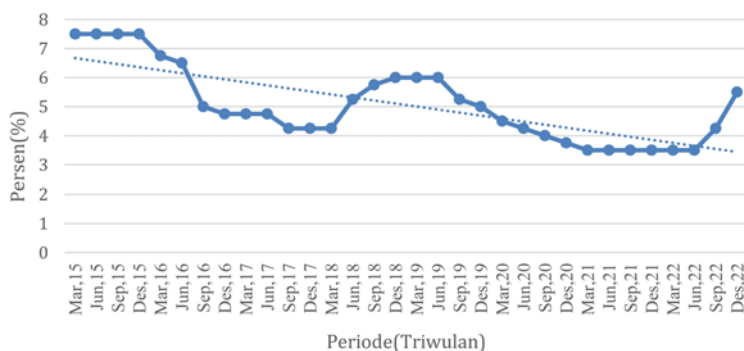


Figure 6. Rate of reference interest rate (BI7DRR) in Indonesia in 2015–2022.

Source: Bank Indonesia, processed.

Based on data obtained from Bank Indonesia for the 2015–2022 period, the peak of the BI7DRR increase was in 2015, from March to December 2015, at 7.5%. During 2015–2022, BI7DRR experienced the sharpest decline from June 2016 to September 2016 of 1.5%. Based on the economic report from LPS, it is known that Bank Indonesia is maintaining the BI7DRR at 6.5% and 5.25% in anticipation of Britain’s exit from the European Union, which has put pressure on global financial markets. Then BI7DRR had a downward trendline, peaked in March 2021, and BI7DRR reached 3.5%. Based on Bank Indonesia’s Board of Governors’ Meeting at 3.50% to maintain the stability of the rupiah exchange rate and the increasing uncertainty of global financial markets.

4.1 Research result

4.1.1 Regression estimation model

Table 1. Regression estimation result.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.661790	0.922160	-0.717652	0.4791
FDI	0.036839	0.026195	1.406303	0.1710
TPF	-0.010137	0.139820	-0.072500	0.9427
BI7DRR	0.786444	0.161166	4.879712	0.0000
EXCHANGE RATE	0.094503	0.045585	2.073136	0.0478
R-squared	0.525326	Mean dependent var		3.442500
Adjusted R-squared	0.455004	S.D. dependent var		1.558450
S.E. of regression	1.150508	Akaike info criterion		3.260885
Sum squared resid	35.73905	Schwarz criterion		3.489906
Log-likelihood	-47.17416	Hannan-Quinn criteria.		3.336799
F-statistic	7.470290	Durbin-Watson stat		1.124255
Prob(F-statistic)	0.000346			

Source: Processed Eviews10.

The interpretation of the estimated times series regression model is explained as follows:

Constant (a) of -0.661790 with a significance level of 0.0001 explains that when the amount of FDI, DPK, BI7DRR, and the exchange rate is equal to zero or constant, inflation will decrease by 0.66%

X1 (FDI) = 0.036839 , the regression coefficient of the FDI variable is 0.036839 . This shows a positive influence between FDI on Inflation (Y) of 0.036839 . If FDI (X1) increases by 1% , then inflation will increase by 0.36% , whereas if FDI (X1) decreases by 1% , then inflation will reduce by 0.36% , assuming other variables are constant.

X2 (TPF) = -0.010137 , the regression coefficient of the TPF variable is -0.010137 . This shows a negative influence between TPF on Inflation (Y) of -0.010137 . If TPF (X2) increases by 1% , then inflation will decrease by 0.01% , whereas if DPK (X2) reduces by 1% , then inflation will increase by 0.01% , assuming other variables are constant.

X3 (BI7DRR) = 0.786444 , the regression coefficient of the BI7DRR variable is 0.786444 . this shows a positive influence between BI7DRR on Inflation (Y) of 0.786444 . if BI7DRR (X3) increases by 1% , then inflation (Y) will increase by 7.86% , whereas if BI7DRR (X3) decreases by 1% , then inflation will decrease by 7.86% , assuming other variables are constant

X4 (Exchange Rate) = 0.094503 , the regression coefficient of the Exchange Rate variable is 0.094503 . This shows a positive influence between the Exchange Rate on inflation (Y) of 0.094503 . If the Exchange Rate (X4) increases by 1% , then inflation (Y) will increase by 0.94% , whereas if the Exchange Rate (X4) decreases by 1% , then Inflation (Y) will reduce by 0.94% , assuming other variables are constant.

Assumption Test t Test (Partial)

Variable FDI (X1)

Based on this output, it is known that the statistical prob t value is 0.1710 or > 0.05 , so H_0 is accepted, and H_1 is rejected. So that it can be interpreted that the variable Foreign Investment (FDI) as X1 does not affect the occurrence of inflation in Indonesia from 2015 Q1 to 2022 Q4.

Variable TPF (X2)

Based on this output, it is known that the statistical prob t value is 0.9427 or > 0.05 , so H_0 is accepted, and H_1 is rejected so that it can be interpreted that the variable Third Party Funds (TPF) as a variable X2 does not affect the occurrence of inflation in Indonesia from 2015 Q1 to 2022 Q4

Variable BI7DRR (X3)

Based on this output, it is known that the statistical prob t value is 0.0000 or < 0.05 , so H_0 is rejected, and H_1 is accepted. So, it can be interpreted that the variable Bank Indonesia 7 Day Repo Rate (BI7DRR) as a variable X3 affects inflation in Indonesia from 2015 Q1 to 2022 Q4.

Variable Exchange rate (X4)

Based on this output, it is known that the statistical prob t value is 0.0478 or < 0.05 , so H_0 is rejected, and H_1 is accepted. So, it can be interpreted that the variable Rupiah Exchange Rate against the United States Dollar as a variable X4 affects the occurrence of inflation in Indonesia from 2015 Q1 to 2022 Q4.

f Test (Simultaneous)

Based on this output, it can be seen that the prob f statistic is 0.000346 or < 0.05 , then H_0 is rejected, so H_1 is accepted. It can be interpreted that FDI, TPF, BI7DRR, and exchange rates jointly affect inflation in Indonesia.

R-Squared

Based on the output, it is known that the R-Squared is 0.525326 or 52.53%. This means that the influence exerted by FDI, TPF, BI7DRR, and the Exchange Rate on Inflation is 52.53%, while other variables influence the remaining 47.47%.

Adj R-Squared

Based on the output, it is known that Dj. R-Squared of 0.455004 or 45.50%. This means that the influence exerted by FDI, TPF, BI7DRR, and the Exchange Rate on Inflation is 45.50%, while other variables influence the remaining 54.50%.

Classic Assumption Test

Normality test

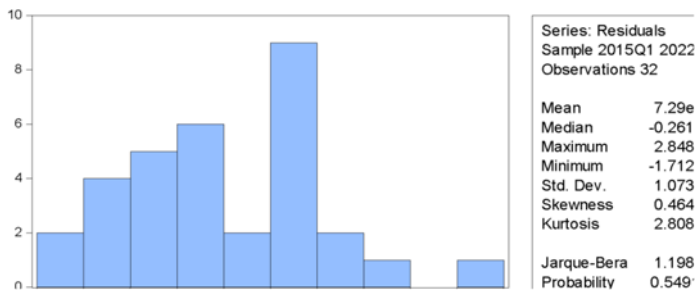


Figure 7. Normality test results.

Source: Processed Eviews10.

The output obtained by the p-value statistic of the Jarque-Bera test is 1.198803, which is > 0.05 , and the probability test is $0.549140 > 0.05$. Then it is concluded that it accepts H_0 because the error/residual normality assumption is fulfilled (the data obtained is usually distributed).

Autocorrelation test

Durbin Watson Test

Based on the table, the Durbin-Watson stat is obtained with a value of 1.124255 which is then calculated to see whether there is autocorrelation.

$$k = 4 \quad n = 32 \quad dl = 1.1769 \quad du = 1.7323$$

$$DW = 1.124255$$

$$dl = 1.1769$$

$$du = 1.7323$$

$$4 - dl = 2.8231$$

$$4 - du = 2.2677$$

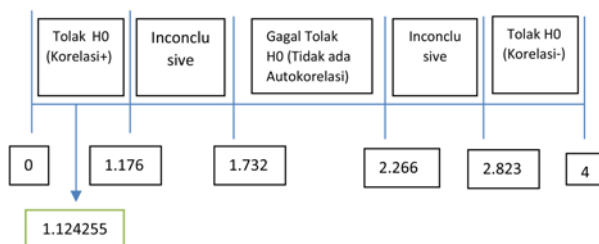


Figure 8. Durbin-watson test result.

Source: Processed Eviews10.

Durbin Watson Test Results

Based on the results of the Durbin-Watson test, the Durbin-Watson stat value is 1.124255 where $d_l < d < d_u$ or $4 - d_u < d < 4 - d_l$, it is decided that the Durbin-Watson test does not produce accurate results so that it accepts H1. Namely, there is autocorrelation, and it needs treatment.

Table 2. Results of Handler's Durbin-Watson stat test.

Mean dependent var	7.29E-16
S.D. dependent var	1.073719
Akaike info criterion	3.268574
Schwarz criterion	3.772421
Hannan-Quinn criterion.	3.435585
Durbin-Watson stat	1.832870

Source: Processed Eviews10.

Durbin-Watson test (after handling)

The results of the Durbin-Watson test after handling through the LM Test serial correlation were 1.832870. This figure is not rejecting H0, so the Durbin-Watson Test results accept H0.

Breusch-Pagan-Godfrey Test

Table 3. Breusch Pagan Godfrey test results.

Prob. F (6,21)	0.2099
Prob. Chi-Square (6)	0.1317

Source: Processed Eviews10.

The output of the test that has been carried out produces a Godfrey test probability number of 0.1317, so the criteria for testing the hypothesis to accept H0 explain that there is no autocorrelation.

Multicollinearity Test

Table 4. Multicollinearity test.

Variable	Centred VIF
C	THAT
FDI	1.066366
TPF	1.278462
BI7DRR	1.049186
EXCHANGE RATE	1.273610

Source: Processed Eviews10.

Based on the value of Centered VIF FDI = 1.066366, TPF = 1.278462, BI7DRR = 1.049286, EXCHANGE = 1.273610. Centred VIF results for each variable x are below ten, so it is concluded that H0 is accepted so multicollinearity does not occur.

Heteroscedasticity Test

Uji White

Table 5. White test.

Prob. F (14,17)	0.5229
Prob. Chi-Square (14)	0.4388

Source: Processed Eviews10.

Based on the results of the White Test, the Prob value was obtained. Chi-Square 0.4388, where the value obtained is more significant than 0.05. So it was decided to accept H0, meaning that the model contains homoscedasticity and no heteroscedasticity.

Uji Breusch – Pagan – Godfrey

Table 6. Godfrey’s Pagan Breusch test.

Prob. F (4,27)	0.5920
Prob. Chi-Square (4)	0.5500

Source: Processed Eviews10.

Based on the results of the Breusch – Pagan – Godfrey test, the Prob. Chi-Square 0.9477, where the value obtained is more significant than 0.05. So it was decided to accept H0, meaning that the model contains homoscedasticity and no heteroscedasticity.

Uji Glejser

Table 7. Glejser test.

Prob. F (4,27)	0.3020
Prob. Chi-Square (4)	0.2768

Source: Processed Eviews10.

Based on the results of the Glejser Test, the Prob. Chi-Square 0.4826, where the value obtained is more significant than 0.05. So it was decided to accept H0, meaning that the model contains homoscedasticity and no heteroscedasticity.

4.2 Discussion

4.2.1 Effects of FDI, TPF, BI7DRR, and exchange rates on inflation

Based on the results of simultaneous calculations, it shows that FDI, TPF, BI7DRR, and the Exchange Rate simultaneously affect inflation. So that if FDI, TPF, BI7DRR, and the Exchange Rate simultaneously increase, it will impact an increasing inflation rate. Inflation, in general, describes a situation when there is a continuous increase in prices. When inflation rises, the currency loses its purchasing power (Foluso, 2020). This is the opinion of Mahendra (2016), inflation is characterised by increasing prices of goods and services continuously.

4.2.2 Effect of FDI on inflation

Developed countries are a source of FDI for designing and developing countries (Muhammad & Khan, 2019). Goes along with it (Owusu-Antwi, 2013). Most developing countries are targeting FDI as a stimulus for their countries. Foreign Investment (FDI) can also be seen as a global financial investment between companies belonging to a group of multinational companies (Damgaard *et al.*, 2019). Other researchers (Uzomac *et al.*, 2015) emphasised FDI as the most important source of external capital for developing countries for many years. The realisation of FDI is generally carried out by Multinational Companies, which have characteristics in the form of using technology that can reduce production costs and sell goods at competitive prices in the community. Based on the research that has been done, it is known that the statistical prob t value is 0.1710 or > 0.05 , so H0 is accepted, and H1 is rejected. It can be interpreted that the FDI variable (X1) does not affect inflation in Indonesia. This aligns with research (Kokala Abdullah *et al.*, 2018), indicating a positive FDI towards the inflation rate through the exchange rate’s most significant.

4.2.3 *Effect of TPF on inflation*

Third-Party Funds (TPF) are the most significant and relied-on funds by banks collected from the public. Nearly 80–90% of funds managed by banks are deposits. TPF is then controlled by the bank and channelled back to the community through credit (Dwijayanti, 2018). In Sharia banking, Third Party Funds are also funds entrusted by the public to banks through Sharia agreements, both in savings, demand deposits, and deposits (Surya *et al.*, 2019). Based on the research that has been done, it is known that the statistical prob t value is 0.9427 or > 0.05 , so H_0 is accepted, and H_1 is rejected. It can be interpreted that the TPF variable (X2) does not affect inflation in Indonesia. This aligns with research (Dwihapsari *et al.*, 2021), indicating that bank-managed TPF in financing does not significantly affect inflation.

4.2.4 *The effect of BI7DRR on inflation*

The BI 7-day reserve repo rate (BI7DRR) is a reference rate in the new policy that replaces the BI Rate to achieve a more accurate inflation target through increases and decreases in value by Bank Indonesia according to predictions of inflation conditions. According to another opinion, the Indonesian interest rate, or BI rate, is the reference interest rate determined by the Central Bank as the implementation of the monetary system to increase the effectiveness of monetary policy (Mulia, 2020). According to Diyanto & Savitri (2015), The BI rate is an interest rate that reflects the attitude of the monetary policy applied by Bank Indonesia to the public. Changes in the BI7DRR reference rate do not only have an impact on rising or falling prices but also have an impact on the economic growth of society and the country. Based on the research that has been done, it is known that the statistical prob t value is 0.0000 or < 0.05 , so H_0 is rejected, and H_1 is accepted. It can be interpreted that the variable BI7DRR (X3) influences inflation in Indonesia. This aligns with research (Ajeng, 2022; Widiarsih & Romanda, 2020a), which shows that BI7DRR significantly and positively affects inflation.

4.2.5 *Effect of exchange rate on inflation*

Exchange rates are divided into two, nominal and actual exchange rates. The nominal exchange rate is the relative price of the country's currency, while the real exchange rate relates to the comparable costs of goods and services between trading partner countries (Mira Larasati, 2017). The exchange rate is also used to measure a country's economic strength. The exchange rate shows the amount of domestic money to buy one unit of foreign currency. One that affects the exchange rate is the national trade balance. Besides that, the exchange rate is also determined by the foreign exchange market (Hasyim, 2018). The Central Bank of Indonesia sets the exchange rate as an instrument to maintain the balance of payments, adequate foreign exchange reserves, domestic market stability, and control inflation rate stability. Based on the research that has been done, it is known that the statistical prob t value is 0.0478 or < 0.05 , so H_0 is rejected, and H_1 is accepted. It can be interpreted that the variable BI7DRR (X3) influences inflation in Indonesia. This aligns with the research of Darmawan (2020), which indicates that the Exchange Rate variable significantly affects inflation.

5 CONCLUSION

Problems related to macroeconomics and monetary are complex problems for every country. This is because many things affect these two things. Based on the research results and discussion conducted to analyse the effect of FDI, TPF, BI7DRR, and the Exchange Rate on Inflation. If the FDI level increases, the inflation rate will also increase, whereas when the TPF rate increases, the inflation rate will decrease. If the BI7DRR rate increases, the Inflation rate will increase significantly, as well as the Exchange Rate. If the Exchange Rate increases, the Inflation rate will also increase significantly. Inflation compared to the other three variables).

For example, suppose monetary policy is carried out to overcome a problem. In that case, it only applies for a specific time, but in the future, it can cause a boomerang effect and become a problem in the next period. This is because there is a time lag every time a new policy is set.

5.1 Suggestions

As the authority determines the direction of monetary policy related to the financial sector, Bank Indonesia needs to maintain the BI7DRR reference interest rate for a specific time according to the Indonesian economic situation. This is because the BI7DRR reference rate directly impacts the real sector. Based on the results of the research, it is necessary to lower the BI reference rate through the Indonesian Central Bank's decision to serve as a stimulus for economic activity in Indonesia through lowering lending rates, which will encourage consumption and investment and then have an impact on keeping the inflation rate at a lower level. Bank Indonesia must also monitor the Rupiah Exchange Rate against the US Dollar. Implementing the Exchange Rate policy will affect Indonesia's trade balance in the international trade market. It will automatically affect the macroeconomy in countries that cannot compete in the global market. The central bank, through the Flexible Inflation Targeting Framework (ITF) program, one of the goals of which is exchange rate policy and capital flows in support of macroeconomic stability. Based on the research, it is necessary to depreciate the rupiah exchange rate against the US dollar by increasing import spending, purchasing products from abroad, and increasing the country's dollar reserves so that the inflation rate in Indonesia can be kept down.

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Clearing the air: How emissions in Asia are hindering economic growth

Happy Febrina Hariyani & A.A. Syafira Basyaasyah
University of Muhammadiyah Malang, Indonesia

ABSTRACT: Public health is being seriously affected by air pollution resulting from the rapid economic growth observed in Asian countries during recent years. A study was conducted on 16 Asian countries from 2000 to 2020 to examine the relationship between air pollution, economic growth, nitrogen monoxide, and public health. The study utilized fully modified least squares panel and panel vector error-corrected models. The findings indicate a strong and persistent correlation between spending on renewable energy, carbon dioxide emissions, and healthcare expenditures. Specifically, a positive and statistically significant association exists between investments in renewable energy and healthcare. The study concluded that investing in renewable energy can lead to reductions in air pollution, healthcare improvements, and economic growth.

Keywords: Economic Growth, CO₂, Public Health Spending, Nitrogen Monoxide, Renewable Energy

1 INTRODUCTION

The United Nations (UN) formed the Sustainable Development Goals to replace the previous program, namely the Millennium Development Goals (MDGs). Sustainable Development Goals are a global initiative created to tackle various environmental, social, and economic issues over the past 15 years. According to (Tauhid 2018), While the MDGs focused on eight significant objectives, the SDGs have a broader scope as they encompass 17 primary goals and 169 global targets that are applicable universally. As mentioned earlier, the sustainable development agenda comprises 17 goals. Achieving a healthy and prosperous life is crucial, as it remains a fundamental challenge for developing nations. Through the SDGs, all countries are required to pay great attention to the importance of global health for all countries. Global health is a topic that concerns everyone. Attention has begun to be focused on the condition of less developed countries still facing serious health problems. Thus, according to research. According to (Juned *et al.* 2015), the SDGs will emerge as a universal and equitable approach. In other words, the global health community is starting to pay great attention to everyone's health.

According to Clean and Affordable Energy, wind, water, geothermal, and solar energy are necessary for all daily needs. This renewable energy can be obtained continuously (Tauhid 2018). With the goals of the SDGs, it is estimated that people's dependence on fossil fuels will decrease. By 2050, more than 50% of vehicles and industrial activities will already use electrical energy from generators that use renewable energies, such as wind and solar. Decent Work and Economic Growth as indicators of economic development positively influence various aspects, both in improving the economy and empowering public health. The level of effectiveness and productivity of labour can be a major factor in achieving the target. Economic growth is followed by productivity and the effectiveness of decent work for

all. In addition, improving health by carrying out various health programs also influences economic growth based on the quality aspects of human resources (Madani *et al.* 2022).

One of the important issues regarding the global environment today is air pollution, which has become the subject of discussion worldwide (Mursinto & Kusumawardani 2016). It is common knowledge that air pollution that occurs in big cities around the world, namely around 70%, comes from transportation or motorized vehicles (Sudarti *et al.* 2022). According to a 2022 research survey conducted by the World Health Organization (WHO) in 1,600 cities across 92 countries, 90% of individuals residing in urban areas are exposed to polluted or harmful air. WHO also noted that more than half of the global population experiences the negative effects of air pollution, which is approximately 2.5 times higher than the established air quality limit. The phenomenon of air pollution also occurs in Indonesia, where air pollution can be said to be a negative result of development that focuses on economic growth (Mursinto & Kusumawardani 2016). There is a direct correlation between population growth and economic activity, resulting in an increase in demand for transportation services (Bestari *et al.* 2014).

In motorized vehicles, there is a process of burning fuel where it emits exhaust gases which cause the appearance of pollutants in the air in urban areas (Bestari *et al.* 2014). Almost all conventional energy products and internal combustion engine designs used in transportation are still sources of air pollution emissions. The combustion of gasoline (fuel oil) in fuel engines inevitably releases substances like carbon monoxide (CO), total hydrocarbon (THC), dust (TSP), nitrogen oxides (NOx), and sulfur oxides (SOx) (Ismiyati 2014). The impact of the occurrence or presence of air pollution on public health, in the end, will also impact the economy of a country. The economic impact in question is the emergence of three cost components from diseases arising from air pollution: direct, indirect, and unreal costs. The definition of direct costs in terms of air pollution is the costs incurred to treat and treat people who are sick, such as health costs and transportation costs to health facilities. Indirect costs include the value of lost resources, such as death and high crime rates due to medical expenses. Then intangible costs are a type of psychological cost whose benchmark are feelings of pain, suffering and discomfort living in an environment (Mursinto & Kusumawardani 2016).

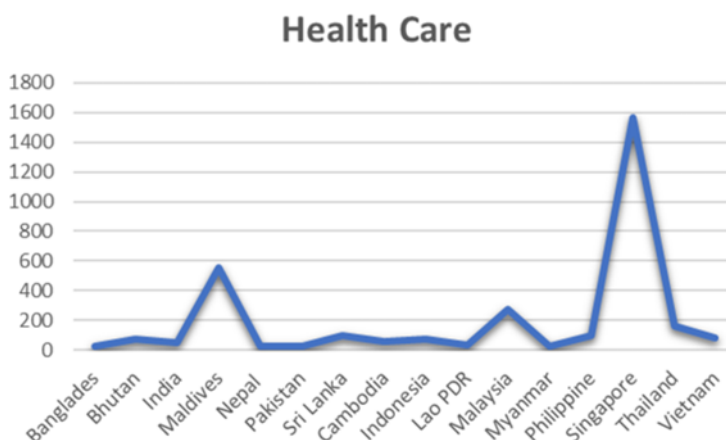


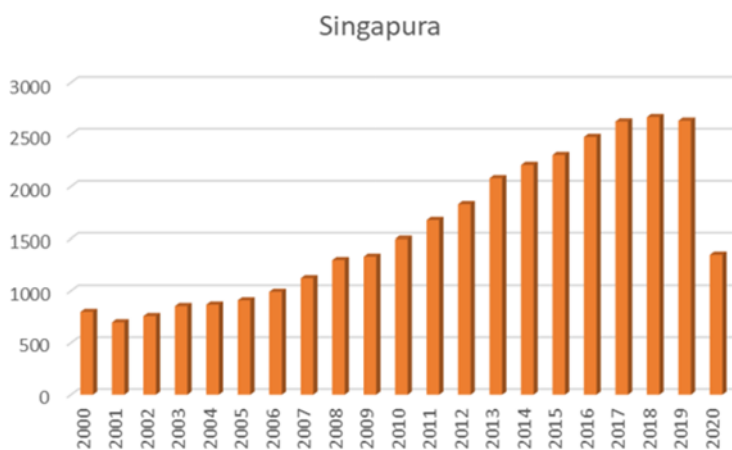
Figure 1. Healthcare expenditure.
Source: World Bank 2020.

Figure 1 shows that Singapore has the highest average expenditure on health compared to other Asian countries, with a value of 1569.261 million dollars. In comparison, Bangladesh has the lowest average health expenditure compared to other Asian countries, which

amounted to 22.57633 million dollars. As a developed country, Singapore is better prepared in the health sector, such as infrastructure, equipment, doctors and workforce, showing that Singapore has the highest health sector compared to other Asian countries. The development of health infrastructure comes from FDI coupled with the existence of CrossBorder Mergers & Acquisitions, which play a role in increasing the existing health capacity in a country (Oliveira *et al.* 2003).

Second, Singapore has a highly comprehensive air monitoring system in place. The primary cause of air pollution in Singapore is the combustion of fossil fuels for transportation, power generation, and industrial heat generation (ENV Annual Report 1998). Despite the sources of air pollution mentioned, Singapore meets the World Health Organization’s (WHO) international standards for ambient air quality (Quah & Boon 2003).

On the other hand, Bangladesh’s health expenditure state is the lowest because Bangladesh is not ready in the health sector. Bangladesh is also starting to develop its medical tourism industry. Even if compared to India and Sri Lanka, Bangladesh is still lagging. Bangladesh’s health industry sector’s facilities, infrastructure and quality workforce still lag behind those of Sri Lanka and India. For this reason, Bangladesh still does not have a stable basis for running medical tourism (Wandera 2017). Bangladesh has high air pollution from industrial activities such as the steel, sugar and fertilizer industries. The discharge of pollutants from industries poses a significant hazard to human health, ecosystems, and economic operations. Uncontrolled large-scale deposits of industrial waste and effluent have the potential to cause severe environmental pollution. In certain countries, particularly in developing nations like Bangladesh, the treatment of industrial effluent has not been given high priority (Rasul *et al.* 2006). Bangladesh, the country with the highest pollution, should be better prepared in health facilities such as infrastructure, equipment, doctors and a more decent workforce.



Source: World Bank 2020.

Air pollution has emerged as a global issue, prompting countries worldwide to adopt a green economy to reduce poverty and achieve sustainable development by curbing carbon emissions. The United Nations has identified 17 sustainable development goals (SDGs), including one that focuses on air pollution and the use of renewable energy alternatives. In addition, renewable alternative energy, such as wind power, is more environmentally friendly, reduces air pollution and improves public health. This air pollution causes disease, damages the environment, and increases government spending in the health sector. Hydropower is a renewable energy source that harnesses the power of flowing water. It has been utilized by humans for a long time due to its abundance and eco-friendliness. A

hydroelectric power plant or hydropower plant is an example of using hydropower for a better life. China's Three Gorges Dam, with a capacity of 22.5 GW, is the biggest hydroelectric power station in the world. It generates an annual output of 80 to 100 kWh, which is sufficient to meet the electricity needs of approximately 70–80 million households.

1.1 Literature review (optional)

1.1.1 CO₂ emissions with economic growth

Arista & Amar (2019) found that there is a bi-directional or reciprocal relationship between CO₂ emissions and economic growth. Using data from Indonesia, researchers argue that the higher the economic growth, the lower the level of environmental damage, which in this case is measured by CO₂ emissions. It is happening in Indonesia because of Indonesia's strong determination and seriousness in controlling GHG (Greenhouse Gas) emissions. (Kurniarahma *et al.* 2020). Using data from Indonesia, the researchers argue that CO₂ emissions had no significant positive effect on economic growth in Indonesia from 2000–2019. This indicates that a rise in CO₂ emissions does not necessarily result in an increase in economic growth (Sukma *et al.* 2019). Hence, CO₂ emissions and economic growth have a two-way or reciprocal relationship.

1.1.2 Health spending with economic growth

If there is a positive correlation between government healthcare spending and economic growth, implementing a minimum 5% health budget policy could potentially boost economic growth. This statement aligns with previously mentioned theories, including the human capital theory, which states that good health is a basic need for individuals, and without public health, productivity and economic growth will suffer. Human capital is believed to play a more significant role in driving growth than technological factors. Therefore, the government must provide public facilities to increase economic productivity, especially in the health sector. The higher government spending on health, the better public facilities and health services for the community can encourage economic activity, thereby improving economic conditions in an area. (Ilmiyono & Aldillah 2019). (Gövdeli 2019) found that the panel analysis revealed a two-way causality between health expenditure and economic growth. The study concluded that investing in healthcare has a positive impact on economic growth, and there is also a two-way causality between health spending and levels of CO₂ emissions.

1.1.3 Renewable energy with economic growth

Based on data gathered from ASEAN countries, the use of renewable energy has a positive impact on the economic growth of these nations, albeit in relatively modest amounts. The limited impact of renewable energy consumption on economic growth in ASEAN countries may be attributed to their failure to fully utilize renewable energy as a viable and sustainable alternative to non-environmentally friendly sources of energy. Certainly, this should be a shared concern as the use of non-environmentally friendly energy sources in ASEAN countries can greatly contribute to environmental degradation, which can have negative impacts on public health, increase the occurrence of natural disasters, and more (Ula & Affandi 2019).

This research is similar to previous studies conducted by (Gövdeli 2019; Mujtaba & Shahzad 2021; Wang *et al.* 2019b) They used marketing mix independent variables consisting of air pollution, health expenditure and the selected variable for the availability of economic growth. This study also used the same research method as previous studies on the VECM panel test.

The difference between previous studies lies in the addition of the independent variables, namely adding the variables Nitrogen Monoxide and Renewable Energy. The fundamental difference between previous studies is in research locations and observation periods. Ghulam

Mujtaba conducted research in 2020 with research objects in OECD countries, while this research was conducted in 2022 with research objects in Asian countries; Muhammad Ahsan Asghar conducted research in 2019 with research objects in Pakistan, while this research was conducted in 2022 with research objects in Asian countries, and Tuncer Gövdeli conducted research in 2019 with research objects in OECD countries while this research was conducted in 2022 with research objects in Asian countries.

2 RESEARCH METHODS

2.1 Data and data sources

This research employs data collected from the official website of the World Bank, which is based on annual panel data from 16 Asian countries spanning from 2000 to 2020. In this study, health expenditure (HEALTH) is considered the dependent variable, while GDP is used as a proxy to measure economic growth. Air pollutants are represented by CO₂ and NO_x, and renewable energy (RNE) is the independent variable.

2.2 Method

The Vector Error Correction Model (VECM) is a Vector Auto Regression (VAR) form with cointegrated restrictions or long-term relationships between variables. VECM combines the behaviour of variables in the long term and the relationships between variables in the short term. Therefore, VECM can better reflect the relationship between variables. VECM is usually performed on time series data.

2.3 Unit root test

In a classical regression model, it is essential for both the dependent and independent variables to exhibit stationarity, which means having a mean of zero and finite variance. Stationarity implies that the parameters of the variables, mean and standard deviation are stable measures of dispersion. Using a cointegration framework allows one to check for the existence of a long-term link between the variables of interest. While the variables may be non-stationary at their original levels, taking their first difference renders them stationary. Granger and Newbold (1986) stated that In the case of time series data, if it is non-stationary, the results of the regression model can be misleading. Thus, it is crucial to assess the stationarity of the dataset before applying an appropriate model. The stationarity of the data can be evaluated using the augmented Dickey-Fuller (ADF) test. The ADF test is commonly employed in panel data for unit root testing and is defined as:

$$\Delta X_{it} = \alpha_0 + \delta X_{it-1} + \beta_1 \Delta X_{it-1} + \beta_2 \Delta X_{it-2} + \dots + \beta_p \Delta X_{it-p} + u_{it}$$

where X_{it} represents the time series component, α_0 represents the intercept term, the coefficient having a unit root is given by δ the first difference of Ziti's augmented lag parameter is denoted by β_1 to β_p Which represents an autoregressive process of the order, and the term error is represented by u_{it} .

2.4 Cointegration test

Next, we'll look at the long-term connection between the variables after determining by first differences that the variable of interest is stationary. We used a two-panel cointegration test in our investigation, which consists of the Kao and Pedroni tests. Both procedures are variants on the two-stage cointegration test developed by Engle and Granger. Pedroni's method

involves testing the possibility that ρ is equal to 1. The Pedroni test offers two alternative hypotheses: a homogeneous alternative and a heterogeneous alternative. In the homogeneous alternative, a common autoregressive coefficient is applied across sections, while the group test employs individual autoregressive coefficients for each section. On the other hand, the heterogeneous alternative allows for greater variability, as it does not require the same ρ value. Homogeneous alternatives are used for panel tests, while heterogeneous alternatives are used for group tests. The Kao cointegration test was employed to ensure stability. Data cointegration is supported by this approach. The first step of estimate in this method employs a cross-sectionally specific intercept and homogenous regressor coefficients.

2.5 Vector autoregressive

The analysis commences by defining the n -factor vector, denoted as X_{it} , with a p th order autoregressive Gaussian method:

$$\begin{aligned} &P \\ X_{it} &= \mu + \sum_{i=1}^p \varphi_i x_{it-1} + \epsilon_{it} \quad \text{dimanat} = 1, 2, 3, \dots, N \quad \text{dan} \quad i = 1, 2, 3, \dots, K \\ &i = 1 \end{aligned}$$

The vector constants are represented by μ and ϵ_{it} , where μ follows a normal distribution and ϵ_{it} is an independent distribution of n terms with zero mean and covariance Ω , which consists of nonsingular matrices. The endogenous factor vectors are denoted as X_{it} . The equation mentioned above can be further validated through an error correction model (ECM).

$$\begin{aligned} &P - 1 \\ \Delta x_{it} &= \mu + \sum_{i=1}^p \varphi_i \Delta x_{it-1} - \varphi_0 x_{it-1} + \epsilon_{it} \\ &i = 1 \end{aligned}$$

where $\varphi_0 = 1 - (\psi_1 + \varphi_2 + \dots + \varphi_p)$ and $-\varphi_i = -\sum \psi_j$ and $i = 1, 2, 3, \dots, M$. Here the matrix ψ ($n \times n$) equals φ_0 , indicating a linear setup at x_t . Validating the stationarity condition.

2.6 Vector error correction model

The vector constants, denoted as μ and ϵ_{it} , have specific characteristics in the given context. μ follows a normal distribution, while ϵ_{it} represents an independent distribution of n terms with a mean of zero and a covariance matrix Ω consisting of nonsingular matrices. The endogenous factor vectors are represented by X_{it} . The equation mentioned above can be effectively evaluated and validated using an error correction model (ECM).

Short-run dynamics between the independent and dependent variables are shown by negative-signed coefficients in an error correction model (ECM), whereas long-run insights are provided by positive-signed coefficients. The VECM (Vector Error Correction Model) possesses the characteristic of constraining endogenous variables in the long term until convergence is achieved. Stable long-term relationships are observed when a variable shows a negative and statistically significant coefficient. This indicates that only short-term fluctuations occur between the two variables. The VECM allows for short-term adjustments in endogenous variables.

The error correction term (ECT) represents a cointegration component that illustrates partial short-term adjustments made to restore long-term equilibrium. Thus, the VECM serves as a useful tool for examining both short-term and long-term relationships between variables. On the other hand, a panel vector autoregressive (VAR) approach is more appropriate when the variables are not cointegrated.

3 RESULTS AND DISCUSSION

Table 1. Descriptive statistics.

	GDP	CO2	HE	NX	RE
Mean	5102.780	1.987909	201.9241	29950.52	43.63670
Median	1585.715	0.968654	60.14077	11938.75	43.52500
Maximum	66679.05	10.57130	2667.675	253790.0	93.46000
Minimum	128.0997	0.100511	4.335375	10.00000	0.330000
Std. Dev.	11186.97	2.378485	420.3441	53467.95	28.36706
Skewness	3.946756	1.831187	3.908771	2.988620	0.042737
Jarque-Bera	4206.036	267.7090	4690.775	1486.704	15.46779
Probability	0.000000	0.000000	0.000000	0.000000	0.000438
Sum	1714534.	667.9374	67846.49	10063375	14661.93
Sum Sq. Dev.	4.19E + 10	1895.159	59190859	9.58E + 11	269571.1
Observations	336	336	336	336	336

Source. Processed Data E-Views 9.

Air pollution, alternative energy, healthcare expenditure, nitrogen monoxide, and economic development in Asian nations are examined here, supported by actual facts. We began our analysis by using descriptive statistics to get a feel for the raw data before moving on to more advanced procedures including panel cointegration, panel VECM, and the unit root test panel. Table 1 provides descriptive data, which demonstrate that both the mean and standard deviation for GDP are greatest, while those for health expenditures are lowest. The large standard deviation in CO2 emissions is indicative of a high value. There is a negative skew between GDP and renewable energy. Conversely, there is a maximum possible value for GDP. The majority of the variables are leptokurtic and have a negative skew.

Table 2. Panel unit root test at level and first difference.

Variable	Level	First Difference
GDP	11.2494(1.0000)	-5.94381(0.0000)
CO2	4.28451(1.0000)	-2.05708(0.0198)
HE	3.04699(0.9988)	-7.58283(0.0000)
NX	1.49868(0.9330)	-10.8653(0.0000)
RE	-7.93482(0.0000)	-11.3608(0.0000)

Source: Processed Data E-Views 9.

Results Table 2 displays the results of a panel unit root test for separate variables. In panel unit testing, the null hypothesis states that all of the investigated variables have unit roots. The null hypothesis states that all variables in the analysis have unit roots. For the vast majority of our variables, we cannot reject the null hypothesis at the 5% level of significance. At the 5% level of significance, the findings reveal that the majority of these variables are stationary at the initial difference.

Table 2 shows that all the variables used in this study are stationary at the first difference level. It can be seen in each variable; namely, the variables GDP, CO2, HE, NX and RE at the level of testing at the first difference level shows that the t-statistic value is smaller than the value of 0.05, namely $0.0000 < 0.05$, which means, H0 is rejected, and H1 is accepted, or in other words, the data is stationary. From the data test above, all variables have met the test data stationarity requirements where the t-statistic value is smaller than the value of 0.05 at the first difference level. Because all data variables are stationary at the first difference level, the next step in VECM estimation can be taken.

Table 3. Results of cointegration tests.

Unrestricted Cointegration Rank Test (Trace and Maximum Eigenvalue)				
Hypothesized No. of CE(s)	Fisher Stat.* (from trace test)	Prob.	Fisher Stat.* (from max-eigen test)	Prob.
None	694.5	0.0000	510.9	0.0000
At most 1	244.3	0.0000	207.6	0.0000
At most 2	86.25	0.0000	75.97	0.0000
At most 3	34.24	0.3607	31.02	0.5158
At most 4	20.83	0.9352	20.83	0.9352

*Probabilities are computed using asymptotic Chi-square distribution.

Source. Processed Data E-Views 9.

Cointegration test results Table 3 shows the panel cointegration results. It can be explained that three rank variables are related to cointegration at the 5 per cent test level (0.05). It can be proven from the trace statistical values of 694.5, 244.3, 86.25, 34.24, and 20.83, which are greater than the Eigen Test 0.05, namely 510.9, 207.6, 75.97, 31.02, and 20.83. This suggests that H1 is true, or that there is a long-term link (cointegration) between the variables, while H0 is false. Therefore, VECM estimation in this study can be used. Furthermore, the VECM stability test can be carried out.

Table 4. Panel VECM.

Cointegrating Eq:	CointEq1				
D(GDP(-1))	1.000000				
D(CO2(-1))	2410.141 (579.070) [4.16209]				
D(HE(-1))	-11.98047 (1.94843) [-6.14878]				
D(NX(-1))	-0.005966 (0.04726) [-0.12624]				
D(RE(-1))	-143.6908 (55.4581) [-2.59098]				
C	-372.0336				
Error Correction:	D(GDP,2)	D(CO2,2)	D(HE,2)	D(NX,2)	D(RE,2)
CointEq1	-0.650244 (0.09467) [-6.86826]	-0.000133 (5.4E-05) [-2.44865]	-0.006486 (0.01016) [-0.63832]	-0.075099 (0.99880) [-0.07519]	0.000688 (0.00021) [3.29034]
D(GDP(-1),2)	0.412148 (0.07839) [5.25748]	0.000195 (4.5E-05) [4.35089]	0.047293 (0.00841) [5.62094]	-0.299935 (0.82703) [-0.36266]	-0.000346 (0.00017) [-1.99675]
D(GDP(-2),2)	-0.291625 (0.08066) [-3.61566]	6.47E-07 (4.6E-05) [0.01404]	-0.008992 (0.00866) [-1.03878]	0.288801 (0.85091) [0.33940]	-0.000402 (0.00018) [-2.25499]
D(CO2(-1),2)	-0.151216 (324.066)	-0.748707 (0.18533)	-82.99490 (34.7817)	2054.812 (3418.85)	-1.573508 (0.71617)

(continued)

Table 4. Continued

Error Correction:	D(GDP,2)	D(CO2,2)	D(HE,2)	D(NX,2)	D(RE,2)
D(CO2(-2),2)	[-0.00047] -231.8744 (291.562)	[-4.03976] -0.476673 (0.16675)	[-2.38617] -15.78110 (31.2931)	[0.60102] 359.1620 (3075.94)	[-2.19713] -0.279305 (0.64434)
D(HE(-1),2)	[-0.79528] -7.355265 (1.50365)	[-2.85868] -0.000929 (0.00086)	[-0.50430] -0.491643 (0.16139)	[0.11676] -1.217549 (15.8633)	[-0.43348] 0.005464 (0.00332)
D(HE(-2),2)	[-4.89160] 1.242055 (1.46927)	[-1.08083] 0.001155 (0.00084)	[-3.04640] 0.102949 (0.15770)	[-0.07675] -4.062281 (15.5006)	[1.64420] 0.004184 (0.00325)
D(NX(-1),2)	[0.84536] 0.006147 (0.03185)	[1.37426] 3.47E-06 (1.8E-05)	[0.65284] 0.001129 (0.00342)	[-0.26207] 1.116001 (0.33597)	[1.28848] -5.14E-05 (7.0E-05)
D(NX(-2),2)	[0.19303] 0.012762 (0.03160)	[0.19069] -4.10E-06 (1.8E-05)	[0.33021] 0.000936 (0.00339)	[3.32178] 0.236723 (0.33338)	[-0.73063] 6.21E-05 (7.0E-05)
D(RE(-1),2)	[0.40385] -93.58512 (29.0929)	[-0.22704] -0.019483 (0.01664)	[0.27606] -2.463582 (3.12251)	[0.71007] 107.9635 (306.926)	[0.88917] -0.580087 (0.06429)
D(RE(-2),2)	[-3.21677] -46.60402 (28.4994)	[-1.17098] -0.003775 (0.01630)	[-0.78898] -0.138188 (3.05881)	[0.35176] -66.42300 (300.665)	[-9.02248] -0.192360 (0.06298)
C	[-1.63526] -44.62617 (49.2030)	[-0.23162] -0.024627 (0.02814)	[-0.04518] -7.657911 (5.28091)	[-0.22092] -692.3785 (519.085)	[-3.05421] 0.039646 (0.10874)
	[-0.90698]	[-0.87519]	[-1.45011]	[-1.33384]	[0.36461]

The results of the VECM panel Table 4 shows that in the long and short term, the CO₂ variable significantly influences the GDP variable with a t-Statistic value [4.16209] > the critical value of t-Table [1.967903], the HE variable has a significant effect on the long and short term variable GDP with a t-Statistic value [-6.14878] > t-Table critical value [1.967903], and the RE variable also affects the GDP variable with a t-Statistic value [-2.59098] > t-Table critical value [1.967903].

The results show that long and short-term relationships are visible between the variables. CO₂ emissions have a positive relationship with public health spending. It means that an increase in air pollution causes an increase in health problems, requiring more health attention. In addition, too high emissions will have a risky health impact. As health declines, the productivity rate of the population will automatically decrease; this will reduce the level of productivity in Asian countries. When a country has high carbon emissions, the effect may not be visible, but it will definitely affect its economic growth in the long term. Therefore, efforts to reduce air pollution and carbon emissions must be a top priority for Asian countries to maintain their people's health and economies. Our results are consistent with the research (Wang *et al.* 2019a) that health spending and air pollution (CO₂) are significantly and positively related, indicating that air pollution has a negative impact on the health sector.

Using renewable energy sources instead of traditional ones is one way to mitigate health risks. Renewable energy and health care spending are intertwined in the long run. The findings corroborate the findings of a previous study (Mujtaba & Shahzad 2021) that found a strong positive correlation between the use of renewable energy and lower healthcare costs.

Table 5. Uji kausalitas granger.

Null Hypothesis:	Obs	F-Statistic	Prob.
GDP does not Granger Cause CO2	320	1.67350	0.1967
CO2 does not Granger Cause GDP		5.04031	0.0255
HE does not Granger Cause CO2	320	2.11005	0.1473
CO2 does not Granger Cause HE		5.23733	0.0228
NX does not Granger Cause CO2	320	0.10145	0.7503
CO2 does not Granger Cause NX		0.20386	0.6519
RE does not Granger Cause CO2	320	2.05528	0.1527
CO2 does not Granger Cause RE		7.21641	0.0076
HE does not Granger Cause GDP	320	7.63647	0.0061
GDP does not Granger Cause HE		11.0617	0.0010
NX does not Granger Cause GDP	320	0.15510	0.6940
GDP does not Granger Cause NX		0.04948	0.8241
RE does not Granger Cause GDP	320	1.43925	0.2312
GDP does not Granger Cause RE		1.89830	0.1692
NX does not Granger Cause HE	320	0.10318	0.7483
HE does not Granger Cause NX		0.03305	0.8559
RE does not Granger Cause HE	320	3.18855	0.0751
HE does not Granger Cause RE		2.11258	0.1471
RE does not Granger Cause NX	320	0.35913	0.5494
NX does not Granger Cause RE		0.64983	0.4208

If the probability value of the F-statistic is <0.05 , then H_0 is rejected. Table 5 shows the Granger causality test. Economic growth affects CO2 emissions, while CO2 emissions do not affect economic growth. Thus there is no causality between economic growth and CO2 emissions. It is evidenced by the probability value of economic growth on CO2 emissions of $(0.1967 > 0.05)$ and the probability value of CO2 emissions on the economic growth of $(0.0255 > 0.05)$. It is in accordance with the opinion (Sari & Karimi 2022) states that economic growth in the short term has a positive and insignificant effect on CO2 gas emissions which is also written in research (Tang 2018) which states that economic growth in 17 Asian countries has no effect significantly to CO2 emissions so that it can be seen that economic growth has a relatively small relationship to increased CO2 emissions.

Health spending affects CO2 emissions, and CO2 emissions do not affect health spending. Thus there is no causal relationship between health expenditure and CO2 emissions. It is evidenced by the probability value of health expenditure on CO2 emissions of $(0.1473 > 0.05)$ and the probability value of CO2 emissions on health expenditure of $(0.0228 > 0.05)$. It follows research conducted by (El *et al.* 2014), which explains that energy consumption, especially fossil energy, can increase health expenditure. Consumption of fossil fuels has a negative impact on environmental processes and causes various health problems. Supported by the opinion (A'nnisa *et al.* 2020) states that the energy supply in Indonesia uses a lot of fossil energy, which will encourage higher impacts, especially the production of CO2 emissions which will continue to increase and have an impact on increasing health problems and encouraging higher health problems.

NX affects CO2 emissions, while CO2 emissions affect NX. Thus there is a causality between NX and CO2 emissions. It is evidenced by the probability value of NX on CO2 emissions of $(0.7503 > 0.05)$ and the probability value of CO2 emissions on NX of $(0.6519 > 0.05)$. The result aligns with the opinion (Nurdjannah 2015), who states that the largest contribution to CO2 emissions comes from the consumption of premium and its derivatives (pertamax, Pertamina Plus and super TT), as well as diesel. Motorized vehicles contribute 71 million tons of CO2 emissions, with an energy consumption of 179 million BOE (Barrels of Oil Equivalent). Because of its favourable fuel qualities, gas-fired engines may be designed

to be very efficient and produce little exhaust pollutants, making natural gas a great fuel for internal combustion engines.

Supported by the opinion (Uwar *et al.* 2012), the methane number is high. It easily mixes with air to obtain a homogeneous mixture, which can cause combustion at high speed at a high coefficient of 3 of excess air. It is to avoid high maximum temperatures and high maximum pressures, thus reducing NO_x emissions by up to 90% compared to diesel fuel, meaning that the reduction depends on the maximum engine temperature. The maximum temperature difference affects NO_x and also allows greater efficiency.

Renewable energy affects CO₂ emissions, and CO₂ emissions do not affect renewable energy. Thus there is no causal relationship between renewable energy and CO₂ emissions. It is evidenced by the probability value of renewable energy on CO₂ emissions of (0.1527 > 0.05) and the probability value of CO₂ emissions on renewable energy of (0.0076 > 0.05). This aligns with the opinion (Zulaicha *et al.* 2020), which states that renewable energy consumption has a negative and insignificant effect on CO₂ emissions. As for the not optimal use of renewable energy, the consumption of renewable energy does not significantly affect CO₂ emissions. Some contributing factors are the relatively high investment costs, the lack of public knowledge in adapting the use of renewable energy, the lack of government support, and the low subsidies for renewable energy, which results in the selling price of renewable energy is still high. The development of energy efficiency and consumption of renewable energy as an energy mitigation effort has not been followed by a reduction in CO₂ emissions.

NX affects economic growth, while economic growth affects NX. Thus there is a causality between NX and economic growth. It is evidenced by the probability value of NX on economic growth emissions of (0.6940 > 0.05) and the probability value of economic growth emissions on NX of (0.8241 > 0.05). Any attempt to reduce NX will affect economic growth. It is because these emissions can be reduced using technologies such as denitrification, desulfurization, and electrostatic precipitators (dust filters), which require relatively high costs. Therefore, it is necessary to have the economic stability to maintain these efforts in line with the opinion of (Sukarsono 2004), which stated that the effort was to burn NO_x gas. However, because this absorption process costs high, and the by-product, namely gipsun, is not widely used, most developing countries do not use this absorbent, except for gases with a very high SO_x content. Therefore, it is necessary to have a lot of health spending to overcome this problem so that it can also affect economic growth.

Renewable energy affects economic growth, while economic growth affects renewable energy. Thus there is a causality between renewable energy and economic growth. It is evidenced by the probability value of renewable energy for economic growth of (0.2312 > 0.05) and the probability value of economic growth for renewable energy of (0.1692 > 0.05). It is consistent with research conducted by (Rahmandani & Dewi 2023), which states that studies in high-income countries find that per capita GDP has a significant positive effect on renewable energy consumption. It illustrates that individuals in high-income countries are more concerned about the environment and urge the government to prioritize policies and regulations for renewable energy. It shows that when there is an increase in the overall economy and total goods & services, people have more access to energy.

NX affects health expenditure, while health expenditure affects NX. Thus there is a causality between health expenditure and NX. It is evidenced by the probability value of NX on health expenditure of (0.7483 > 0.05) and the probability value of health expenditure on NX of (0.8559 > 0.05). According to (Chandra, n.d.), the effects of air pollution on human life can be broken down into several categories: general effects; effects on ecosystems; effects on health; impacts on plants and animals; impacts on weather and climate; and impacts on the social-economic system. This is supported by (Winarno *et al.* 2014), which argues that air and environment pollution from vehicles can negatively impact human health, particularly in urban areas. The effect occurs in the form of noxious smoke and vapour that hinders breathing, impedes the senses of smell and sight, weakens the body, and lowers intelligence.

Animals and vegetation are also negatively impacted by automobile exhaust pollution. That way, a lot of funds will be spent on health matters. It is due to the many negative impacts caused by NX pollution on human health, which will cause serious problems. Therefore, it is necessary to do prevention or even treatment to overcome human and plant health problems.

Renewable energy affects health expenditure, while health expenditure affects renewable energy. Thus there is a causality between renewable energy and health expenditure. It is evidenced by the probability value of renewable energy on health expenditure of $(0.0751 > 0.05)$ and the probability value of health expenditure on renewable energy of $(0.1471 > 0.05)$. It is also consistent with the research (Sasana *et al.* 2019), where CO₂ emissions have a major impact on public health budgets. The available air quality is predicted to deteriorate as CO₂ gas emissions continue to rise. Poor air quality is a leading cause of many serious illnesses, particularly respiratory illnesses. A person's vulnerability to illness increases in proportion to the frequency with which they are exposed to air of low quality. This will lead to more people needing medical attention, which in turn will lead to more money being spent by the government on healthcare. So it is necessary to make several breakthroughs to reduce some of the impacts of fossil energy. This breakthrough is by starting to use renewable energy. Where using renewable energy will reduce various impacts, especially the impact on the production of CO₂ emissions.

Health expenditure affects NX, while NX affects health expenditure. Thus there is a causality between health expenditure and NX. It is evidenced by the probability value of health expenditure on NX of $(0.5494 > 0.05)$ and the probability value of NX on health expenditure of $(0.4208 > 0.05)$. It can be seen that health spending affects dealing with pollution produced by NX. It is necessary to protect the environment, support the clean sky program, and find ways to absorb these harmful gases cheaply. The electron beam machine, a low-energy electron accelerator, has the prospect of solving this problem.

In accordance with the opinion of (Sukarsono 2004), implementing NX countermeasures can be carried out by re-burning NO_x. NO_x re-combustion is a modification of the combustion process so that the formation of NO_x is minimized. Re-combustion of NO_x to reduce NO_x in combustion products is carried out in 3 stages. The first stage is the gas formation of NO gas by the interaction of fuel with air; the second stage is the addition of fuel under reducing conditions (lack of oxygen) to produce hydrocarbon radicals which react with the NO_x formed to produce Nz, and the third stage is the addition of air at low temperatures to complete combustion. Because the cost of this absorption process is high, and the by-product, namely gibsun, is not widely used, most developing countries do not use this absorbent, except for gases with a very high SO_x content. Therefore, it is necessary to have a lot of health spending to overcome this problem.

4 CONCLUSION

Air pollution, economic development, and population health are all topics that are examined in this study of Asia. Air pollution, healthcare costs, nitrogen monoxide, and economic development in these nations are only somewhat explored in the existing research. The impact of renewable energy sources on healthcare costs and GDP growth is also discussed. The VECM panel is used to analyse yearly data from 2000 to 2020 for this research. To begin, we utilise the panel unit root test to see whether our variables are stationary. The VECM panel was then utilised to look at the long-term connection between the variables after the panel cointegration test was done to discover the association between the variables. The data supported the existence of such a link.

Based on the results from the VECM panel Health Care Expenditure has a significant long-term and short-term relationship to CO₂ emissions, indicating that air pollution has a negative impact on the Health sector, which in the long term will affect economic growth

and will also reduce the country's productivity level. Renewable energy also has a significantly long and short-term relationship to health care spending, indicating that air pollution will reduce health levels. The usage of traditional energy sources can be reduced, health and other non-economic variables, like education, can be promoted, and environmental sustainability can be achieved, all thanks to investments in renewable energy resources. The Granger causality test indicates that health care costs are related to the use of renewable energy sources, the level of carbon dioxide released into the atmosphere, and economic development.

5 SUGGESTION

The following are some suggestions for the government, other stakeholders, and future researchers regarding the impact of emissions on economic growth in Asia in 2000–2020: The government needs to adopt more stringent policies and regulations related to emissions, such as reducing the use of fossil fuels, increasing the use of renewable energy, and promote sustainable transport. The government also needs to strengthen oversight and law enforcement to crack down on violations of emission regulations.

Other stakeholders, such as companies and communities, also need to be actively involved in efforts to reduce emissions. Companies can adopt environmentally friendly practices in their production and operations and promote the use of renewable energy and green technologies. Communities can participate in environmental campaigns and movements and adopt a more environmentally friendly lifestyle.

Future researchers need to conduct further research to evaluate the impact of emissions on economic growth in Asia and find more effective solutions to reduce emissions. Research could focus on developing green technologies and innovative solutions to reduce emissions and evaluating the economic impact of stricter policies and regulations on emissions.

Reducing emissions can challenge economic growth in Asia and provide opportunities for green technology development and innovation. With the adoption of appropriate policies and solutions, as well as the active involvement of governments, other stakeholders and researchers, the impact of emissions on economic growth in Asia can be reduced.

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The effect of intellectual capital dynamics on firm value with capital structure as a mediating variable: Evidence on technology companies in Indonesia

Mudrifah, Nur Fadilah, Ihyaul Ulum & Abdurrahman
University of Muhammadiyah Malang, Indonesia

ABSTRACT: The study was conducted to test the impact of intellectual capital on a firm value by mediating its capital structure. Where intellectual capital is reflected in VAIC, MVAIC, and MCM. The value of the company is reflected in $tobins'q$, so it measures the value of the company's stock price. The capital structure is represented by the DER ratio. The relationship between intellectual capital, firm value, and capital structure is measured partially and simultaneously. The population in this study is the entire technology sector company listed in BEI in 2019-2020. The sample-forming method used is a purposive sampling method. A data-gathering technique using documentation. Data analysis technique using linear regression analysis using a Stata 15 application. Analysis showed that the intellectual capital represented by VAIC, MVAIC, and MCM affected the firm value simultaneously and partially. Capital structures can project connections between VAIC, MVAIC, and MCM to corporate values simultaneously, but partially only inflate the relationship between MCM and the company's value.

Keywords: intellectual capital, VAIC, MVAIC, MCM, firm value, capital structure, $tobins'q$, DER

1 INTRODUCTION

Company value is one of the benchmarks for the public in seeing the performance of a company. Firm value is an investor's view on the company's ability to achieve success in managing resources assessed by the stock price (Soebiantoro 2007). The high share price will affect investor confidence in the company now and in the future. The high and low value of the company will not be the same every year, the changes that occur are influenced by several factors. One of the factors that affect firm value is Intellectual Capital (IC).

IC is a non-physical asset of the company which is one of the important elements in creating company value with a competitive advantage. Non-physical assets that can be an advantage for the company include human capital (human capital), structure capital (organizational capital) and relation capital (relationship capital). In focusing on the value of the company must also pay attention to the sustainability of the company. The long-term sustainability of the company and the improvement of company performance can be determined through its capital structure. Capital structure is a way for a company to manage its capital resources (Santiani 2018).

The dynamics of IC always change and are never the same at any time both within one company and between companies. IC values measured by different methods will provide different value results. The value of IC, which is never the same, shows that IC has a changing and non-fixed nature. The dynamics of the IC value is one of the benchmarks for investors in the company and determines the sustainability of the company's life.

The capital structure is the composition of the combination of capital originating from personal assets with capital originating from debt used for the company's operational activities. So it is necessary to have the right capital structure management to ensure the sustainability of the company's long-term investment. Based on Resource Based Theory (RBT), each company can be used as a competitive advantage because of the concept of difficult to imitate as a form of competitive advantage (Barney 1996). Good management of company assets will maximize company value. IC is one of the value-added resources owned by the company.

Li and Zhao (2017) conducted research on the effect of IC on firm value in developing China. The results of this study indicate that there is no significant relationship between human capital and firm value, except in capital-intensive companies. Meanwhile, Lestari and Sapitri (2016) conducted research on the effect of IC as measured by VAIC on firm value as measured by Tobins Q. The results showed that IC has a positive effect on firm value. The results showed that IC has a positive effect on firm value.

This study chose the object of technology companies in Indonesia because at this time many labor-intensive companies have turned into capital-intensive companies. Where this company prioritizes technology and innovation as added value. Technology companies use more intellectual capital such as skills, expertise, knowledge, experience, relationships and others. So that in the eyes of investors, technology companies have high value and prospective large profits in the future.

Research on Intellectual Capital mediated by capital structure is still not much done. So this study was conducted to examine the effect of intellectual capital measured using VAIC, MVAIC and MCM on firm value as measured by Tobins Q mediated by capital structure, with objects in technology companies in Indonesia.

2 LITERATUR REVIEW

2.1 *Resource based theory*

Resource Based Theory (RBT) is a theory that explains that each company is able to manage all assets owned to provide excellence for the company (Barney 1996). RBT discusses the utilization of resources owned by a company, of course not only utilization but also management of resources owned by the company. So that it can increase the value of the company.

In Resource Based Theory Barney (1996) says that wealth is a rarity that is not easy to imitate and has the potential to be a source of competitive advantage in the long term, so that wealth in the company must be valued. This theory emphasizes that every company has a rare wealth that can be maximized to increase the value of a company.

Resource management can create value added for the company in taking opportunities and being able to face a threat. Barney (1996) strengthens RBT by categorizing 3 physical resources, including technological resources, human resources, and organizational resources. IC has criteria that can be in line with RBT by believing that companies can achieve a more competitive advantage if they have superior resources.

2.2 *Company value*

Firm value is a certain condition that the company has achieved with the trust of the community since the company was founded until now (Hery 2017). Firm value is the value per share received when the company's assets are sold according to the share price (Gitman *et al.* 2015). The conclusion from this definition is that the company's value is the condition of the company during the establishment of the business which is valued at the share price per share.

Firm value is a view for stakeholders (investors) to assess the company's ability to increase profits through the value of its shares (Soebiantoro 2007). Company value is one of the considerations of investors in making capital investment (Ernawati and Widyawati 2015). In the eyes of investors, company value is a benchmark in decision making and trust in a company.

2.3 *Modal intelektual*

Stewart (1997) defines Intellectual Capital as “packaged useful knowledge” which means that the company has resources in the form of knowledge so that it can produce assets with high value and economic benefits in the future. Intellectual Capital is also defined as an intangible asset that implicitly exists in the company's financial statements and has a positive impact on company performance (Edvinsson 1997). Meanwhile, Ozkan *et al.* (2017) argue that IC is an intangible set that is not explicitly listed on the company's balance sheet but has a positive impact on company performance and adds value to the company.

Mavridis (2004) explains that Intellectual Capital is an intangible asset that can provide added value to the company and the general public. It can be concluded that Intellectual Capital is an intangible asset that has a positive influence on the value of the company and provides benefits in the long term. Bontis (1998) calculates Intellectual Capital into several main elements, namely, human capital, structural capital and customer capital.

The indicator in measuring Intellectual Capital is value added, by providing information from tangible and intangible assets owned by the company. Pulic (2000) developed an Intellectual Capital measurement model using three components, namely VACA (Value Added Capital Employed), VAHU (Value Added Human Capital) and STVA (Structural Capital Value Added).

2.4 *Struktur modal*

Capital structure is a company's effort to create a composition of the size of debt with the most profitable business capital in financial aspects (Puspitasari and Suryono 2020). In the formation of business capital, it does not only consist of private capital, but also consists of debt capital. Company capital can show the value of the company. Companies with high debt capital are undervalued by investors.

Capital Structure is a description of the company's financial proportion between debt-sourced capital and own-sourced capital which is the company's resource (Kurniawan and Lukman 2020). Where the composition of capital consisting of venture capital and debt capital must have the right and appropriate level to increase company value.

3 RESEARCH METHODOLOGY

This type of research is associative research with a population of all technology companies listed on the Indonesia Stock Exchange (IDX) in 2019-2020. The sampling method used is purposive sampling. With the following criteria:

- (1) Technology companies that have financial statements for 2019-2020
- (2) Technology Companies That Earned Profit During 2019-2020
- (3) Technology companies that have complete 2019-2020 financial statement data according to researcher needs.

The data used in this study is secondary data in the form of financial statements with data collection techniques using the documentation method.

3.1 *Modal intelektual*

Value Added Intellectual Coefficient (VAIC)

$$VAIC = VACA + VAHU + STVA$$

$$VA = OUT - IN$$

$$VACA = \frac{VA}{CE} \rightarrow VAHU = \frac{VA}{HC} \rightarrow STVA = \frac{SC}{VA}$$

Keterangan:

VA = Value Added

OUT = Total Sales and Other Income

IN = Selling and other expenses except salary and wage expenses

CE = *Capital Employed* (ekuitas, laba bersih)

HC = *Human Capital* (Beban gaji)

Meanwhile, the measurement using MVAIC is added with the measurement of relation capital (RC). RC is measured by the formula:

$$RC = \frac{RC}{VA}$$

RC = *Relation Capital* (Biaya Pemasaran)

$$VMAIC = VACA + VAHU + STVA + RC$$

In IC measurements with MCM, it can be calculated by the formula:

$$MCM = \frac{MV}{BV}$$

MV: Market value (share price x shares outstanding)

BV: Book value (assets - debt capital)

3.2 *Nilai perusahaan*

The measurement of firm value is by using Tobin's Q with the formula:

$$Tobins\ Q = \frac{EMV + LBV}{Total\ Aset}$$

Where the LBV value is the liability book value, while the EMV value is obtained from the price per share x the number of shares outstanding.

3.3 *Struktur modal*

Capital structure is measured by the DER ratio, which is the formula:

$$DER = \frac{Total\ Hutang}{Total\ Modal}$$

3.4 *Metode analisis data*

The method of analysis carried out in this study is the linear regression analysis method. before linear regression analysis, statistical tests are carried out first, then continued with the classical assumption test consisting of normality test, multicollinearity test and heteroscedasticity test. Then the linear regression test was carried out.

4 RESEARCH RESULT

4.1 *VAIC affects company value*

Based on the results of data processing, it can be seen that VAIC has a negative effect on firm value. These results indicate that the higher the VAIC value, the lower the firm value.

Based on resource-based theory, conveyed by Barney (1996) states that companies that are able to manage their resources well will be able to increase company value. Intellectual Capital as measured by VAIC has three measurement components, namely capital employed, human capital and structural capital. The three measurement components must be able to be maximized by the company to create excellence for the company.

The measurement of Intellectual Capital projected by VAIC in technology companies listed on the IDX in 2019-2020 shows a negative effect because the amount of VAIC value from 2019 to 2020 tends to increase, but the profits of most companies tend to decrease. The decline in company profits was followed by a decline in stock prices. This happened to several companies such as DMMX, HDIT and MCAS.

The decline in stock prices that occurs indicates that the value of a company is decreasing. The increase in VAIC value that is not in line with the increase in firm value shows that technology companies have not been able to manage their resources well to become a competitive advantage. So that even though the value of intellectual capital increases, it cannot be in line with the increase in firm value. As for investors who view the value of the company based on one component only, where investors should assess a company based on all VAIC components.

The results of this study are in line with the results of research from Wergiyanto (2016) which states that IC as measured by VAIC has a negative effect on firm value. This is because investors only use VACA as a consideration in assessing the company. Fivi (2020) in her research states that VAIC has a significant negative effect on firm value because IC management is still not maximized and IC has not become a competitive advantage among other companies.

4.2 *MVAIC affects company value*

The test results in this study are in line with resource-based theory, where every company that manages its resources well will provide a competitive advantage to the company (Barney 1996). So that the company will have a higher value than other companies. This advantage has a big influence on investors' views of the company.

The statistical results show that the average value of the MVAIC and Firm Value variables is higher than the median value. This shows that technology companies have company values that tend to be high. So that the increase in MVAIC value is in line with the increase in company value as in MTDL, PTSN, TFAS.

The technology sector companies used in this study have been able to use their advantages, both in the utilization of human resources and other company resources such as the utilization of information technology and knowledge and relationships with relations so as to increase company value in the eyes of investors. This shows that the ability to manage resources is an important factor in generating company value.

IC projected with MVAIC has different results from IC projected with VAIC. This is because the relationship contained in the MVAIC component is a differentiator in the two methods so that it has a significant influence on the value of IC. This shows that investors view the relationship relationship (RC) is an important thing that must be owned by the company and can be an advantage for a company.

The results of this test are in line with research conducted by Putri *et al.* (2019) where Intellectual Capital as measured using MVAIC has a positive influence on firm value, this happens because the company is able to make the most of its non-physical assets. Research

conducted by Dewi and Dewi (2020) also states that MVAIC which is used to measure the effect of IC has a significant effect on firm value.

4.3 *MCM affects company value*

MCM has a positive influence on Firm Value. So that the higher the MCM, the higher the company value. The average value of the MCM and Firm Value variables shows a value higher than the median value. This shows that technology companies have company values that tend to be high. So that the increase in MCM value is in line with the increase in firm value. This is indicated by the increase and decrease in MCM value in line with the increase and decrease in firm value.

In accordance with resource based theory, it means that the company has used all assets owned to the maximum and is able to provide superior value that is different from other companies. In measuring Intellectual Capital with MCM, it is represented by measuring the value of the company's shares with the asset value consisting of all company assets.

Investors tend to assess companies by stock prices, when the company's stock price is high and the assets owned are high, investors consider that the company is of high value. So that the increase in each share price and company assets is in line with the increase in company value. This has been reflected in the results of data processing where all samples from technology companies have a positive direction towards firm value.

The results in this study are in accordance with research conducted by Svanadze and Kowalewska (2017) which states that the measurement of Intellectual Capital using MCM has a significant effect, because investors measure the value of the company from its share price and the number of assets owned by the company. Jordão and Almeida (2017) in their research also stated that Intellectual Capital with MV / BV measurement has a positive influence on financial performance which has an impact on increasing company value, and can maintain the sustainability of the company financially. This is because the measurement reflects the company's share price.

4.4 *VAIC, MVAIC and MCM affect company value*

Based on the results of data processing, it is known that there is a simultaneous influence (overall) of the VAIC, MVAIC and MCM variables on firm value. These results indicate that the existence of Intellectual Capital has a positive influence on firm value. So that the higher the Intellectual Capital in a company, the more the company value will increase.

The average value of the VAIC, MVAIC, MCM and Firm Value variables is higher than the median value. This shows that technology companies have company values that tend to be high. So that the value of IC affects the increase in firm value.

These results are in line with the RBT theory conveyed by Barney (1996), where each company has different resources and has the ability to manage its resources well to achieve competitive advantage. The positive effect of Intellectual Capital on firm value indicates that technology sector companies in Indonesia already have a competitive advantage so as to increase firm value.

IC represented by VAIC, MVAIC or MCM has a positive influence on firm value because investors consider that the IC owned by each company is valuable. So for investors, every company that has IC will have its own added value compared to other companies and have a high company value.

The results of this study are in line with research conducted by Santiani (2018) which states that Intellectual Capital has a positive and significant effect on firm value. This is because companies with good IC are able to maximize their economic resources to prosper shareholders, so investors view the company as valuable. The same opinion is also obtained from research conducted by Nuryaman (2015) where Intellectual Capital has a positive effect on firm value. This is because the IC measurement component is able to show added value to investors.

4.5 *VAIC, MVAIC and MCM affect firm value with capital structure as a mediator*

In the mediation test with regression that has been done, it can be seen that the first regression, second regression and third regression have met the requirements. So that from the three regression results, it shows that capital structure can mediate the relationship between IC and firm value.

In accordance with the RBT theory which states that good management of tangible and intangible assets will increase firm value, on the other hand, poor management will reduce firm value. Likewise, in the capital structure, good capital structure management will increase firm value and poor management will decrease firm value.

Capital structure can mediate the relationship between intellectual capital and firm value because the company is able to manage well the proportion of debt and capital owned by the company. Debt owned by a company has a certain limit, if the company has debt outside of this limit, investors will assess the company's debt as too high and tend to reduce the company's value.

Likewise with the use of debt in the company. The debt owned by the company must be used properly, the results of this study indicate that the use of debt in technology companies has been used properly so that it can increase the value of intellectual capital owned by the company, so that the company's value in the eyes of investors becomes higher.

The results of this study are in line with research conducted by Kurniawan and Lukman (2020) where capital structure can mediate the relationship between Intellectual Capital and firm value. This happens because the right proportion of debt usage has increased the value of the company.

5 CONCLUSION

The purpose of this study is to determine whether Intellectual Capital measured by VAIC, MVAIC and MCM has an influence on Firm Value projected by Tobins Q. And whether Capital Structure can be a mediating variable in the relationship between Intellectual Capital and Firm Value. And whether Capital Structure can be a mediating variable in the relationship between Intellectual Capital and firm value. Based on the results of the research that has been done, it can be concluded:

Intellectual Capital as measured by VAIC has a negative influence on firm value. VAIC is measured by a combination of VACA, VAHU and STVA. The negative effect that occurs is because technology companies are still unable to utilize their Intellectual Capital. So that ownership of Intellectual Capital cannot increase firm value.

Intellectual Capital projected by MVAIC has a positive influence on firm value. MVAIC itself is formed from the combination of VACA, VAHU, STVA and RC. The positive effect on MVAIC shows that the existence of RC or relationship capital has an important role in intervening the relationship between human capital and structural capital. So that the company can increase its company value.

Intellectual Capital as measured by MCM has a positive influence on Firm Value. This measurement uses the market share value with the company's assets to assess how these assets can affect the increase in company value. Simultaneously Intellectual Capital has an effect on.

Capital Structure simultaneously provides a mediating influence on the relationship between Intellectual Capital and firm value. But partially, capital structure cannot mediate the relationship between Intellectual Capital and firm value. Except for Intellectual Capital as measured by MCM.

Based on this study, it can be seen that Intellectual Capital measured by MCM has the greatest influence on firm value. However, MVAIC can explain the components of Intellectual Capital better. The measurement using MVAIC has more informative measurement indicators, so that the information generated can be more accurate. In addition, the role of RC is also very significant to maximize the role of VACA, VAHU and STVA that have existed before.

5.1 Suggestions

Based on the research results and limitations, the authors provide suggestions for further research, such as increasing the number of research samples with companies whose conditions are stable in one sector so that the financial data used does not tend to be too high or too low. If using time series panel data, it should use data for more than 2 years. Further researchers are advised to measure Intellectual Capital using monetary and non-monetary measurements. So that the results obtained are more accurate, this is because each company has monetary and non-monetary intellectual capital.

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The impact of leverage, fixed asset intensity, and multi-nationality on tax avoidance with independent commissioners as a moderation variable

Aulia Jihan Marzuqah, Ihyaul Ulum & Aviani Widyastuti
Program Studi Akuntansi Universitas Muhammadiyah Malang

ABSTRACT: This study aims to examine and analyze the impact of leverage, fixed asset intensity, and multinationality on tax avoidance with an independent commissioners as a moderating variable. The population in this study are manufacturing companies and real estate, property and building construction companies listed on the Indonesia Stock Exchange (IDX) in 2021. The sample was determined using a purposive sampling method, so the total sample was 54 samples. Hypothesis testing with the help of SPSS 25 software with Multiple Regression Analysis (Multiple Linear Regression) and Moderated Regression Analysis (MRA) (interaction test). The results of the study prove that leverage and multinationality have a significant effect on tax avoidance. Fixed assets intensity has no significant impact on tax avoidance.

Keywords: leverage, fixed asset intensity, multinationality, tax avoidance, independent commissioner

1 INTRODUCTION

Tax subjects are individuals or entities determined by the laws and regulations in force in Indonesia. As the main source of state revenue, the Government seeks to continue to optimize the potential for tax revenue. But on the other hand, this is the opposite when viewed from the tax subject side. For companies, tax is a burden that can reduce the company's net profit for the year (Aina and Rohman 2016).

One of the tax avoidance cases was carried out by PT Bentoel Internasional Investama. Based on data from the Tax Justice Network Institute dated May 8 2019, the company committed tax evasion by making debt loans from 2013 to 2015 from Rothmans Far East BV, an affiliated company in the Netherlands, to finance bank loans and purchase machinery and equipment. Interest costs on these loans are tax deductible which can reduce tax costs by up to USD 14 million per year.

The emergence of the phenomenon above is one that proves that there are still companies that carry out tax avoidance actions in order to maximize their company's profits which have an impact on the state. Tax avoidance is an action to minimize the tax burden by not violating the law (Sinaga and Suardikha 2019). Tax avoidance is an action that does not violate tax regulations because this practice takes advantage of the loopholes that exist in tax law regulations (Ayuningtyas and Sujana 2018).

Many factors influence the implementation of tax avoidance by companies. There are several cost components owned by the company, including interest expense and depreciation expense. The interest expense is based on the loans owned by the company. Leverage shows the company's high debt. The higher the level of leverage will increase the interest expense that must be paid. Interest expense is a component that can be used as a deductible expense,

so that the higher the interest expense, the smaller the tax paid (Adelina 2012). Previous research conducted by Alam and Fidiana (2019) concluded that leverage has a positive effect on tax avoidance practices. The same results were also produced from research conducted by Ependi (2020) and Rahmadani *et al.* (2020) who concluded that leverage has a positive effect on tax evasion. Meanwhile, research conducted by Honggo and Marlinah (2019) Leverage has no effect on tax avoidance because not all companies use debt to finance their assets.

In carrying out its operational activities, the company has fixed assets which in its accounting records carry a depreciation expense. High intensity of fixed assets will drive high depreciation expense so that it can reduce profit before tax. This will encourage taxes to be paid smaller. Based on research conducted by Nasution and Mulyani (2020) and Noviyani and Mu'id (2019), it is stated that the higher intensity of fixed assets has a significant effect on tax avoidance. However, it is inversely proportional to research conducted by Asri and Mahfudin (2021) and Jamaludin (2020) which state that the intensity of fixed assets has no effect on tax avoidance.

The development of the era of globalization and free markets encourages multinational companies to operate in different countries from their home countries. Multinational companies can use transfer pricing schemes to carry out tax avoidance. Research conducted by Widodo *et al.* (2020a) and Pramudya *et al.* (2021) states that multinationality has a significant effect on tax avoidance practices. There are differences with the results of research conducted by Anggraini *et al.* (2020) which shows that multinationality has no effect on tax avoidance.

Independent commissioners as independent parties or not affiliated with other parties are responsible for overseeing the Company's Management in running the company so that the interests of all stakeholders can be treated fairly. Based on the regulations issued by the IDX, the minimum number of independent commissioners is 30%. Based on previous research conducted by Tamara *et al.* (2021) stated that the number of independent commissioners has a significant effect on tax avoidance practices. This means that the more the number of independent commissioners, the less tax avoidance practices. Research conducted by Supriyanto (2021) The moderating variable for the proportion of independent commissioners simultaneously moderates (weakens) the effect of profitability, solvency, activity, sales growth and fixed asset intensity,

This research was conducted to refine previous studies and to find out the factors that can influence tax avoidance in this research making companies in the manufacturing sector and property, real estate, and building construction companies listed on the Indonesia Stock Exchange as sample companies.

Manufacturing company as a company that has been a taxpayer several times which is focused on the inspection list of the Directorate General of Taxes (Mulyani *et al.* 2019). In addition, manufacturing companies also have a large influence on Indonesia's economic growth. The magnitude of this influence can be seen from the magnitude of the contribution of manufacturing companies to Indonesia's Gross Domestic Product (GDP). Basically, GDP is used to determine the economic condition of a country. In this case, manufacturing companies contribute the most to Indonesia's GDP compared to other sectors, which is above 20% annually (Zia *et al.* 2018).

Furthermore, the second sector which is the research sector in this study, namely property, real estate, and building construction companies is one of the sectors that provides a large number of workers and has a multiplier effect and a significant backward linkage to economic sectors. others (Setiawan *et al.* 2021). This is what makes property, real estate and building construction companies seen as one of the sectors that earn high profits from the operational activities they carry out. These developments will attract investors to invest in companies so that they can grow good economic growth and increase income for a country, especially through the property and real estate sector in tax revenues for the country.

The existence of inconsistencies in several previous studies prompted the authors to examine further the factors that encourage tax avoidance in Indonesia with the variables that

have been described. In addition, the Independent Commissioner Variable as a Moderating Variable is deemed necessary because of the role and responsibility of the independent commissioner in overseeing the company's operations whether it can prevent tax avoidance practices within a company. Therefore, the authors are interested in conducting research entitled "The Influence of Leverage, Fixed Asset Intensity, and Multinationality on Tax Avoidance with Independent Commissioners as Moderating Variables (Empirical Studies on Manufacturing Companies and Property, Real Estate, and Building Construction Companies Registered in Bei Year 2021).

2 LITERATURE REVIEW

2.1 Agency theory

According to Jensen and Meckling (1976), Agency theory is a relationship that occurs between two parties *viz* principal with agent. *The two parties have different interests or decisions that present a conflict. Each party has its own interest goals where the agent will focus on interests that conflict with the interests of the principal.* This causes the principal to monitor and control the agent by imposing several mechanisms with the aim of aligning the interests of both parties.

2.2 Tax avoidance

According to Pohan (2013) Tax avoidance or tax avoidance is a form of effort by taxpayers to suppress and minimize the tax burden legally and safely because it takes advantage of loopholes or weaknesses in the tax law itself.

2.3 The impact of leverage on tax avoidance

There are indications that the company is doing tax evasion can be seen from the funding policy taken by the company. One of the funding policies is the leverage policy, namely the level of debt used by the company to finance its operating activities. The increase in the amount of debt will cause interest expenses to be paid by the company. The interest expense incurred on this debt will be a deduction from the company's net profit which will reduce tax payments so that maximum profits are achieved.

H1: Leverage has an impact on Tax Avoidance

2.4 The impact of fixed asset intensity on tax avoidance

The intensity of fixed assets owned by a company can affect a company's tax obligations. The relationship between the intensity of a company's fixed assets and taxation is related to the depreciation contained in the company's investment decisions on fixed assets. The depreciation expense attached to the ownership of fixed assets will affect the value of corporate tax payments, this is because the depreciation expense will act as a tax deduction.

H2: Fixed Asset Intensity has an impact on Tax Avoidance

2.5 The impact of multinationality on tax avoidance

These multinational companies have bigger opportunities to carry out tax avoidance compared to companies that only operate in one country. Multinational companies will take advantage of loopholes, namely weaknesses such as very low tariff differences or even not imposing taxes, which are known as tax haven countries.

H3: Multinationality has an impact on tax avoidance

2.6 *The impact of leverage on tax avoidance with independent commissioner as a moderating variable*

Companies use debt to meet the company's operational and investment needs. The greater the debt, the smaller the taxable profit because the tax incentive on debt interest is greater. This has implications for increasing the use of debt by companies. The board of commissioners is in charge of and responsible for overseeing the quality of the information contained in the financial reports. To overcome this, the board of commissioners is allowed to have access to company information.

The board of commissioners does not have authority within the company, so the board of directors is responsible for conveying information related to the company to the board of commissioners (NCCG 2001).

H4: Independent Commissioner moderates the impact of Leverage on Tax Avoidance.

2.7 *The impact of fixed asset intensity on tax avoidance with independent commissioner as moderating variable*

The practice of tax avoidance by companies by utilizing the depreciation expense of fixed assets can be minimized by having an independent board of commissioners in a company. In this case, the intermediary between company managers and company owners, namely independent commissioners, in making strategic or policy decisions can greatly influence so that there are no violations of applicable regulations, this is included in tax decisions.(Ardyansah and Zulaikha 2014).

H5: Independent Commissioner moderates the impact of Fixed Asset Intensity on Tax Avoidance.

2.8 *The impact of multinationality on tax avoidance with independent commissioners as a moderating variable*

In order to minimize aggressive tax avoidance, it is necessary to supervise the actions of managers in corporate activities, including one of the multinational actions. Where companies are suspected of transferring their income to subsidiaries that have lower tax rates. This is where it is hoped that independent commissioners can reduce aggressive tax avoidance by managers, one of which is an act allegedly committed by a multinational company.

H6: Independent Commissioner moderates the impact of Multinationality on Tax Avoidance.

3 METHODS

This type of research is associative research. The population in this study uses manufacturing companies and real estate property companies, and building construction companies that are listed on the Indonesia Stock Exchange (IDX) in 2021. Determination of the sample uses a purposive sampling method with several criteria, namely 1) manufacturing companies and property real estate companies, and building construction listed on the Indonesia Stock Exchange (IDX) in 2021. 2) Manufacturing companies and real estate property companies, and building construction companies that implement and have financial reports for the 2021 period. 3) Manufacturing companies and real estate property companies, and construction buildings that have subsidiaries abroad because one of the research variables is multinationality. After the sampling process was carried out, there were 54 companies that met the sample selection criteria. The type of data is secondary data. Data obtained through the IDX website (<https://www.idx.co.id/>) and company websites. Data analysis techniques with Multiple Regression Analysis and Moderated Regression Analysis (MRA) with the help of SPSS software version 25.

4 RESULTS AND DISCUSSION

4.1 Description of research object

This research was conducted on all manufacturing companies listed on the Indonesia Stock Exchange (IDX) in 2021. Manufacturing companies are divided into three sectors, namely the various industrial sector, the basic and chemical industry sector, and the consumer goods sector. In addition, this research also examines real estate property companies and building construction.

The sample selection in this study used a purposive sampling technique, namely there were certain criteria. After the sampling process was carried out, there were 54 companies that met the sample selection criteria. The results of sample selection based on predetermined criteria can be seen in the following table:

Table 1. Research sample selection criteria.

Research Sample Selection Criteria	Number of company sales
Manufacturing companies and real estate property companies, and building construction on the Indonesia Stock Exchange (IDX) in 2021	293
Manufacturing companies and real estate property companies, and building construction companies that apply and have financial reports for the 2021 period	(23)
Manufacturing companies and real estate property companies, and building construction companies that do not have overseas subsidiaries	(216)
Number of companies that match the criteria	54

Source. Results of 2023 research data processing.

4.2 Descriptive statistical analysis

Table 2. Descriptive statistical analysis.

	N	Minimum	Maximum	Mean	Std. Deviation
LEV (X1)	54	0.097	3.825	0.765	0.573
IAT (X2)	54	0.020	0.908	0.315	0.185
MULTI (X3)	54	0.011	1.000	0.293	0.229
TAX AVO (Y)	54	0.002	0.674	0.184	0.152
KOMIND (Z)	54	0.286	0.750	0.431	0.105
Valid N (listwise)	54				

Source. Results of 2023 research data processing.

Based on Table 2 of the test results above, it can be seen that the results of descriptive statistics on all research variables indicate that the majority of the resulting mean values are greater than the standard deviation.

4.3 Normality test

The normality test uses the Kolmogorov Smirnov statistic by looking at the KomolgorovSmirnov test, if the probability value is significant > 0.05 then the data is normally distributed and if < 0.05 then the data is not normally distributed. The test results can be seen as follows:

Asymp results. Sig. (2-tailed) of 0.200, which means that the result is greater than 0.05 ($0.200 > 0.05$) so that these results indicate that in the normality test the data is normally distributed.

Table 3. Normality test.

		Unstandardized residual
N		54
Normal parameters ^{a,b}	Mean	.0000000
	Std. Deviation	.13271556
Most Extreme Differences	Absolute	.101
	Positive	
	Negative	.101 –.069
Test Statistic		.101
Asymp. Sig. (2-tailed)		.200c,d

a. Test distribution is Normal

Source. Results of 2023 research data processing.

4.4 Multicollinearity test

The multicollinearity test is carried out by looking at the tolerance value and VIF value which can be seen from the SPSS output. The test results can be seen as follows:

Table 4. Multicollinearity test.

Coefficients ^a		Collinearity Statistics	
Model		Tolerance	VIF
1	LEV	.955	1.047
	IAT	.862	1.160
	MULTI	.861	1.161
	KOMIND	0.954	1.048

Source. Results of 2023 research data processing.

Based on Table 3 above, it can be seen that there is no multicollinearity in the data, because the tolerance value of all independent variables is greater than 0.10 and the VIF value is not more than 10.

4.5 Heteroscedasticity test

The heteroscedasticity test was carried out with the Glejser test, which is to find out whether a regression model has an indication of heteroscedasticity by means of absolute residual regression. Here are the results of the heteroscedasticity test:

Table 5. Heteroscedasticity test.

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig
	B	Std. Error			
1 (constant)	.066	.056		1.176	.245
LEV	–.006	.021	–.042	–.286	.776
IAT	–.003	.069	–.007	–.044	.965
MULTI	.010	.056	.028	.180	.858
KOMIND	0.090	.115	.114	.784	.437

a. Dependent Variable : ABS_RES

Based on the results of the Glejser test, it can be seen that all research variables have no symptoms of heteroscedasticity because all sig values > 0.05.

4.6 Multiple regression analysis (multiple regression analysis)

This study uses multiple linear regression to see the effect of leverage, fixed asset intensity, multinationality on tax avoidance. The following are the results of hypothesis testing on sample companies that have been carried out:

Table 6. Multiple linear regression test.

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
	B	Std. Error			
1 (Constant)	.132	.047		2.814	.00
LEV	.080	.034	.301	2.324	.02
IAT	.141	.113	.171	1.244	.21
MULTI	-.184	.091	-.276	-2.029	.04

a. Dependent Variable : TAX AVO

Based on Table 6 The multiple linear regression test above can be explained as follows:

- (a) $\alpha = 0.132$
The constant (α) is 0.132 which means that if leverage, fixed asset intensity, and multinationality are 0, then tax avoidance is 0.132.
- (b) $\beta_1 = 0.080$
The regression coefficient (β_1) is 0.080 which means that if leverage increases by 1 then tax avoidance will increase by 0.080. Based on the test results table, the leverage variable has a tcount value of 2.324 and a significance of 0.024 which is smaller than the significance value used in this study, namely 0.05 ($0.024 < 0.05$), the t-count value is also greater than the t-table ($2.324 > 2.008$) this means that there is a significant partial effect of the leverage variable on tax avoidance. A positive coefficient means that there is a positive relationship between leverage and tax avoidance, the higher the leverage value, the higher the tax avoidance. So that H1 which reveals "Leverage affects tax avoidance" can be accepted.
- (c) $\beta_2 = 0.141$
The regression coefficient (β_2) is 0.141 which means that if the intensity of fixed assets increases by 1 then tax avoidance will increase by 0.141. Based on the test results table that the fixed asset intensity variable has a t value of 1.244 and a significance of 0.219. This indicates that there is no significant partial effect of the fixed asset intensity variable on tax avoidance. Because the calculated t value is smaller than t table ($1.244 < 2.008$) and also the sig. the test result is greater than the sig value. used in research ($0.219 > 0.05$). The results shown are the variable regression coefficients which are positive but have no significant effect. Thus, H2 which reveals "Fixed asset intensity affects tax avoidance" is not accepted because it is not supported statistically.
- (d) $\beta_3 = -0.184$
The regression coefficient (β_3) is -0.184 , which means that if multinationality increases by 1, tax avoidance will decrease tax avoidance by 0.184. Based on the results of tests carried out by the multinationality variable, it has a t-value of -2.029 and a significance of 0.048. This shows that there is a significant partial effect of the multinationality variable on tax avoidance. Because the significant value of the test results is

smaller than the significant value used in the study ($0.048 < 0.05$). The coefficient is negative, meaning that there is a negative relationship between multinationality and tax avoidance. So that H3 which reveals multinationality has an effect on tax avoidance can be accepted.

4.7 Interaction testing or moderated regression analysis (MRA)

This test aims to determine whether the moderator variable strengthens or weakens the influence of the independent variables on the dependent variable. The test results for the interaction testing model or Moderated Regression Analysis (MRA) are as follows:

Table 7. Moderated regression analysis (MRA) test.

Model	Coefficients ^a		Standardized Coefficients Beta	T	Sig.
	Unstandardized Coefficients	Std. Error			
1 (Constant)	.070	.237		.294	.77
LEV	-.045	.140	-.168	-.319	.75
IAT	.187	.494	.227	.379	.70
MULTI	-.182	.397	-.274	-.459	.64
KOMIND	.207	.504	.143	.411	.68
X1M	.193	.229	.490	.842	.40
X2M	-.135	1.166	-.080	-.116	.90
X3M	.056	.848	.040	.066	.94

a. Dependent Variable: TAX AVO

Based on Table 7 above it can be explained as follows:

- (a) $\alpha = 0.070$
The constant (α) is 0.070, which means that if leverage, fixed asset intensity, and multinationality, and all variables each of which is moderated by an independent commissioner, the value is 0, then the tax avoidance value is 0.070.
- (b) $\beta_1 = -0.045$
The regression coefficient is -0.045 , which means that if the other independent variables have a fixed value and leverage increases by 1, it will reduce tax avoidance by 0.045.
- (c) $\beta_2 = 0.187$
The regression coefficient is 0.187, which means that if the other independent variables have a fixed value and the intensity of fixed assets increases by 1, tax avoidance will increase by 0.187.
- (d) $\beta_3 = -0.182$
The regression coefficient is -0.182 , which means that if the other independent variables have a fixed value and multinationality increases by 1, then tax avoidance will decrease by 0.182.
- (e) $\beta_4 = 0.207$
The regression coefficient of 0.207 indicates the effect of the independent commissioner variable on tax avoidance is positive, which means that if there is an increase in tax avoidance, it will be followed by an increase in the independent commissioner of 0.207 assuming the other variables have a fixed value.
- (f) $\beta_5 = 0.193$
The regression coefficient of 0.193 shows that the influence of the leverage*independent commissioner variable on tax avoidance is positive, which means that if there is an

increase in tax avoidance, it will be followed by an increase in leverage*independent commissioners of 0.193 assuming the other variables are of a fixed value.

(g) $\beta_6 = -0.135$

The regression coefficient of -0.135 shows the effect of the fixed asset intensity variable * independent commissioners on tax avoidance is negative, which means that if there is an increase in tax avoidance, it will be followed by a decrease in the intensity of fixed assets * independent commissioners of 0.135 assuming other variables have a fixed value. h. $\beta_7 = 0.056$.

The regression coefficient of 0.056 indicates the effect of the multinationality*independent commissioner variable on tax avoidance is positive, which means that if there is an increase in tax avoidance, it will be followed by an increase in multinationality*independent commissioners of 0.056 assuming other variables have a fixed value.

4.8 Simultaneous significance test (F Test)

Simultaneous test or F test is conducted to test whether all independent variables namely leverage, fixed asset intensity, multinationality, and independent commissioners as moderators have a significant effect simultaneously (simultaneously) on the dependent variable of tax avoidance. The results of the F test are seen in the ANOVA table column sig. with a significance level of 0.05 or 5%. The following is a table of F test results from the SPSS output that has been carried out:

Table 8. Simultaneous Test (F Test) multiple linear regression.

ANOVA ^a					
Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	.227	3	.076	3.754	.017
Residual	1.009	50	.020		
Total	1.237	53			

a. Dependent Variable: TAX AVO

b. Predictors: (Constant), MULTI, LEV, IAT

Source. Results of 2023 research data processing.

The significance value is $0.017 < 0.05$ so it can be concluded that there is a simultaneous or joint effect of the leverage variable, fixed asset intensity, and multinationality on the tax avoidance variable. Then proceed with the calculation of the simultaneous test with the addition of moderating variables:

Table 9. Simultaneous Test (F Test) MRA regression.

ANOVA ^a					
Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regres- sion	.318	7	.045	2.278	.044 ^b
Residual	.918	46	.020		
Total	1.237	53			

a. Dependent Variable: TAX AVO

b. Predictors: (Constant), X3M, LEV, KOMIND, IAT, X1M, MULTI, X2M

It can be concluded that there is a simultaneous influence or jointly from the variable leverage, fixed asset intensity, multinationality. Independent commissioners, moderation (leverage*independent commissioners), moderation (fixed asset intensity*independent commissioners), moderation (multinationality*independent commissioners) on tax avoidance variables.

4.9 Partial significance test (T Test)

The T or partial test aims to test how the influence of each independent variable partially or individually on the dependent variable. This test is carried out using a significance level of 0.05 or 5%. Following are the results of the t test for your berg linear regression model and also the results of the moderation regression test.

Table 10. Partial test (T Test) multiple linear regression coefficients^a.

Model	Unstandardized Coefficients		Standardized Coefficients Betas	Q	Sig.
	B	std. Error			
1 (Constant)		.047		2,814	.007
Lev	.080	.034	.301	2,324	.024
IAT	.141	.113	.171	1,244	.219
MULTI	-.184	.091	-.276	-2,029	.048

a. Dependent Variable: TAX AVO

Source. Data processed by researchers in 2023.

Table 11. Partial Test (t test) MRA Regression.

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients Betas	Q	Sig.
	B	std. Error			
1 (Constant)	.070	.237		.294	.770
Lev	-.045	.140	-.168	-.319	.751
IAT	.187	.494	.227	.379	.707
MULTI	-.182	.397	-.274	-.459	.648
KOMIND	.207	.504	.143	.411	.683
X1M	.193	.229	.490	.842	.404
X2M	-.135	1.166	-.080	-.116	.908
X3M	.056	.848	.040	.066	.947

a. Dependent Variable: TAX AVO

Source. Data processed by researchers in 2023.

Based on the results of the regression analysis performed, it can be concluded that the results of the hypothesis testing of the 6 hypotheses are as follows:

4.9.1 The impact of leverage on tax avoidance

The results of this study can provide support for agency theory which explains that the greater the debt owned by a company, the greater the interest costs that will arise and this will have an impact on reducing the tax burden that will be paid to the government. The results of this study support research conducted by (Pratiwi *et al.* 2021) which shows that leverage has a significant positive effect on tax avoidance. This shows that there is a uni-directional relationship between leverage and tax avoidance.

Increases or decreases in tax avoidance can be influenced by leverage, this is because the increase in debt made by companies to fund their companies will affect the increase in interest payments so that companies take advantage of this to minimize the tax burden or even have a tendency to lead to tax avoidance. If the company continues or gets higher, it will cause interest expenses. The interest expense which is then borne by the company is used to reduce the company's taxable income to reduce its tax burden. Thus, the higher the value of the leverage ratio, the higher the indication that the company is practicing tax avoidance.

4.9.2 *The impact of fixed asset intensity on tax avoidance*

In research conducted on the sample companies of this study, based on the data owned, it is suspected that the existence of fixed assets does not pose a risk to tax avoidance because the high availability of fixed assets is thought to have a large impact which is risky for the company, for example the emergence of maintenance expenses, required storage space and risks. obsolescence of fixed assets owned so that this causes the company not to use these fixed assets as a tendency to carry out tax avoidance. There is no influence from the intensity of fixed assets because the intensity of fixed assets is in fact a company asset that is needed for the company's operational interests only. The company does not deliberately save large assets for taxes, but the goal is that these fixed assets are assets needed for the benefit of the company. So that the intensity of fixed assets does not affect tax avoidance or tax avoidance.

4.9.3 *The impact of multinationality on tax avoidance*

Multinational companies generally have good prestige and brand image in the countries where they operate (David 2011). So that tax avoidance has the risk of damaging the company's reputation if the tax authorities find out. Companies that carry out tax avoidance will be considered unethical in carrying out their business so that it will reduce the trust of customers and other stakeholders. In addition, multinational companies often receive incentives from the government (Dewi and Jati 2014). The incentive aims to encourage exports and the income is expected to return to the country. Matters regarding incentives are explained and regulated in the Regulation of the Minister of Finance Number 124/PMK.011/2013 concerning reduction of the amount of Income Tax article 25 and Postponement of payment of Income Tax article 29 of 2013 for Certain Industrial Taxpayers. Thus, multinational companies no longer need to avoid taxes because they have received various incentives and concessions from the government. So, this is in line with the test results where the higher the multinationality value will reduce the tax avoidance value.

4.9.4 *The impact of leverage on tax avoidance is moderated by the independent commissioner variable*

The results of this study are not in line with agency theory which explains that independent commissioners in a company are able to exercise strict oversight in terms of decision making, including and related to tax payments. This shows that the company's aim to present independent commissioners is only limited to complying with applicable regulations, namely the implementation of the Republic of Indonesia Financial Services Authority Regulation Number 33/POJK. 04/2014 regarding the number of independent commissioners of at least 30% in one company (Yulyani *et al.* 2022).

4.9.5 *The impact of fixed asset intensity on tax avoidance is moderated by the independent commissioner variable*

Ineffective oversight function carried out by independent commissioners on tax avoidance due to company management limiting and dominating so as to be able to control the company's independent commissioners (Mulyani *et al.* 2018). Independent commissioners are boards or members who come from outside management so that independent commissioners have a tendency not to be influenced by management's actions, independent commissioners can only encourage management to disclose broader information to shareholders and

stakeholders. Thus, the ability of an independent commissioner to oversee the process of preparing financial statements will be limited if the parties concerned within the company have a higher level of domination in controlling the independent commissioner. Independent commissioners are suspected of only being able to supervise so that the company avoids unspecified provisions, not taking or replacing the rights or authority possessed by the company's management.

4.9.6 *The impact of multinationality on tax avoidance is moderated by the independent commissioner variable*

The existence of an independent commissioner in a multinational company only fulfills the administrative requirements of the capital market supervisory authority in Indonesia (Kusuma and Firmansyah 2018). Tax planning activities carried out by multinational companies in Indonesia are in accordance with the policies issued by the parent company. Independent commissioners do not have authority over the activities of multinational companies related to multinationality. Thus, the sixth hypothesis cannot be accepted because it is not supported statistically. Independent commissioners are also suspected of being less responsive in paying attention to the presence or absence of tax avoidance in the company or the ability of independent commissioners to monitor the process of disclosure and provision of information will be limited if affiliated parties in the company dominate and can control the independent commissioners as a whole.

4.10 *Determination coefficient test (R2 Test)*

The coefficient of determination test (R2 test) aims to measure how far the model's ability to explain the dependent variable is. The following are the results of the coefficient of determination test (R2 test) for the multiple linear regression model:

Table 12. Test of the coefficient of determination (R2 Test) multiple linear regression summary models.

Model	R	R Square	Adjusted R Square	Std Error of the Estimate
1	.429 ^a	.184	.135	.142074

a. Predictors: (Constant), MULTI, LEV, IAT
Source. Data processed by researchers in 2023.

The results of the coefficient of determination test show the adjusted R square value of multiple linear regression of 0.135 or 13.5%, which means that the moderate variable with tax avoidance is influenced by 13.5% of the variable leverage, fixed asset intensity, and multinationality. While 86.5% is influenced by variables outside of the variables used in this study.

Table 13. Test results for the coefficient of determination (R2 Test) MRA regression.

Summary models				
Model	R	R Square	Adjusted Square	R std. Error of the Estimate
1	.507 ^a	.257	.144	.141288

a. Predictors: (Constant), X3M, LEV, KOMIND, IAT, X1M, MULTI, X2M
Source. Data processed by researchers in 2023.

Furthermore, the following are the results of the coefficient of determination test for the moderated regression analysis (MRA) equation:

Test results the coefficient of determination shows the adjusted R Square value of moderation regression of 0.144 or 14.4%, meaning that the moderate variable with tax avoidance is influenced by 14.4% of all variables. Meanwhile, 85.6% is influenced by other variables outside of the variables used in this study.

5 CONCLUSION

Based on the results of the research and analysis conducted, it can be concluded that leverage (X1) and multinationality (X3) have an impact on tax avoidance, while the intensity of fixed assets (X2) has no effect on tax avoidance. Meanwhile, the independent commissioner (X) was unable to moderate all variables on tax avoidance.

5.1 Suggestion

For future researchers, they can use the most recent year if companies have issued many recent annual reports. It is also hoped that researchers will be able to map companies that actually carry out transfer pricing, and related to measuring the intensity of fixed assets in order to eliminate components that cannot be depreciated.

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Measuring earnings quality of manufacturing company through earnings volatility and growth opportunity

Ahmad Waluya Jati, Mudrifah, Lupita Abril Sivana & Adi Prasetyo
University of Muhammadiyah Malang, Indonesia

ABSTRACT: This study aims to empirically examine the effect of earnings volatility and growth opportunity on earnings quality. The sample in this study is a manufacturing sector company listed on the Indonesia Stock Exchange (IDX) in 2020. The sampling technique in this study uses the purposive sampling method. The number of sample in this study is 49 companies. The secondary data is used in this study. The analytical method used is multiple linear regression analysis using STATA 15. The results of this study indicate that earnings volatility has a positive effect on the quality of earnings produced using discretionary accruals. Meanwhile, the growth opportunity variable has been shown to have a negative effect on the quality of earnings produced by using discretionary accruals.

Keywords: Earnings Volatility, Growth Opportunity, Earnings Quality, Manufacturing Company, Indonesia Stock Exchange, Discretionary accruals

1 INTRODUCTION

A company uses earnings quality as a tool to measure the level of success or failure in achieving the expected goals (Saymeh 2020). The quality of earnings occupies a special role in accounting principles, namely as a basis for disclosing the real reality of earnings, the better the quality of earnings generated by a company, the better the reputation of the company (Ali *et al.* 2019).

According to Narita and Taqwa (2020), the low quality of earnings in the view of investors will occur if a company does not show real earnings because this will result in inaccuracies in investor assessments, so in this case, the company must show the actual earnings generated.

The recording of financial statements basically also cannot be ruled out, if an error occurs it will affect the amount of earnings generated, as was the case in PT. Hanjaya Mandala Sampoerna Tbk (HMSP) which is one of the manufacturing companies listed on the Indonesia Stock Exchange with the line of business being the trading industry. The earnings generated by PT. Hanjaya Mandala Sampoerna Tbk (HMSP) decreased by 37.95% compared to the same period in the previous year which reached 13.72%. The decrease in net income resulted in an unfavorable impact on basic earnings per share which also decreased to Rp. 74 per share compared to the previous earnings per share of Rp. 118 per share (Sidik 2021).

PT. Garudafood Putra Putri Jaya Tbk (GOOD), in the midst of the current covid pandemic, has recorded a net earnings distributed to the parent entity of 211.94 billion, net earnings for that year decreased by 28.79% compared to the previous year. The decrease in net income was accompanied by a decrease in earnings per share which in that year recorded Rp 28.73 per share while the previous year was Rp 40.34 per share, not only earnings per share but sales in that period also decreased, so that in first semester report of 2020 the company's profit generated decreased by 49.77% (Sidik 2020).

Some of these problems indicate that there are factors that affect earnings quality, including earnings volatility, the higher the earnings volatility value, it also indicates that the earnings quality is poor (Pane and Rahmadhani 2021a). Yulianti, Anjani, Nugraheni, Habibah, and Prasetya (2020) states that the more opportunities to develop a company, it indicates that the company's performance can be said to be good, which can be seen from the price of shares owned by a company.

Several previous studies related to the factors that affect earnings quality as carried out by Pane and Rahmadhani (2021a) shows that earnings volatility indicators have a negative effect on earnings quality. Subsequent research was carried out by Yulianti *et al.* (2020) growth opportunity indicators have a significant effect on earnings quality.

This research is a modified form of previous research that has been carried out by Pane and Rahmadhani (2021a), in this study added a predictor in the form of growth opportunity. The object of research used in this study is a manufacturing company in 2020, while the object of previous research used is PT. Bank of North Sumatra. The sampling technique in this study was purposive sampling, while in previous studies the sampling technique was saturated.

The purpose of this research is to test and prove empirically the relationship between earnings volatility, growth opportunity, and earnings quality. The population in this study is manufacturing companies listed on the Indonesia Stock Exchange (IDX) in 2020, which in that year Indonesia is in the midst of a COVID-19 pandemic, so many sectors are experiencing problems related to profits. Based on this objective argument, it can be formulated the title adopted in this study, namely "The Effect of Profit Volatility and Growth Opportunity on earnings quality (Empirical Study on Manufacturing Companies on the IDX in 2020)".

2 LITERATURE REVIEW

Agency theory and signaling theory are used in this study. Maslahah (2021) states that agency theory is an approach to earnings management. It explains that the conflict that occurs between the interests of management (agent) and the owner (principal) can affect earnings management. This arises because of the desire to achieve and consider a set level of prosperity. Based on the explanation of several definitions of agency theory, it shows that agency theory has a correlation with earnings quality.

Then signal theory is a theory in which, for the shares owned by a company to increase, the executive will provide good information regarding the performance shown in the company's financial statements (Ross 1977). Financial statements are a picture that can be given by companies in attracting investors so that by applying signal theory, companies will better understand how companies can make efforts in providing signals to users of financial statements, in this theory, management will be as much as possible to maintain the company's credibility in the market, it is intended that the company will report whatever conditions it is experiencing at that time, even though the company's condition is not good (Narita and Taqwa 2020).

Earnings that fluctuate significantly each period will make it difficult for company management to project future profits. High earnings volatility will indicate that the company's performance in mitigating risk is not good, which will impact the quality of the resulting profit. Based on research by Pane and Rahmadhani (2021), earnings volatility has a negative effect, which means that the resulting profit is stable because the higher earnings volatility will reflect the company's poor performance. Further research that discusses earnings volatility was carried out by Sasongko *et al.* (2021); in this study, earnings volatility positively affects earnings quality, which means that the resulting profit tends to fluctuate. This research is in line with agency theory in which the manager will try his best to meet the needs of the principal, but the information possessed by the agent and the principal is different, so this will result in conflict. This research is also consistent with the existence of signal theory, where the better the information in the form of financial reports provided by the company, the better the response received. Based on the results of this study, the hypothesis that can be proposed is as follows:

H1: Earnings Volatility Affects Earnings Quality.

Companies that have the opportunity to grow rapidly in the long term have good performance, and the resulting earnings quality will also be good, so good earnings quality is characterized by a low or near zero discretionary accrual value. The higher the growth opportunity of a company, the discretionary accrual value will decrease or approach zero, which means that earnings management actions taken by management are low, and later, the earnings quality that the company will produce will be good and vice versa.

Based on research conducted by Yulianti *et al.* (2020) revealed that Growth Opportunity has a positive influence on earnings quality, so the higher the opportunity for a company to develop, the better the resulting earnings quality will be. Further research was conducted by Rizqi *et al.* (2020); in this study, growth opportunity has a negative effect on earnings quality; this is because the higher the opportunity for the company to grow, the lower the investor response will be, which will have an impact on the quality of earnings generated. This research is in line with agency theory, where the higher the growth opportunity of a company will result in management taking action to withhold profits by not distributing dividends, but the principal or shareholders expect to benefit from the distribution of dividends provided by the company, this results in a conflict that occurs between the agent and the principal. This research is also consistent with the existence of signal theory, which states that the better information in the form of financial reports provided by the company, the better the response received by the company. Based on the results of this study, the hypothesis that can be proposed is as follows:

H2: The Effect of Growth Opportunity on Earnings Quality.

3 RESEARCH METHODOLOGY

This research is a type of associative research. The population in this study were 168 manufacturing companies listed on the Indonesia Stock Exchange in 2020. The sampling technique used was purposive sampling, entering criteria for business entities that issued 2020 annual reports, presenting financial statements using rupiah currency, providing complete data that needed in the study, as well as 5 outlier data. So that obtained 49 companies as research samples.

3.1 Earnings quality

Earnings quality is earnings quality is an indicator of real earnings assessment in the sense of avoiding fraud or manipulation of profit value (Laoli and Herawaty 2019). The calculation of the earnings quality variable in this study uses Discretionary accruals which the calculation refers to the Wicaksono and Syam (2020) and Yulianti *et al.* (2020).

3.1.1 Calculating the company's discretionary accruals

$$DA_{it} = TA_{it}/A_{it} - 1 - NDA_{it}$$

Information:

DA_{it} = Discretionary Accruals of company i period t

TA_{it} = Total accruals of company i in year t

A_{it-1} = Total assets of company i in period $t-1$

NDA_{it} = *Non-Discretionary Accruals* company i in period t

3.1.2 Calculating the company's total accruals

$$TA_{it} = NI_{it} - CFO_{it}$$

Information:

TA_{it} = Total accruals of company i in year t
 NI_{it} = net profit of company i in period t
 CFO_{it} = Cash flow from operating activities of company i period t

3.1.3 Calculating company's non-discretionary accruals

$$NDA = 1(1/A_{it} - 1) + 2(\Delta RE_{vit}/A_{it} - 1 - RE_{cit}/A_{it} - 1) + 3(PPE_{it}/A_{it} - 1)$$

Information:

NDA = Non-Discretionary Accruals company
 β = Beta
 A_{it-1} = Total assets of company i in period t-1
 RE_{vit} = Change in earnings of firm i in period t
 RE_{cit} = Changes in receivables of company i in period t
 PPE_{it} = Fixed assets of company i in period t

3.1.4 Looking for the values of 1, 2, 3 it is necessary to do multiple linear regression test

$$TA_{it}/A_{it} - 1 = 0 + \beta_1(1/A_{it1}) + \beta_2(\Delta RE_{vit}/A_{it} - 1) + \beta_3(PPE_{it}/A_{it} - 1) + \epsilon$$

Information:

TA_{it} = Total accruals of company i in year t

4 RESULTS AND DISCUSSION

- (1) Classic assumption test
 - (a) Normality test
 - (b) Multicollinearity test
 - (c) Heteroscedasticity test
- (2) Test of determination
- (3) Multiple linear regression test
- (4) Partial test (t test)
- (5) Simultaneous test (f test)

Descriptive statistics are data that is seen by the average value (mean), medium, standard deviation, maximum value and minimum value (Bougie and Sekaran 2019).The following are the results of descriptive statistical tests.

Table 1. Descriptive statistical test.

Variable	Obs (n)	Mean	Std. Dev	Min	Max
Dac	49	-.1041566	.0730928	-.2490784	.0272634
VI	49	28.42123	1.579303	26.2454	32.74418
Go	49	2.247365	2.240855	.2586202	13.54348

Source. Secondary data processed 2022.

The dependent variable of earnings quality which is proxied by using discretionary accruals has a minimum value of -0.2490784 while the maximum value is 0.0272634. The mean value of earnings quality is -0.1041566 while the value for the standard deviation is 0.0730928 which means that the mean value is smaller than the standard deviation value.

This shows that of the 49 manufacturing companies listed on the be in 2020 there are 45 companies that carry out earnings management by reducing the value of earnings (income decreasing), while the remaining 4 companies carry out earnings management by increasing profits (income increasing).

Profit volatility with a minimum value of 26.2454 while the maximum value of 32.74418. The mean value for earnings volatility is 28.42123 while the standard deviation value is 1.579303 which means that the mean value is higher than the standard deviation value. From the total sample, there are 28 manufacturing companies that experience low profit fluctuations, while 21 other manufacturing companies experience fairly high profit fluctuations.

Growth opportunity with a minimum value of 0.2586202 while the maximum value of 13,54348. The mean value for growth opportunity is 2.247365 while the standard deviation value is 2.240855, meaning that the mean value is higher than the standard deviation value. From the total sample, there are 24 manufacturing companies that have low growth opportunity standards, 10 medium companies, and 15 companies that have high standards.

4.1 Classic assumption test

4.1.1 Normality test

Normality test is a test carried out to find out whether a data has a normal distribution or not. In this study to test for normality using the skewness kurtosis test. The following is a graph of the normality test of this study:

Table 2. Normality test results.

Variable	Obs	Pr (skewness)	Pr (kurtosis)	Adj chi2	Prob>chi2
Dac	49	0.8730	0.9488	0.03	0.9853

Source. Secondary data processed 2022.

Based on the results of the normality test, it can be seen that the probability value (prob>chi2)0.9853 > 0.05 concluded that the research data was normally distributed.

4.1.2 Multicollinearity test

The multicollinearity test was carried out in order to determine the relationship between the independent variables. symptoms of multicollinearity will not occur if the tolerance value is more than (>) 0.10 and the vif value is less than (<) 10.00(Ghozali 2018).

Table 3. Multicollinearity test results.

Variable	Vif	1/vif
V1	1.00	0.999247
Go	1.00	0.999247

Source. Secondary data processed 2022.

Based on the multicollinearity test table, it can be concluded that the calculation of the vif value and the 1/vif value for all independent or independent variables has a vif value of less than 10 and a 1/vif value of more than 0.1 which indicates that there is no multicollinearity between the independent variables.

4.1.3 Heteroscedasticity test

The heteroscedasticity test has the aim of knowing a regression where there is a mismatch of variance from one study to another. The basis for testing heteroscedasticity is if the significant value is > 0.05 , then it can be said that there is no heteroscedasticity (Ghozali 2018).

Table 4. Heteroscedasticity test results.

Chi2 (1)	=	0.00
Prob > chi2	=	0.9584

Source. Secondary data processed 2022.

Based on the heteroscedasticity test, it can be seen that the prob>chi2 value shows the number $0.9584 > 0.05$, which means that there are no symptoms of heteroscedasticity.

4.2 Determination test

The coefficient of determination (r^2) is used to measure how far the ability of the independent variables in this study to explain variations in the dependent variable. The following is a table of the coefficient of determination test results:

Table 5. Determination test results.

R-squared	=	0.3720
Adj r-squared	=	0.3447

Based on the results of the determination test, it can be seen that the adjusted r^2 value is 0.3447. This indicates that 34.5% of earnings quality variables can be explained by independent variables in the form of earnings volatility and growth opportunity, while the remaining 65.5% is explained by other variables not included in this study.

4.3 Multiple linear regression test

This study uses a hypothesis test with multiple linear regression analysis model, namely by doing multiple linear regression analysis, f statistical test and t statistical test, using stata 15 software. The following is Table 5 of the results of the regression test:

Table 6. Multiple linear regression test.

Dac	Coef	Std.err	t	P> t
Vl	.0268517	.0054095	4.96	0.000***
Go	-.0066806	.0038125	-1.75	0.086*
_cons	-.8523018	.1539819	-5.54	0.000***
F(2.46)	= 13.63			
Prob > f	= 0.0000			
R-squared	= 0.3720			
Adj r-squared	= 0.3447			

Significance level:

*** (significant 1%)

** (significant 5%)

* (significant 10%)

Source. Secondary data processed 2022.

Based on the results of the calculation of the multiple linear regression equation in Table 6, it is obtained that the multiple linear regression equation model on the effect of earnings volatility and growth opportunity on earnings quality is as follows:

$$\text{Dac} = -0.8523018 + 0.0268517 \text{ vl} - 0.0066806 \text{ go}$$

Based on the multiple linear regression equation, it is explained that the constant value resulting from the multiple linear regression test is -0.8523018, which means that if the value of the independent variable in the form of earnings volatility and growth opportunity is at zero (0) then the discretionary accrual value will be 85 %. The coefficient value of earnings volatility is 0.0268517, which means that the existence of independent variables in the form of earnings volatility and growth opportunity makes the discretionary accrual value increase by 2.6%, while the coefficient of growth opportunity is 0.0066806 which means that the independent variable is growth opportunity can reduce the value of discretionary accruals by 0.67%.

4.3.1 *Simultaneous test (f)*

In the table written the number of probabilities is 0.0000. Which means < 0.05 . Together, the independent variables in the form of earnings volatility and growth opportunity affect earnings quality.

4.3.2 *Partial test (t)*

Based on the multiple linear regression equation, it is explained that the probability value of the t-test of significance for the earnings volatility variable is at the 1% level, with a probability value of 0.000 which is less than the significance level of 0.01, and a coefficient value of 0.0268517 which is positive or equivalent. With 2.6%, so it can be concluded that earnings volatility has a positive effect on earnings quality which is proxied by using discretionary accruals. The next independent variable is growth opportunity which has a probability value of t-test of significance for the earnings volatility variable at the level of 10%, with a probability value of 0.086 which is less than a significance level of 0.1, and a coefficient value of -0.0066806 which is worth negative or equivalent to -0.67%.

4.3.2.1 *Earnings volatility affects earnings quality* Based on the results of this study by processing statistical data and calculating multiple linear regression analysis, it can be concluded that earnings volatility has a positive effect on earnings quality. The higher the value of earnings volatility in the company, the higher the value of discretionary accruals in the sample companies, which will have an unfavorable impact on the quality of earnings generated because the profits generated tend to fluctuate.

The results of this study are consistent with agency theory, that there are differences in interests between the agent and the principal in terms of achieving company goals. The results of this study are also in line with signal theory, in which the company will provide a signal in the form of financial statements produced to investors, the better in reflecting the truth, the better the investor's view and vice versa.

The results of this study support the research conducted by Sasongko *et al.* (2021) and Wijayanti and Diyanti (2017), which states that earnings volatility has a positive effect on earnings quality as proxied by using discretionary accruals. This is because if the company experiences fluctuations in profits where the profit generated is not significant. It will trigger a company to take earnings management actions, either by increasing profits or by reducing the earnings generated.

4.3.2.2 *Growth opportunity affects earnings quality* Based on the results of this study by processing statistical data and calculating multiple linear regression analysis, it can be concluded that earnings volatility has a positive effect on earnings quality. The higher the value of growth opportunity in the company, the lower the value of discretionary accruals in the sample company, which will have a good impact on the quality of earnings generated by the company.

The results of this study are consistent with agency theory, that there are differences in interests between the agent and the principal in terms of achieving company goals. The results of this study are also in line with signal theory, in which the company will provide a signal in the form of financial statements produced to investors, the better in reflecting the truth, the better the investor's view and vice versa.

The results of this study support research conducted By Rizqi, Murdayanti, and Utamingtyas (2020), and Pitria (2017) which states that growth opportunity has a negative effect on earnings quality. This is because if the company has a high growth opportunity value, the intensity of earnings management in the company will be lower, it can be seen from the value of discretionary accruals generated so that it will have a good impact on the quality of earnings generated.

5 CONCLUSION

- (1) Based on the results of the study, it can be seen that earnings volatility has a positive effect on earnings quality.
- (2) Based on the results of the study, it can be seen that growth opportunity has a negative effect on earnings quality

5.1 *Suggestions*

Further research can add research objects and use research objects with different sectors. So if there are companies that do not publish financial statements, the number of

- (1) measurement.
- (2) samples in further research is not too small.
- (3) Future research is expected to continue to use the same variables but with different measurements or approaches in order to be able to see the advantages and disadvantages of each measurement

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China's belt and road initiative (BRI) influence on potential United States of America power shifts in the Asia Pacific region

Ruli Inayah Ramadhon, Dedik Fitra Suhermanto & Hafid Adim Pradana

Department of International Relations, University of Muhammadiyah Malang, Indonesia

ABSTRACT: This paper aims to analyze how the Belt and Road Initiative (BRI) affects the existence of United States power in the Asia Pacific. The BRI program initiated by China's strategy in realizing The Rise Peace of China in international relations. The embodiment of China's rise is applied in expansive policies through expanding the scope of economic cooperation with countries in the Asia Pacific. By this project, China's expansion had a major influence on the existence of the United States in the Asia Pacific Region. Based on this point of view, BRI policies are considered to be challengers and have the opportunity to shift the United States both economically, militarily and politically. This research uses Power Transition theory to explain the influence of BRI on the existence of the United States by emphasizing two basic foundations they are dominant and challenger power. Dominant power refers to the existence of the United States in the region and Challenger is China BRI policy. The result of this study is that BRI has a strong influence on the declining influence of the United States in the Asia Pacific. Throughout the BRI policies, indirectly becomes a means of disseminating influence and has the potential to shift the position of the United States in the Asia Pacific.

Keywords: China, United States, Belt and Road Initiative, Asia pacific, Power Transition

1 INTRODUCTION

The Belt and Road Initiative (BRI) is one of the policies made by China during Xi Jinping's reign in 2013 (Anam & Ristiyani 2018). The Belt and Road itself is a multidimensional economic, diplomatic, and geopolitical undertaking. The purpose of holding this policy is to connect the economies of Eurasia, East Africa, Europe and more than 71 countries, the figure represents 70% of the total global population (ZiroMwatela & Changfeng 2016). Then, by initiating and leading BRI with an initial investment of 1.3 trillion USD to create infrastructure, telecommunications, energy pipelines, trade, and ports. In this BRI policy itself consists of two components, namely the Silk Road Economic Belt and the 21st Century Maritime Silk Road (Anam & Ristiyani 2018).

The Silk Road Economy is a land route created to connect the lagging region of western China with Europe through Central Asia. While the 21st Century Maritime Silk Road is a sea route that aims to connect provinces in the coastal region of China with the Southeast Asian region to Africa through port lines and also railway lines (Cai 2017). By connecting many countries with China, Xi Jinping can realize his dream of building an iron silk road for China and can facilitate its interests. BRI itself is a giant project, this is because BRI's expenditure is estimated to reach 100 billion USD per year (Marbler & Shan 2017). As a result, China established the New Development Bank in 2013, the Asian Infrastructure Investment Bank (AIIB) in 2014, the Silk Road Fund in 2015, and also other funding mechanisms, both in bilateral and multilateral scopes.

This concept of the “silk road” is not new, but has existed since the time of the Han Dynasty, around 200 BC (Kartini 2015). At that time the concept was used as a trade and cultural route between China and Central Asia and South Asia, as well as with Europe and the Middle East. There are two factors driving China’s new silk road policy, namely: Domestic factors, as it is known that since 1989 and 2011 China experienced an average economic growth of 10% also followed by increased energy needs (Whal 2015). However, as a result of this growth, China is worried about its dependence on Russia and has begun to look for alternative energy sources, because it is known that Asian countries are rich in energy sources.

In addition, there are also international factors, where the policy of the United States is the main factor influencing China’s policy (Guidetti 2015). China is also seeking to improve its relations with its Asia Pacific region’s neighbors. Then the concept of the silk road was again announced by Xi Jinping, aimed at strengthening relations between China, Central Asia and Europe. The idea of the new silk road was raised as a result of the fact that China’s domestic economy underwent structural changes that reflected a “new normal” of economic slowdown, which turned out to have a significant impact on Asian economies.

Furthermore, Xi Jinping also put forward a proposal on the establishment of an Asia Infrastructure Investment Bank (AIIB) which is used to fund infrastructure development and also promote regional interconnectivity and economic integration (Fallon 2015). The AIIB will also complement China’s increased bilateral development financing and connect more resources from developing countries (Soilen 2012). It is conducted to secure energy supplies from the Indian Ocean and South China Sea balancing economic strength and multilateral cooperation on infrastructure development (Len, 2015; Ye 2015).

1.1 *United States engagement in the Asia Pacific region*

The dynamics of power relations between China and US is inseparable with the struggle to influence the Asia Pacific region. In this context, China through the BRI policy seeks to depoliticize its political competition with the United States through a campaign of regional economic development programs that will involve the active participation of countries in the Asia Pacific region, one of which is through multilateral mechanisms. Indirectly, the Cooperation campaign is the right strategy to gradually take on the role of the United States in the Asia Pacific because through multilateral it is considered a defensive strategy that will not downplay the contribution and influence of any country. Correspondingly, China seeks to increase its influence in the dynamics of international politics, particularly diametrically with the influence of the United States.

The major reason is before the announcement of BRI policy, the United States dominated in the Asia Pacific region. It was proven by the involvement of the United States in the South China Sea conflict during the Barack Obama administration, where at that time the United States exerted great influence in reducing tensions between overlapping claim countries in the South China Sea. Through the presence of the United States in the midst of such tensions is considered one of the efforts to maintain security and national interests over the SCS, as well as maintain global leadership, peace and stability in the Region (Bakhtiar Darmawan 2017).

Along with the involvement of the United States in the SCS conflict, there was also cooperation established between the United States and Japan, the cooperation began at the end of World War II, when Japan signed the San Francisco treaty which was also signed by 49 other countries containing a declaration of the end of World War II. In addition, Japan’s sovereignty was also under the supervision of the United States, which meant the dissolution of the Japanese armed forces and resulted in Japan becoming heavily dependent on its alliance with the United States. Therefore, the United States also established its military bases in the sovereign region of Japan in the name of peace (Zeijden 2009).

Another influence that the United States has in the Asia-Pacific region is the establishment of military cooperation with Taiwan. The cooperation between the two countries has made China heated up, it is because the United States has violated the regulations that have been made by China, namely the One China Policy during the Den Xiaoping government. The meaning of the policy itself is to state that there is only one China including mainland China, Tibet, Hong Kong, Macao, Xinjiang, and Taiwan. Additionally, One China Policy also states that diplomatic relations can only be carried out if there is recognition of the One China Policy (<http://www.china.org.cn> 1949). However, the cooperation carried out by the United States-Taiwan does not take into account the One China Policy at all, it certainly causes regional tensions between China-Taiwan and the United States.

The United States also has a great influence in the countries of the Southeast Asian region, such as Indonesia and other Southeast Asian countries. In Indonesia, the United States provided foreign assistance during the administration of President Suharto in the form of bilateral cooperation in which the assistance was divided into 3 categories of assistance: military and security assistance (25% of annual expenditure), humanitarian assistance and disaster management (15%), and economic development assistance (60%), but the distribution varies depending on the interests of the country receiving the assistance (Jones 2019).

The influence possessed by the United States also reaches the Countries of the South Asian region. One of them is the influence of the United States in India, where the United States provides support for the construction of nuclear reactors in India. Although the United States provided assistance to nuclear development carried out by India which led to tensions between States in South Asia especially between India and Pakistan, the United States also acted as a stabilizer in the region, where the United States sought to stop attempts at nuclear arms competition between India and Pakistan it was also done by the United States so that China would not intervene in the region.

1.2 *The competition and struggle for influence in the region*

The relationship between China and the United States even before the inception of the BRI policy already had a bad relationship, this was due to China's always ambivalent or ambiguous attitude towards the United States (Soetjipto 2014). Moreover, from the perspective of the United States, the dynamics of relations between China and the United States have a poor track record in bilateral relations between them, even before and after World War II. Although the two countries have recognized each other the importance of their respective positions and positions in the global political arena, and the global economy.

The attitudes of the two countries also have two spectrums, namely containment and engagement. On the spectrum of 'engagement' in the United States, it is seen that the character of the relationship between America and China is more positive, and the bilateral relationship between the two is arguably stable in terms of dependence between the two politically and economically. And for the spectrum of 'containment' this view is more in demand by realist thinkers, because the strategies taken by the United States are more containment (Shambaugh 2021). It can also be seen from the attitude of the United States which is very sensitive to the efforts made by China to realize a global balance, causing diplomatic relations between the two to heat up.

In this case, the reaction of the United States was the result of China's actions that tended to be offensive, by means of increasing power by expanding its cooperation territory. The purpose of holding the BRI itself is to overcome political turmoil that occurs within its domestic scope, especially in the Xinjiang region by providing guarantees for economic development (Kartini 2016). In addition, there is also an increase in domestic oil demand, so BRI is aimed at increasing import supply lines from countries in the Asia Pacific. China's ambition to seize power in the Asia Pacific region can be seen from China's efforts to spread its influence by financing infrastructure projects (Anam & Ristiyani 2018). This certainly has implications for the reduced supremacy of the United States in the Asia-Pacific region, and

leads to a struggle between China and Japan as the leading position in the region. This is because Japan has also succeeded in leading the Asian region.

The offensive actions taken by China to gain power beyond the United States, lead more to hegemony of a dominating nature than moral and intellectual leadership. China in this regard emphasizes not only the economic influence of the currency, but also military power, leadership in its handling of regional conflicts and the possession of nuclear weapons. But on the other hand, there are also those who suggest that the power of hegemony comes from finances, production capacity and military power (Yilmaz 2010). From several sources of hegemony that have been mentioned, China made the BRI policy because of several factors, namely; China considers that each State moves automatically on the basis of national interests, China seeks to gain leadership positions in the East Asian region by financing HSR projects that are competing fiercely with Japan, China also seeks hegemony in the field of security by forming a new security order by inviting States to exclude the United States from the security affairs of the Asian region. In addition to security, China is also trying to find its hegemonic position in the economic sphere by establishing the AIIB which tends to challenge the regional financial order (ADB) as well as globally (World Bank and IMF).

2 LITERATURE REVIEW

In this study, nine literatures were divided into two parts, namely policy, security and geopolitics. The first part about the policy written by (Anam & Ristiyani 2018, Kartini 2016). The second part about security is by (Yandry Kurniawan 2016). The three Geopolitical topics are (Cavanna 2019; Heiduk & Sakaki 2019; Ramadhan 2018).

2.1 *Belt road initiative policy implications*

Previous studies of BRI policy dominated in several ways, especially the implications of BRI on the existence of major countries in the Asia Pacific. In writing Kartini (2015) that BRI policy covers two aspects, namely land (new silk road economic belt) and ocean (21st century maritime silk road) (Nathan & Mustafaga 2014). These aspects are a combination of geopolitical and geoeconomics forces to connect the Eurasian region with China as its center. The idea of the new silk road was raised as a result of China's domestic economy undergoing structural changes that illustrated the "new normal" of the economic slowdown that brought a very significant economic impact to the Asian region. According to Kartini (2015).

China's foreign policy is seen as the result of internal and external pressures. The thing that has most affected internal factors or domestic factors is since the death of Mao Zedong and the economic situation that has seriously endangered China, which is why China must find new export markets to maintain existing markets and also narrow the development gap between rich coastal areas and poor land areas. In addition, external factors or international factors that greatly influence China's foreign policy are the policies of the United States, considering that the rivalry between these two countries includes both economic and military sectors. So that China's foreign policy has implications for American hegemony, since then the United States considers that China's rise is not as peaceful as China declared, it can be seen from the South China Sea dispute, but more than that China seeks to dominate its nearby seas, namely the East Asian and western Pacific regions.

In line with Anam & Ristiyani (2018) that the driving factor for the initiation of the BRI policy is seen from 2 perspectives, namely the perspective of realism and liberalism. In view of realism, China's interest in securing its energy sources through cooperation with countries in the South Asian region, the expansion of influence in the South Asian region by building a secular infrastructure limits India's influence so that Pakistan is in the position of "under a Chinese security blanket.", and the AIIB and SRF that China has built challenge the regional and global order by looking at the division of voting rights within the AIIB and

other financial institutions. Then the perspective of liberalism underlies BRI's policy, namely China wants to rebuild its economy by strengthening its economic relations with Eurasian countries, BRI as a tool to increase economic integration by carrying out infrastructure development, and BRI financing through the AIIB and also SRF only to complement the international system by encouraging reforms to these institutions. In addition, this journal also discusses the implementation of China's BRI and its implications for the United States. As a result of this BRI policy, the supremacy of the United States in the Asian region began to decline.

2.2 *Belt road initiative in the security dimension*

Syahrin (2008) in his writings that China's presence with BRI has a strong correlation with the United States so that the security dimension in the region becomes shaky. This indirectly marks that the feud between the two major countries has entered into the regional security framework. Such is the case with research Yandry Kurniawan (2016) who sees the BRI or OBOR policy as having the main objective of connecting Asia, Africa and Europe by sea, while by land China aims to connect China, Central Asia, Russia and Europe (Ministry of Foreign Affairs 2015). When viewed from the vision of OBOR, which is a vision of developing transcontinental connectivity through land and sea routes, it is an opportunity for various countries to get mutual benefits carried out by joint funding for infrastructure development that crosses the Eurasian regions. It is not surprising, then, that China's presence with the BRI may result in regional instability due to the implications not only on the economic aspect but also the shift in political influence in the Region.

2.3 *BRI in geopolitics perspectives*

Geopolitics is one of the alternatives to see China's movement in the implementation of BRI in the Asia Pacific. Bri's projections in the international political constellation suggest a new direction in looking at the behavior of countries, especially large countries such as the United States. BRI, which stretches between continents, is actually China's strategy to confirm that global power is not only owned by the United States as a super power. Ramadhan (2018) in his hypothesis that the construction of maritime trade corridor routes is a strategic development to expand China's influence in Eurasia. The sea transportation route is one of the priorities in realizing the BRI Silk jaur because this water transportation route still dominates to facilitate energy supply (oil and gas). Correspondingly, Radityo *et al.* (2019) that China as an emerging power through the BRI is considered a firm stance to become a competitor to the United States.

For China, economic development is a national interest and is also the basis for a nation to become stronger and more prosperous. Therefore, this OBOR policy is an effort made by China to open wider market access, with the aim of strengthening its economic system. Moreover Heiduk & Sakaki (2019) looking at the OBOR projection is also a way for China to realize its political interests by conducting various cooperation and investments, because the wide scope of this OBOR project can certainly improve China's status in the international world as a large country.

3 RESEARCH METHODOLOGY

The research method used in this study uses an explanatory method, where this type of research is a study that studies the causal relationship between two or more variables. This type of research is also used as a test of the principle or prediction of a theory. In addition, this type of research is also used to develop a theory into new issues or topics. Then the

relationship between the variables is explained using a frame of thought first, which is then formulated in the form of a hypothesis (Suryana 2010).

The level of analysis in this study uses the level of nation-state analysis. This level of analysis has the basic assumption that decision makers will behave the same when faced with the same situation. Thus the behavior of the nation-state is considered the dominant actor in international relations. The nation-state analysis unit was chosen because the author wanted to see the reason for the perception of the decline in the influence of the United States in the Asia Pacific region, which here acts as a variable X or analysis unit. Through this level of analysis, the author can see the factors that pose a threat to the decline in the influence of the United States in the Asia Pacific region, namely the BRI policy made by China. Here the BRI policy made by China acts as a variable Y or explanatory unit (Lamont 2015).

In this study, the authors also used qualitative data analysis techniques which generally emphasized more on the use of words compared to quantification in data collection and analysis (Bryman 2016). This research also uses data collection techniques or library research. The data in this study were obtained from several library sources that are related to the topic in the study. Literature studies themselves are obtained through journals, books, and the like. This data collection technique uses internet searching methods or online data search by searching, browsing, or downloading (Nurdin & Hartati 2019).

4 RESULT AND DISCUSSION

4.1 *The existence of United States in the Asia Pacific region*

The existence of the United States' influence in the Asia-Pacific region has been happening for a long time, especially after the end of the cold war, which has brought about a change in the system in world politics, which was originally from an international system dominated by two superpowers to being dominated by one power only. Where the position of the United States is dominates as a superpower therefore this is changes in the pattern of interaction between States as well as in the system to provide consequences for order and stability in the world.

In this case the United States adopted a hegemonic strategy to promote its regional order, it was used to serve the interests of the United States itself. Its most dominant influence in the international system makes the United States feel that it does not have a balanced competitor in all sectors, namely the military, economic and political sectors. It also affects the acceptance of the liberalist-capitalist ideology that the United States has by the Countries of the world (Ikenberry 2011).

There were two things that made the United States the sole hegemonic power in the Asia Pacific region at that time, where the United States had established bilateral relations with key countries in the Asia Pacific, including South Korea, Japan, India, Australia and also countries that are members of ASEAN (Cohen 2012). Then, second is the United States military commitment to several countries in the Asia Pacific region that have no time limit, this military commitment is proven by the existence of the United States Armed Forces which are divided into two military commands, namely the US Pacific Command and the US Central Command where two of the nine Combatants and of the five Regional Commands (Cohen 2012).

Pacific Command covers parts of South Asia and Central Asia is part of Central Command, Pacific Command. Meanwhile, The United States Pacific Command (US PACOM) based in Hawaii has an area of responsibility covering about 50% of the earth's surface and approximately 60% of its population, including two heavily populated countries, namely Indonesia. US PACOM oversees 43 countries with five allied countries (Cangara 2022). US PACOM covers areas of responsibility from Alaska to Madagascar and from India to the South Pacific.

The United States also built its military base in Australia, precisely in the Darwin region. Therefore the United States seeks to regulate everything that happens in the Asia Pacific region to maintain its superiority, including in regulating regional conflicts that will result in wars both on a local scale and on a wider scale (Christensen 1999). This is done by the United States under the pretext of maintaining regional stability, besides that the United States also does so through diplomatic channels and carries out threats by utilizing its military strength in the Asia Pacific region.

4.2 *Existence of the belt and road initiative (BRI) in the Asia Pacific region*

The rise of China, especially in the economic sector, has strengthened China's influence on the geoeconomics sector in the Asia Pacific region through its giant project the Belt and Road Initiatives (BRI) policy (Khurana 2007). BRI which is a grand strategy, is the development of previous concepts in the form of the Maritime Silk Road, Silk Road Economic Belt, "Go Out" foreign policy, Nine Dash Line or Nine Broken Lines, and String of Pearls or Pearl Threads. BRI itself was first introduced through the OBOR concept during the visit of Chinese President Xi Jinping in September 2013 in Kazakhstan. Meanwhile, the concept of Maritime Silk Road as part of the initiation was first introduced by President Xi Jinping during a speech in front of the Indonesian parliament on his state visit in Southeast Asia (Blanchard & Flint 2017).

By focusing on economic cooperation among countries in the Asia Pacific region, China prioritizes the aspect of connectivity with the development of a number of trade infrastructures fully supported by the Asia Infrastructure Investment Bank (AIIB). The establishment of the AIIB in 2015 consisted of 84 members and was divided into 40 regional members, 21 non-regional members, and 23 members followed (Blanchard & Flint 2017). With an investment from the Chinese government of 40 billion USD BRI consists of 3 land silk roads and 2 maritime silk roads covering 71 countries of participant (Whal 2015).

The land or silk road consists of China's relations with Central Asia, then Russia and Europe through the China-Mongolia-Russia corridor and the New Eurasian Land Bridge. The routes are connected to these main relations, including one to Southeast Asia and South Asia including the China-Pakistan Corridor, and others stretching to the China-Central Asia-West Asia corridor. While at sea, the Maritime Silk Road (JSM) lies in the core significance of the South China Sea (LCS) which is the confluence of the two routes. The first route goes south and east of the Pacific ocean, and another route to the west connects the Indian Ocean, the Middle East, and Europe. These routes begin with China's coastal ports which also connect the China-Indochina Corridor and the Bangladesh-China-India-Myanmar Corridor (OBG 2018).

There are several factors that make many countries in the Asia Pacific region interested in joining China's BRI policy, including the benefits obtained by BRI participating countries are reducing travel time by 12%, increasing trade between 2.7% and 9.7%, increasing income by 3.4%, and improving the welfare of 7.6 million people from severe poverty (WorldBank 2022).

China's existence of influence began in its movement in Asia Pacific at the 2001 APEC Summit meeting, by hosting and promoting Shanghai to advance its provinces and cities and attract Western investment and technology (Luzyanin 2014). China ensured its position in the Asia Pacific by launching a fairly successful ASEAN +1 (China) project. Since the election of Xin Jinping as China's new leader, escalating China's active role in ASEAN+6 "China, Japan, South Korea, India, Australia and New Zealand" (Luzyanin 2014).

The Philippines also responded positively to the BRI after the Trans-Pacific Partnership (TPP) proposed by the US had no bright future prospects after Donald Trump cancelled the deal on January 23, 2017 (Cipto 2018). President Rodrigo Duterte's administration seized this opportunity to secure \$167 billion in funding through medium-term investments allocated to infrastructure builders such as airports and ports. The Philippines is also leveraging

BRI connectivity to bridge the Philippines with all countries in the Eurasian region to increase the coverage of agricultural markets from the Philippines.

In South Asia, Sri Lanka positively welcomes BRI's presence through infrastructure investment. Hambantota Port became a strategic point in the Indian Ocean. In July 2017, China's Trading Ports agreed to pay \$1.1 billion to the Sri Lankan Port Authority to fill a 99-year contract for 70% of the shares (S.R 2014). Although it is controversial because the port is suspected by a number of countries to accommodate China's military interests behind the signatures that have been affixed in the contract. As a security guarantee concession given to the port. The European Union (EU) for example, which questions transparency, protection of technical standards, market norms and economic interaction under the BRI. In addition, another criticism revolves around the ballooning foreign debt in Sri Lanka's involvement in the BRI.

Meanwhile, the RRC Ambassador to Indonesia in a guest lecture at Airlangga University said that BRI affirmed China's hegemony in the Asia Pacific region as an emerging economy that began to change the regional order (FISIPUnair 2019). Starting from regional organizations such as ASEAN and the South Asia Association of Regional Cooperation (SAARC) which have a membership scope as large as the sub-continentals of Southeast Asia and South Asia then followed by regionalism such as the Asia Pacific Economic Cooperation (APEC) and the Indian Ocean Rim Association (IORA) whose membership is much wider, namely in circles Pacific Ocean and Indian Ocean. China's presence through the BRI takes a crack that these regional organizations have not had time to touch: connectivity that must be built to ensure economic and trade cooperation can be delivered properly.

4.3 *The identification of China as a challenger country*

To become the dominant State in a region, a State must meet several criteria. This study discusses China's efforts to show signs that China wants to replace the United States' position as the dominant country in the Asia Pacific region. According to power transition theory Organski (1959) Here China's position acts as a challenger State or also referred to as a State that has power close to the dominant State but is dissatisfied with the international order that has been made by the dominant State.

The United States is said to be the dominant State measured by the magnitude of a country's power as well as its influence on the international sphere. The United States does have a lot of influence in almost all countries of the world, that influence in the economic and military spheres. In the military field, it is evident from the construction of United States military bases in the sovereign territory of a State, as is the case in Japan and Australia (Burke & Parker 2017; Zeijden 2009). Then in the economic sector, the United States has a very strong economic influence in the Southeast Asian region because it has made investments in the form of building production bases for United States companies in ASEAN countries (Fauzia 2018). But over time the United States is now starting to have a competitor, namely China, where China is starting to show its efforts to have great influence in a region.

China is said to be a competitor or challenger as evidenced by several indications indicated by China. To become a Challenger Country there are three stages (Siverson 1981). The stages are:

4.3.1 *China as challenger country's by socio-economic development*

Starting with the socio-economic development process of the challenger State, this development process aims to increase human resources as a potential change. The potential for change in China has been seen since under the leadership of Hu Jintao who started China's Peaceful Development policy, and basically this policy is a policy that has been enacted since China revolutionized after the replacement of Mao Zedong by Deng Xiao Ping (Pardesi 2015).

President Hu Jintao reiterated that the policy was enacted as China's capabilities increased from political, economic and military. The policy is intended as evidence to other countries that China's rise will not threaten calm and peace especially in the Asia-Pacific Region. According to him, the core of China Peaceful Development in general is to develop national capabilities so that they can contribute to maintaining world peace. China's ability is achieved by reforming and innovating to follow international dynamics, especially in the era of globalization (Doran 2012).

Then China also carried out their military reforms through the education system as well as conducting military naval operations in the Gulf of Aden and also increasing its contribution to peacekeeping missions (Vanaga 2014). The military and economic revival carried out by China has experienced very rapid development in a very short period of time. This is what causes the United States to worry that its influence in the Asia Pacific will be replaced.

4.3.2 *China as challenger countries by expansion the scope of cooperation*

Then in the second stage, challenger countries will begin to compare internal conditions with countries that they consider stronger, in this study China made these comparisons with Japan and India. China's comparison efforts with India are carried out through cooperation with South Asian countries, such as Sri Lanka and Pakistan. However, the cooperation is not to support development in the region but to meet China's own national interests, the expanding its influence in South Asia and limiting India's influence in the region by establishing Sino-Pakistani relations, thus allowing Pakistan to be in the position of "under a China security blanket." (Walt 1987).

This process is also evident from the rivalry relationship that occurred between China and Japan in the high-speed rail construction project or known as the High-speed Railway (HSR). This railway project was planned to be implemented on the Jakarta-Bandung railway in Indonesia, but in the end the project was won by China. In the process, the competition resulted in competition between China and Japan, where initially Indonesia under the administration of President Susilo Bambang Yudhoyono (SBY) agreed to conduct further studies through the adoption of Shinkansen high-speed rail technology for the Jakarta and Surabaya routes (Hariyanto 2016).

4.3.3 *China as challenger carried out massive development*

At the last stage is the moment when the challenger State begins to show massive development in various aspects, such as economic and military, it aims to keep pace with the strength of the dominant State. At this last stage the challenger countries also began to implement the new international order formulation. In this study, China is in the third stage, where China openly announced its revival and also started its BRI policy, which is a massive economic development project carried out through infrastructure development. (Wu *et al.* 2008).

Another advantage of China can be seen from China's efforts in building new institutions to fund infrastructure projects of master-plan of BRI. Some of the financial institutions established by China include the Asian Infrastructure Investment Bank (AIIB), New Development Bank (NDB), BRICS Bank which is a reformed Development Bank of China, and also the Silk Road Fund (SRF) which is ad hoc or temporary (Ferdinand 2016). It is the new institutions that attract mergers, acquisitions and investments. Supported by adequate infrastructure, BRI expects an increase in transportation and telecommunications speed to reduce transaction costs (Freeman 2016).

In addition to infrastructure development, China also innovates in the industrial sector which makes China's position dominant in the Asia Pacific region in the fields of technology, navigation, and markets (Bader 2005). China's dominance in the international market, especially in the Asia Pacific region, is evident from the flood of Chinese products entering almost all world markets. The term "Made in China" has also become undeniable and is starting to be commonly found in imported goods in various countries, and is known as

“cheap but well-made” goods (Liangyu 2018). It has indirectly suppressed the economic influence of the United States in the Asia Pacific region.

From the explanation above, it is very noticeable that China shows an aggressive attitude that describes as if China wants to shift the power position of the United States in the Asia Pacific region. This is supported by Mearsheimer’s statement that States that have Great Power tend to behave aggressively, and Great Power States always have the desire to be the only force or core in the international system (Roach 2007).

4.4 *Indications of a shift in the influence of the United States in Asia Pacific due to the belt and road initiative (BRI)*

Since the end of the cold war no country has been able to keep up with the power of United States. This makes the United States the main power that dominates the international system, which was originally an international system dominated by two superpower states (multipolar) changed to be dominated by only one power (unipolar) (Layne 1993). The end of the cold war was marked by the destruction of the Soviet Union in the late 1980s, where the Soviets were the main rivals of the United States at that time.

However, this rivalry relationship between the United States and China has actually been predicted, that after the end of the cold war, the United States will get a comparable counterpoint in the economic field, especially from China. This is supported by Waltz’s statement, where China’s economic strength is able to influence the power of the United States, especially in the economic field. (Waltz 1979). In addition, Waltz also thinks that the socioeconomic correlation of countries that can be utilized for the military strength of a country, where Every country needs technology to build military power. This power can be built if the country has resources such as money and natural resources (Waltz 2008).

Waltz’s prediction was evident during the reign of Xi Jinping, who took office as President of China in 2013, it was seen that China began to modernize in the military field, this was done by improving China’s military capabilities. These efforts certainly make the United States feel worried, because it is known that China has made improvements to its non-military marine equipment aimed at supporting China’s territorial claims in the South China Sea (LCS) (Tiezzi 2014). China is also developing anti-ship ballistic missiles capabilities, which makes the interventions carried out by the United States in the region, especially Taiwan, dangerous and also costly. China’s move also resulted in “Pax Americana” being reduced in the Asia Pacific region (Rolf & Schindler 2023).

China also published The Peaceful Rise of China which is the peaceful rise of China, the peaceful revival of China through launching a cooperation project that was originally known as the One Belt One Road (OBOR) project but is now changed to the Belt and Road Initiative policy (BRI). The project is China’s effort to build cooperation in the economic sector with various countries, especially countries in the Eurasian region, the cooperation is realized by providing infrastructure development assistance as a means to facilitate trade routes between the three continents while cutting import export costs, and also making investments with countries that are members of the BRI (Saraswati *et al.* 2019).

The United States’ concerns about the shift in influence are also supported by statements from Xi Jinping in his speech on the “New Asian Security Concept” and also the slogan “Asian Community of Common Destiny” both of which emphasize that countries in the region, especially the East Asian region have actually been strong enough to maintain security in their own regions. The statement implicitly states that countries in the East Asian region do not need the presence of an extra-regional power, namely the United States, to take care of security in East Asia. China had even encouraged this before the creation of its BRI policy, where Chinese figures encouraged that China’s economic strength must be balanced with political, military and moral strength in competing in international politics (Leonard 2008).

Another factor that causes many countries in the Asia Pacific region to be interested in joining the BRI and establishing cooperative relations with China is because the relationship established with China is a partnership cooperation, not an alliance like the cooperation system carried out by the United States (Tao 2014). According to China, cooperation in the form of alliances was the initial thought of the emergence of the cold war, it can be seen from the increase in maritime tensions between China and the United States' allies (Tao 2014).

Petras (2012) Since China's rapid economic revival, China has also carried out a major modernization in the country which has resulted in China's continued growth in its manufacturing sector. This has made many parties believe that the BRI policy made by China will later generate high profits, this comes from highly concentrated public investment. In addition, Xi Jinping's export strategy is very dynamic and has an increasing impact on the trade surplus, making China the world's largest creditor. The increase in China's economic strength comes from the productive capacity of trade and investment, triggering China's economic growth of around 9% annually (Petras 2012).

In this BRI policy itself consists of two components, namely the Silk Road Economic Belt and the 21st Century Maritime Silk Road (Anam & Ristiyani 2018). First, The Silk Road Economy is a land route created to connect the indigenous territories left behind in the western part of China with Europe through Central Asia. Second, the 21st Century Maritime Silk Road is a sea route that aims to connect provinces in the coastal region of China with the Southeast Asian region to Africa through port lines and also railways, these two aspects are what make China able to compete with the strength of the United States in the international system (Cai 2017).

This is supported by Mahan's statement that sea power is the key to national strength. A country that controls the oceans (as Britain did in the 19th century) can dominate international relations (Berke 2015). In addition, Mackinder also argued that the country that controls the territory between Germany and Siberia can control the world. As expressed in Mackinder's known phrase: "Who rules Eastern Europe commands the Heartland. Who rules the Heartland commands the World Island.. Who rules the World Island commands the World" (Cheng 2015).

McKINDER's statement above has indeed been proven, where the total profit that China has obtained through trade from the Silk Road Economic Belt has reached 21 trillion USD, this figure has been recorded in the European Bank for Reconstruction and Development (Ramadhan 2018b). It is also one indication of China's growing economic influence in the region.

China's condition is in contrast to what happened to the United States, where many countries in the Asia Pacific region are now doubting the economic development of the United States, even though the United States is the first country that has the largest economic influence in the world. Especially since the United States left the Trans Pacific Partnership (TPP) at the beginning of President Donald Trump's administration, countries that were members of the TPP that were originally in the stronghold of the United States have now begun to shift to start giving a positive response to BRI, because they consider BRI more promising to help their country's economic development (Triana 2020).

According to China, countries in the Asia Pacific region are strategic regions to implement their BRI policies both multilaterally, sub-regionally, and bilaterally (Guidetti 2015). Therefore, China is now increasing the intensity of cooperation and diplomatic relations, such as with its neighbors, Taiwan and Japan. Then there are also countries in the Southeast Asian region, namely countries that are members of ASEAN and countries in the Pacific Rim such as Australia.

From this, it can be seen that the existence of the United States' influence in the Asia Pacific region has experienced a very significant shift, if analyzed based on the ups and downs of relations between the United States and countries in the Asia Pacific region caused by the BRI policy strategy carried out by China, where many countries are interested in the benefits obtained in BRI policy projects, especially in the economic growth

sector (Bijian 2005). This situation rebalancing of power that carried out by China, and the United States could potentially bloc which resembles the cold war (the United States and the Soviet Union) but the rivalry between the United States and China this time does not involve ideological motives. The rivalry relationship supported by President Xi Jinping's time limit has been eliminated, making Xi Jinping stronger and more optimistic to run the BRI program (Xuetong 2010). Therefore, rebalancing and counterbalance efforts against BRI policies carried out by the United States are increasingly impossible.

5 CONCLUSION

Based on the analysis conducted by the author regarding the threat posed by the Belt and Road Initiative (BRI) policy initiated by China under the leadership of Xi Jinping in 2013 to the existence of the United States' influence in the Asia Pacific region, it can be concluded that the BRI has proven to have a significant impact on the potential shift in influence of the United States. The potential shift in influence of the United States includes the economic, social, and military sectors.

Through the Power Transition theory with the BRI policy, China has succeeded in creating new forces especially in the economic sector. The BRI policy itself focuses on partnership cooperation and not alliance cooperation as carried out by the United States. Meanwhile the United States acts as the Dominant State, it is measured by the amount of influence exerted on the International order in the economic, political, and military sectors. The potential shift in the influence of the United States is due to the start of many countries in the Asia Pacific region that have begun to support BRI policies, such as South Korea, Japan, Pakistan, etc. China's increasing influence is also due to the exit of the United States from the Trans Pacific Partnership (TPP), which has caused many countries in the Asia Pacific facing the doubt of the economic future of the cooperation relations with the United States.

Notes on contributors

Dedik Fitra Suhermanto

Dedik Fitra Suhermanto (ORCID: 0000-0003-0314-0693) is a lecturer in the international relations study program at the University of Muhammadiyah Malang. Research focus is global politics and globalization. In addition, Dedik is also a Junior research member at the Center for Asian Studies, especially in the field of Economic-Politics Cooperation and regionalism in Asia.

Ruli Inayah Ramadhoan

Ruli Inayah Ramadhoan (ORCID:0000-0001-7059-0614) is a lecturer in International Relations Department UMM. His research focus is security studies and Southeast Asia Area Studies.

Hafid Adim Pradana

Hafid Adim pradhana (ORCID:0000-0002-4643-0941) is a researcher in International Department and his research focus in European Studies and Global Politics.

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An assessment of Indonesia trade deficits in joining the RCEP

Dedik Fitra Suhermanto, Ruli Inayah Ramadhoan & Hafid Adim Pradana
University of Muhammadiyah Malang, Indonesia

ABSTRACT: This research discusses the potential of Indonesia's *deficit trade* in RCEP (Regional Comprehensive economic partnership) cooperation. RCEP has countries members which has varied commodities with different quality and quantity. RCEP cooperation was formed with the aim of expanding relations between countries in the region with a focus on economic development such as economy, investment, services, technical cooperation, intellectual property, competition, conflict resolution, e-commerce, MSMEs and so on. In this regard, Indonesia has several consequences when joining this RCEP, first internal policy in determining the need for exports of goods. Second, Indonesia needs a strategy in determining goods and mapping the potential of export destination countries. Third, Indonesia needs a policy of importing goods base on domestic needs. From this point of view, further research is needed to see Indonesia's *deficit trade* in RCEP cooperation. This study uses the Balance of Trade (BOT) approach to see the balance of transactions between RCEP member countries. The variables used are export and import for the last ten years. The result of this study is that Indonesia has a trade deficit it is due to the total import is more bigger than total exports.

Keywords: Trade deficit, RCEP, Mega regionalism, Balance of Trade, economic cooperation

1 INTRODUCTION

An important factor in boosting the country's economic growth is through Cooperation. A country's economy can grow if there is an increase in income and growth. One way to increase income and growth is through cross-border cooperation. This cooperation can take the form of bilateral, trilateral, multilateral, and regional cooperation. In the last decade, along with economic globalization, economic integration has become the best way to increase income and growth. Integration in this case is through regional cooperation where regulation is important in realizing an integrative and sustainable economy.

Substantively, to realize an economic surplus, it focuses on trade balance through economic growth. This growth can be seen from the competitiveness of the market and products. In addition, the supporting factor for the creation of competitiveness is an efficient policy in seeing the market.

RCEP (Regional Cooperation Economic Partnership) is a free economic cooperation involving ASEAN countries of five countries such as Japan, China, Australia, New Zealand and South Korea. Based on the number of members, there are 16 countries including Indonesia participating in this Cooperation, which means that this Cooperation is one of the largest regional cooperation after the European Union because it involves Asian countries and Pacific countries (rcepsec.org 2019). Compared to other mega-regional cooperation such as NAFTA, EU-28, TPP and others, RCEP has a major impact on the economic

development of member countries and the world. In fact RCEP represents about 30% of the global population, 30% of world GDP, 27% of world trade and 29% of FDI (Gultom 2020).

As a country that has an interest in RCEP cooperation, Indonesia has a strategic role in this matter, which is the interest of market expansion in supporting the national economy. Indonesia's involvement itself is considered important because it is one of the leaders in initiating the RCEP and this is evidenced by the role of negotiations with the countries involved. Under the ministry of trade, Indonesia became the chief negotiator for 16 current RCEP countries (Pangestu 2019).

Interestingly, this mega-regional economic work, the countries that are incorporated have inequalities in terms of capacity and capability. This capacity and capability is seen from the economic conditions of each country, especially ASEAN countries that tend to fluctuate such as Cambodia, Laos, and Myanmar. Meanwhile, other countries such as Australia, Japan, South Korea, New Zealand and China are ASEAN partner countries that are more advanced compared to other member countries.

Furthermore, Indonesia in this agreement has the opportunity to expand its export and investment markets through wider access to the markets of other countries that are members of the RCEP (rcepsec.org 2019). Through this mega-regional cooperation, it can help strengthen the Indonesian economy and expand the expansion of domestic businesses to regional and international scales. However, on the other hand, there are challenges for Indonesia in participating in the RCEP, such as increasingly fierce competition from producers of other countries that are also members of this agreement. Therefore, Indonesia must prepare well through improving the quality of products and services, strengthening infrastructure, and improving HR competencies.

Pangestu (2019) reporting that currently Indonesia's position in the field of exports is still relatively small for ten years starting from 2010 to 2020, which is 171,333,546 dollars from the total average export to 13 other countries, namely 4,791,311,052 dollars. Meanwhile, Indonesia's imports to RCEP countries amounted to 164,226,041 dollars. There is a difference of 7,107,505 dollars. Here is Figure 1 of the value of Indonesia's exports to the RCEP country.

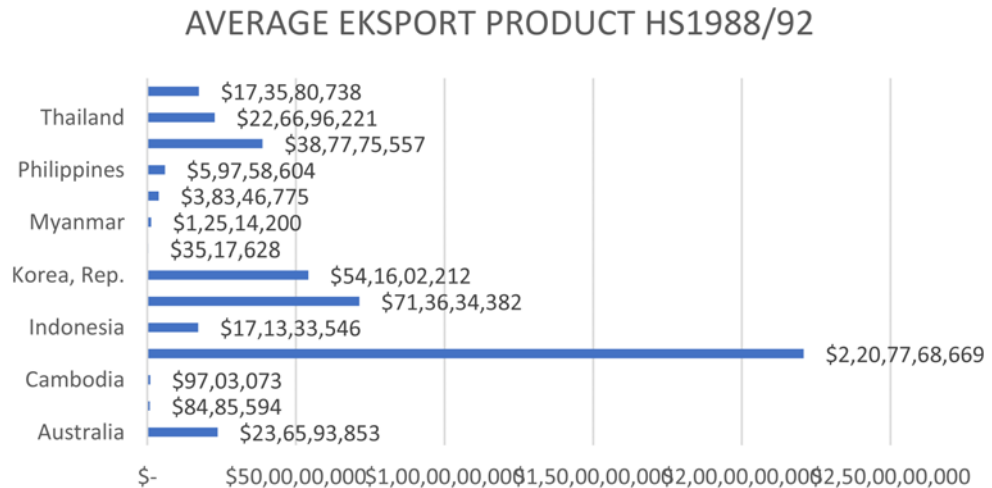


Figure 1. Average export of Indonesian by products.
 Source: WITS's dataset.

Based on Figure 1 above, there are differences in capacity and capability in export products, making the dynamics in economic cooperation very dynamic. Thus, it is hoped that it

can get an *impact* on member countries so that the economy can develop optimally and help the development of their respective national economies. Like Indonesia with product capacity, both raw materials and mature materials require a market. Oleh therefore, RCEP is very helpful to expand the international market. In addition, Indonesia is also supported by capabilities in terms of policies to support and encourage cooperation as has been done such as ASEAN + 1, ASEAN + 3 cooperation and other FTA cooperation.

However, Indonesia in the RCEP needs to look deeper into reviewing this economic agreement, one of which is the availability of export opportunities to countries because the majority have their own comparative advantages. So, the problem is first why Indonesia needs to map the market potential so that there is no *deficit*. Second, what is the condition of Indonesia's economic share in the RCEP Cooperation over a period of ten years? Both questions are interesting to study further because RCEP for Indonesia is an opportunity to expand market networks, on the other hand, RCEP can be a trap because the wide scope of cooperation and the capacity of competitive countries can have an influence on the domestic economy, one of which is to become a market for member countries, causing trade deficits.

2 LITERATURE REVIEW

The study collected 73 literature review documents with *deficit trade* certificates collected in 1982–2020. However, this will use 10 years to determine the relevance and relevance of this study. Based on the literature review collected, there is a discussion of the most relevant topics, namely related to regional economic policies. The topics of economic policy include trade, economy, deficit, and policy. Here are the Treemap of the most relevant topics in the deficit trade document.

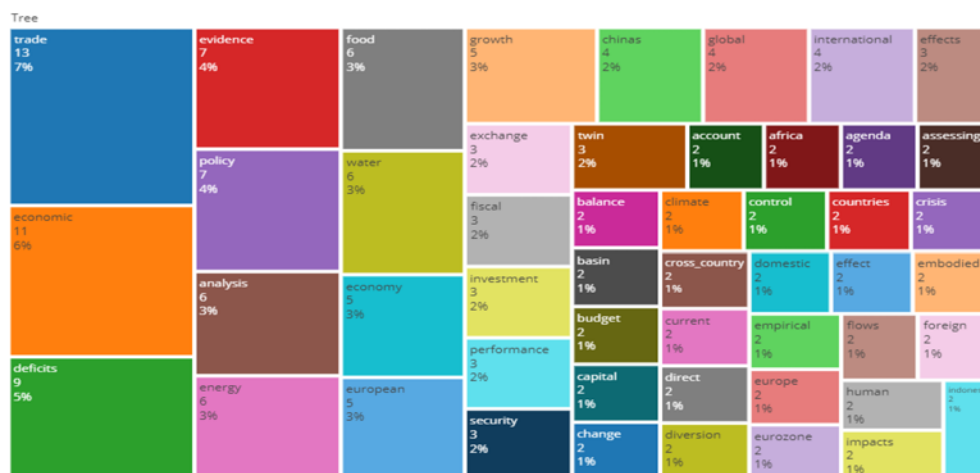


Figure 2. Treemap literature review.

Source: Author's collection data.

In the following Figure 2 above, it is known that research is dominated by regional cooperation studies, especially the EU (European Union) regional economic cooperation study, while in mega-regional studies such as RCEP it has not been studied much. The paper looks more at aspects of economic trade, policy, food and energy. Meanwhile, researchers focus (Russi 2008; Wilens 2008; Yang 2007) on *deficit trade* only writing more emphasis on the effect of trade balance growth in the EU-28 cooperation. Then, look at the historical

factors in the cooperation of the US and Japan in the context of the trade deficit. Furthermore, the study looked at the influence of economic growth through state competitiveness and the relationship between countries (Blavasciunaite *et al.* 2020; Gabberty 2014). Then, that trade has an effect on economic growth (Andersen and Babula 2008; Awokuse and O. 2007; Michelis and Zestos 2004). Meanwhile, trade has no effect on economic growth and even international trade can cause a trade deficit (Kang and Shambaugh 2016; Topalli and Dogan 2015).

Although the strong interest lies in the trade deficit in the Asia Pacific regional cooperation, it has not been studied much except, to fill the gap in research that has been carried out so that this paper can be a supplement in the trade deficit literature, especially mega-regional economic cooperation. This paper describes 16 countries that are members of the RCEP Cooperation. This study used a 10-year period starting from 2012–2021 to see the potential trade deficit. (Abbas and Raza 2013).

Through the review of the literature study, it can be said that this research is relevant because the average looks at the growth of trade in regional cooperation, while the research looks more at the potential trade deficit in the region across regions. In addition, most of the research conducted puts more emphasis on single regional institutional actors and bilateral cooperation.

3 THEORETICAL BACKGROUND OF DEFICIT TRADE IN ECONOMIC REGIONAL COOPERATION

Economic theory identifies that trade can have an effect on economic growth. Through trade promotion, the state can allocate resources more efficiently. The allocation of resources for economic growth is important because it can help expand economies of scale in domestic and international markets. identifying channels through which international trade can affect economic growth i.e. first the availability of access to foreign intermediaries and technologies; secondly it can facilitate the international dissemination of knowledge; and thirdly expanding the market size for new product varieties. In the study by Andersen and Babula (2008) Thirlwall Law explains why the trade balance has to do with economic growth. In the model the constraints of balance sheet growth are payments that actual growth can be projected based on the ratio of export growth to the elasticity of import demand income, and the BoP (Balance of Payment) must be in equilibrium (Santos-Paulino and Thirlwall 2004). Then, in the basic model of export performance and import behavior determines long-term economic growth. Then, the increase in foreign exchange income from exports is the only sustainable way to finance the increase in imports caused by widespread domestic activity (Santos-Paulino and Thirlwall 2004).

There have been various attempts to empirically test the assumptions of the Thirlwall model. developed a model based on the test assumptions of Thirlwall's Law in different countries (Portugal, Italy, Slovakia, Greece) and also taking into account the internal imbalance that prices are relatively non-neutral for economic growth. Testing the sources of the business cycle in order to grow constrained BOP. expanding the model to include interest payments and net transfers as these variables are critical to the development of developing countries. In addition to the study (Alleyne and Francis 2008; Garcimartin *et al.* 2016; Kvedaras *et al.* 2020; Soukiazis *et al.* 2014) it contributes to the analysis of the BOP-constrained growth model, which describes the rate of economic growth and cyclical growth driven by net capital flows.

3.1 *International trade theory*

The International trade empirically and positively affects economic growth by facilitating capital accumulation, modernization of industrial structures, and technological and institutional development (Krugman *et al.* 2012). Krugman *et al.* (2012) argue that trade allows countries to

specialize in the production of goods and services in which they have a comparative advantage, which leads to greater efficiency and lower costs. This specialization also allows countries to benefit from economies of scale and to access a wider range of products and technologies. Furthermore, Krugman *et al.* (2012) have shown that exchange rate fluctuations can have significant effects on trade flows and prices, and that exchange rate policies can be an important tool for countries to manage their external economic relationships.

In particular, an increase in imports of capital and semi-finished goods that are not available in the domestic market can increase productivity. Then the case of transnationals and panels or individual countries that international trade has a positive impact on China's economic growth, but there is a decrease in domestic absorption, negative environmental impacts, trade disputes with partners and uneven regional development. Meanwhile, in research (Keho 2017; Sun & Heshmati 2010) emphasized that foreign trade has a positive effect on economic growth.

In addition, Çetintaş and Barişik (2009) Analyzing 13 economies in transition, it was concluded that an increase in import demand is likely to affect economic growth. Furthermore, the study by examined the non-linear relationship between exports and economic growth in five industrial economies (Canada, Italy, Japan, the UK, and the US) (Awokuse and O. 2007; Awokuse *et al.* 2009). Busse and Koeniger (2012) show the impact of exports on economic growth is diminishing, which allows setting thresholds when exports are still beneficial to economic growth. Later the study developed panel models for 108 countries (87 of which are developing countries), stating that trade has a positive and significant influence on economic growth. Finally, estimates by Fetahi-Vehapi *et al.* (2015) 10 Southeastern European countries show a positive effect of trade on economic growth based on initial per capita income and other explanatory variables, such as human capital and fixed capital.

As we can see, there are several studies that analyze the influence of the trade balance on the economic growth of European countries and it is important that exports and imports are considered separately, but also the publication of the trade balance. When assessing the economic importance and validity of international trade for a country, or when formulating future trade policies, it is important to assess the impact of the trade balance on economic growth.

4 RESEARCH METHODOLOGY

This study uses quantitative methods to see Indonesia's trade deficit in RCEP Cooperation. Quantitative methods are research techniques used to collect and analyse numerical or quantitative data. These methods are commonly used in social science research, such as in psychology, sociology, economics, and other fields (Ceswell 1991).

Some common examples of quantitative methods include first Surveys: Surveys are questionnaires or interviews that gather data from a sample of individuals about their opinions, behaviours, or attitudes. Second, Experiments: Experiments involve manipulating one or more variables to observe the effects on an outcome variable, often using a control group. Third, Observational studies: Observational studies involve observing and collecting data on individuals or groups without manipulating any variables. Forth, Secondary data analysis: This involves analysing data that has already been collected and is available from sources such as government agencies, research institutions, or databases. Fifth, Content analysis: This method involves analysing written or visual data, such as news articles or social media posts, to identify patterns or themes (Bryman 2012; Ceswell 1991).

Scientifically looking at reality can be classified, concretely, observable, and measured between variables of a causal nature in this case are numerical data. This study uses numerical data to explain the relationship between the potential trade deficit and the RCEP Cooperation projections. Thus, this study focuses on the trade balance as an independent variable in Indonesia using time series data from 2012–2021. The data in this study used datasets from ASEANStats and WITS.Worldbank.

The variables of this study are Export (X), Import (M). The first variable, namely exports, is used to see the amount of value of goods and services such as the value of goods, cargo, insurance, transportation, travel, royalty, licenses and including communication, construction, financial, information and other services in US Dollars. Furthermore, the second variable is import, which is to find out the value of goods and services issued in market transactions. The use of export and import data is categorized according to the needs, namely the identification of member countries in the RCEP.

Methodologically, the use of important equations is applied in this paper to study the trade deficit of the value of Indonesia's exports and imports. First, the trade balance equation is expected to give us an overall picture of how the value of exports affects the trade balance. Foreign demand is adopted in the equation as an important factor affecting the trade balance directly.

In an effort to find a trade deficit in trade products, researchers used the standardization of goods from the International Merchandise Trade Statistics, namely HS-2. Then, researchers grouped the data based on reporting the number of imports and exports. These two variables are the variables that are used to determine Indonesia's trade deficit.

Following the Balance of Trade equation model, which uses the Net Export formula.

$$GDP = C + I + G + X - M$$

C: Consumer expenditure

I: Investment expenditure

G: Government Expenditure

X: Total Export

M: Total Import

Where *C* is Consumer expenditure, *I* for Investment expenditure, *G* is Government expenditure, *X* for Total export, and *M* is Total Import. From this point, the BoT equation model using the Net Export formula is used because it involves several other economic variables as a growth benchmark in determining the trade deficit, namely GDP (Gross Domestic Product) where GDP as a benchmark for economic growth in general is caused by periodic growth in the total value of goods and services produced at the domestic level. GDP is also interpreted as national income generated from one of which is total exports and total imports which are essentially related to the components of the country's estimated GDP.

By following the BoT equation I set up the simple calculation of the trade deficit. Where *Dft* is Deficit trade, *X* for Total export and *M* is Total import:

$$Dft = X - M$$

$Dft = X - M$

Dft: Deficit Trade

X: Total Export

M: Total Import

Therefore, the country experiences a trade deficit if the import value is greater than the export value ($X > M$) and the country experiences a trade surplus if the export value is greater than the import value ($M > X$).

In estimating the trade balance equation, export equation and import equation, the authors apply joint integration techniques to determine whether Indonesia has a trade deficit in the RCEP mega-regional cooperation. Because the equation in the calculation of the Balance of trade is that the export value will be reduced by the import value so that in simple terms a deficit value can be found in the trade cooperation. In addition, to determine the deficit trade, the author will compare with the trade balance of each RCEP country for ten years with the

criteria for HS1988/92 products which are categorized as export and import values from the Cooperation agreement. Furthermore, if a deficit is found, it can be known and mapped what sectors and product categories are experiencing a deficit for Indonesia¹ (WITS n.d.)

4.1 Results and discussion

For dependent variables, authors have collected data on Indonesia’s exports and imports from 2012 to 2020. Data was collected and processed using the WITS World bank dataset of exports and imports of total share products. In addition, the authors also used comparative data taken from ASEANstast (ASEANStats 2023). The use of these two datasets is important because both provide annual trade balance data reports in the form of export and import data based on the categories of each data. In the ASEANStats data, trade data displays the total value of exports and imports based on international standardization, namely HS-2 to HS-8 digits. WITS provides value and product categories for both export and import shares. Thus, the use of these two datasets is considered to represent as the basic material for processing data to see the trade deficit studied.

5 RESULT AND DISCUSSION

Based on the calculation results, it was found that Indonesia in trade with countries that are members of the RCEP has almost reached 750 trillion in the last ten years. The highest amount of Indonesia’s export and import value is still dominated by ASEAN regional trade, namely 824,261,014,633 dollars.

Figure 3 above shows the largest value of trade value with China of 629,595,755,476 dollars. In addition, other countries such as Japan totaled 358,759,879,618 dollars and South Korea reached 184,617,576,331. Finally, Australia and New Zealand have not more than 100 trillion in the ten years between 2012–2021.

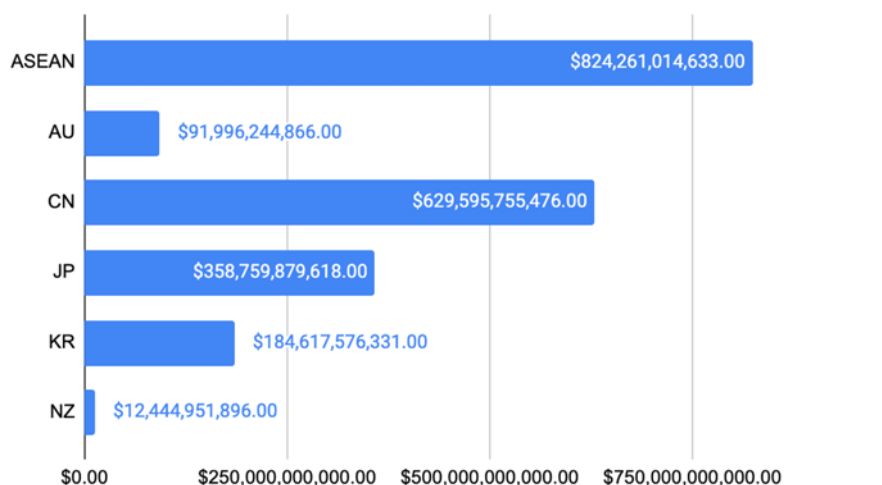


Figure 3. Indonesia export-import by Total.
Source: ASEANStats Data.

¹HS 1988/92 is a large group of products based on WCO (World Custom Organization) sector classification for harmonization systems or HS (Harmonized System) product nomenclature with minor differences.

There are six trades that Indonesia exports to RCEP countries, namely animal or vegetable fats and cleavage products, mineral fuels, oil and distillation products, natural. Cultural pearls and semi-precious stones, machinery and mechanical appliances, electrical machinery and equipment, and vehicle products. Figure 4 shows Indonesia's export products to RCEP countries.

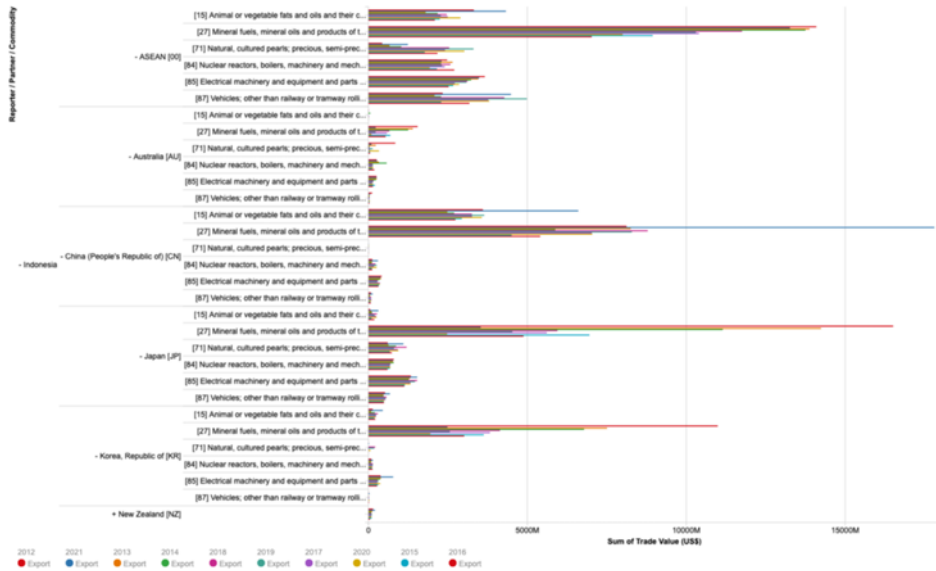


Figure 4. Indonesia export to RCEP countries.
Source: WITS Data.

In Figure 4 above, Indonesia's largest partners in trade are ASEAN countries, China, Japan and South Korea. Then Indonesia's import trade data its largest partners are ASEAN and China in this case the relevant category because Indonesia is part of regional cooperation in Southeast Asia and China is also included in ASEAN + 1 Cooperation. Figure 5 shows the value of Indonesia's imports from RCEP countries.

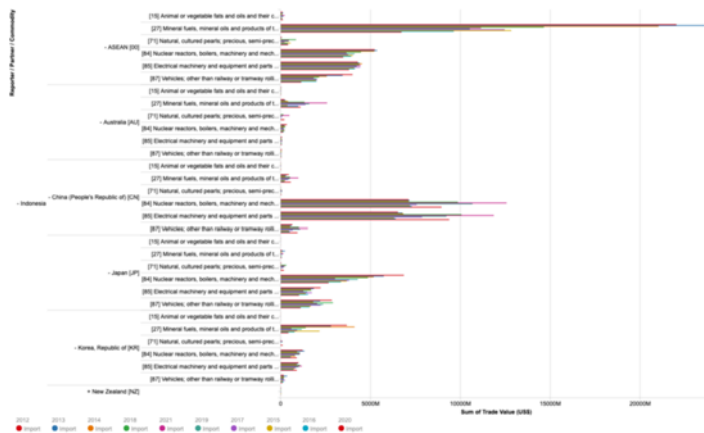


Figure 5. Indonesia import from RCEP countries
Source: WITS Data.

Figure 5 shows that Indonesia is an importing country for goods such as oil processing products from partner countries in ASEAN and machinery products or machinery, electronic products from China. The amount of imported data is relatively large so that it contributes to Indonesia's deficit in the RCEP Cooperation.

6 DISCUSSION

RCEP In estimating the trade balance equation, export equation and import equation, the authors apply joint integration techniques to determine whether Indonesia has a trade deficit in the RCEP mega-regional cooperation. Because the equation in the calculation of the Balance of trade is that the export value will be reduced by the import value so that in simple terms a deficit value can be found in the trade cooperation. In addition, to determine the deficit trade, the author will compare with the trade balance of each RCEP country for ten years with the criteria for HS1988/92 products which are categorized as export and import values from the Cooperation agreement. Furthermore, if a deficit is found, it can be known and mapped what sectors and product categories are experiencing a deficit for Indonesia.² (WITS n.d.)

Referring to the quarterly trade balance between imports and exports of Indonesia over the last ten years has increased quite significantly, namely exports of 67,233,661,747 Dollars and Imports of 56,973,820,229 Dollars. Referring to the simple trade deficit formula that I set up before which are *Dft* is a Total number by *I* total exports minus *M* total imports.

$$\begin{aligned} Dft &= I - M, \\ Dft &= 67.233.661.747 - 56.973.820.229 \\ Dft &= 10.259.841.518 \\ Dft &= 18,01\% \end{aligned}$$

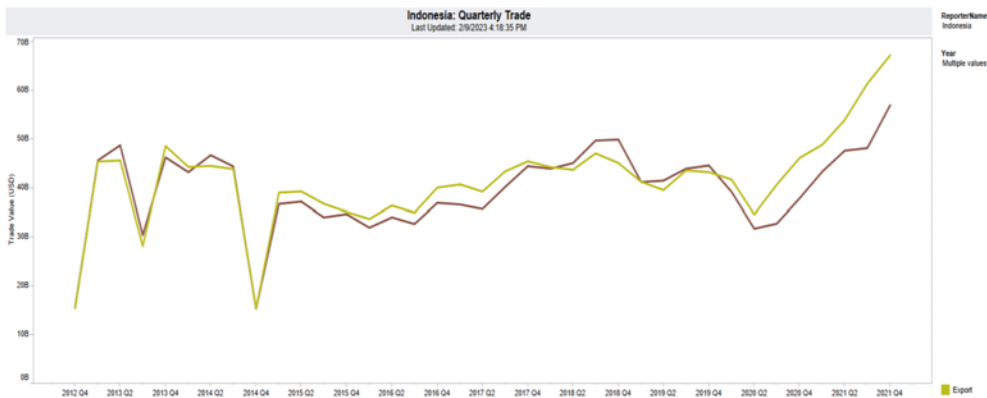


Figure 6. Indonesia trade balance.

Source: WITS Data.

Figure 6 shows that Indonesia's trade balance has a difference of 10259841518 dollars. Thus, Indonesia in the RCEP trade cooperation is included in the trade deficit criteria, which

²HS 1988/92 is a large group of products based on WCO (World Custom Organization) sector classification for harmonization systems or HS (Harmonized System) product nomenclature with minor differences.

is 18.01% of the total number of exports and imports over the past ten years. The criteria for a trade deficit are caused by the value of Indonesia's imports being greater than the number of exports to RCEP member countries.

6.1 Export opportunities within RCEP

The RCEP (Regional Comprehensive Economic Partnership) is a multilateral trade agreement involving ten ASEAN member states (Indonesia, Brunei Darussalam, Cambodia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam) and five ASEAN trade partner countries, namely Australia, China, Japan, South Korea, and New Zealand.

Within the framework of RCEP, Indonesia has the opportunity to increase exports to RCEP partner countries, especially RCEP member countries which are Indonesia's main trading partners such as China, Japan, South Korea, Australia, and New Zealand. Some of the sectors that have the potential to become the main export sectors of Indonesia's trade in RCEP cooperation are the first agriculture and food sector: Indonesia has great potential in the agricultural and food sectors. Some of Indonesia's leading agricultural and food products such as coffee, cocoa, rubber, and palm oil have high demand in RCEP partner countries. Second, Manufacturing industry: Indonesia has a rapidly growing manufacturing industry sector, including the electronics, textile, and footwear industries. Quality and competitive Indonesian manufactured products will have a great opportunity to enter the markets of RCEP partner countries. The following are details of Indonesia's export potential in supporting trade cooperation at RCEP.



Figure 7. Indonesia merchandise export.
Source: WITS Data.

In Figure 7 of the treemap, Indonesia exports a lot of goods such as Vegetable, Fuels, Metals, Machinery and Electronic, Wood, Textile, Stones and Glass, and Rubber. Goods below 5% of total exports are chemicals, Transportation, Footwear, Miscellaneous, animals, and Minerals. Based on the export value above, Indonesia has the opportunity to increase export goods below 5%.

Indonesia's trade deficit in RCEP cooperation occurs when the value of Indonesia's imports from RCEP partner countries is greater than the value of Indonesia's exports to RCEP partner countries. In the context of RCEP, a trade deficit can occur if Indonesia is unable to compete with RCEP partner countries in terms of product production and exports.

Comparison of Exports and Imports Indonesia in Figure 8 has a preference to increase exports to ASEAN member countries and four countries outside ASEAN, namely Australia, Japan, South Korea and New Zealand. However, Indonesia needs to consider with China's trading partners because the value of exports and imports is relatively the same so that in this case China can become a competitor in RCEP trade cooperation.

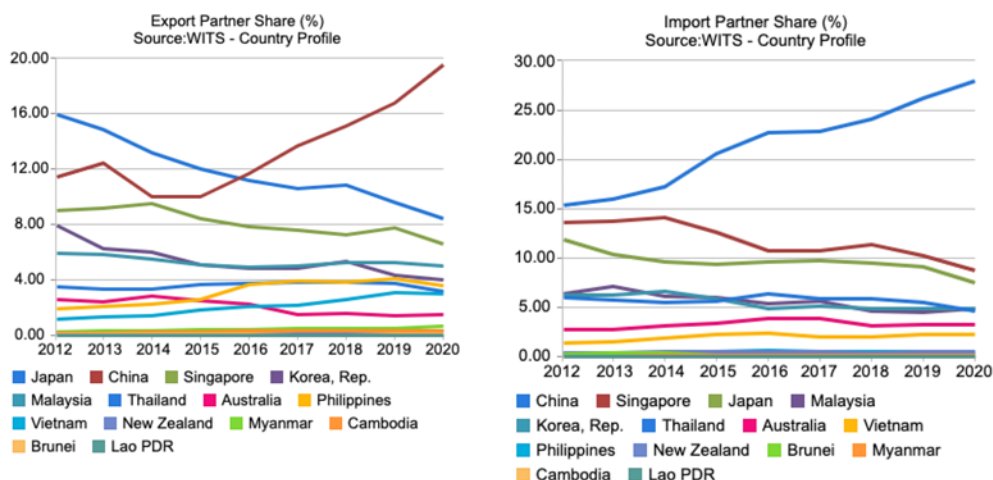


Figure 8. Indonesia export-import partner by RCEP member.
Source: WITS Data.

Indonesia’s trade with RCEP member countries over the past ten years has fluctuated, but overall it shows an upward trend. The total value of Indonesia’s trade with RCEP member countries in 2010 amounted to approximately USD 190 billion, consisting of exports worth USD 99 billion and imports worth USD 91 billion. In 2020, the total value of Indonesia’s trade with RCEP member countries reached around USD 305 billion, consisting of exports worth USD 162 billion and imports worth USD 143 billion.

Despite the increase in trade value, Indonesia is still experiencing a trade deficit with RCEP member countries for the last ten years. In 2010, Indonesia experienced a trade deficit of USD 7.7 billion, while in 2020 the trade deficit increased to USD 50.9 billion.

Specifically, Indonesia has significant trade relations with several RCEP member countries, such as China, Japan, and South Korea. In 2020, China was Indonesia’s largest trading partner with a total trade value of around USD 79 billion, followed by Japan at USD 30 billion, and South Korea at USD 19 billion.

Although there is potential to increase Indonesia’s exports in RCEP cooperation, Indonesia still experiences a trade deficit with RCEP partner countries. According to data from the Indonesian Ministry of Trade, in 2020, the value of Indonesia’s exports to RCEP partner countries reached around USD 85.4 billion, while the value of imports from RCEP partner countries reached around USD 136.3 billion, resulting in a trade deficit of around USD 50.9 billion. Meanwhile, in the first half of 2021, Indonesia experienced a trade deficit with RCEP partner countries of USD 6.65 billion. The value of Indonesia’s exports to RCEP partner countries amounted to USD 60.61 billion, while the value of imports from RCEP partner countries reached USD 67.26 billion.

In general, Indonesia has the potential to increase exports to RCEP member countries by utilizing the RCEP free trade agreement. However, to increase competitiveness and reduce the trade deficit, Indonesia needs to make improvement efforts in various aspects such as improving product quality and innovation, improving regulations and technical standards, as well as strengthening the manufacturing sector and increasing investment in potential sectors.

Some of the factors that cause Indonesia’s trade deficit in RCEP cooperation include the limited competitiveness of Indonesia in the production and export of products, differences in standards and regulations applied in RCEP partner countries, and the low level of investment in potential sectors. To overcome this trade deficit, Indonesia needs to increase

competitiveness and productivity in potential sectors and better coordination between the government, industry, and society in an effort to increase exports of Indonesian products.

7 CONCLUSION

The calculation of the analysis of the trade deficit that the export value is reduced by the import value In the context of RCEP, Indonesia is experiencing a trade deficit with several partner countries, such as China, Japan, South Korea, and Thailand.

There are Some factors that causing Indonesia's trade deficit in RCEP cooperation which are lack of competitiveness of Indonesian products in the international market, especially related to quality, price, and product innovation. In addition, differences in technical and regulatory standards among RCEP partner countries are also obstacles to the export of Indonesian products.

To reduce Indonesia's trade deficit in RCEP cooperation, the Indonesian government needs to strengthen the manufacturing sector and improve the quality of the products produced. The government also needs to open up investment opportunities in potential sectors, as well as accelerate structural reforms in improving regulations and infrastructure development. In addition, better coordination between the government, industry, and society in an effort to increase exports of Indonesian products is also needed.

ACKNOWLEDGEMENTS

DISCLOSURE STATEMENT

No potential conflict of interest was reported by the author(s)

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The effect of EPS, ROA and ROE on stock prices in mining companies on the Indonesia stock exchange period 2017–2021

Gusti Nyoman Reken & Ade Maharini Adiandari
Ngurah Rai University, Denpasar Bali, Indonesia

ABSTRACT: This study aims to examine the effect of Earning Per Share (EPS) Return On Assets (ROA) and Return On Equity (ROE) on stock prices simultaneously and partially in mining companies on the Indonesia Stock Exchange for the period 2017–2021. The approach used is an associative quantitative approach. The population in this study were mining companies listed on the Indonesia Stock Exchange for the period 2017–2021, totaling 42 companies. Determination of the sample using purposive sampling method, so that 39 companies were obtained as samples. Using multiple linear regression analysis methods, classical assumption tests, f tests (simultaneous), t tests (partial), and coefficient of determination tests using SPSS 25 (Statistical Product and Service Solutions) software. From the results of the study it can be concluded that simultaneously Earning Per Share (EPS) Return On Assets (ROA) and Return On Equity (ROE) have a positive and significant effect on Stock Prices in Mining Companies on the Indonesia Stock Exchange for the period 2017–2021. Partially Earning Per Share (EPS) has a positive and significant effect on Stock Prices in Mining Companies on the Indonesia Stock Exchange for the 2017–2021 Period, Return On Asset (ROA) has a positive and significant effect on Stock Prices in Mining Companies on the Indonesia Stock Exchange for the 2017–2021 Period and Return On Equity (ROE) has a negative and significant effect on Stock Prices in Mining Companies on the Indonesia Stock Exchange for the 2017–2021 Period.

1 INTRODUCTION

The capital market is a place for buying and selling securities where parties who need funds and investors meet. The capital market also means the market used to trade securities which basically have a lifespan of more than one year, namely stocks, bonds and mutual funds, while the place where buying and selling of securities takes place is called the stock exchange (Tandelilin 2017).

Mining companies in managing their natural energy base require enormous capital so that mining can continue to grow, so that in strengthening their financial position many mining companies enter the capital market to obtain funds. The capital market itself contributes to the economy of a country because the capital market carries out economic and financial tasks (Ramadan and Munawaroh 2022).

The company has a goal of making a profit, so the ratios that describe the company's ability to generate profits (profitability) will show the level of effectiveness and efficiency of management carried out by the company's management (Aditya and Sumartana 2019). Earning Per Share (EPS) can be categorized as a profitability ratio, as the name implies EPS measures the portion of a company's profit that can be allocated to each outstanding share (Zulfikar 2016:183). The main profitability ratios that are commonly used are Return on Equity (ROE) which describes the extent to which a company's ability to generate profits

that can be obtained by shareholders and Return on Assets (ROA) which illustrates the extent to which the ability of the company's assets to generate profits (Tandelilin 2017:44).

According to Erick (2021) EPS is the company's ability to distribute its income to shareholders. When the EPS of a company is high, the demand for the company's shares will increase, then the stock price of the company will also increase. EPS describes the amount of profit earned for each common stock and shows the company's earnings prospects in the future. EPS is categorized as a profitability ratio because EPS measures the amount of company profit that can be allocated to each outstanding share (Zulfikar 2016:183).

Return On Assets (ROA) is a company's ability to generate profits with all of its assets. ROA is used to evaluate whether management has received a reasonable return from the assets under its control. This ratio is an appropriate measure if someone wants to evaluate how well the company has used its funds (Egi and Adiandari 2020). According to Kartiko and Rachmi (2021) ROA shows the rate of return on the company's investment to investors by using all the assets owned by the company. The company's high ROA value can be an attraction for investors to invest. Conversely, a low company ROA value can result in low investor interest in the company.

Return on Equity (ROE) is a profitability ratio that describes a company's ability to obtain profits from its own capital that has been used by the company. According to Junaidi and Cipta (2021) ROE shows how far a company can manage its own capital (net worth) effectively and measures the level of profit from investments that have been made by capital owners or company shareholders. ROE compares the company's net profit with equity or own capital. ROE provides a measure of the return on investment for shareholders.

1.1 *Stock price*

According to Widoatmodjo (2014:30) the price of shares on the stock exchange is determined by market forces, which means that it depends on the strength of buying and selling requests. The meeting process of buying orders with selling orders takes place continuously.

1.2 *Earning per share (EPS)*

EPS is earnings per share which shows the amount of the company's net profit that is ready to be distributed to all the company's shareholders. The amount of a company's EPS can be obtained from the financial statement information published by the company (Tandelilin 2017:76).

1.3 *Return on assets (ROA)*

ROA is a company's financial ratio related to profitability. ROA is a ratio that shows the yield (return) on the total assets used in the company for a measure of management activity (Kasmir 2014:201).

1.4 *Return on equity (ROE)*

According to Zulfikar (2016:183) ROE measures a company's ability to generate profits available to shareholders. This ratio is obtained by dividing net income by total equity owned. The higher the ROA means the more efficient the company is in utilizing its equity base, the better it is for investors.

The phenomenon of share prices listed in mining companies on the Indonesia Stock Exchange (IDX) tends to fluctuate where share prices experience significant increases and decreases from 2017 to 2021.

According to some previous studies such as Govia *et al.* (2019), Manullang *et al.* (2019), Al Umar and Nur Savitri (2020), Erick (2021), Kartiko and Rachmi (2021) and Fairuzie *et al.* (2022)

states that EPS has a positive and significant effect on stock prices while according to Hidayat (2019) states that EPS has a negative and significant effect on stock prices. According to Ani *et al.* (2019), Takaful (2021), Widodo *et al.* (2022) and Ramadan and Munawaroh (2022) states that EPS has no significant effect on stock prices.

Kartiko and Rachmi (2021), Junaidi and Cipta (2021), Nugraha *et al.* (2022) and Sitanggang *et al.* (2022) states that ROA has a positive and significant effect on stock prices mean while Hasibuan, (2019), Ani *et al.* (2019), Takaful *et al.* (2021) and Dewi *et al.* (2021) states that ROA has a negative and significant effect on stock prices. According to Wulandari *et al.* (2017), Govia *et al.* (2019) and Erick (2021) found that the ROA variable has no significant effect on stock prices.

Al Umar and Nur Savitri (2020), Kartiko and Rachmi (2021), Takaful *et al.* (2021), Junaidi and Cipta (2021) and Nugraha *et al.* (2022) states that ROE has a positive and significant effect on stock prices. Where as Rahmadewi and Abundanti (2018), Sorong (2019) and Manullang *et al.* (2019) states that ROE has a negative and significant effect on stock prices. According to Anisa and Asakdiyah (2017), Hasibuan (2019), Sari *et al.* (2020), Ramadan and Munawaroh (2022), Widodo *et al.* (2022) and Sairin *et al.* (2022) states that ROE has no significant effect on stock prices.

Based on the theoretical basis and the results of previous research, a conceptual framework can be created as follows:

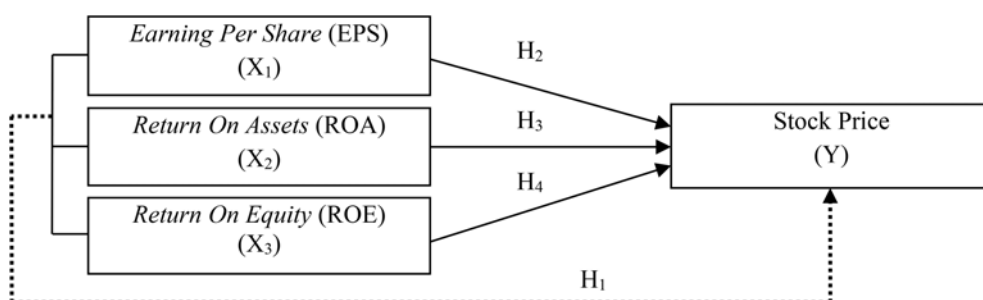


Figure 1. Research conceptual framework.

The purpose of this study was to determine the effect of EPS, ROA and ROE on the stock prices of mining companies on the Indonesia Stock Exchange for the 2017–2021 period. The formulation of the problem is stated as follows:

H₁: Earning Per Share (EPS), Return On Assets (ROA) and Return On Equity (ROE) simultaneously positive and significant effect on stock prices.

H₂: Earning Per Share (EPS) positive and significant effect on stock prices.

H₃: Return On Assets (ROA) has a positive and significant effect on stock prices.

H₄: Return On Equity (ROE) has a positive and significant effect on stock prices.

2 RESEARCH METHODS

The research design used in this study is an associative quantitative research design which aims to determine the effect of EPS, ROA and ROE on stock prices. The population in this study were mining companies on the Indonesia Stock Exchange during the 2017–2021 period, totaling 42 companies using the purposive sampling method so that 39 companies were obtained as samples. The type of data used in this study is quantitative data, namely data in the form of numbers. The object of this study aims to obtain secondary data by conducting

research on the official website (www.idx.co.id). Data collection was carried out by observing and studying documentation on the site (www.idx.co.id). The technique used to analyze the data in this study is the classical assumption test, determination test, multiple linear regression and simultaneous and partial tests through the SPSS (Statistical Program and Service Solution) version 25.0 program.

3 RESULTS AND DISCUSSION

3.1 Descriptive statistics test

Descriptive statistics show that the number of N is 195. This means that there are 195 observational data studied, consisting of 39 mining companies on the Indonesia Stock Exchange for the 5 year research period, namely 2017–2021.

Table 1. Descriptive statistical test results.

	N	Minimum	Maximum	Means	std. Deviation
STOCK PRICE	195	50.00	49,000.00	2534.57	5527.64
EPS	195	-1122.20	3513.00	207,15	558.58
ROA	195	-61.50	49,49	5,66	11.99
ROE	195	-45.10	135.96	10.03	22.87

3.2 Autocorrelation test

Table 2. Autocorrelation test results.

Model	R	R Square	Adjusted R Square	Durbin-Watson
1	0.780 ^a	0.609	0.603	1.906

Table 2 shows the value of DW = 1.906 compared to the value of the Durbin-Watson table (DW) $\alpha = 5\%$, the number of samples is 195 (n) and the number of independent variables (k = 3) results in a dU value of 1.7969. The DW value of 1.906 is more than the upper limit (dU) which is 1.7969 and less than (4-dU) $4 - 1.7969 = 2.2031$, it can be concluded that the data has passed the autocorrelation test using the Durbin Watson test.

3.3 Multicollinearity test

Table 3. Multicollinearity test results.

Variable	tolerance	VIF	Information
Earning Per Share (X1)	0.739	1,353	Multicollinearity Free
Return On Assets (X2)	0.149	6,708	Multicollinearity Free
Return On Equity (X3)	0.162	6,182	Multicollinearity Free

Multicollinearity test can be seen from the tolerance value and variance inflation factor (VIF), the occurrence of multicollinearity if the tolerance value ≤ 0.10 or equal to the VIF value ≥ 10 . Based on Table 3, it can be seen that the VIF and Tolerance values, where it is

shown that there is no Tolerance value less than 0.10 (10 percent) or a VIF value greater than 10. Therefore, based on the Tolerance and VIF values in the analysis model, there are no symptoms of multicollinearity.

3.4 Heteroscedasticity test

Table 4. Heteroscedasticity test results.

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	std. Error	Betas	t	Sig.
1	(Constant)	1,046	0.102		10,260	0.000
	EPS	0.005	0.005	0.094	1.146	0.253
	ROA	0.016	0.040	0.073	0.400	0.690
	ROE	-0.070	0.040	-0.307	-1,752	0.081

Table 4 shows that significance value Earning Per Share (X1) of 0.253, Return On Assets (X2) of 0.690 and Return On Equity (X3) of 0.081. The test results have a significance value greater than $\alpha = 0.05$. So it is concluded that there is no heteroscedasticity.

3.5 Normality test

Table 5. Kolmogorov Simornov test.

		Unstandardized Residuals	
N			195
Normal Parameters, b	Means		0.0000000
	std. Deviation		1.04007470
Most Extreme Differences	absolute		0.053
	Positive		0.052
	Negative		-0.053
Test Statistics			0.053
asypm. Sig. (2-tailed)			0.200c,d

Table 5 shows the Asymp Sig (2-tailed) value of 0.200 is greater than the level of significance, which is 5 percent (0.05). So it can be concluded that the residual values in the tested regression model are normally distributed.

3.6 Multiple linear regression analysis

Table 6. Results of multiple linear regression analysis.

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	std. Error	Betas	t	Sig.
1	(Constant)	5,714	0.177		32,218	0.000
	EPS	0.117	0.008	0.783	14,885	0.000
	ROA	0.146	0.070	0.244	2,084	0.039
	ROE	-0.194	0.070	-0.313	-2,785	0.006

From the results of multiple linear regression analysis on Table 6, then the equation can be made : $Y = 5.714 + 0.117X_1 + 0.146X_2 + (-0.194)X_3 + \varepsilon$

- (a) A constant of 5.714 indicates that if the value of the independent variable is considered constant then the share price of mining companies listed on the Indonesia Stock Exchange is 5.714.
- (b) The value of the regression coefficient $X_1 = 0.117$ means that if the other independent variables have a fixed value and Earning Per Share (EPS) increases by 1%, the stock price (Y) will increase by 0.117.
- (c) The value of the regression coefficient $X_2 = 0.146$ means that if the other independent variables have a fixed value and the Return On Assets (ROA) increases by 1%, the stock price (Y) will increase by 0.146.
- (d) The value of the regression coefficient $X_3 = -0.194$ means that if the other independent variables have a fixed value and Return On Equity (ROE) increases by 1%, the stock price (Y) will decrease by 0.194.

3.7 Determination coefficient test

Table 7. Test Results for the coefficient of determination.

Model	R	R Square	Adjusted R Square	std. Error of the Estimate
1	0.780a	0.609	0.603	1.04821

The coefficient of determination test is carried out to find out how far the ability of the independent variables in explaining the variation of the dependent variable. The test results obtained that the magnitude of R^2 (R Square) is 0.609. So it can be calculated that the Coefficient of Determination (D) = $R^2 \times 100\% = 0.609 \times 100\% = 60.9\%$. This means, as much as 60.9 percent of the variation in stock prices can be influenced by variables Earning Per Share (X_1), Return On Assets (X_2), and Return On Equity (X_3), while the remaining 39.1 percent is explained by other factors not examined.

3.8 Simultaneous significance test (F-test)

Table 8. Simultaneous significance test results (F-Test).

Model		Sum of Squares	df	MeanSquare	F	Sig.
1	Regression	326,974	3	108,991	99,196	0.000b
	residual	209,861	191	1,099		
	Total	536,835	194			

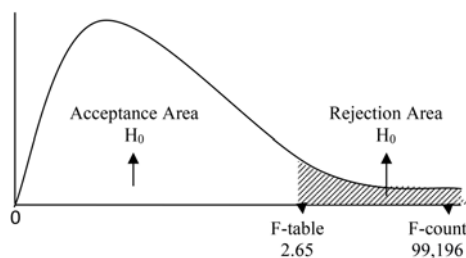


Figure 2. Region of acceptance and rejection of H_0 (Test Result F).

Based on Table 8 and Figure 2, it is obtained the F-count value is in the rejection area H_0 , the F-count is positive, $F\text{-count} > F\text{ table}$ ($99.196 > 2.65$) and $\text{Sig.} < \alpha$ ($0.000 < 0.05$) so that H_0 is rejected. From the results of the simultaneous significance test stated that the first hypothesis (H_1) namely Earning Per Share (X_1), Return On Assets (X_2), and Return On Equity (X_3) has a simultaneous positive and significant effect on stock prices of mining companies on the Indonesia Stock Exchange for the 2017–2021 period, accepted.

Table 9. Results of the Parsial test (t-test).

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	std. Error	Betas	t	Sig.
1 (Constant)	5,714	0.177		32,218	0.000
EPS	0.117	0.008	0.783	14,885	0.000
ROA	0.146	0.070	0.244	2,084	0.039
ROE	-0.194	0.070	-0.313	-2,785	0.006

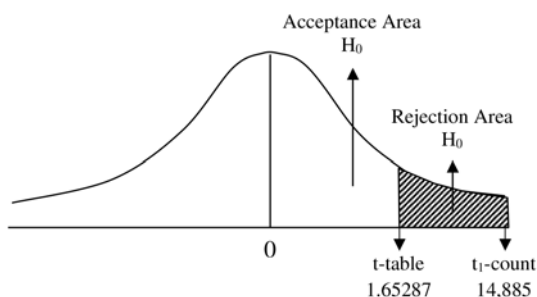


Figure 3. Area of acceptance and rejection of H_0 (t_1 test results).

3.9 Parsial test (t-test)

Table 9, the value of the regression coefficient X_1 or Earning Per Share (EPS) is 0.117, which is positive. Figure 3 shows the t_1 -count value is 14.885 and t-table with $\alpha = 5\%$ is known to be 1.65287 with a significance level of $0.000 < 0.05$, meaning that H_0 is rejected and H_a is accepted. This shows that Earning Per Share (EPS) has a positive and significant effect on stock prices. So the H_2 hypothesis which states that Earning Per Share (EPS) has a positive and significant effect on the stock prices of mining companies on the Indonesia Stock Exchange for the 2017–2021 period, is accepted.

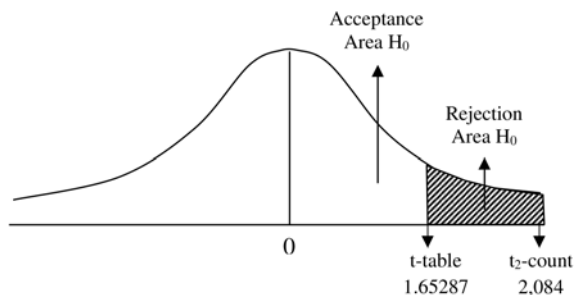


Figure 4. Region of acceptance and rejection of H_0 (t_2 test results).

Table 9, the value of the regression coefficient X_2 or Return On Assets (ROA) is 0.146, which is positive. Figure 4 shows the t_2 -count value is 2.084 and t-table with $\alpha = 5\%$ is known to be 1.65287 with a significance level of $0.039 < 0.05$, meaning that H_0 is rejected and H_a is accepted. This shows that Return On Assets (ROA) has a positive and significant effect on stock prices. So the H_3 hypothesis which states that Return On Assets (ROA) has a positive and significant effect on stock prices in mining companies on the Indonesia Stock Exchange for the 2017–2021 period, is accepted.

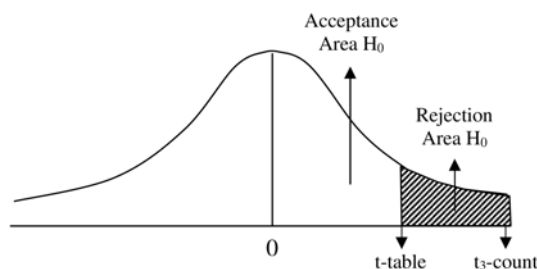


Figure 5. Area of acceptance and rejection of H_0 (t_3 test results).

On the Table 9, the value of the regression coefficient X_3 or Return On Equity (ROE) is -0.194 , which is negative. Figure 5 shows the absolute value of t_3 -count is 2.785 and t-table with $\alpha = 5\%$ is known to be 1.65287 with a significance level of $0.006 < 0.05$, meaning that H_0 is rejected and H_a is accepted. This shows that Return On Equity (ROE) has a negative and significant effect on stock prices. So the H_4 hypothesis which states that Return On Equity (ROE) has a positive and significant effect on the stock prices of mining companies on the Indonesia Stock Exchange for the 2017–2021 period, is rejected.

4 INTERPRESTATION OF RESEARCH RESULTS

4.1 *Effect of Earning Per Share (EPS), Return On Assets (ROA) and Return On Equity (ROE) on stock prices*

The results of the analysis using the F test show a significance value of 0.000 and value F count $> F$ table ($99.196 > 2.65$) it means that H_0 is rejected and H_a is accepted. This shows that Earning Per Share (EPS), Return On Assets (ROA) and Return On Equity (ROE) have a positive and significant effect simultaneously on stock prices. The company's increase in EPS, ROA and ROE was able to attract a positive response from investors to increase their investment in mining companies. An increase in demand for mining company shares will drive up mining company stock prices. These results support the hypothesis which states that EPS, ROA and ROE have a positive and significant effect simultaneously on stock prices in mining companies on the Indonesia Stock Exchange for the 2017–2021 period. This study supports research conducted by Hasibuan, (2019), Ani *et al.* (2019) and Al Umar and Nur Savitri (2020) which states that Earning Per Share (EPS), Return On Assets (ROA) and Return On Equity (ROE) simultaneously have a positive and significant effect on stock prices.

4.2 *Effect of Earning Per Share (EPS) on stock prices*

The results of the analysis using the t test show that the EPS regression coefficient is positive (0.117), valuet-count is greater than t-table ($14.885 > 1.65287$)and the significance value is

smaller than α ($0.000 < 0.05$) it means that H_0 is rejected and H_a is accepted. Based on these results, it shows that partially Earning Per Share (EPS) has a positive and significant effect on the stock prices of mining companies on the Indonesia Stock Exchange for the 2017–2021 period. This is because EPS describes the company's profitability which is directly reflected in each share. EPS has a positive effect, meaning that an increase in the value of EPS will increase the value of the stock price. The higher the EPS value, the higher the investor's interest in investing because the greater the profit earned by shareholders and the possibility of increasing the amount of dividends distributed by the company. When a company's EPS is high, the demand for shares will increase, so the company's stock price will also increase. The high number of EPS will increase the confidence of investors to invest in the company. This is supported or in line with previous studies such as Govia *et al.* (2019), Manullang *et al.* (2019), Al Umar and Nur Savitri (2020), Erick (2021), Kartiko and Rachmi (2021) and Fairuzie *et al.* (2022) which states that Earning Per Share (EPS) has a positive and significant effect on stock prices.

4.3 *Effect of Return On Assets (ROA) on stock prices*

Based on the results of the analysis using the t test, the ROA regression coefficient is positive (0.042), the t-count is greater than the t-table ($2.084 > 1.65287$) and the significance value is smaller than α ($0.039 < 0.05$) meaning that H_0 is rejected and H_a accepted. Based on these results, it shows that partially Return On Assets (ROA) has a positive and significant effect on the stock prices of mining companies on the Indonesia Stock Exchange for the 2017–2021 period. ROA measures the rate of return on a company's investment to investors by using all of the company's assets. Companies that have high ROA can be an attraction for investors. Conversely, if a company has a low ROA, it can reduce investor interest in the company's shares. Kartiko and Rachmi (2021), Junaidi and Cipta (2021), Nugraha *et al.* (2022) and Sitanggang *et al.* (2022) states that Return On Assets (ROA) has a positive and significant effect on stock prices.

4.4 *Effect of Return On Equity (ROE) on stock prices*

Based on the results of the analysis using the t test, the regression coefficient is negative (-0.194), t-count $>$ t-table and a significance value of 0.006 (smaller than 0.05) which means H_0 is rejected and H_a is accepted. These results indicate that partially ROE has a negative and significant effect on stock prices of mining companies on the Indonesia Stock Exchange for the 2017–2021 period. The negative regression coefficient value indicates that the ROE variable (X_3) has a relationship in the opposite direction to stock prices (Y). Based on this research data, many companies' ROE values have decreased but their share prices have actually increased. The cause of a company's ROE has decreased due to corporate action in the form of a rights issue or the issuance of new shares, the amount of retained earnings, stock splits, the small equity value is even minus because the capital structure is obtained from loans or debt and the company suffers losses from year to year. Return On Equity (ROE) Negative indicates that the company is not able to generate adequate profits from equity invested by shareholders due to operational inefficiencies, high costs and low income. A company's debt that is greater than its equity shows a higher risk because the company has difficulty repaying its debts if the profits generated are insufficient. Continuous losses indicate that companies are not able to manage their capital properly and can reduce investor confidence in the company so that investors are not interested in buying shares of companies with low ROE values. The results of this study contradict the results of research conducted by Al Umar and Nur Savitri (2020), Kartiko and Rachmi (2021), Takaful *et al.* (2021), Junaidi and Cipta (2021) and Nugraha *et al.* (2022) which shows that Return On Equity (ROE) has a positive and significant effect on stock prices. While the results of this study are supported or in line with previous research that has been conducted by Rahmadewi and

Abundanti (2018), Sorong (2019) and Manullang *et al.* (2019) which states that Return On Equity (ROE) has a negative and significant effect on stock prices.

5 CONCLUSION

- (1) Simultaneously, Earning Per Share (EPS), Return On Assets (ROA) and Return On Equity (ROE) have a positive and significant effect on stock prices in mining companies on the Indonesia Stock Exchange for the 2017–2021 period.
- (2) Partially, Earning Per Share (EPS) has a positive and significant effect on stock prices of mining companies on the Indonesia Stock Exchange for the 2017–2021 period.
- (3) Partially, Return On Assets (ROA) has a positive and significant effect on stock prices of mining companies on the Indonesia Stock Exchange for the 2017–2021 period.
- (4) Partially, Return On Equity (ROE) has a negative and significant effect on the stock prices of mining companies on the Indonesia Stock Exchange for the 2017–2021 period.

6 SUGGESTION

- (1) Mining companies listed on the Indonesia Stock Exchange are advised to improve company performance so that the value of Earning Per Share (EPS) and Return On Assets (ROA) increases because the increase in Earning Per Share (EPS) and Return On Assets (ROA) can have a positive influence on the company's share price. Mining companies are also advised to pay attention to their capital structure because high liabilities can cause negative equity which has an impact on negative Return On Equity (ROE).
- (2) Investors are advised to consider the value of the company's Earning Per Share (EPS) and Return On Assets (ROA) when investing because the Earning Per Share (EPS) and Return On Assets (ROA) values have a positive effect on the company's stock price. Mean while, the value of Return On Equity (ROE) should be reviewed in advance of the financial statements because Return On Equity (ROE) can have a negative impact on stock prices.
- (3) For future researchers, they can expand the scope of research and extend the year of observation, namely by using all companies listed on the IDX. In addition, further researchers can add other profitability ratios as variables, for example Gross Profit Margin (GPM), Net Profit Margin (NPM), Return on Investment (ROI) and so on, so as to describe the effect on stock prices in a better and more complex manner.

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Implementation of the Pancasila economic system in B.J. Habibie government

Wahyu Hidayat Riyanto & Luluk Setyowati Ningsih
University of Muhammadiyah Malang, Malang, Indonesia

ABSTRACT: The purpose of this study is to analyze the implementation of Pancasila economic system in B.J. Habibie government. The research method uses literature studies, by explaining theories related to Pancasila economic values as contained in UUD 45 and online media. The results of the study in this study show that the B.J. Habibie era was an important period in Indonesian history which began in 1998 and has continued until now. During the B.J. Habibie era, Indonesia experienced many changes in the political, economic, social and cultural order which had an impact on the lives of Indonesian people and were considered different from the values contained in the 1945 Constitution as a reflection of the economic values of Pancasila. The results of the analysis in this research show that realizing the economic values of Pancasila in the government of B.J. Habibie still requires a harder effort and ensuring that Indonesia's economic development should reflect Pancasila's economic values not only limited to the interests of one dominant economic actor, but also evenly distributed throughout Indonesian society.

Keywords: Pancasila, Pancasila Economics, Economic Policy, B.J. Habibie's Era

1 INTRODUCTION

Every country, including Indonesia, has a legal basis in order to function effectively and efficiently and to maintain stability over a very long period of time. Every government action is really out to guarantee the achievement of the goals of the state, which have been outlined from the outset in the ratified constitution. This is achieved by utilizing the principles of the state as a way of life and principles. The achievement of the goals of the state itself is ultimately determined by the functions of the state which are then carried out by the government.

One way is to apply the Pancasila economic system. Implementation of the Pancasila economic system in Indonesia aims to create a balance between business interests and the interests of the people. Habibie's government issued a series of policies oriented towards social welfare and economic justice. Some of the policies implemented include:

- a) Reducing Indonesia's dependence on foreign investment and increasing domestic investment, especially in strategic sectors such as energy, agriculture and fisheries.
- b) Increase the government's role in controlling the economy, especially through strict regulation and supervision of sectors that are considered important for people's welfare.
- c) Increase people's access to economic resources, especially through poverty alleviation programs and improved education.
- d) Encourage the formation of cooperatives and small and medium enterprises managed by the local community.
- e) Establish closer ties with developing countries, especially Asian countries, with the aim of building mutually beneficial economic cooperation.

According to Swasono (2010), Pancasila refers to the cultural mindset, philosophy, economic system, and technological progress of the Indonesian nation and sees it as a cohesive whole. The ability to think, act, and act based on economic incentives, social variables, and moral considerations is what is meant by a unified whole.

According to Deliabdila *et al.* (2021) details of the Pancasila precepts; 1). The principle of the Supreme God. This principle forms the basis for the religious beliefs of the Indonesian people which are an essential component of all aspects of national and state life. 2) “Just and Civilized Humanity” is the second principle. This principle shows that every citizen has personal rights which are always balanced with the rights of society and government to promote a just and civilized life at the national level. 3). Unity of Indonesia is the third precept. By realizing Bhineka Tunggal Ika, this principle shows how Indonesian culture is bound by the idea of kinship. 4). Populist Led by Wisdom, the fourth precept of Wisdom in deliberation/Representation of this Precept shows that sovereignty is in the hands of all Indonesian citizens, and that common sense and deliberation are used to reach a consensus in accordance with one’s conscience. 5). Social Justice for All Indonesian People is the fifth nature. The achievement of a harmonious life among its inhabitants, between the role of humans as individual and social beings, and between political rights and economic, social and cultural rights is what the Indonesian nation seeks, as evidenced by this precept. (Latif 2011).

Achieving prosperity and fulfilling all the material and non-material needs of the people is the vision of the Pancasila Economic System. The role of Article 27 paragraph (2) and paragraph (2) in the implementation of the Indonesian National Economic System is listed in Article 33 paragraph (3) of the 1945 Constitution. This requires the state to play a role in: 1). Providing the widest possible employment opportunities so that everyone can play an active role in national development and benefit from the results. 2). Establish economic policies and ensure their implementation to increase revenues and generate efficient economic growth for the benefit of all. 3). Using fiscal tools, the state developed service programs for households that were extremely low-income and unable to work effectively, particularly in the areas of education and health. The government should also support citizens’ economic initiatives by offering subsidies, tax breaks, and building community-specific infrastructure such as roads and irrigation systems. 4). To maintain stability and achieve national economic equality, form and strengthen 5). Maintaining a sustainable and comfortable atmosphere for the community (Tjakrawedaja *et al.* 2019).

This research will explain how important the role of the Pancasila economy is for economic development in Indonesia, especially in BJ. Habibie government. This study tries to explain and add theory to enrich insights by studying BJ. Habibie economic policies.

2 LITERATURE REVIEW

According to Era, K. *et al.* (2022), in his research he explained that one can still see how the economic principles of Pancasila are applied in various government programs. To sustain the Indonesian State has traditionally opposed economic liberalization and globalization. trying to maintain a people’s economy that is rooted in local wisdom while also following global progress and development.

Upholding People’s Economy in Indonesia’s economic regulations and policies is a task. This is very much needed by economic actors, the general public, and especially the government. A populist economic system based on Pancasila is a suitable and adequate approach to be implemented in Indonesia.

Wijaya & Permatasari, (2019), in his research explained that in a short time, BJ. Habibie and Megawati achieved success as presidents of Indonesia. During his administration, BJ Habibie succeeded in achieving a number of goals, including forming a new development

reform cabinet, improving the economic and political fields, increasing freedom of speech, and holding general elections in 1999.

The Pancasila economy system various conceptual frameworks, basic principles and recommendations aimed at improving Indonesia's economic system. Directly related to the ongoing constitutional role of freedom. The Sustainable Development Goals, as well as a kind of Pancasila social contract, are perfectly (and above expectations) reflected in their composition and functional tasks (Agusalim *et al.* 2014). The Pancasila economy system has several main characteristics. First, the Pancasila economy is a socialist economy that takes root from Indonesian customs and is guided by the five principles of Pancasila. This principle emphasizes the importance of prioritizing human beings in economic development and creating social justice for all Indonesian people.

One concrete example of this principle is the development of small and medium enterprises (SMEs), which aims to create jobs and improve people's welfare. Sri Edi Swasono said that the BJ Habibie government's policies in supporting SMEs were in accordance with the economic principles of Pancasila.

In addition, Sri Edi Swasono stressed the importance of increasing human resources in sustainable economic development. This is in line with Habibie's policy of improving the quality of education and training, as well as expanding the scholarship program to support education. Sri Edi Swasono believes that this effort is very important to create a skilled workforce that is able to compete in the global market.

3 RESEARCH METHODS

Literature study is used in this type of qualitative descriptive research. Approach The process of conducting a literature study requires several important tasks, including organizing research materials, reading and taking notes thoroughly, and collecting relevant data from literary sources (Zed 2008:3). The study of literature is an important endeavor in the field of research, especially in academia where the main aim is to advance both theoretical and practical components.

3.1 *Data collection procedures*

The data collection procedure was carried out using previous literature studies based on books, journals or websites and elaborated through descriptive analysis.

The data uses theory which is a study from previous researchers to become a reference in this study to formulate existing problems.

3.2 *Data analysis technique*

It starts with the most relevant study findings. A different approach would involve looking at the year of study, starting with the most recent and then going backwards to a longer year. Before deciding whether the issues raised are in accordance with the issues to be investigated by research, read the abstracts of each study.

4 RESEARCH RESULTS AND DISCUSSION

President B.J. Habibie took over as president from President Suharto on May 21, 1998, and served until October 20, 1999. This change in leadership was caused by the tensions of Indonesia's economic crisis and political pressure. Habibie is known as a democratic, intelligent, proactive, inventive and creative leader, although he has a weakness for making hasty judgments.

Under the Habibie government, there was a shift in national economic planning with decentralization in the implementation of economic activities. The aim is to guarantee social justice by ensuring a clear and firm balance between planning at the national level and implementation at the local level. The era of regional autonomy began during Habibie's reign, which resulted in the formation of new regions.

During his leadership, Timor Leste separated from the Unitary State of the Republic of Indonesia. President Habibie's tenure lasted for one year, from May 1998 to October 1999.

During his tenure as president of Indonesia, BJ Habibie made important achievements within a limited time in the fields of economy, promotion of freedom of expression, political reform, holding a special session for the Establishment of Multi-Party Reform (MPR) in 1998 and the successful holding of general elections in 1999.

President B.J. Habibie directed his attention to the currency crisis that occurred and related economic problems. The adverse effects of inflation and exchange rate depreciation, especially in the case of the rupiah against the US dollar, can have a significant impact on the economic sector. On the other hand, there has been a decline in public trust in the president, who is seen as a symbolic embodiment of Orde Baru regime.

The policies implemented by President B.J. Habibie had the support of the Indonesian people and gradually showed a favorable picture of Indonesia's progress and improvement in response to the economic crisis. The Indonesian economy is showing signs of improvement as indicated by the achievement of national financial stability, growth in the business sector, and reduction in the poverty rate.

The main focus of B.J. Habibie, commonly known as Habibienomics, relates to an economic framework that requires the pursuit of advanced technology to bridge the gap with developed countries. Indonesia should not only be limited in its capacity to produce goods that have a comparative advantage. On the contrary, Indonesia must have added value and competitive advantage.

Every economic policy has 2 things, namely positive and negative, it needs to be considered holistically in evaluating government performance in the economic field. It is important for the government to take steps that can strengthen the positive impacts and reduce the negative impacts of economic policies in order to achieve inclusive and sustainable economic growth.

Characteristics of the Pancasila economy during the BJ period. Habibie

The wheels of the economy are driven by economic, social and moral stimuli. During the financial crisis in Indonesia, President B.J. Habibie focused on an economic recovery strategy by reviving investment, trade and performance operations in the banking and commercial sectors. He also issued various laws to improve the country's economic situation, such as reviving the national economy, closing troubled banks, and increasing the rupiah exchange rate. These steps aim to overcome monetary problems and improve the welfare of the people affected by the crisis.

The strong will of the whole society towards social equality according to the principles of humanity. During the administration of President B.J. Habibie, there has been an increase in community participation in development and decision-making. The right to express opinions and freedom of the press are given, so that people can criticize the government and participate in the development process. In addition, the central government also gives power to regional governments to determine development according to the needs and preferences of local communities.

Economic concentration on the Indonesian people. President B.J. Habibie implemented policies that prohibited monopolies in the national economy and protected consumer rights. He also adopted laws that promote the effectiveness of Indonesia's economic activities and control unhealthy business activities. The aim of this policy is to create a more just and profitable economy for the people of Indonesia.

The integration between economic growth and human empowerment. President B.J. Habibie has a labor-intensive industrial philosophy and prioritizes the development of

human resources and technology in economic development. By optimizing Indonesia's natural and human resources, the government is trying to create good management and high standards in the economic struggle. This aims to achieve sustainable economic growth and empower the community

In the BJ. Habibie government, the implementation of the Pancasila economy experienced several shortcomings, including:

- 1) Not Achieved Even People's Welfare: Although the Habibie government has established Pancasila economic programs, such as rural development programs and cooperatives, people's welfare has not yet been achieved. This can be seen from the existence of economic disparities between urban and rural areas.
- 2) Weak Agricultural Sector: Even though the government has positioned agriculture as a strategic sector in economic development, this sector is still not well developed. Dependence on food imports is still high and there is a lack of support for farmers, making it difficult for the agricultural sector to develop properly.
- 3) Unable to Increase Economic Competitiveness: Habibie's government has not been able to increase economic competitiveness on a global scale. This can be seen from the weakness of the infrastructure and the economic system that has not developed properly.
- 4) Unable to Maintain Economic Stability: Although the government has implemented various Pancasila economic programs, economic stability is still not well maintained. This can be seen from the post-1998 monetary crisis.
- 5) Lack of Public Participation in Economic Development: The government still pays little attention to community participation in economic development. Thus, there is no direct involvement of the community in economic development policies.
- 6) During the BJ Habibie government, Timor Leste was separated from Indonesia. In 1999, after a long period of political and social conflict, a referendum was held to determine whether Timor Leste remained part of Indonesia or broke away and became an independent country. The results of the referendum show that the majority of the population of Timor Leste supports secession.

The Indonesian government, which at that time was led by BJ Habibie, respected the results of the referendum and decided to release Timor Leste as an independent country. This decision was taken after Indonesia experienced pressure from the international community and certain parties who rejected violence and demanded the peaceful separation of Timor Leste. The process of separating Timor Leste from Indonesia did not go smoothly. After the referendum there was violence and rioting which resulted in a great deal of loss of life and damage.

Comparison of the Implementation of the Pancasila Economy in the Government of BJ. Habibie and the Government of President Joko Widodo.

The application of the Pancasila Economy has a different urgency in the BJ Habibie administration and the Jokowi era. The Pancasila economy refers to an economic framework that is based on the basic precepts of Pancasila, which includes the principles that serve as guidelines for Indonesian society, including adhering to a monotheistic view of Belief in One Almighty God, realizing a just and cultured society, strengthening national unity, realizing a democratic system characterized by an inclusive and representative decision-making process, governance, and commitment to achieving social justice for all individuals in Indonesia.

During BJ Habibie's leadership (1998–1999), the imperative to implement Pancasila Economy was closely related to the economic crisis that occurred in Indonesia during that period. The Habibie government attempted to rebuild trust and economic stability by adopting Pancasila Economic principles. This urgency can be seen from the government's efforts to create equitable economic development, suppress inflation, strengthen domestic industry, and provide protection for strategic sectors.

During the Jokowi administration era (2014-present), the urgency of implementing the Pancasila Economy focused on efforts to achieve the Concept The goal was to achieve

sustainable, inclusive and socially just economic development. The government led by President Joko Widodo or who is familiarly called Jokowi has set various priority initiatives aimed at encouraging sustainable economic expansion and increasing the resilience of the domestic economy.

The implementation of the Pancasila Economy system in this context requires prioritizing social justice, environmental sustainability, empowering the people's economy, as well as the independence and resilience of the domestic industry. The main objective behind the implementation of the Pancasila Economy during the two periods of government was to achieve sustainable economic development that is socially just, while strengthening the domestic economic sector. Regardless of the various contexts and challenges faced, the use of the inclusion of Pancasila values in economic policy seeks to promote equity and prosperity for all Indonesian people.

Within the context of the Pancasila economy for the next leading government, there are several urgency that can be identified. Here are some exigencies that may be relevant:

- 1) **Achieving Sustainable Economic Growth:** The main urgency is achieving sustainable and stable economic growth. Governments need to take steps to stimulate investment, encourage innovation, and increase economic productivity. Sustainable economic growth must be combined with sustainable environmental protection and socially just development.
- 2) **The principle of social justice for all Indonesian citizens is the basic principle of Pancasila.** The main objective of the government is to ensure the distribution of wealth, opportunities and economic benefits in all strata of society. It is critical for economic policies to effectively reduce economic disparities, protect vulnerable populations, and promote economic inclusiveness.
- 3) **Improving the Competitiveness of the National Industry:** The government needs to take a strategic process to increase the competitiveness of the domestic industry. This can be done through the development of adequate infrastructure, support for research and development, quality workforce training, and industrial policies that encourage innovation and technological development. Strengthening the national industry also needs to pay attention to environmental sustainability and efficient use of resources.
- 4) **Increasing Economic Independence:** The government must have an urgency to increase Indonesia's economic independence. This can be done by reducing dependence on imported goods and increasing domestic production. The government can also provide incentives and protection for national industries so they can compete with imported products. Increasing economic independence will reduce vulnerability to changes in the global economy and increase the resilience of the national economy.
- 5) **Encouraging Community Economic Empowerment:** The government needs to pay special attention to community economic empowerment, especially marginalized and vulnerable groups in society. This can be achieved by implementing programs that enhance educational opportunities, provide skills training, and facilitate access to venture capital. In addition, it is very important for the government to create a business environment that supports the growth and progress of small and medium enterprises and cooperatives.

These points are some of the urgency that is relevant in the economic context of Pancasila for the government of the next leader. It is important to note that these exigencies may change according to the conditions and challenges faced by the government in the future.

5 CONCLUSION

During the reign of B.J. Habibie, there are efforts to implement economic policies based on Pancasila. This effort is based on the idea that Pancasila is an ideology that can provide a philosophical foundation for sustainable, just and equitable economic development.

Habibie's government has taken various actions to encourage economic growth and improve people's welfare. Some of them are increasing investment in strategic industries, broadening the economic base through developing high potential economic sectors, and increasing welfare through social programs.

The implementation of the Pancasila economic system during Habibie's reign faced various challenges and obstacles, especially in terms of managing state finances which were still limited and dependent on foreign resources. Although there were attempts to implement Pancasila economic policies during the reign of B.J. Habibie, the challenges and constraints faced prevented the implementation from going smoothly. However, these efforts continue to provide inspiration for the Indonesian government and people to continue working towards building a sustainable, just and equitable economy based on Pancasila values.

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Product design development of cap Lumba-Lumba Cassava Chips

Hamsah Asari, Baroya Mila Shanty & Iqbal Ramadhani Fuadiputra

University of Muhammadiyah Malang, Indonesia

ABSTRACT: Keripik Singkong Cap Lumba-Lumba is UMKM in food snack sector. The study aims to know consumer needs, priority attributes, technical responses, and prototype development to improve variant taste and design packaging. The analysis tools used in these experiments are QFD methods and qualitative analytics. Research shows that there were 35 attributes of consumer need with priority attribute chips that have much of variant flavors and packaging colors. 28 attributes need correction so that it has needs to be performed 13 technical responses as a technical response effort with a priority technical response that adds variant formulations and adds information package. The study also described the development of a prototype design based on consumer needs. The advice given to the company is to improve on a variant of taste and design of packaging, to do the development based on the prototype stages of development, and value-enhancing nutrition of the package.

Keywords: Product development, QFD, Product Prototype

1 INTRODUCTION

The current era of increasingly intense industrial competition encourages business people in Indonesia to be able to think creatively and innovatively. According to Trott (2017) in producing a product, companies are required to be able to develop products according to the needs of their consumers, therefore sustainable product development must be applied in every type of industry, especially in the manufacturing industry. In the development of product development, there are various types of methods and development concepts. Quality Function Deployment (QFD) is one of the methods used in developing or designing a product with the principle that the product or service produced must be able to meet all consumer needs (Ficalora and Cohen 2013).

The diversity of products produced can provide more options to consumers where various product variants are considered by consumers as a form of product reliability, especially in industries engaged in food production. According to Munawaroh and Siregar (2021) revealed that product taste variants affect customer purchasing decisions for snack products. Therefore the development of flavor variants with the right formula can be an advantage for the food business in winning market competition according to Osiriphun *et al.* (2018). Apart from flavor variants, there are many factors that can influence consumers in purchasing food products, one of which is the design on the packaging.

Packaging design aims to protect the product from contamination from outside, besides that packaging also plays an important role in influencing consumers to decide to buy. Based on Eka's research (2018) on attribute snack products with a high influence on snack sales, namely an attractive product packaging design. Therefore, in an effort to develop products and packaging designs, they must be in accordance with the wishes of consumers so that they can have a positive effect on product sales (Narto 2019).

In the UMKM business, product development is one of the keys to winning the competition. The problem that often occurs in some UMKM industries is the company's inability to make development efforts because it cannot know what the needs of its consumers are.

This happens because the company has limited knowledge and interaction in knowing every consumer's needs. Meanwhile, based on Ato'Illah's research (2015), product development activities can be implemented optimally if companies always interact with consumers to find out consumers' wants and needs.

Cassava Chips Cap Lumba-Lumba is a company engaged in the snack food industry. Where in its sales activities there are several problems faced by companies where the cassava chips produced are not able to compete in the wider market, besides that the products produced are difficult to recognize by consumers because the product is considered similar to its competitors and also does not have a strong identity. This is evident from the level of satisfaction with the flavor variants and packaging design which is still very low. Therefore the Quality Function Deployment (QFD) method is very appropriate to use as a product development strategy formulation and one of the right methods for formulating technical responses in an effort to improve the quality of products produced by Eka (2018).

2 METHODOLOGY

The research was conducted at the rest area shop of Cap Lumba-Lumba Cassava Chips which is located at Jalan Hamid Rusdi No.24 Malang, which was conducted from November to December 2022. The research focused on developing flavor variants and packaging designs of Lumba-lumba cassava chips with the condition that respondents are consumers of snacks with a purchase frequency of at least twice a week. The research sample was 30 respondents who tried Cap Lumbalumba Cassava Chips directly with competitors' products.

The analytical tools used are the Quality Function Deployment (QFD) method and Qualitative Analysis used as a description of the development prototype with data reduction stages, presentation of concepts and conclusions of theoretical development prototypes from Satori and Komariah (2017). The research steps are as follows.

2.1 *Quality function deployment (QFD) method*

- (1) Identification of Consumer Attributes Needs, this stage aims to determine the attributes that consumers need
- (2) Importance To Customer (ITC), this stage aims to assess the level of importance of attributes with an interest rating scale of (5) Very Important, (4) Important, (3) Neutral, (2) Not Important, and (1) Very Not Important.

$$ITC = \frac{\sum x}{N}$$

Source: Ficalora and Cohen (2013)

ITC: Importance Of Customer

$\sum x$: Total importance score

N: Number of samples

- (3) Customer Satisfaction Performance (CuSP) is the level of satisfaction of the attributes possessed by Lumba-Lumba Cassava Chips with a satisfaction scale of (5) Very Satisfied, (4) Satisfied, (3) Neutral, (2) Dissatisfied, and (1) Very Dissatisfied.

$$CuSP = \frac{\sum x}{N}$$

Source: Ficalora and Cohen (2013)

CuSP: Level of Customer Satisfaction

$\sum x$: Total satisfaction score N: Number of samples

- (4) Competitive Satisfaction Performace (CoSP), this stage aims to measure the level of satisfaction of the attributes possessed by competitors based on the consumer's perspective and make comparisons with Lumba-Lumba Cap Chips
- (5) Goal, Goal is a comparison value between the ITC value and also the CuSP value of Cap Lumba-Lumba Cassava Chips, with the highest value being the Target value (Goal).
- (6) Improvement Ratio (IR) is a step in the value of the improvement ratio for a product. IR value > 1 Needs improvement while IR = 1 does not need improvement.

$$IR = \frac{Goal}{CuSP}$$

Source: Ficalora and Cohen (2013)

IR: Improvement Ratio

Goal: Goal

CuSP: Customer Satisfaction Performance

- (7) Sales Point, a stage that shows how much influence an attribute of consumer needs has on product sales with a value scale without selling points (1), medium selling points (1.2) and strong selling points (1.5).
- (8) Raw Weight (RW) is a stage that shows the final importance of each attribute of consumer needs so that attribute priority is obtained in developing

$$Raw\ Weight\ (RW) = ITC \times IR \times Sales\ Point$$

Source: Ficalora and Cohen (2013)

RW: Raw Weights

ITC: Importance To Customer

IR: Improvement Ratio

SP: Sales Points

- (9) Normalized Raw Weight (NRW) stage where the identification value that shows the importance of each attribute needs of all attributes presented in the form of a percentage.

$$NRW = \frac{Raw\ Weight}{Total\ Raw\ Weight}$$

Source: Ficalora and Cohen (2013)

NRW: Normalized Raw Weight

Total RW: Raw Weights

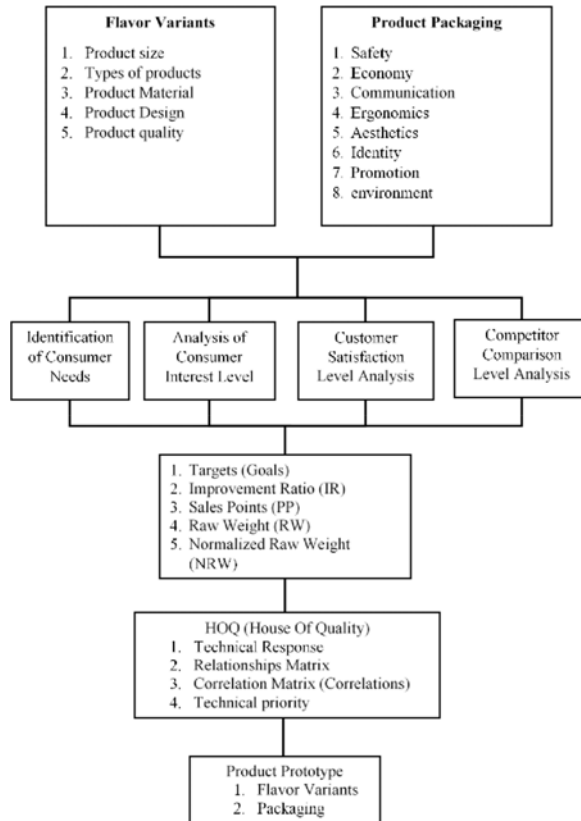
- (10) Technical Response is the process of translating the attributes of Cap Lumba-Lumba Cassava Chips into a technical response or technical requirements carried out by the company in meeting these consumer needs.
- (11) Matrix Relationships (Relationships), a stage that connects the attributes of consumer needs to the technical response provided by the company by using symbols.
- (12) Correlation matrix (Correlations), connecting between technical responses with other technical responses that use symbols.
- (13) Priority Of Technical Response, the stage of calculating priority values and contributions from technical responses obtained from the calculation results between the relationship matrix and the Normalized Raw Weight (NRW) value so that priority can be obtained from technical responses.

2.2 *Qualitative analysis*

- (1) Data reduction, reducing the results of the previous method so that the data needed in development is obtained.

- (2) Presentation of the Development Concept, is an explanation stage in the form of a development concept and an overview of product designs from new flavors and packaging designs
- (3) Conclusion of the Prototype Development Results makes conclusions that are presented in the form of prototypes for the development of new flavors and packaging designs.

The following is a picture of the results of the research framework based on the steps in developing Cap Lumba-Lumba Cassava Chips.



Picture 1. Research framework.

Source: Benson (2017), Ficalora and Cohen (2013), Nugraheni (2018), Satori and Komariah (2017)

3 RESULTS AND DISCUSSIONS

3.1 Test validity and reliability

The results of the validity test found that out of a total of 52 indicators, there were 35 valid indicators. While the data reliability test is reliable because the Cronbach's alpha value is more than 0.60.

3.1.1 Quality function deployment (QFD) analysis

The initial stage of development was carried out using Quality Function Deployment (QFD) analysis which aims to determine the attributes of consumer needs, priority attributes and also the company's technical response in developing Cap Lumba-Lumba Cassava Chips.

3.1.1.1 *Identification of attributes of consumer needs* There are 35 attributes of consumer needs including 13 attributes of flavor variants and 22 attributes of packaging design which are presented in the following table.

Table 1. Identification of flavor variant attributes and packaging design customer needs.

No	Dimensions	Attributes of Consumer Needs
A. TASTE VARIANTS		
1	Product Size	Chip size 250gr
2		Chip size 180gr
3	Types of products	Chips have a variety of flavors
4	Product Material	Chips produces various types of chips based on the basic ingredients used
5	Product Design	The appearance of the chips is appetizing
6		The color of the chips is brownish yellow
7		The maturity level of the chips is appropriate and cooked evenly
8		The taste of the seasoning chips is appropriate
9		Crispy chips when consumed
10		Soft flaky texture
11	Product quality	The portion of chips according to needs
12		No preservatives
13		Oil deposits in chips are not much
B. PACKAGING DESIGN		
1	Security Function	Packaging can protect the contents of the product
2		Waterproof packaging
3	Communication Function	Packaging is not easily damaged
4		The packaging includes information on flavor variants
5		The packaging includes net weight information
6		The packaging contains information on the composition of the product
7		The packaging includes information on the nutritional value of the product
8		The packaging includes distribution permit code information
9		The packaging includes production code information
10		The packaging includes expiration date information
11		The packaging includes recycling logo information
12		The packaging includes a halal logo
13	Ergonomic Function	Packaging is easy to store and carry
14	Aesthetic Function	The packaging has an illustration of chips
15		The packaging has a flashy color
16	Identity Function	The packaging has an attractive and easy-to-read font
17		The packaging bears the brand name logo
18		The packaging includes social media accounts and websites
19		The packaging has a mascot image
20		The packaging contains the identity of the manufacturer and distributor
21		Promotion Function
22	Environment Function	Packaging is recyclable

Source: Primary data (2023) processed.

Based on Table 1, it is found that the attributes that are the needs of consumers are based on indicators of flavor variants and also the functions of the packaging so that they can answer the attributes that are the needs of consumers. These attributes have similarities with

the results of previous studies conducted by Eka (2018), Magdalena and Wijaya (2018), Narto (2019) and Pertiwi *et al.* (2015).

3.1.1.2 *Importance to customer (ITC)* In the results of calculating the Importance Of Customer (ITC) for flavor variants, it was found that the highest value was that chips had various kinds of flavors and flavors from the seasoning of chips which corresponded to a ITC value of 4.533. Meanwhile, in the packaging design, the highest value was found for the importance level, namely packaging attributes that can protect product contents with a ITC value of 4.767. The attributes can be said to be important for consumers of chips products.

3.1.1.3 *Customer satisfaction performance (CuSP)* Based on the calculation of the level of customer satisfaction with the flavor variants of Cassava Chips Cap Lumba-Lumba, it was found that the highest satisfaction results were on the 180 gr chip size attribute, the CuSP value was 4.567, while on the packaging design attribute, the highest satisfaction results were found on the packaging attribute with the logo and brand name with a value CuSP amounted to 4,533. So that the attributes of the Lumba-lumba cassava chips can satisfy consumers.

3.1.1.4 *Competitive satisfaction performance (CoSP)* As many as 10 attributes of the competitor's flavor variant with a higher CuSP value compared to Cap Lumba-Lumba Cassava Chips. Meanwhile, in the packaging design attributes, it was found that 19 competitors' product attributes (CoSP) had higher values than CuSP Cap Lumba-Lumba Cassava Chips. This means that the level of customer satisfaction with the packaging design attributes, customers are more satisfied with the packaging designs owned by competitors.

3.1.1.5 *Goal* The target value (goal) of Cap Lumba-Lumba Cassava Chips shows as many as 8 flavors of attributes that have a higher TKK value than the TKP value of Cap Lumba-Lumba Cassava Chips. While the packaging design attributes, there are as many as 20 attributes that have a higher TKK value compared to the TKP value of Lumba-lumba stamp chips. In determining the target value, it is found that the company must be able to increase its customer satisfaction, therefore improvements are needed.

3.1.1.6 *Improvement ratio (IR)* Improvement Ratio (IR) explained as many as 8 attributes of taste variants that needed improvement. This is because the value of $IR > 1$. Based on the calculation of the IR value, the flavor variant has the highest value on the attribute of chips having various flavors. While the packaging design attributes show as many as 20 packaging design attributes that must be repaired with the highest IR value, namely an illustration of chips followed by a striking packaging color. The higher the IR value means the greater the effort that must be made to improve these attributes.

3.1.1.7 *Sales point* Determination of selling points found strong selling points as many as 5 attributes based on flavor variants and 9 attributes based on packaging design so that these attributes are attributes that strongly influence product sales. At the moderate selling point there are 7 attributes of flavor variants and packaging design respectively. Meanwhile, without selling points, there is 1 flavor variant attribute and 6 packaging designs.

3.1.1.8 *Raw weights (RW)* The results of the calculation of the Raw Weight (RW) value on the flavor variant attribute, it was found that the highest value was found in the chips attribute having various flavor variants with an RW value of 18.13. In terms of packaging design, the highest value is found in the packaging attribute that has a striking color with a value of 22.24. The results of this study are supported by the research of Permadi, Susatyo

and Pujotomo (2015), and Mustikasari (2022). The following is the result of calculating the RW value.

Table 2. RW calculations and priority attributes of flavor variants and packaging designs.

Priority	Dimensions	Attributes of Consumer Needs	TKK	IR	pp	RW
A. TASTE VARIANTS						
1	Types of products	Chips have a variety of flavors	4,53 3	2,66 7	1.5	18,1 3
B. PACKAGING DESIGN						
1	Aesthetic Function	The packaging has a flashy color	4,33 3	3,42 1	1.5	22,2 4

Source: Calculation of Raw Weight (RW) values (2023).

3.1.1.9 *Normalized raw weight (NRW)* The calculation of the Normalized Raw Weight (NRW) value found that the results on the Chip attribute having various flavors were the largest NRW value with a value of 0.163 or 16.3%. Whereas in the packaging design attribute the results obtained for the packaging attribute having a striking color are the highest NRW values, namely 0.11 or 11%. It can be said that these two attributes are the attributes with the largest percentage when compared to other attributes.

3.1.1.10 *Technical response* The technical response can be said to be the process of translating the attributes of Cap LumbaLumba Cassava Chips into a technical response or technical requirements carried out by the company in meeting these consumer needs. In preparing the technical response, an interview was carried out with the operational or production manager of the Cap Lumba-Lumba Cassava Chips so that appropriate and appropriate technical requirements were obtained. The technical response is determined based on the attributes of the flavor variant and the packaging design for consumer needs.

3.1.1.11 *Relationships matrix* The formation of the relationship matrix (Relationships) aims to link the attributes of consumer needs with technical responses. In this stage the relationship is symbolized by symbols depending on the strong, moderate and weak relationships.

3.1.1.12 *Correlation matrix (Correlations)* Correlation matrix (Correlations) is a step to connect between technical responses with other technical responses. The relationship between technical responses is represented by symbols that link between technical responses.

13. *Prioritization of Technical Response*
 In terms of technical response to flavor variants, adding new flavor variant dosage formulations, namely Cheese, BBQ and Balado flavors in cassava chips, is a technical response priority in terms of flavor variants with a priority value of 2.037 with a contribution of 25.2%. Whereas the technical response to the packaging design includes complete information on the packaging such as flavor variants, net weight, product composition, and other information with a priority value of 3.77 with a contribution of 41.6%. The results of the technical response are also supported by several previous studies which have the same technical response in meeting consumer needs, namely research by Sari (2013), Mustikiwa and Marumbwa (2013), Eka (2018), and Umami *et al.* (2018).

The next stage is that all calculation data is entered and formed into the House Of Quality (HOQ) matrix based on the parts in accordance with the provisions of the HOQ matrix. The formation of the HOQ matrix aims to combine all previous calculations into a unified matrix contained in appendices 3 and 4.

Table 3. Priority value, contribution and priority order of technical response.

Technical Response	Priority Value	Contribution	Priority Order
A. TASTE VARIANTS			
Adding dosage formulations for new flavor variants, namely Cheese, BBQ and Balado flavor variants on cassava chips	2,037	25.2%	1
B. PACKAGING DESIGN			
Include complete information on packaging such as information on flavor variants, Net weight, Product Composition, Product Nutritional Value, Product Permit Code, Production Code Information, Expiry Date Information, Recycled Logo Information and Halal Logo	3.77	41.6%	1

Source: Calculation of Priority Value, Contribution and Priority Order of technical response (2023) 14. Formation of House Of Quality (HOQ) matrix

3.1.2 Qualitative analysis of flavor variants and packaging design


Qualitative analysis aims as a stage in making development prototypes according to consumer needs. Therefore, at the development prototype stage, the development is based on the findings of the previous method.

3.1.2.1 *Data reduction* Data reduction, namely reducing data resulting from technical responses carried out in developing flavor variants and packaging designs so as to produce two technical response situations, namely technical responses that must be carried out before the development process and also technical responses that will be carried out during the development process.

3.1.2.2 *Presentation of the development concept* The presentation of the development concept will be arranged systematically based on the technical response that will be carried out before the development process because it involves the concept of developing flavor variants and what kind of packaging design is done. This stage aims to create and describe development concepts for flavor variants and packaging designs for new Cap Lumba-Lumba Cassava Chips according to consumer needs as shown in Appendix 5.




3.1.2.3 *Conclusion of development prototype results* Withdrawal of this concept aims to show the overall results of combining data which is then presented into the final prototype of the product development of Cap Lumba-Lumba Chips in detail regarding the features and specifications of the development. Table 4. The following is the final prototype for the development of the Lumba-Lumba Cassava Chips flavor variant.

Table 4. Prototype development of Lumba-Lumba Cassava Chips flavor variants.

Flavor Variants	Product Prototype	Information
Cheese Flavored Cassava Chips		<ul style="list-style-type: none"> - Cassava based - Variety of cheese flavors - Round shape - Slice thickness ± 1mm - 3-4 cm in diameter - Soft texture - Additional measure of cheese flavoring powder 10g

(continued)

Table 4. Continued

Flavor Variants	Product Prototype	Information
Barberque Flavor Cassava Chips		<ul style="list-style-type: none"> - Cassava based - Various BBQ flavours - Round shape - Slice thickness ± 1mm - 3-4 cm in diameter - Soft texture - Additional measure of BBQ flavor powder 10g
Balado Flavored Cassava Chips		<ul style="list-style-type: none"> - Cassava based - Balado flavor variant - Round shape - Slice thickness ± 1mm - 3-4 cm in diameter - Soft texture - The additional measure of Balado flavoring powder is 10g
Original Flavored Tempeh Chips		<ul style="list-style-type: none"> - Tempeh based - Original flavor variant - Round shape - Slice thickness ± 2mm - 3-4 cm in diameter - Crispy Texture - Chip Measure <ul style="list-style-type: none"> (a) 200 gr Tempeh (b) 70 gr Rice Flour (c) 15 gr Cornstarch (d) 150 ml Water (e) 4 gr Salt (f) 2 gr Pepper Powder (g) 4 gr coriander powder (h) 5 gr Onion Powder (i) 500 ml Cooking Oil

Source: Product Development Results (2023)

There is also a production process from the prototype results in Table 4, namely the process of making cassava chips for cheese, BBQ and balado flavors as well as tempeh chips for original flavor variants which are presented as follows.

Table 5. Materials and process for making flavor development variants.

Flavor Variants	Ingredients and Quantity	Making process
Cheese, Barberque and Balado Flavored Cassava Chips	<ul style="list-style-type: none"> - Cassava (200 gr) - Salt (8gr) - Sugar (5gr) - Flavor Powder (10gr) - Onion Powder (5gr) 	<ol style="list-style-type: none"> (1) Cassava is peeled and washed thoroughly (2) Cut cassava with a slice thickness of $1 \pm$ mm (3) Fry the chips for about 3-4 minutes with a frying temperature of 160-260°C (4) After being cooked evenly, the chips are then drained for 5-10 minutes until the chips are completely dry

(continued)

Table 5. Continued

Flavor Variants	Ingredients and Quantity	Making process
Original Flavored Tempeh Chips	– Cooking Oil (1000ml)	<ol style="list-style-type: none"> (5) The measurement of seasoning for chips is in accordance with the raw materials for making salt, sugar, flavoring powder (cheese, BBQ, Balado), and onion powder (6) Next, add the mixed spices for about 2–3 minutes (7) After evenly distributing the chips, they are packaged according to the flavors and packaging designs of each
	<ul style="list-style-type: none"> – Tempeh (200gr) – Rice Flour (70gr) – Cornstarch (15gr) – Water (150ml) – Salt (4gr) – Pepper Powder (2gr) – Powdered Coriander (4gr) – Onion Powder (5gr) – Cooking Oil (500ml) 	<ol style="list-style-type: none"> (1) To make tempeh chips coating material, namely by mixing rice flour, cornstarch, salt, ground pepper, coriander powder, and also onion powder. All the ingredients are mixed and stirred while pouring water little by little. (2) Thinly slice the tempeh with a thickness of 2 ± mm and then add it to the coating mixture (3) Heat the oil until the frying temperature is suitable for medium heat (4) Fry tempeh until cooked using medium heat (5) Drain the cooked tempeh until completely dry with 5–10 minutes draining time (6) After drying, the tempe chips are then packaged using packaging that matches the flavor variants

Source: Development Results (2023)

Formation of the development prototype is also carried out in terms of the packaging design which is presented in the form of a mockup of the front and back of the packaging so that a clear picture of the final prototype packaging design is obtained which is presented in Table 6 below.

Table 6. Prototype of packaging design for Cassava Chips Cap Lumba-Lumba.

Flavor Variants	Packaging Design	Packaging specifications
Cassava chips Cheese Flavor		<ul style="list-style-type: none"> – Packaging Material : Aluminum Foil – Weight size: 180gr and 250gr – Packaging Size: 23cm x 30cm for 180 gr weight and 27cm x 34cm for 250 gr weight – Packaging Color : Yellow (FFBF00) – Text Color : Yellow, White, and Black – Packaging Shape : Rectangle – Packaging Type : Full Foil – Style : Pillow Pack Bag

(continued)

Table 6. Continued

Flavor Variants	Packaging Design	Packaging specifications
Cassava chips Barbecue flavour		<ul style="list-style-type: none"> - Packaging Material : Aluminum Foil - Weight size: 180gr and 250gr - Packaging Size: 23cm x 30cm for 180 gr weight and 27cm x 34cm for 250 gr weight - Package Color : Dark Brown (602611) - Text Color : Brown, White, and Black - Packaging Shape : Rectangle - Packaging Type : Full Foil - Style : Pillow Pack Bag
Cassava chips Balado taste		<ul style="list-style-type: none"> - Packaging Material : Aluminum Foil - Weight size: 180gr and 250gr - Packaging Size: 23cm x 30cm for 180 gr weight and 27cm x 34cm for 250 gr weight - Packaging Color : Red (B90009) - Text Color : Red, White, and Black - Packaging Shape : Rectangle - Packaging Type : Full Foil - Style : Pillow Pack Bag
Original Flavored Tempeh Chips		<ul style="list-style-type: none"> - Packaging Material : Aluminum Foil - Weight size: 180gr and 250gr - Packaging Size: 23cm x 30cm for 180 gr weight and 27cm x 34cm for 250 gr weight - Packaging Color : Orange (FFA700) - Text Color : Orange, White, and Black - Packaging Shape : Rectangle - Packaging Type : Full Foil - Style : Pillow Pack Bag

Source: Development Results (2023)

The final prototype of the packaging design also spells out in detail the specifications of the packaging starting from the basic ingredients of the packaging, weight size, package size, basic color of the package, text color, packaging shape, type and also the style used in designing the new Lumba-Lumba Cap Chips packaging.

During the process of developing flavor variants and packaging designs, technical responses also play an important role in maximizing the development process. The technical response carried out during the development process holds the key to the success of the

concepts that have been presented. The prototype development results were also supported by several researchers who previously developed product designs carried out by Swasty *et al.* (2019), Sukamto and Salahuddin (2015), Rustan (2021) and Sari (2013).

4 CONCLUSION

Based on the results of the research, it can be concluded that the development of flavor variants and packaging designs using the Quality Function Deployment (QFD) method shows that there are as many as 35 attributes of flavor variants and packaging design needs of consumers so that they can men, of these attributes there are 28 attributes that require improvement-repair. The priority attributes in developing Cap Lumba-Lumba Cassava Chips include chips which have various flavors, while in terms of packaging design, the packaging has a striking color.

As an improvement effort, a technical response is determined, which is then determined by the priority value and its contribution so that the results of the priority technical response for the flavor variant are obtained, namely adding a new flavor variant dosage formulation for cassava chips and including complete information on the packaging such as flavor variants, net weight, product composition, and information other information. The results of the development show the prototype for the development of flavor variants and also the packaging design for Lumba-lumba stamp chips. Where prototyping is based on the findings of the previous method which results in the division of technical responses into two situations, namely the technical responses carried out before and during development. In the final stage of forming a prototype based on predetermined concepts.

The limitation of this research is that there is no inclusion of nutritional value information on the packaging design because this research focuses on development results in the form of product prototypes so that the nutritional value on the packaging is not listed because in making nutritional value it is necessary to have a food laboratory test first which makes the development process limited. Advice that can be given to the Lumba-Lumba Cassava Chips company is that the company can immediately make improvements to its product attributes in accordance with the predetermined technical response. Companies can also follow each step of the flavor variant development process as well as new packaging designs based on the development concept. In developing chip packaging it is also hoped that the nutritional value of the new chip flavor variants will be in accordance with the results of laboratory tests.

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ATTACHMENT

Attachment 1. Technical response of flavor variants and packaging design.

No	Dimensions	Attributes of Consumer Needs	Technical Response
A. TASTE VARIANTS			
1	Types of products	Chips have a variety of flavors	Adding dosage formulations for new flavor variants, namely BBQ, Balado and Cheese flavor variants on cassava chips
2	Product Material	Chips produces various types of chips based on the basic ingredients used	Adding the basic ingredients of tempeh as a basic ingredient for chips
3	Product Design	The appearance of the chips is appetizing	Set the frying temperature at 160 – 260°C, the frying time is 3–4 minutes and the thickness of the cassava slices is ± 1mm
4		The maturity level of the chips is appropriate and cooked evenly	
5		Crispy chips when consumed	
6		The taste of the seasoning chips is appropriate	Proper dosing of spices and the process of adding spices is stirred for about 2–3 minutes so that the spices can be evenly distributed throughout the chips
7		Soft flaky texture	Choose mangu cassava with a harvest age of 7–8 months

(continued)

Attachment 1. Continued

No	Dimensions	Attributes of Consumer Needs	Technical Response
8	Product quality	Oil deposits in chips are not much	Choose good quality oil with a dose of 10lt and also process the chips until dry for 5–10 minutes
B. PACKAGING DESIGN			
1	Security Function	Packaging can protect the contents of the product	Use packaging materials made of aluminum foil
2		Packaging is not easily damaged	
3	Environment Function	Packaging is recyclable	
4	Communication Function	The packaging includes information on flavor variants	Include complete information on packaging such as:
5		The packaging includes net weight information	– Flavor information
6		The packaging contains information on the composition of the product	– Net Weight Information
7		The packaging includes information on the nutritional value of the product	– Product Composition Information
8		The packaging includes distribution permit code information	– Product Nutritional Value Information
9		The packaging includes production code information	– Product Permit Code Information
10		The packaging includes expiration date information	– Production Code Information
11		The packaging includes recycling logo information	– Expiry Information
12		The packaging includes a halal logo	– Recycled Logo Information
13	Ergonomic Function	Packaging is easy to store and carry	– Halal logo
			Packaging designs that are easy to carry and store such as:
			– Packaging weighing 250gr and 180gr
			– The packaging is designed in a rectangular shape
			– Package size 23 cm x 30cm (180 gr) and 27 cm x 34 cm (250gr)
14	Aesthetic Function	The packaging has an illustration of chips	Include an illustration or photo of chips according to taste in the center of the package
15		The packaging has a flashy color	The choice of packaging colors that are striking and represent the flavors of chips such as:
			– Orange packaging color for the original Tempe flavor variant with color code (FFA700)
			– Yellow packaging color for cassava chips Cheese flavor variant with color code (FFBF00)

(continued)

Attachment 1. Continued

No	Dimensions	Attributes of Consumer Needs	Technical Response
			<ul style="list-style-type: none"> – Dark brown packaging color for cassava chips BBQ flavor variant with color code (602611) – Red packaging color for cassava chips Balado flavor variant with color code (B90009)
16	Identity Function	The packaging bears the brand name logo	Include complete identity on the packaging such as:
17		The packaging includes social media accounts and websites	– Brand name logo on the front of the packaging
18		The packaging has a mascot image	– Social media accounts and company website on the back of the package
19		The packaging contains the identity of the manufacturer and distributor	– Lumba-lumba chip mascot on the front of the package – Producer and distributor identity on the bottom front of the packaging
20	Promotion Function	The packaging has a memorable tagline	Include an attractive and easy to remember tagline, namely “Snacking Friends with Family” on the back

Source: Lumba-lumba Cap Cassava Chips Technical Response (2023)

Attachment 2. Technical responses made during the production process of cassava and tempeh chips and packaging design.

No Reduction Result

A. TASTE VARIANTS

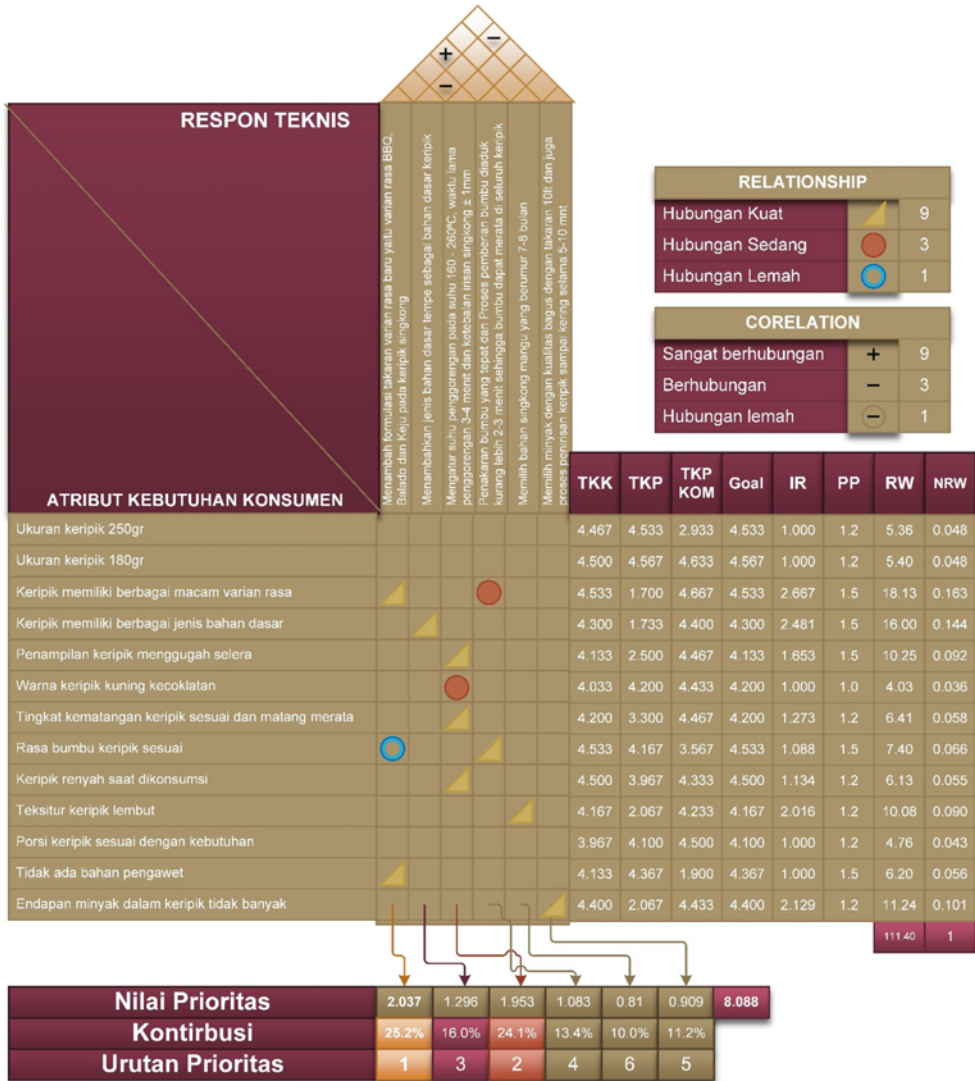
- 1 Choose mangu cassava with a harvest age of 7–8 months
- 2 Choose good quality oil with a dose of 10lt and also process the chips until dry for 5–10 minutes
- 3 Set the frying temperature at 160 – 260°C, the frying time is 3–4 minutes and the thickness of the cassava slices is \pm 1mm
- 4 Proper dosing of spices and the process of adding spices is stirred for about 2–3 minutes so that the spices can be evenly distributed throughout the chips

B. PACKAGING DESIGN

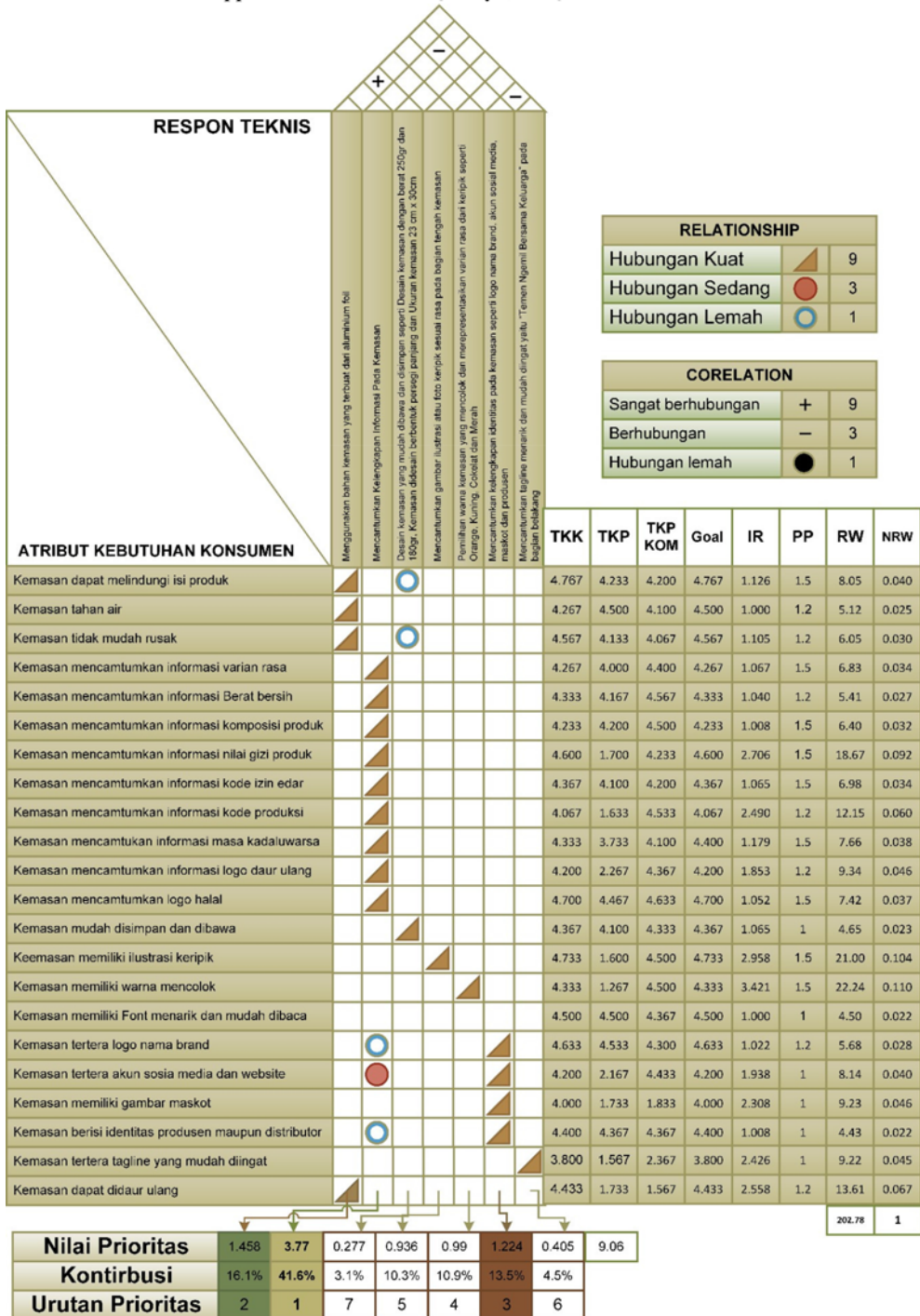
- 1 Packaging designs that are easy to carry and store such as:
 - Packaging weighing 250gr and 180gr
 - The packaging is designed in a rectangular shape
 - Package size 23 cm x 30cm (180 gr) and 27 cm x 34 cm (250gr)

Source: Appendix 1 processed.

Attachment 3. House of quality (HOQ) flavor variants.



Appendix 4. House of quality (HOQ) flavor variants.



The influence of brand ambassadors on purchasing decisions with trust as a mediating variable (study on Bukalapak consumers in Malang Raya)

Reza Ayu Amanda, Marsudi & Baroya Mila Shanty
University of Muhammadiyah Malang, Indonesia

ABSTRACT: Thanks to the advancement of the internet, business is not only done conventionally but business can also be done online or called online business in the form of e-commerce as well as shopping through marketplaces such as Bukalapak, the high growth of the marketplace has an impact on people who shop online more often. Therefore, researchers have the aim of examining the influence of Brand Ambassadors on purchasing decisions through trust as a mediating variable. The sampling technique used was purposive sampling by determining 120 respondents. Validity and reliability tests were carried out on the data before distribution. The type of research used is survey research with a quantitative approach. This study shows that Brand Ambassador has a positive and significant effect on purchasing decisions, Brand Ambassador has a positive and significant effect on Trust, Trust has a positive and significant effect on decisions, and Brand Ambassador has an effect on purchasing decisions and the Trust dimension.

Keywords: Brand Ambassador, Purchase Decision and Trust

1 INTRODUCTION

Consumer behavior continues to evolve along with social changes, technology, and market trends. Technological advances have changed the way consumers shop. Along with the development of consumer behavior, this requires companies to adapt and understand consumer needs and preferences. By understanding trends and changes in consumer behavior, consumers in making purchasing decisions are influenced by promotions. Companies are currently using many models as companions which is a form of promotion and some of them are trusted to become brand ambassadors who represent a brand. Ilaisyah and Sulistyowati (2020).

According to the Indonesian Internet Service Providers Association (APJII) regarding the penetration of internet usage in 2019–2020 (Second Quarter), Indonesia has 196.71 million active internet users out of a total population of 266.91 million Indonesians. Most e-commerce users in Indonesia are estimated to come from generation-Z and millennials who are not only technologically savvy but also idolize many influencers. the role of influencers as brand ambassadors is one of the powerful strategies to attract consumers to shop and enliven e-commerce sites.

Growth rate of E-commerce Indonesia in 2021



Toko Online	Pengunjung Web Bulanan	Ranking AppStore	Ranking PlayStore
1 Tokopedia	157,443,300	#2	#4
2 Shopee	138,776,700	#1	#1
3 Lazada	8,173,300	#3	#2
4 Bukalapak	25,760,000	#5	#7
5 Orami	16,683,300	n/a	n/a

Picture 1. Online store competition in Indonesia.
Source: iPrice.com (2021).

Along with the k-pop trend, e-commerce began competing to use brand ambassadors on social media to market their products. It can be seen that from the year 2021 Tokopedia occupies the first position as the most popular e-commerce by looking at the number of visits every month in the first – fifth quarter of 2021. As an e-commerce that leads in terms of the number of monthly visits, Tokopedia decided to use BTS brand ambassadors. Followed by Shopee with the Blackpink brand ambassador and also Lazada with the Seventeen brand ambassador. In this competition, many companies in Indonesia use famous figures from South Korea as one of the advertising strategies in attracting public attention to make purchasing decisions.

Bukalapak is one of the leading E-commerce in Indonesia which provides online buying and selling service sites with a customer to customer or C2C model (Hastuti 2021). iPrice research shows that Bukalapak ranks fourth in the 1V quarter of 2021. The data explains that in several categories Bukalapak gets a low percentage in monthly web visits and application rankings in the appstore and playstore. Currently Bukalapak is an online marketplace that is less developed and has experienced a decline in visitors for almost three years, this is the main reason for evaluating the causes of Bukalapak’s lack of interest by consumers.



Picture 2. Bukalapak web visits 1st quarter 2020-4th quarter 2021.
Source: iPrice.com (2021).

Picture 2 shows that Bukalapak has a fluctuating level of visitor numbers but tends to decrease during the fourth quarter of 2021. Sequentially in the first to fourth quarters of 2021, the number of Bukalapak marketplace visits in the country is 34.1 million, 29.4 million, 30.1 million, 25.7 million. Basically, the higher the number of visitors, the higher the possibility of buying and selling transactions. The decline in the number of visitors experienced by Bukalapak can be an indication that consumers are switching to other e-commerce sites so that consumers do not return to visit Bukalapak’s B2C e-commerce site which ultimately results in the number of Bukalapak marketplace visits which are decreasing.

Bukalapak in 2022 tried to keep up with the competition by using an actor from South Korea, Song Joong Ki as brand ambassador. This received positive support and response because it became something new and refreshing for Bukalapak consumers. So it is expected that the presence of a new face as a Bukalapak representative can catch up and increase sales through this promotion.

Bukalapak’s marketing strategy in attracting visitors or potential customers, namely, by collaborating with artists (public figures) as brand ambassadors who have attractiveness and positive influence on consumer purchasing decisions which will cause consumer confidence in the online marketplace. This means that choosing the right brand ambassador or according to the target market will increase consumer confidence. From this description it can be concluded that consumers will provide stimuli to market stimuli for what they receive and see, the selection of brand ambassadors themselves is not without reason by spreading positive messages given by the company to consumers which will have an impact on purchasing decisions. Based on the phenomena described previously, the researcher is interested in conducting research on Bukalapak as the object of research. The purpose of this study is to determine the effect of brand ambassadors on purchasing decisions through trust in the Bukalapak marketplace.

2 METHODOLOGY

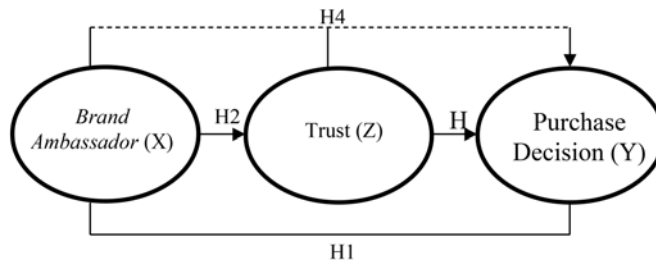
The research location was conducted in Malang City, East Java on prospective consumers or Bukalapak consumers who have made transactions in the last 12 months. The type of research used in this study is a type of survey research with a quantitative approach. In this study, the population used is Bukalapak consumers who are in Malang City and have made purchases at the Bukalapak marketplace during the last one year which is not known with certainty. The technique that researchers will use in determining the sample is purposive sampling technique, with a sample of 120 respondents.

The data collection technique used in this study was to distribute questionnaires. Scoring in this study uses a Likert scale. The Likert scale is used to measure agreement or disagreement with a particular subject, object or event (Sayidah, 2018). Instrument testing techniques in this study used validity tests and reliability tests. Furthermore, the classical assumption test is carried out. This test includes normality test, multicollinearity test and heteroscedasticity test. Data analysis techniques use path analysis, and hypothesis testing in this study using the T test and mediation test.

The purchasing decision indicators used in this study use indicators from the opinion of Kotler & Keller (2012) which consist of Stability towards a product (Y1), Habituality in buying a product (Y2), and Speed in buying a product (Y3). while the trust indicator uses the opinion of Lee *et al.*, (2018), namely prioritizing customer interests (Z1), being able to fulfill commitments (Z2), being able to provide solutive responses (Z3), sellers can be trusted (Z4). brand ambassador variables used by researchers refer to Lea-Greenwood, (2013) which consists of Transparency (X1), Suitability (X2), Credibility (X3), Attractiveness (X4) and strength (X5).

In research Brand Ambassador as the independent variable, purchasing decision as the dependent variable and consumer trust as the mediator variable. so that the framework used in the study is as follows:

Framework of research



Picture 3. Research mindset.
Source: data processed, (2022).

2.1 Results and discussions

The characteristics of respondents in this study were dominated by women as many as 70 people with a percentage of 58.3%. Based on these results, it can be concluded that female respondents dominate when compared to male respondents.

The majority of respondents who shop online at Bukalapak are aged 18–25 years with a percentage of 62.5%. It can be concluded that Bukalapak marketplace respondents are mostly millennials who dominate online shopping trends and most respondents who shop online at Bukalapak in this study make transactions 2–3 times a month.

In this study, participating respondents consisted of various social statuses. Based on the data obtained, it can be seen that the most respondents are students as many as 43.3%. and based on purchases at the Bukalapak marketplace in the past year, it is known that the majority of respondents made transactions 23 times a month with respondents 81.7%.

2.2 Research Instrument Test 1. Validity Test

A variable is said to be valid if it has a value of $r_{\text{count}} > r_{\text{table}}$ if $r_{\text{count}} < r_{\text{table}}$ then it is declared invalid. By using the real level $\alpha = 5\%$, r_{count} will be compared with r_{table} , if $r_{\text{count}} > r_{\text{table}}$, then the statement in the questionnaire is said to be valid or has measured what should be measured. In this study using 120 respondents so that the significance value in the r_{table} used is 0.195. So the results of the validity test are that all indicators used in this study are valid for use.

Table 1. Data validity test results.

Variables	Indicator	(R-Count)	=	R-Table	Description
<i>Brand Ambassador</i>	X1.1	0.899	>	0.1793	Valid
	X1.2	0.840	>		Valid
	X1.3	0.902	>		Valid
	X1.4	0.890	>		Valid
	X1.5	0.883	>		Valid
Purchase Decision	Y1.1	0.901	>	0.1793	Valid
	Y1.2	0.905	>		Valid
	Y1.3	0.886	>		Valid
Trust	Z1.1	0.877	>	0.1793	Valid
	Z1.2	0.908	>		Valid
	Z1.3	0.877	>		Valid
	Z1.4	0.908	>		Valid

Source: Appendix 1.

2.3 Reliability test

The reliability test in this study is that all variables are said to be reliable or can be used to determine the extent to which the measuring instrument is reliable. The results of data testing in this study.

Table 2. Data reliability test results.

Variables	Cronbach's Alpha	Description
<i>Brand Ambassador</i> (X)	0,929	Reliable
Trust (Z)	0,910	Reliable
Purchase Decision (Y)	0,878	Reliable

Source: Appendix 2.

The results of the reliability test that has been carried out on the brand ambassador, trust and purchasing decision variables all show reliable results, because they have a Cronbach's alpha value greater than 0.60 So that all questionnaires used have consistency if measurements are repeated and it can be interpreted that the instruments in this questionnaire are declared reliable or reliable or trustworthy.

2.4 Classical Assumption Test

- (a) Normality test, The data normality test used in this study is the Kolmogorov-Smirnov Test, with measurements with a benchmark value on the asympt.sig (2-tailed) must be > 0.05 indicating that the regression model residuals are normally distributed. The following data normality test results can be seen in the following table.

Table 3. Data normality test results.

<i>Test Statistic</i>	<i>t-value</i>	Description
0,080	0,055	Normal

Source: Appendix 3.

The results of the data normality test that has been carried out show that a significant value is obtained in Table 3. (Asymp. Sig. (2-tailed) of 0.055 is greater than α (0.05). This means that the variables are normally distributed normally because they have a value greater than the Kolmogrov-Smirnov Test benchmark of 0.05 or 5%.

(b) Multicollinearity test, aims to test whether or not there is a correlation between the independent variable and the dependent variable under study and will be called good if there is a correlation between the two variables.

Table 4. Multicollinearity test results.

Variables	<i>Tolerance</i>	VIF	Description
<i>Brand Ambassador (X)</i>	0,557	1,794	No Multicollinearity
<i>Trust (Z)</i>	0,557	1,794	No Multicollinearity

Source: Appendix 4.

The results of the multicollinearity test show that all variables used, both the independent variables and the mediating variables used in this study, are free from multicollinearity, reliable, and objective because each tolerance value is more than 0.10 and the VIF value is less than 10 so that it has met the assumptions of the multicollinearity test.

(c) Hetrokedastisitas test, is a test to determine whether the variables operated have the same variance (homogeneous) or vice versa (heterogeneous). The following are the results of the heterokedasitas test in this study:

Table 5. Heteroscedasticity test results.

Variables	Sig.	Description
<i>Brand Ambassador (X)</i>	0,456	No Heteroscedasticity
<i>Trust (Z)</i>	0,754	No Heteroscedasticity

Source: Appendix 5.

The results of the heterocedasticity test show that the independent variable, namely brand ambassador and the mediating variable, namely trust, affect the dependent variable in the study, so heterocedasticity does not occur. Because all the results of the heteroscedasticity test as a whole show the significance value of all independent variables more than 0.05 so that there is no heteroscedasticity problem.

2.5 Path Analysis

Path Analysys testing is carried out by regressing model I, namely the Brand Ambassador variable (X) on the trust variable (Z). Then regress model II between Brand Ambassador (X) and the trust variable (Z) on purchasing decisions (Y).

(a) First Model Path Analysis, the effect of variable X on variable Z

Table 6. Regression Model 1.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.630 ^a	.396	.391	1.95102

a. Predictors: (Constant), *Brand ambassador (X)*

Source: data processed, 2022. *Sumber: data diolah, 2022*

In the table above, the R-Square value contained in model 1 summary is 0.396, which shows that the contribution of the influence of variable X (Brand Ambassador) is 39.6% while the remaining 60.4% is influenced by other variables not included in this study.

Table 7. Regression Model 1.

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	3.810	.819		4.653	.000
X	.374	.043	.630	8.801	.000

a. Dependent Variable: Purchase Decision.

Source: data processed, 2022.

Based on the results of the model I analysis presented in table 4.30 above, it can be seen that the magnitude of the influence of brand ambassadors (X) on purchasing decisions (Y) is 0.630 with a significance value of $0.00 < 0.05$, so it concludes that in regression output model I it is stated that brand ambassadors have a significant effect on purchasing decisions. Meanwhile, the value of $e1$, which is the amount of unidentified variables, can be obtained using the formula $e1 = \sqrt{1-0.396} = 0.777$.

From the regression results, the structural equation is obtained as follows:

$$Z = a + \beta_1x + e1$$

$$Z = 3.810 + 0.630 + e1$$

Second Model Path Analysis, the effect of variables X and Z on Y

Table 8. Regression Model 2.

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	3.810	.819		4.653	.000
X	.374	.043	.630	8.801	.000

a. Dependent Variable: Y.

Source: data processed, 2022.

In the table above, the R-Square value contained in model 2 summary is 0.641. which shows that the contribution of the influence of variable X (Brand Ambassador) is 64.1%. while the remaining 35.9% is influenced by other variables not included in this study.

Based on the results of model II regression analysis presented in table 4.30 above, it can be seen that the magnitude of the influence of brand ambassadors (X) on purchasing decisions (Y) is 0.304 with a significance value of $0.00 < 0.05$. While the amount of influence of trust (Z) on purchasing decisions (Y) is 0.573 with a significance value of $0.0 < 0.05$. So it concludes that in the regression output model II it is stated that brand ambassadors and trust each have a positive and significant effect on purchasing decisions. Meanwhile, the value of e_2 , which is the amount of unidentified variables, can be obtained using the formula $e_2 = \sqrt{(1 - 0.641)} = 0.599$.

From the regression results, the structural equation is obtained as follows:

$$Y = a + \beta_1x + \beta_1z + e_2$$

$$Y = 3.180 + 0.304 + 0.573 + e_2.$$

Table 9. Direct and indirect effect results.

Variable Effect	Causal Effect		Total
	Direct	Indirect	
X – Y	0,630	–	0,630
X – Z	0,304	–	0,304
Z – Y	0,573	–	0,537
X to Y through Z	–	0,630 + (0,304 X 0,573)	0.804

Source: Processed Research Data (2023)a. Direct and Indirect Effect Direct Effect.

1) Direct Influence

- a) Analysis of the effect of X on Z: from the analysis above, it is obtained that the significance value of X is $0.00 < 0.05$. So it can be said that there is a direct influence between variable X on Z.
- b) Analysis of the effect of X on Y: from the analysis above, the significance value of X is $0.00 < 0.05$. So it can be said that there is a direct influence between variable X on Y.
- c) Analysis of the effect of Z on Y: from the analysis above, the significance value of Z is $0.00 < 0.05$. So it can be said that there is a direct influence between variable Z on Y.

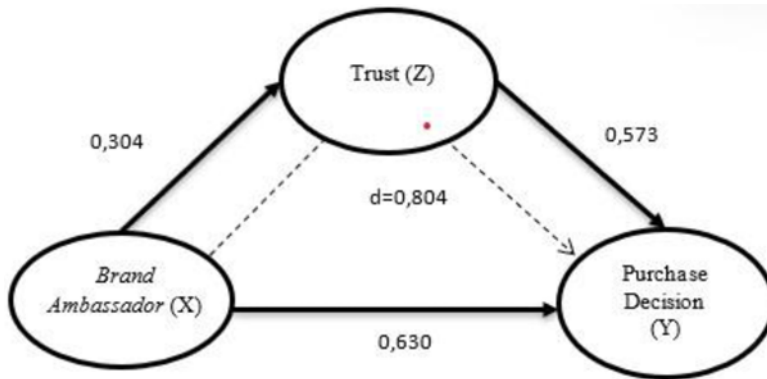
2) Indirect Effect

The indirect effect of brand ambassadors (X) through trust (Z) on purchasing decisions (Y) is the multiplication of the beta coefficient value (brand ambassadors on purchasing decisions) by the beta value (purchasing decisions on trust), namely $0.630 \times 0.573 = 0.361$.

3) Total Influence

The total influence given by brand ambassadors (X) on purchasing decisions (Y) through trust (Z) is $0.630 + (0.304 \times 0.573) = 0.804$.

Based on the results of the above equation, the path diagram that can be drawn is as follows:



Picture 4. Path analysis diagram.
Source: data processed, 2022.

Based on the picture above, it can be concluded that there is a significant influence between brand ambassadors on purchasing decisions, trust has a significant effect on purchasing decisions and brand ambassadors on purchasing decisions through trust have a positive and significant effect.

3 HYPOTHESIS TEST

Table 10. Result of T-test analysis.

Variable Influence	thitung	ttabel	Significance	Description
X to Y	8,801	1,657	0,000	Significant
X against Z	2,801	1,657	0,000	Significant
Z against Y	8,045	1,657	0,000	Significant

Source: SPSS processed data (2022).

Hypothesis 1 *Brand Ambassador* Variables Affect Purchasing Decisions

Based on Table 10, it shows that the t test results on the Brand Ambassador variable(X) on Purchasing Decisions (Y) are *thitung* greater than *ttabel* ($8,801 < 1,657$) and a significance value of $0,000 < 0,05$. So it can be concluded that directly there is a significant effect of Brand Ambassador (X) on Purchasing Decisions (Y) and Hypothesis 1 is Accepted.

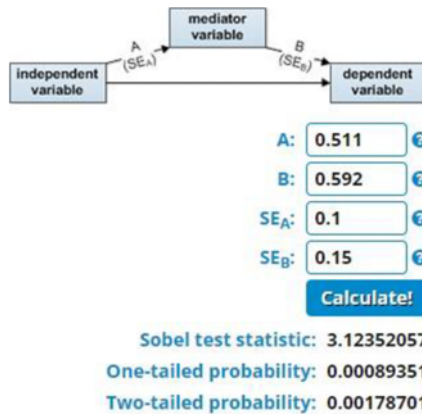
Hypothesis 2 *Brand Ambassador* Variables Affect Trust

Based on Table 10 shows that the t test results on the Brand Ambassador variable (X) on Trust (Z) are *thitung* greater than *ttabel* ($2,801 < 1,657$) and a significance value of $0,000 < 0,05$ So it can be concluded that directly there is a significant effect of Brand Ambassador (X) on Trust (Z) and Hypothesis 2 is Accepted.

Hypothesis 3 Trust Variables Affect Purchasing Decisions

Based on Table 10, it shows that the t test results on the Trust variable (Z) on Purchasing Decisions (Y) are *thitung* greater than *ttabel* ($8,045 < 1,657$) and a significance value of $0,000 < 0,05$. So it can be concluded that directly there is a significant effect of Trust on Purchasing Decisions (Y) and Hypothesis 3 is Accepted.

Mediation Test Hypothesis 4 Brand Ambassador Variabels on Purchasing Decision mediated by Trust



Picture 5. Mediation test results.
Source: Sobel test calculator, 2023.

Based on the results of the Sobel test calculation, it is obtained that the Z value is 3.12352057 or greater than 1.96 (absolute z value). Thus it can be concluded that Hypothesis 4 in this study is accepted, which states that brand ambassadors influence purchasing decisions with trust as a mediating variable.

4 CONCLUSION

Brand ambassadors have a positive and significant effect on purchasing decisions, in the sense that the better and more acceptable brand ambassadors in meeting consumer expectations will influence purchasing decisions.

Brand ambassadors have a positive and significant effect on trust, in the sense that the better the brand ambassador in supporting promotional activities can create trust in the advertised product company, this shows that brand ambassadors are able to create trust. Purchasing Decisions have a significant effect on Trust, in the sense that a strong trust factor can encourage purchasing decisions, trust is the foundation of the relationship between consumers and brands or companies, and when consumers feel trusting, they are more likely to make purchases.

There is an influence between brand ambassadors on purchasing decisions through the variable trust as a mediating variable for Bukalapak consumers in Malang Raya. It can be interpreted that the existence of the right and credible brand ambassador can provide trust to consumers so that consumers have confidence and decide to make purchases of the brand represented by the Bukalapak marketplace.

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Tourism service product development in the post pandemi era of Covid-19 at Manuamdi Tours & Travel Bali

Baroya Mila Shanty & Satura Dava Bintang
University of Muhammadiyah Malang, Indonesia

ABSTRACT: PT Manumadi Tours & Travel Bali is a service company engaged in the travel agency. The purpose of this research is to find out and analyze the new products desired by consumers and the company Manumadi Tours & Travel Bali, and what are the results of the product development carried out by PT Manumadi Tours & Travel Bali. This research is applied research (Applied Research). The analytical tool used in this study is the New Services Development stage. Data collection techniques are carried out by conducting interviews with the company, and documentation. The result of this study is the discovery of one suggestion idea for developing a new product at the Manumadi company, namely Taylor Made. The limitation of this research is that the company has consumers who are foreign nationals, and the data collection for this research is only by interviewing the Sales & Product Manager of Manumadi Tours & Travel Bali and documentation. The suggestions from this research are expected to be a reference for making improvements or modifications to products that have been developed and the company is expected to maintain its services according to consumer choices.

Keywords: New Services Development Stages, New Product Development, Tour Travel Agency

1 INTRODUCTION

Competition in the business world is currently felt to be getting tighter, along with the increase in the number of similar companies offering the same products or services. This becomes a consideration for every company to be able to be competitive with its competitors in winning competition in its products. There are many ways that can be used by companies to win competition in the business world from an operational point of view, including process design, product design and services, quality management, location, layout, management of human resources resources, scheduling, supply chain management, inventory and maintenance Heiizeir and Reindeir (2014). Of the existing basic ideas, one of the most important ideas is balancing new products or improving existing products.

Balancing products that have high sales value and competitiveness requires the right business strategy. Because of that, companies need to make optimal use of sources of resources to maintain the continuity of business life over time. The tourism sector is one of the sectors growing to become the future of economic sector balancing, and quite plays an important role in contributing to the country's supply and income. Therefore, there is a need for business actors who are able to provide the needs of the community in terms of fulfilling the needs in carrying out tourism activities Wardiah (2016).

Travel service businesses or tour travel bureaus (BPW) have become a bridge between tourists and service providers, by planning tourist trips. Each travel agency is competitive in presenting tourism products and packages to attract tourists who are the main factor in tourism. The travel agency prepares complete tour packages for sale, such as transportation, accommodation and various tourist attraction arrangements. Generally speaking, tour travel agencies are categorized into two worlds, namely inbound and outbound. The inbound tourism travel agency remembers tour packages for tourists entering into neighboring countries where the teirseibuit beirada organization is located. On the other hand, the outbound organization remembers the trip outside Neigeiri Nuianmeisiri (2022).

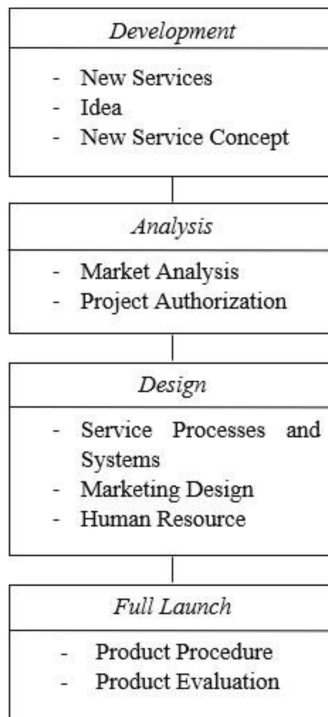
However, tourism is one of the national strategic sectors most affected by the Covid-19 pandemic. Regions in Indonesia which are the epicenter of the national tourism sector, such as Bali, experience extraordinary economic difficulties and challenges. This condition has been exacerbated by the increase in Covid-19 victims in Indonesia since the first case was announced in March 2020, the World Health Organization (2019). Bali as an epicenter of Indonesian tourism has become one of the areas that has experienced a significant impact of the pandemic, resulting in a decrease in the number of foreign tourists competing.

Manumadi Tours & Travel is a travel agency company that can still survive and operate on the island of Bali during the Covid-19 pandemic to date, where quite a number of companies engaged in tourism have gone bankrupt and have closed their businesses, which was caused by several factors. The company itself has provided a service, namely the Standard Package, this service includes a complete travel package such as transportation, accommodation, tours, and travel guides provided by the company, and the company helps with visa arrangements, guarantees that the services provided must be in accordance with those provided by the company, as well as assisting in the processing of other documents needed on the trip, by picking up the benefits of the services provided by the company to consumers can optimize their travel experience while traveling.

However, during the post-Covid-19 pandemic, the culture of tourism that consumers did was different from before Covid-19, consumers tended to travel more privately, this made companies experience product adjustments related to new consumer demands, as well as during the post-Covid-19 pandemic 19 places – tourist attractions cannot always be visited because in some tourist attractions they are still undergoing environmental treatment in order to attract consumers back, on this basis the company wants to make a product that can fulfill consumer desires. Therefore, the development of tourism products in business must be able to move quickly and creatively so that they can rise and develop tourism and its companies immediately in accelerating economic recovery after the Supardi pandemic (2021).

2 METHODOLOGY

The research object was conducted at PT Manumadi Tour & Travel Bali which is located at Jl. Dewi Sri IX No. 8, Legian, Keic. Kuta, Badung Regency, Bali. This type of research is applied research (Applied Research) Suigiono (2015). This study focuses on product service balance for a new company, namely Taylor Made. Data collection techniques in this study are by means of interviews and documentation. The analytical tool used is Fitzsimmons' New Service Development Strategy (2014). There are also steps in the framework of this research based on steps to balance new service products at PT Manumadi Tour & Travel Bali.



Picture 1. Research framework.
 Source: Fitzsimmons (2014).

2.1 *Development*

The initial stage in product development begins with an idea. Ideas can also come from a variety of sources such as development and research, customers, scientists, marketing channels, and top management. The search for product ideas can also be seen from the needs of companies and consumers in efforts to recover tourism after the Covid-19 pandemic.

- a) New Services
- b) Idea
- c) New Service Concept

2.2 *Analysis*

Concepts that passthrough product development are then considered in the analysis phase, to determine their potential as part of a profitable business. At this analysis stage, the company analyzes product service opportunities that will be developed in the market.

- a) Market Analysis
- b) Project Authorization

2.3 *Design*

At the design stage, product development is carried out which has a long process and takes a long time. This process creates a new service design and product testing process in the field with appropriate personnel training, and creates a product marketing campaign in a specific city or region.

- a) Service Processes and System
- b) Marketing Design
- c) Human Resource

2.4 Full launch

The ideas or ideas that have been selected are then converted into products or services that will be produced by launching the service products that have been developed to the market, then the company evaluates the services that have been developed.

- a) Product Procedure
- b) Product Evaluation

3 RESULTS AND DISCUSSIONS

3.1 Development

3.1.1 New services

In the selection of services to be balanced by the company based on consumer needs, namely Taylor Madei. While the choice of new services is based on business needs, namely Standard Packagei, this new service is then selected at the next stage, namely intuitive ideas to describe what products will be balanced by the company, the new service concept is based on consumer and business needs as attached in the attachments one and two.

3.1.2 Idea

Table 1. Idea search result.

No.	Idea Found	Service Development
1	<i>Taylor Madei</i>	<ul style="list-style-type: none"> a) Developing consumer services related to consumers' desire to increase their tourism products, ranging from reimbursement to accommodation, and consumer activities during holidays b) The company provides a choice of tourism products that suit consumer tastes c) Developing services in the Nich Market market where consumers have their own interests in hobbies, activities, and the environment in which they live together while on holiday

Source: Primary data (2023). Processed.

Based on the choice of services based on consumers and companies, then selected through the idea search results stage to produce a choice of Taylor Made products, the advantages and disadvantages of the choice of services – these services are then selected based on the results of interviews with companies to decide on the results of searching for ideas that have greater potential to be developed on the company.

This service was chosen by the company because it got the highest idea, and this product was also developed based on the Customized Services Strategy to meet the needs of new markets after the Covid-19 pandemic. Taylor Made itself is a product that aims to meet the needs of consumers, the needs of consumers who want make their own vacation activities privately and explore tourism – tourism in Indonesia, especially the islands of Bali, Lombok, Sulawesi, Sumatra and Flores.

3.1.3 *New service concept*

The new concept that the company wants in appendix three is to build experiences, and new knowledge for consumers about tourism in Indonesia by building the freedom and desires of consumers when buying their tourism products assisted by the company.

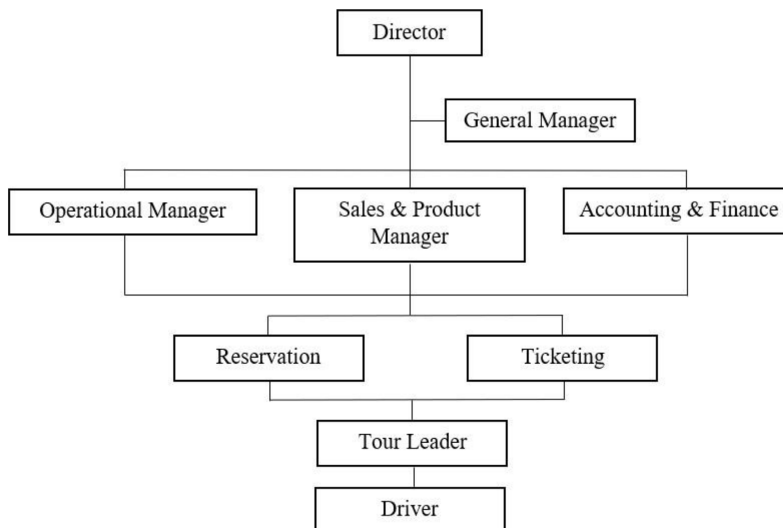
3.2 *Analysis*

3.2.1 *Market analysis*

From the results of the market analysis carried out, the opportunities and strengths of the Manumadi Tours & Travel company's products in appendix four have a good fit for creating products to be developed, because based on the threats and weaknesses in this market the company still has a few shortcomings, while the opportunities and strengths of the company have more value than the threats and weaknesses of the market, therefore the company can continue to develop new services for consumers.

3.2.2 *Project authorization*

In this case the company has a clear organizational structure to assign responsibilities and tasks to each division so that when project testing is carried out it can run well. The human resources in charge are responsible for providing services such as delivering consumers on time, providing knowledge related to the culture of the places to be visited, and providing good service to consumers, while the human resources in charge are Reservations, Tour Leaders, and Drivers in the attachment five.



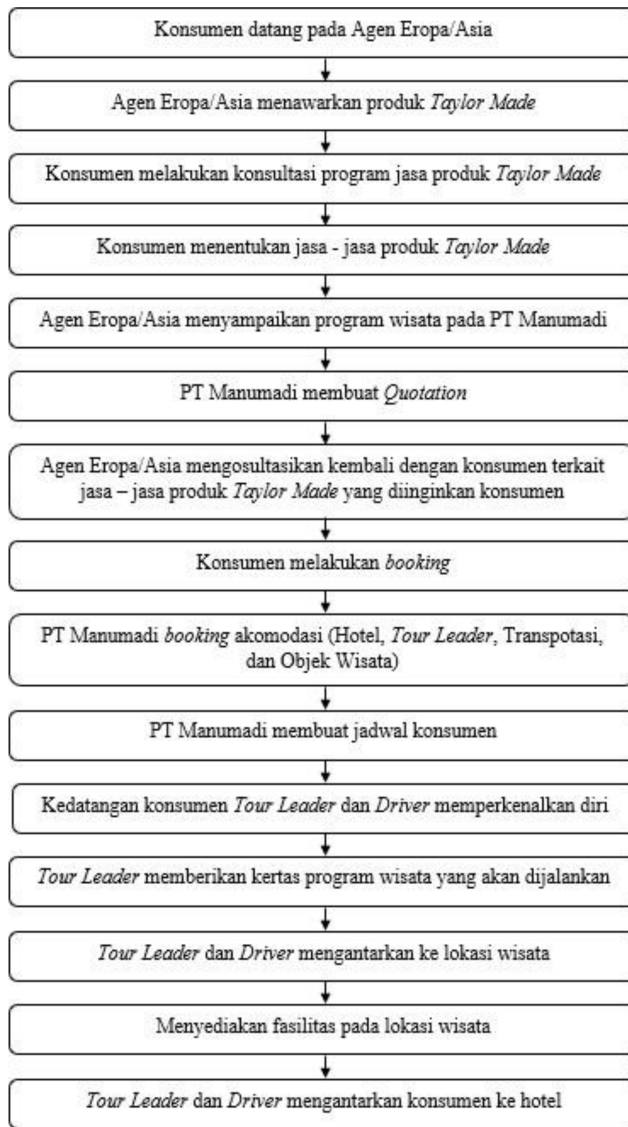
Picture 2. Manumadi Tours & Travel Bali organizational structure.

Source: Primary Data (2023). Processed.

3.2 *Design*

3.2.1 *Service processes and system*

The service process is an operational stage of a series of actions in a predetermined sequence. This process is the result of a development made in reference to Taylor Made Manumadi Tours & Travel products.



Picture 3. Taylor made process.
 Source: Primary data (2023). Processed.

The Service Package owned by the company in appendix six will be developed in the future so that it can follow the concept of a service that has been built, because the quality performance of service providers must be able to arrange properly in each element – the elements of the tour package that will be felt directly by consumers.

3.2.1 Marketing design

The marketing program in this research is an important step to introduce a new product to consumers and in this marketing program companies can develop their business to increase product sales after the Covid-19 pandemic. Marketing carried out by the company Manumadi Tours & Travel itself includes the 7Ps contained in appendix seven.

3.2.2 Human resource training

In the human resource training stage, the company conducts human resource training that will carry out the services that have been balanced before the service products will be used to consumers. This human resource training aims to create an effective and efficient service process, so that when these services are used by consumers, they can run well. The following is the human resource training conducted by the company Manumadi Tours & Travel.

Table 2. Human resources training.

No.	Role	Provided Training
1	Resi eirvation	a) Hotel, restaurant and transportation accommodation inspection training b) Foreign language training (other than English) c) Information system and computer application training
2	Tour i Leai deri	a) Foreign language training (other than English) b) Communi ication skill training c) Learn knowledge about tourist attractions and local culture
3	Driveri	a) Driveir skill deiv eil opmein t training b) Foreign language training (other than English) c) Company transportation maintenance training

Source: Primary data (2023). Processed.

3.4 Full launch

3.4.1 Product procedure

Product procedures will be divided into two stages, namely soft launching and grand launching, both of these stages are equally important because without an introduction to company products it will be difficult to find consumers, along with soft launching and grand launching of products at the company.

Table 3. Product procedure.

No.	Service Introduction	What to Do
1	<i>Soft Laumi ching</i>	a) Conducting a trial based on free of charge (FOC) with partner agents working with the company, the purpose of this trial is so that the company and work partners can find out firsthand how the atmosphere is at tourist attractions and find accommodation services such as hotels, and transportation. Trial can also add knowledge to companies and partners
2	<i>Grand Laumi ching</i>	a) Holding activities with the Association of Indonesian Travel Agencies (ASITA) Bali and other travel agency companies, by determining a theme that matches the company's branding, in this activity the company will prepare promotional materials such as brochures, merchandise that shows the identity of the company's brand

Source: Primary data (2023). Processed.

3.4.2 Product evaluation

In evaluating the company's products, the company uses a questionnaire given to consumers after using the company's services, this questionnaire contains consumer ratings of hotels, restaurants, transportation, drivers, and tour leaders. This questionnaire was made as

concise as possible by the company with animated human emojis depicting happy, flat and sad feelings. As well as on the questionnaire sheet given by the company there is a scale of 1–10 on all of the company's services that have been provided to consumers, on the questionnaire sheet the company also provides additional comments and suggestions if consumers want to provide other comments and input for services that have been provided by the company.

Based on market analysis, Taylor Made company has greater opportunities and strengths than Standard Package products, the advantages of Customized Services Strategy are more in line with consumer needs and preferences, so consumers can get a more satisfying experience. By understanding the advantages and disadvantages of these two types of products, companies can choose the most suitable product strategy to meet consumer needs. Taylor Made products have advantages in terms of meeting the special needs of consumers and providing a more personalized experience.

4 CONCLUSION

The conclusions that can be drawn from this study are based on the formulation of the problem and the results of the analysis that has been carried out to determine product development at PT Manumadi Tours & Travel Bali. Responding to the formulation of existing problems, the process or stages of product development which are carried out starting from the initial stages of searching for ideas obtained directly from the company and customers to the design stage of the product to be developed, namely Taylor Made.

Meanwhile, the Manumadi Tours & Travel Bali company itself in the future wants to develop a Standard Package service that aims to increase consumer preferences and product lines for the general market so that consumers get attractive product offers from the company, this product is still in the planning stage because during the post-Covid-19 pandemic, demand Consumers regarding Standard Package products are still insignificant compared to Taylor Made, therefore the company's steps for the future are to develop the Standard Package service after the company is able to return to organizational conditions as before the Covid-19 pandemic.

The results of service development use 4 stages of product development, namely Development, Analysis, Design, and Full Launch according to Fitzsimmons (2014). Where the Taylor Made product developed by PT Manumadi Tours & Travel Bali after the Covid – 19 pandemic can help maintain the continuity of the company's organization, as well as increase product sales in new markets, namely the Nich Market.

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ATTACHMENT

Attachment 1. New services based on consumers.

No.	Selected Services	Development Services
1	<i>Taylor Made</i>	a) Developing consumer services related to consumer freedom to make tourism products by request to accommodation, and consumer activities while on vacation b) The company provides a choice of tourism products that suit consumer tastes c) Developing services in the Nich Market market where consumers have their own interests in hobbies, activities, to the temporary living environment when consumers are on holiday in Indonesia
2	<i>On the Way Tour</i>	a) Develop short service tourism products when consumers will make hotel transfers b) Introducing several tourist objects to consumers c) The time required is relatively very short

Source: Primary Data (2023). Processed.

Attachment 2. New service based on company.

No	Selected Services	Development Services
1	<i>Standart Package</i>	a) Develop types of services in general, such as adding product variations to consumers so that consumers understand the new tour packages that have been developed by the company b) The company provides a selection of products that are ready to be sold with various variations through the website c) Developing services for all prospective consumer markets
2	<i>Kintamani Transfer Tour</i>	a) Develop short service tourism products, especially the island of Bali b) Introducing several tourist objects to consumers c) The time required is relatively very short
3	<i>Sumbawa Dive Safari</i>	a) Developing dive services with whale sharks b) Providing a new atmosphere to consumers through underwater tourism c) Providing new knowledge to consumers about the benefits of nature conservation for humans and the environment

Sumiberi: Primary Data (2023). Processed.

Attachment 3. New service concept.

No.	Program	Services Concept
1	<i>Taylor Made</i>	<ul style="list-style-type: none"> a) Services: In accordance with the wishes of consumers b) Service Duration: According to the time requested by the consumer c) Hotel Location (Accommodation): In accordance with consumer demand. For example, regarding the hotel environment, consumers can ask companies to be close to nature, beaches, or pedestrians, as well as the creative industries of local Balinese residents. And consumers can ask for a hotel environment that is densely populated or quiet d) Tour Leader: Consumers can ask for a Tour Leader who is able to speak the language of the consumer's country of origin

Sumiberi: Primary Data (2023). Processed.

Attachment 4. Market analysis.

Opportunity	Threat
<ul style="list-style-type: none"> a) The tour packages that the company offers to consumers are easy to implement because previously the company already had existing products ready to be sold to consumers b) Accommodation from tour packages offered by the company is very supportive for consumers because of the increasing number of hotel developments being carried out in Bali and Lombok c) The island of Bali really supports companies to sell tour packages to the European market, especially the island of Bali which is known as the epicenter of tourism in Indonesia d) The economy of European citizens tends to be high compared to Asian countries therefore companies do not have too much difficulty in determining price issues 	<ul style="list-style-type: none"> a) Many products are almost the same b) Pricing issues between European and Asian agents c) Get new competitors in the travel agency industry d) Improved services offered by competitors
Strength	Weakness
<ul style="list-style-type: none"> a) The company has competitive prices b) The company's location is quite strategic and easy to access because it is near tourism and high population density in the area around the company c) The company has a marketing program called "Self-Mission". This program is carried out by the company to participate in international travel agency forums d) Have a tour guide who can speak foreign languages according to the consumer's country of origin e) The company has subsidiaries located on several islands according to the tour packages offered by the company 	<ul style="list-style-type: none"> a) Promotions carried out on social media are still not effective b) Still have limited vehicles c) The shortage of human resources in the high season makes the company use Tour Guides and Drivers from outside the company who are still below the company's standard criteria

Source: Primary Data (2023). Processed.

Attachment 5. Service package Manumadi Tours & Travel Bali.

No.	Variable	Indicator	Information
1	Implicit Service	Attitude of Service	<ul style="list-style-type: none"> a) Reservations have the same preferences/tastes as consumers, and know what facilities are provided by the accommodation to suit consumer needs b) The Tour Leader is able to speak foreign languages, and has knowledge related to tourist sites and culture c) Drivers maintain the cleanliness of the vehicle and are responsible for maintaining the vehicle and are able to speak foreign languages d) Employees have good behavior and can speak foreign languages
		Atmosphere	<ul style="list-style-type: none"> a) Provides an overview of tourist locations related to Taylor Made products in accordance with consumer requirements during consultations and bookings b) Providing accommodation according to consumer needs, such as hotels, restaurants and tourist objects
		Sense of Well-Being	<ul style="list-style-type: none"> a) The company provides vehicles according to consumer capacity b) Hotels provide room types according to consumer needs, and provide facilities according to consumer needs c) The restaurant provides food with types according to the tastes of consumers d) Availability of tourist sites to facilitate activities that suit the type of consumer tourism
		Privacy and Security	<ul style="list-style-type: none"> a) The company provides information on tourist locations that are safe and comfortable when consumers are on vacation b) The hotel has security to protect consumers c) Restaurants provide safe food for consumption by consumers d) Tourist locations have supporting facilities for the safety of tourism types according to consumer needs
		Convenience	<ul style="list-style-type: none"> a) Explain Taylor Made services well to consumers b) Help consumers to provide a choice of services to be determined c) Drivers drive well for consumer convenience when traveling
2	Explicit Service	Training of Service Personnel	<ul style="list-style-type: none"> a) Provide training on foreign language reservations, information systems and computer applications, and inspection of tourist attractions b) Tour Leader training on how to communicate well with consumers, foreign languages, and learn knowledge and culture at tourist attractions c) Foreign language driver training, and transportation maintenance
		Comprehensiveness	<ul style="list-style-type: none"> a) Transportation equipment such as providing spare tires in case of emergencies and umbrellas b) Complete hotel facilities according to the wishes of consumers, such as a gym or swimming pool on the beach c) Completeness of tourist location equipment to maintain consumer safety

(continued)

Attachment 5. Continued

No.	Variable	Indicator	Information
3	Information	Consistency	a) Consistent in providing Taylor Made consulting services in accordance with consumer desires
			b) Carry out routine transportation maintenance based on vehicle mileage or according to service time
			c) Assist customers in checking in/out the hotel on time
		Availability Service	a) Availability of services when consumers want to consult until consumers' wishes are fulfilled
			b) The availability of hotels helps consumers if there are emergencies such as finding medicine or other important needs
			c) Drivers deliver to tourist sites that meet consumer needs
	Accurate	Timely	a) Providing precise information about the description of tourist sites to consumers of Taylor Made products
			b) Provide an overview of the vehicle that will be used when traveling
			c) Provide any information that must be prepared at tourist sites
		Useful	a) Providing Taylor Made program improvements in a timely manner
			b) Providing booking time to consumers if they agree to the program to be run
			c) Timeliness that must be fulfilled by Drivers when picking up consumers and tourist sites
4	Facilitating Goods)	Consistency	a) Useful information for consumers and companies so that they can find out about new knowledge and culture when consumers visit, information is also useful for companies so that they can find out the conditions and situations of the places to be visited for the safety of consumers
			b) Consumer needs are met, causing a sense of satisfaction when the service takes place
			a) Maintenance on transportation to maintain the quality of services provided to consumers
			b) Consistent in maintaining the cleanliness of transportation
			c) Keep tourist sites clean and tidy
			d) The restaurant has a decoration that supports according to the theme it has
	Quantity	e) 24-hour front desk service facility for consumers at the hotel	
		a) Maintaining the quantity of vehicle content in accordance with passenger capacity	
		b) Provide recommendations for tourist locations to consumers	
		c) The restaurant can accommodate all consumers during lunch and dinner hours	
		Selection	a) Have a driver who understands how to take care of the vehicle
			b) Having a vehicle that is still factory standard, not modified, and the interior is pretty good
c) Have a choice of tourist locations to be visited			

(continued)

Attachment 5. Continued


No.	Variable	Indicator	Information
5	Supporting Facility	Location	<ul style="list-style-type: none"> a) Accessible by small to large scale transportation b) Located in the middle of the city's tourist center namely Denpasar, Bali c) Located 1.5 hours from the most distant tourist location, namely Amed, located on the eastern tip of the island of Bali
		Interior Decorating	a) Factory standard vehicle decoration by keeping clean
		Supporting Equipment	a) Supporting equipment such as digital cameras and cell-phones for live documentation on social media
		Architectural Appropriateness	<ul style="list-style-type: none"> a) The office architecture is a shop model office consisting of 3 floors b) Has a printed map of the island of Bali which is useful for showing tourist locations taken by consumers
		Facility Layout	<ul style="list-style-type: none"> a) Placement of facilities on each floor such as break rooms and kitchens to support employee comfort while working b) Meeting room near the company's product department and general manager

Source: Primary Data (2023). Processed.

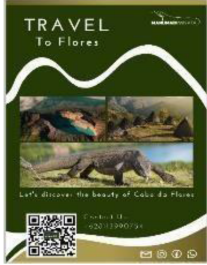
Attachment 6. Marketing Design

No.	Marketing Program	Information
1	Product	<ul style="list-style-type: none"> a) Supporting facilities: Physical sources that must be available before being perceived by consumers are transportation, digital cameras, and company offices b) Item facilities: Facilities provided for consumers by the company by carrying out maintenance on transportation, maintaining the cleanliness of the vehicle interior, the restaurant has decorations according to the type of food theme, and the hotel has a 24-hour front desk service for consumers c) Information: Ease of getting an overview of tourist attractions, and the form of information on the types of tours provided by the company to consumers d) Explicit Service: Benefits that can be felt directly by consumers such as consulting service processes, and completeness of safety equipment to maintain consumer safety e) Implicit Amenities: Psychological added value that is felt directly by consumers so that it creates a feeling of pleasure when services are provided, such as reservation hospitality, tour leaders, and drivers when explaining information on

(continued)

No.	Marketing Program	Information
		tourist attractions and culture to consumers, and providing accommodation according to consumer requests, and delivering to places travel according to the wishes of consumers
2	Price	a) The price offered by the company is in accordance with the consumer's choice
3	Distribution channel	a) Company: PT Manumadi Tours & Travel Dutch agents: Van Verre, EXO Bakcyard, Pacto Belgian Agent: Destination Service, Buffalo TourFrench Agency: GVI, Step In China Agent: Original Asia b) Consumer
		 <pre> graph LR A[Perusahaan] --> B[Agen] B --> C[Konsumen] </pre>
4	Promotion	a) Publicity: Website as a provider of information to consumers, be it information about tourist sites, tourist facilities provided, and how to reach tourist attractions, the website provided by the company can be accessed at any time by consumers with the website address https://manumadi.com/ b) Advertising: Social Media is centered on Instagram and Facebook as documentation of tourism activities that have been carried out by consumers, and through social media companies can also broadcast the services they provide live to potential customers. c) Direct Marketing: Self-Mission promotional program carried out by the company to participate in international travel agency events, this event can introduce work partners and potential customers directly to the services that have been developed by the company
5	Process	a) Consumers come, then consult with agents b) The company makes travel programs that consumers have wanted c) Agents provide tour programs that have been made by the company to consumers d) Consumers determine Taylor Made services e) The company provides Quotation f) Consumer bookings g) The company makes a Taylor Made program schedule that has been determined by consumers h) Tour Leaders and Drivers are ready to provide services according to consumer needs
6	People	a) Reservations: (1) Mastering a foreign language (besides English) (2) Knowing the right accommodation for consumers such as tourist attractions, hotels and restaurants (3) Have good communication skills

(continued)

No.	Marketing Program	Information
7	Physical evidence	<ul style="list-style-type: none"> b) Tour Leaders: <ul style="list-style-type: none"> (1) Mastering a foreign language (besides English) (2) Have knowledge related to tourist sites and local culture (3) Have good communication skills c) Drivers <ul style="list-style-type: none"> (1) Maintain the cleanliness of the vehicle and be responsible for maintaining the vehicle (2) Mastering a foreign language (besides English) d) Employee <ul style="list-style-type: none"> (1) Have good manners (2) Mastering a foreign language (besides English) a) Has an office located on Jl. Dewi Sri IX No. 8, Legian, Kec. Kuta, Badung Regency, Bali 80361 b) Has 3 minibus vehicles such as Hiace and Elf
		 <p>The image shows a travel brochure titled "TRAVEL To Flores". It features a green background with a white wavy line. Below the title, there are three small images: a landscape with a river, a traditional house, and a large animal (possibly a Komodo dragon). At the bottom, there is a QR code and the text "Let's discover the beauty of Nusa Tenggara Timur".</p>

Source: Primary Data (2023). Processed.

Arrangement of business management and quality development of human resources of Msmes entrepreneurs Muhammadiyah regency of Malang

Achmad Mohyi, Siti Nurhasanah & Titiek Ambarwati
University of Muhammadiyah Malang, Malang, Indonesia

ABSTRACT: This service activity aims to help micro, small and medium enterprise entrepreneurs (MSMEs or UMKM) in managing their businesses by providing knowledge on structuring business management concerning the areas of human resources, marketing, production and finance. Besides that, it also provides teaching of cooking skills as a form of improving the quality of skills possessed. This service activity has been carried out in Malang Regency, with participants being MSMEs entrepreneurs from Muhammadiyah Malang Regency who are engaged in the food or cooking business.

Keywords: Management, Small Micro Medium Enterprises, Muhammadiyah

1 INTRODUCTION

The pandemic conditions in this era have devastated many businesses or companies managed by the community, especially the tourism service sector and micro, small and medium enterprises (MSMEs or UMKM). However, at the beginning of 2022 the existence of the pandemic was disappearing, the community started trying to revive the businesses they had worked on, one of which was MSMEs, in this case, the MSMEs that Muhammadiyah residents of Malang Regency were involved in. MSMEs entrepreneurs are starting to compete to revive their businesses in various ways, including increasing their knowledge and skills and using their information technology. The rapid development of information technology has an impact on the economic, financial and social fields. Through the development of Information Technology, it is easy for a business to develop, but it certainly requires increasingly fierce competition and there are still few small businesses that utilize information technology (Hartono 2018).

Law of the Republic of Indonesia No. 20 of 2008 defines MSMEs as a business or business carried out by individuals, groups, small business entities, and households. According to the law, a micro business is said to have assets or net worth of at least IDR 50 million (excluding land and building assets). The criteria for small businesses are businesses that have a net worth of IDR 50 million to IDR 500 million and the criteria for net worth of medium businesses are above IDR 500 million to IDR 10 billion.

There are many challenges faced, including the increasingly tight competition for Small and Medium Enterprises (MSMEs) products which will compete with external products that are superior in management, mastery of technology, human resources, market access and others. Competition is not only in the output market but also in the input market. Many natural resources are utilized by other parties, in other words most of the potential is owned but is still not optimal so that a competitive advantage is needed. The competitiveness of

MSMEs to become creative industries with product design and quality through the application of science and technology (science and technology) and entrepreneurship so that people's love for domestic products increases (Wati *et al.* 2020). MSMEs development is cross-sectoral in nature which requires systematic and participatory planning. Restore official business institutions as legal validity that can provide added value and improve access to productive resources. Based on this, it shows that the need for a solution to this problem, one of which is the use of technology through Digital Marketing as a way to increase competitive advantage (Saputra *et al.* 2020).

Development of Micro, Small and Medium Enterprises (MSMEs) is also being developed among Muhammadiyah members through the Progressive Entrepreneurs Movement which continues to be promoted within the Muhammadiyah Youth body. Unfortunately, the economic movement in the MSMEs sector has not run optimally. Because of this, various breakthroughs are needed to stimulate the growth of MSMEs, especially in Muhammadiyah Youth. "Muhammadiyah youth are not only activists, but there must be business activists in Muhammadiyah Youth," said the Chairperson of the National Industry Economic Committee, Soetrisno Bachir, at a seminar entitled 'Outlook of MSME Business and Post-2019 Election Trade Stretch' at Muhammadiyah University Yogyakarta (UMY), last Saturday (24/8). He hopes that the Muhammadiyah Youth organization will give birth to many young Muhammadiyah merchants. According to him, an organization as big as Muhammadiyah has better business capital than other organizations. Because Muhammadiyah has many business charities that are usually used as business partners. Meanwhile, the Chairman of PP Pemuda Muhammadiyah, Horo Wahyudi, is of the view that the economy is a big problem for the nation globally. Even though Indonesia has various natural resources that have great potential for maximum utilization. Unfortunately, various existing natural resources have not been maximized. Even if it is utilized optimally, and even then through foreign parties in its management.

The development of MSMEs in the regions is one of them by MSME entrepreneurs who are under the auspices of the Muhammadiyah Regional Leadership Economic Council of Malang Regency, which continues to be fostered. Some of the coaching needed includes increasing knowledge in producing the products they sell, methods of marketing these products, insight into knowledge of the use of technology which is currently needed to introduce products and create business networks. The MSMEs entrepreneurs under the auspices of the Economic Council are classified into several groups, including the UKM or MSMEs group of food stalls, crafts and others. While the number of entrepreneurs under the auspices of the PDM Economic Council in Malang district is recorded at approximately 70 MSMEs, in this service the main target is entrepreneurs engaged in the food or cooking sector, around 30 MSMEs.

One of the problems that need to be resolved in managing MSMEs is the irregularity of business management and improving quality or skills in making a product that is really in demand by consumers.

2 MATERIALS AND METHODS OF IMPLEMENTATION OF COMMUNITY SERVICE ACTIVITIES

The material presented in this dedication concerns business management structuring materials in various business fields, namely the human resources sector, the production or operational sector, the marketing sector, and the business financial management sector. Besides that, there is material for improving the quality of human resource skills in making certain products, in this case, namely material for making delicious sweet fried chicken.

While the method of implementation or delivery is by the lecture method, which is related to management structuring material. The next method is the practice of making delicious sweet fried chicken.

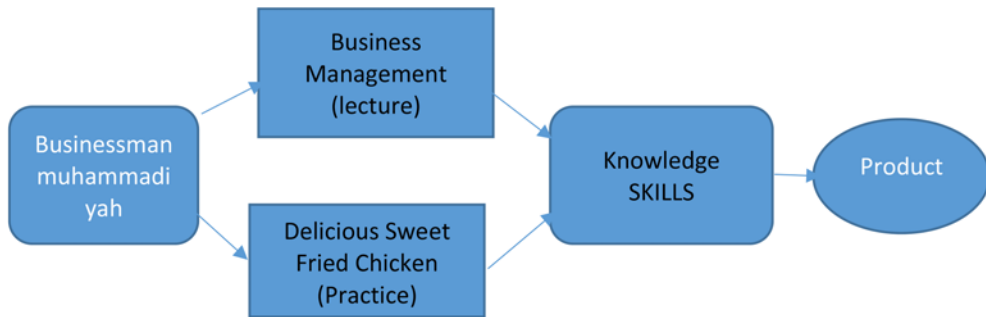


Figure 1. The flow of community service activities.

2.1 *Benefits of implementing service for MSMEs or UMKM*

The benefits of implementing this service include:

1. Realization of the Higher Education Catur Dharma program through community service program partnerships.
2. Establish synergistic and sustainable cooperation in order to improve the community's economy.
3. Helping the community, especially Small and Medium Enterprises for MSMEs entrepreneurs from Muhammadiyah members to increase their knowledge and skills in managing a business.
4. Helping the progress and development of MSME businesses.

2.2 *Priority issues handled*

Priority problem solving needs to be specified by the Community Service Team to support expectations in this assistance. The details can be sorted as follows:

1. Provide knowledge about the management of MSMEs
2. Provision of skills training in making products.
3. Empowerment of human resource management, especially utilization of Small and Medium Enterprises for UMKM or MSMEs entrepreneurs from Muhammadiyah members.

2.3 *Target and output*

The target of this community service activity is to provide knowledge about human resource management, the field of marketing, the field of production and finance to the managers of Small and Medium Enterprises, MSMEs entrepreneurs, Muhammadiyah residents, Malang Regency.

It is hoped that the output specifications for community service activities through practical training in the skills of making a dish for MSMEs entrepreneurs belonging to Muhammadiyah members are expected to provide added value in the long term, so that they become superior and competitive so that they have characteristics compared to other places that embody the mission of supporting a creative environment.

3 RESULTS AND DISCUSSION

3.1 *Service implementation location*

This community service was carried out at the Sengkaling Culinary Hall (SEKUL) with the object of Muhammadiyah Small Entrepreneurs in Malang Regency who are engaged in the food or cooking business of around 30 MSMEs entrepreneurs.

3.2 *Activity results*

Community service activities are carried out by conducting counseling to 30 micro, small and medium entrepreneurs from Muhammadiyah Malang Regency who are engaged in the food or cooking business. Counseling materials regarding business management arrangements and quality development of human resources with training in making delicious sweet fried chicken.

3.3 *Discussion of activities*

3.3.1 *The importance of management in managing micro, small and medium enterprises*

Hasibuan (2009) defines management as the science and art of managing the process of utilizing human resources and other resources effectively and efficiently to achieve a certain goal. Management is a science and art to achieve goals through the activities of other people (NitiseMITO 2012). Management is the art and science of planning, organizing, motivating and controlling people and working mechanisms to achieve goals (Siswanto 2011). Management activities involve various activities of planning, organizing, actuating and directing and evaluating an activity to achieve the desired activity.

Meanwhile, UMKM or MSMEs is a form of community small business whose establishment is based on someone's initiative. Most people think that MSMEs only benefit certain parties. In fact, MSMEs play a very important role in reducing the unemployment rate in Indonesia. MSMEs can absorb many Indonesian workers who are still unemployed. In addition, MSMEs have contributed greatly to regional income and Indonesia's state revenue.

Micro, small and medium enterprises are businesses that are formed with the aim of gaining profit by producing and selling a product in the community. To produce a product with good results and sell products so that consumers buy them satisfactorily, of course, requires a good planning activity, organizing and implementing and supervising these activities properly.

3.3.2 *Several areas of management that need to be organized in MSMEs*

Several areas of management are inherent in a business organization, both MSMEs and large-scale businesses. These fields include the field of human resources, marketing, production or operations and finance.

In the field of human resources, the quality of human resources managing MSMEs is very important. Quality in this case, namely skills, knowledge and attitudes will determine the success or failure of a managed business. Knowledge that needs to be possessed regarding human resource activities, namely office administration, workforce planning and employee placement, payroll systems, performance evaluation.

In the field of marketing, the knowledge that MSMEs entrepreneurs need to have in the field of marketing is how to make and determine the most appropriate products or products needed by consumers, knowledge of how to determine product prices, knowledge of how to market products and determine the most appropriate marketing network for the products being sold. According to Kotler and Armstrong (in Priansa 2017) marketing management is a human effort to achieve the desired exchange results and build close relationships with

consumers in a way that is profitable for the company. Meanwhile, Stanton (2005) said the means utilized by businesses to carry out marketing. Another definition was also put forward by Sumarni (in Sunyoto 2014) who said that marketing management is the analysis, planning, implementation and control of programs designed to create, establish and maintain profitable exchanges with the organization's target buyers.

The field of production, knowledge in the field of production or operational areas that should be owned, namely how to make products with good quality or how to choose products to sell that sell well in the market for MSMEs entrepreneurs engaged in trade, how to calculate production costs and select materials to produce an item, how to maintain or store products so that they are safe in the warehouse. Regarding activities in the production sector, Heizher and Rendher (2011) explain that production management is a series of activities that generate value in the form of goods and services by converting inputs into outputs. Likewise Irham Fahmi (2012), production management is a science that discusses comprehensively how the company's production management uses its knowledge and art by directing and managing people to achieve a desired production result.

In the financial sector, knowledge that is very necessary for MSMEs entrepreneurs related to the financial sector, namely how to determine the feasibility of a business to run, how to choose or determine the most appropriate or profitable source of business funds, how to calculate profit and loss in running a business, how to record incoming and outgoing money in operationalization business, the most appropriate way to allocate budget funds, how to make business financial reports. Regarding financial activities, Mustafa (2017) explained that financial management activities involve several decisions that must be made, namely investment decisions, funding decisions or decisions to fulfill funding needs, and policy decisions on allocating funds.

To run a business in order to survive in competition, including micro-scale businesses, several areas of management need to be carried out. Required management or management: administration, human resources, operational/production management, as well as marketing. Everything can not work alone. But they have to be done together. The more balanced, the more ideal and good.



Figure 2. Management teaching.

3.3.3 *Making delicious sweet fried chicken*

To make delicious sweet fried chicken, you need the following ingredients: Free-range chicken or Arabic chicken, coconut water or degan water, complete seasoning for chicken curry, pressure cooker and cooking stove. The process of making delicious sweet fried chicken is carried out through two stages, namely the stage of cooking the chicken with presto and frying the presto chicken.

The process of the first stage, cooking chicken with presto, namely putting chopped chicken into the presto cooker, then adding enough head water or water, then adding the curry seasoning mixed with chicken meat that has been soaked with head water and then closing the top with banana leaves and closed the pressure cooker so that it is airtight. Heating the pressure cooker on the stove at a medium level for about 2 hours or is declared appropriate if half an hour before the pressure cooker sounds because of the air pressure inside. After being declared cooked, then left to cool.

The second stage of processing is frying with enough cooking oil with premium level ignition. Fry the chicken from the presto by keeping the ignition from burning or enough until the color looks cooked. To reduce the cooking oil adhering to the chicken meat, this can be done by shifting the chicken meat to the side of the frying pan/frying pan or lifting it with a frying pan filter so that the cooking oil in the chicken is reduced/becomes dry.

Serving a delicious sweet fried chicken menu, can be supplemented with chili sauce, sweet sauce or soy sauce according to consumer tastes.



Figure 3. The practice of cooking delicious sweet fried chicken.

4 CONCLUSIONS AND RECOMMENDATIONS

Well-organized business management is needed to support the success of a micro, small and medium enterprise (MSMEs) in achieving its goals, one of which is achieving the desired business profit. Management arrangements required include the field of human resources, marketing, production and finance. MSMEs managers really need to continuously improve their skills in various fields, especially related to the business sector they are in, in this case, the skills to make a food product, namely delicious sweet fried chicken.

It is recommended that MSMEs entrepreneurs with their own awareness continue to learn to improve their skills, knowledge and good attitudes to develop their business through associations or related government institutions so that MSMEs in Indonesia continue to develop rapidly.

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The role of the Women's march in fighting for gender equality and women's rights in Indonesia

Najamuddin Khairur Rijal & Vivi Alayda Anwar
Universitas Muhammadiyah Malang, Malang, Indonesia

ABSTRACT: This research discusses the role of the Women's March in fighting for gender equality and women's rights in Indonesia. The Women's March is a global civil society movement that started in Washington DC, the United States in 2017, then spread and was adopted in various countries, including Indonesia. The concept used is global civil society which describes ten roles that can be played by civil society actors in fighting for what they are fighting for. The research method is descriptive-qualitative with data collection through library research. The results of this study indicate that the Women's March has at least ten roles such as watchdog, advocate, service provider, expert, capacity builder, incubator, representative, citizenship champion, solidarity supporter, and definer of standards in their efforts to promote gender equality and fight for women's rights.

1 INTRODUCTION

The development of existing information and communication technology seems to make national borders borderless. In addition, the emergence of several social media can connect events between countries even with one click. The speed of receiving information and technology has encouraged the emergence of many non-state actors in the global political landscape, one of which is global civil society (Rifki 2018).

Civil society is an independent organization that fights for the public interest. It doesn't come from the government or representatives from business, but it is purely created as a form of expression of existing public problems (Sumpter 2017). Apart from that, the term Global civil society emerged later, which was more complex because its domain was not only local in scope but also global in scope. This also cannot be separated from the influence of social media which supports the global civil society's efforts to voice its goals in defending the public interest, one of which is the Women's March which has become quite controversial in voicing gender equality (Einwohner and Rochford 2019).

Women's March is a large wave of women's action to demand gender equality. In today's modern era, of course, the role of women in this world is no longer a second gender as the construction of patriarchal culture. Patriarchy is a culture that has developed almost all over the world which places men as the most powerful gender. This culture has the view that in this world it would be better if men had more portions than women in various aspects ranging from politics, economics, and social (Irma and Hasanah 2017).

It is on this basis that many feminist movements then try to oppose patriarchal culture which is seen as demeaning to women. Even at this time according to the view of feminism, women's position is also important in all aspects and can compete with men's existence (Pantiasih 2014). One of them is the presence of this Women's March as a milestone in the struggle of women to get their rights.

Women's March was first held in the United States in Washington DC on January 21, 2017 to be precise. This coincided one day after the inauguration of the then president elect, Donald Trump. The Women's March action was a form of protest against President Donald Trump's

statement which seemed to insult women. Not only that, even in his speech, Trump said that women are called animals so it became controversial in various countries (Meivio Bahari *et al.* 2022). The action was attended by more than half a million citizens, the majority of whom consisted of women, and even attended by many world celebrities and artists. Not only women, according to VoA Indonesia, men also took part in this action in Washington. With so many masses following the action, it is also the largest action in the United States (Mazrieva 2017).

Presence of action Women's March sparked several similar actions that took place primarily in the United States. Reporting to American Resistance, more than 25,000 people took several actions against Trump's statements that demean women (Fisher 2020). Then the action was not only in the US but expanded to various countries by utilizing Facebook social media by creating an official Women's March on Washington account so that global attention, especially women, felt called and made a petition. The influence of the Women's March on Washington reaches up to 30 countries in the world including Indonesia (Al Ayubi and Zahidi 2022). The existence of similar actions in various countries is a form of expression from women regarding gender inequality.

Enter Women's March in Indonesia began with an action on March 4 2017 which was joined by the majority of women to demand equal rights. Not only that, they also demanded the state's response regarding the high cases of sexual harassment and violence against women in Indonesia (Meivio Bahari *et al.* 2022). The action, which was dominated by women wearing pink and purple clothes, moved from Jalan Sarinah-Thamrin to Taman Pandang the State Palace, which was not only attended by the general public but also supported by 33 feminist organizations in Indonesia (Kemenpppa.go.id 2017).

In addition, the entry of the Women's March to Indonesia was also due to advances in information and communication technology so the Women's March, which originated in the United States, became a global problem and was later adopted in various countries, including Indonesia. Thus, the Women's March can be called a global civil society. This is also inseparable from the adoption of democracy in these countries. The emergence of various global civil society actors cannot be separated from the democracy implemented in various countries (Martin and Smith 2020).

Furthermore, this article aims to find out the role of the Women's March Indonesia in efforts to promote gender equality in Indonesia which in turn contributes as part of gender mainstreaming. This research is expected to contribute to enriching studies on global civil society, democracy, and democratization, as well as studies on contemporary global issues, particularly about the agenda of sustainable development goals on gender equality.

2 CONCEPTUAL FRAMEWORK: GLOBAL CIVIL SOCIETY

The presence of the global civil society is inseparable from the development of globalization and democracy. The global civil society is also inseparable from the role of the internet and social media as infrastructure to achieve their goals (Rijal 2020). This is because the birth of the global civil society can come from two things. The first is the development of various global problems, one of which is the issue of gender equality. Then these problems were internationalized and formed a global consciousness that transformed into a global civil society. Second, there is interconnectedness between the international community (growing interconnectedness). The existence of this interconnectedness cannot be separated from the internet revolution as a means to campaign for the public goals raised. The existence of this campaign opens a global public sphere that can make local issues a global concern (Sarawati *et al.* 2022).

Furthermore, global civil society has its way of disseminating and gaining support from the international community. First, they use social media as a portal to gain support and brand their group, as was done at the Women's March by creating a Facebook account. Then create a campaign about the issues they raise. The last one is coordinating with the share campaign they have made to social media so that this is where a new movement begins to occur, namely click activism, in which the public participates in sharing campaigns on their social media (Parahita 2019).

In fighting for what they are fighting for, the global civil society has several roles. The first is as a watchdog which is intended to oversee government policies that are not in the public interest, or in the form of criticism of the government or the business sector. Second, as an advocate whose function is to defend certain groups whose interests have been seized both in political and economic aspects. Third, service providers whose function is to provide services independently to the community. Fourth, as an expert in his research, he can offer solutions to overcome existing problems.

Furthermore, the fifth is, capacity builder which builds human resource capacity by providing coaching or training. Sixth, the incubator is a field for storing various solutions to be offered in overcoming existing problems. Seventh, representative, namely as a representative to fight for the interests of groups that concern certain public interests. Eighth, citizen champion functions to win the hearts of the people so they can fight for their interests. Ninth, solidarity supporter functions as a participant in defending interests in the context of solidarity. Finally, the definer of standards, namely by offering new habits or norms that can later be followed by the wider community to support the creation of the public goals raised (Saraswati *et al.* 2022).

Besides that, global civil society also has a strategy for fighting for what they are fighting for, namely, Visibility and Audibility, lobbying, and networking. Visibility and audibility are maximizing the publication of campaigns by the global civil society so that their struggle can be seen and heard by various parties, especially decision-makers (Rijal and Anggraheni 2019). Meanwhile, lobbying is by lobbying policymakers to want to adopt what global civil society stands for. While networking is by collaborating with various other actors to suit their struggles.

Global conceptualization of civil society is then used in this study to describe the role played by the Indonesian Women's March in promoting gender equality and to see its strategy in fighting for demands for gender equality and gender mainstreaming in social life in Indonesia.

3 RESEARCH METHODOLOGY

This article is a qualitative-descriptive research by conducting research by looking at social phenomena which then provide a conceptual description that can be accounted for (Pantiasih 2014). The data used is secondary data collected through literature studies sourced from books, journal articles, press releases, and news websites that have proven their validity and have been published in the last 10 years (Putri Cahyaningsih *et al.* 2020). In addition, data collection was also taken through the Instagram accounts of Women's March, Women's March Jakarta, and several other official Women's March accounts. The analysis technique involves four stages, namely data collection, data processing, data presentation, and conclusion.

4 RESULT AND DISCUSSION

4.1 *Existence and development of women's march in Indonesia*

As already explained, the Women's March originated in the United States and was later adopted in various countries, so that it can be called the global civil society. Even though the Women's March was born as a form of protest against President Donald Trump, the issue is a global issue that is of global concern, which is then facilitated by social media (Einwohner and Rochford 2019a).

In the Indonesian context, the Women's March in Indonesia was created due to the encouragement of sisterhood action over the Women's March protest in Washington in January 2017. Then with several Indonesian feminist activists, Women's March Indonesia held an action on March 4 2017 as a form of women's solidarity around the world (Pahlevi *et al.* 2022). This shows the existence of interconnectedness among women throughout the world.

The Women's March Indonesia was also welcomed by several women activists and other activists. Men also participated in the action and realized that currently women also need to receive political and social rights that are equal to men (Rifki 2018). The purpose of the Women's

March for Indonesia in 2017, apart from being a response to the Women's March for Washington, is to try to protect Indonesian women from the rampant cases of violence that have occurred in Indonesia. This is inseparable from the fact that there is a high rate of violence against women in Indonesia.

Data for 2017 shows that there has been a spike in cases of violence against women in Indonesia, from the beginning in 2016 there were only 7,475 cases which increased to 17,948 cases in 2017. This means that there has been an increase of more than twofold. For this reason, the demands of the 4 March 2017 action primarily focused on women's liberation from the many cases of violence that existed. In addition, it also tries to form an opinion that women should not be treated like animals (Sumpter 2017).

In addition, other demands consist of 8 demands, including Indonesia returning to its tolerance for existing diversity, the government upholding gender-just infrastructure, the community can fulfill women's health rights and eliminating all acts of violence against women, the government protecting women in their work environment, the government must form policies that defend women, the government and political parties can provide proportional seats so that women participate in politics, eliminate all discrimination against women and lastly the government and society care about global issues such as women's issues (Al Ayubi and Zahidi 2022).

The demands put forward by the masses on the action the Ministry of Empowerment and Protection of Women and Children (KPPA) responded positively to the Women's March 2017 because it is in line with the program run by KPPA, namely 3ENDS. These programs include ending violence against women and children, ending human trafficking, and ending economic inequality (Kemenpppa.go.id 2017). Therefore, by obtaining positive support, including from several feminist groups in Indonesia, in 2018 it turned out that the number of violence against women had been reduced, even though it was not significant.

In 2018 the Women's March again held a similar action on March 3, 2018 which was attended by 1500 people with one of them raising the issue of femicide or the killing of women because the victim is a woman. Several demands were also voiced in the action such as protection for laborers and migrant workers, child marriage, violence against women, and protection for sex workers. Not only that, but the Women's March also attempted to push for the ratification of several bills that were pro-women, including bills to eliminate sexual violence, and domestic workers, and criticisms of the RKUHP on reproductive health (bbc Indonesia 2018).

The Women's March then becomes an annual action adjacent to International Women's Day which is celebrated every March 8. In 2019 the Women's March held another action even though the number of violence against women has also gradually decreased. On April 27, 2019, the Women's March acted with the theme of women and politics (Ato 2019). Around 50 non-governmental organizations that care about gender equality and are pro-women participated in the action. Apart from that, they brought 10 demands that were filed against the government as well as the general public as well.

These demands include urging the passage of laws that are pro-women for all discrimination and violence, revising and abolishing several laws that are discriminatory against women, accommodating village and fisherman laws regarding women's involvement, ensuring that labor protection laws protect women. from exploitation, investigating human rights and criminality against women, enforcing gender-just laws, developing gender-based human resources, increasing women's representation in political activities, demanding a fair education curriculum on gender issues, and ensuring effective social protection. for girls (Al Ayubi and Zahidi 2022).

Then, in 2020 the action was carried out to coincide with the commemoration of international women's Day on March 8, 2020. In this action, they brought 6 demands including resolving cases of violence against women, building a sustainable protection system for women, revoking several policies that are still discriminatory against gender, demanding the ratification of the bill on the elimination of sexual violence and the bill on the protection of domestic workers, rejecting the bill on the omnibus law and RKUHP, stopping the development agenda that seems to be in favor of investors (Santoso 2020).

In 2021, it turns out that the number of cases of violence against women has not yet decreased, therefore, another protest is being held by the Women's March. Even though it was during the Covid-19 pandemic, this action was still carried out and broadcast live streaming via YouTube to

reduce the impact of the existing pandemic. The action called for 7 demands, including urging gender-just policies to be passed, revoking policies that would damage the environment and must protect indigenous peoples, urging that education be equalized for students, urging laws to be passed that protect women and eliminate discrimination, encouraging the creation of good health. inclusive and free of discrimination, insisting on equality in the field of employment and repealing policies that are detrimental to society and finally supporting the existence of a democratic movement and rejecting the presence of authoritarianism (Student Voice 2021).

In 2022 the level of cases of violence against women will even increase, so the Women's March is back in action and using Instagram as a campaign tool. At the time of writing, the Women's March Indonesia Instagram account has 2,284 followers who regularly share their content about the actions that will be carried out. Instagram Women's March Jakarta has the most followers, reaching 14.7 thousand, who share a lot of knowledge about feminism and various promotions that care about women's rights.

Not only that, the Women's March movement has now spread to various areas such as Surabaya, Yogyakarta, Lampung, Malang, Kupang, Bandung, Serang, Bali, Salatiga, Pontianak, Sumba, Ternate, Tondano, Pasuruan, and others. The existence of the Women's March is not only in Indonesia. In the central Women's March Instagram followers alone there are 1.4 million people following. And there are 1.9 million hashtag posts on Instagram that use the hashtag women's march. The development of the women's march in Indonesia also shows positive things by trying to build good women's resources through training.

4.2 *The role of the Women's march in Indonesia*

In fighting for gender equality, the Women's March has a role similar to that of civil society according to the World Economic Forum. First, as a watchdog, the Women's March oversees government policies and provides criticism of the government's performance. The role of a watchdog can be seen from the first action in 2017. The Women's March raised several issues related to government policies which were considered to be detrimental to society in general and women in particular. The Women's March criticized the government for immediately forming policies that are gender-just and understanding the function and position of women in several aspects.

In addition, in 2018, as a watchdog, the Women's March pushed forward demands regarding efforts to accelerate the passage of pro-women bills. In 2019, one of the demands is to urge the government to thoroughly investigate crimes against women, which according to the Women's March the handling has not been optimal, and some cases have not yet been resolved. In 2020, the Women's March criticized the adoption of policies that were discriminatory against gender. In 2021, the Women's March urges the passage of the Law on Caring for Women, which had not previously been passed. Through many demands from 2017 to 2021, it appears that this Women's March can act as a watchdog by overseeing all government performance, especially those related to women's issues (Sakhiyya *et al.* 2023).

Second, as an advocate, the Women's March defends a certain group (in this case women) in voicing their rights. In this case, the Women's March also advocates for all women in Indonesia to voice their aspirations. Not only women in Indonesia, through their social media Women's March also invites women around the world to be aware of their rights which should not discriminate against women. As an advocate, the Women's March pushed for women to get a seat in national politics. The Women's March also pushed for the need for regulation regarding the protection of women in the work environment. The Women's March also advocates for the issue of equality in learning for students, not only for boys but also for girls (Sakhiyya *et al.* 2023).

Third, as a service provider and capacity builder, the Women's March conducts a series of seminars and webinars to increase women's knowledge and soft skills. This is also done so that the resources owned by women can grow and develop so that women can be independent. In addition, this also makes it easier for them to find work or even open employment opportunities.

In addition, the Women's March through their Instagram holds many entrepreneurship classes that will improve women's soft skills in Indonesia. Also holding online and offline classes on health issues for women ranging from reproductive health to mental health (Masson and Beaulieu Bastien 2021).

Fourth, as an expert and incubator, by offering several solutions related to existing problems. In this case, the Women's March also cooperates with several institutions related to women's observers, such as the Ministry of Child Protection and Child Protection. The National Commission on Women, and so on, especially to reduce the number of cases of violence against women. As well as, educating women to be willing to report the violence they experience to related parties to get treatment.

Apart from that, several feminist organizations also support the struggle of the Women's March, such as the Jakarta Feminist which took part in the action by voicing women's voices. The Women's March also provided several suggested solutions to the government by continuing to investigate criminal cases against women and asking the government to be responsive to development policies for women themselves (Bahrudin and Bakar 2022).

Fifth, as a representative, the Women's March plays a role by fighting for women's rights. As demanded by those who defend women, but not specifically for women. Women's March also often fights for the public interest in general which is a complaint from the general public. In 2017, the Women's March brought demands about the need for the government to restore existing tolerance regarding diversity.

The year 2018 raised demands for the government to pay more attention to labor regulations and migrant workers to minimize criminal acts against workers. In 2019, raised the need for effective social protection for all groups. In 2020, they will focus on rejecting the omnibus law bill. In 2021, the Women's March demands that the government repeal a series of policies or laws that are detrimental to the people. From some of the demands above, it appears that the Women's March is not only focused on women but is also concerned with paying attention to the interests of the general public which have not been properly accommodated (Moons 2022).

Sixth, the Women's March also acts as a citizenship champion, namely fighting for women's groups by winning the hearts of the community. Apart from carrying out actions to win the hearts of the people, the Women's March also made various campaigns on its social media which were distributed to attract the public's attention. Not only that, in several cases the Women's March also took part in guarding against acts of violence against women which were voiced through their social media as well. So to get public attention, the Women's March chose to spread several campaigns and accommodate women's interests through a series of actions. The action is held annually to coincide with International Women's Day to get public attention (Malcom *et al.* 2020).

Seventh, the Women's March also plays a role as a solidarity supporter by bringing this women's issue which originally came from Washington, United States of America to global attention. When viewed from its history, the Women's March is actually like a local issue by only protesting against President Donald Trump for his speech. Then it spread to various countries and even regions to participate in voicing women's issues based on global solidarity. Solidarity in this case means that all women in the world agree that the existing patriarchal culture should not perpetuate men as the only gender that needs to be upheld. The presence of women also has a positive impact on several aspects that also need attention (McClelland-Cohen and Endacott 2020).

Eighth, the Women's March also acts as a definer of standards. This means that the Women's March provides a new insight for women. The Women's March invites women in Indonesia to fight for their rights and break discrimination against women. This is a value that needs to be fought for where women who are often victims or marginalized must have the courage to fight and bring about a change in the social relations of men and women (Einwohner and Rochford 2019b).

Furthermore, in carrying out its role as mentioned above, the Women's March has its strategy in voicing the narrative of its struggle. In this case, the strategy carried out by the Women's March was primarily visibility and audibility. This is intended so that all their "voices" are heard by the government and the wider community. For this reason, the visibility and audibility of the Women's March is to carry out an action that is joined by many masses so that their demands and existence can be seen. Then publish by spreading the campaign through existing social media.

In addition, the Women's March also cooperates with various parties (networking), both external parties and fellow Women's March activities in various regions. The Women's March also maintains good relations with several related agencies (Gantt-Shafer *et al.* 2019). Apart from visibility, audibility, and networking, the Women's March also lobbied decision makers, both

institutionally and personally to political actors. This is intended so that their demands are heard and responded to quickly (Beyerlein *et al.* 2018).

5 CONCLUSION

Existence the Women's March began with the Women's March action in Washington DC in 2017. The narrative of the Women's March struggle can be adopted in Indonesia, inseparable from the various problems related to women that occur. This means that the issue of women becomes an issue of global concern, therefore movements that encourage narratives of women's emancipation are easy to adopt in various countries. This is inseparable from the development of globalization and the upholding of democracy which allows local issues to transform into global issues. Apart from that, it is also facilitated by social media with its various features.

In Indonesia, presence the Women's March gives color to the women's movement and the struggle for gender equality. In fighting for what they are fighting for, the Women's March can act as a watchdog, advocate, representative, service provider, capacity builder, incubator, expert, citizenship champion, solidarity supporter, and definer of standards. These roles ultimately contribute to encouraging the government and the general public to mainstream gender equality as an important development agenda.

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Effect of trading volume activity and litigation risk on accounting conservatism

Ahmad Juanda, Fahmi Dwi Mawardi, Agung Prasetyo Nugroho Wicaksono & Edisya Nabila Melkis

University of Muhammadiyah Malang, Indonesia

ABSTRACT: This study aims to prove and empirically test the effect of trading volume activity and litigation risk on accounting conservatism. The object of this research is a Mining Sector Company listed on the Indonesia Stock Exchange (IDX) for the 2019–2021 period. This study used purposive sampling conducted on 70 mining companies listed on the Indonesia Stock Exchange (IDX). The data analysis technique in this study used the panel data regression method with the statistical tool E-Views 12. The results showed that trading volume activity partially had no effect on accounting conservatism and litigation risk partially had a significant effect on accounting conservatism.

Keywords: Trading Volume Activity, Litigation Risk, Accounting Conservatism

1 INTRODUCTION

Conservatism can be interpreted as being careful about existing uncertainties so that uncertainties and risks related to business situations can be considered fairly well. In presenting financial statements, the principle of conservatism causes companies to not rush to recognize profits and instead immediately recognize losses. Therefore, the direction of the financial statements of companies that apply accounting conservatism is pessimism. With conservatism, accounting no longer reveals the true value but tends to include a lower number than the actual value (Savitri 2016)

The application of the conservatism principle is carried out for several reasons. Hendriksen (1982) states these reasons, namely 1) The tendency of pessimism is deemed necessary to compensate for the possibility of *overoptimism* and the tendency for companies to report exaggerations; 2) Misrepresentation of profits is riskier than misrepresentation of losses because the company will face lawsuits from stakeholders because it is considered that reporting things that are not true becomes bigger; 3) limitations of accountants in communicating all complete information to investors and high-risk creditors, namely the risk that what is reported turns out to be incorrect and the risk that what is not reported is true.

Nevertheless, the application of conservatism has consequences and criticism. Conservatism causes the data to be interpreted inaccurately because caution causes the reported numbers to be low for positive things and, vice versa, high for unfavourable things.

The Agency Theory explains that there are different personal interests between the owner of the company (principal) and the management (agent) which causes information asymmetry because each party tries to increase profits for himself (Ulum, *et al.* 2021). This study uses agency theory because it uses accounting conservatism as the dependent variable. The principle of conservatism in accounting creates information asymmetry between the company owner (principal) and the manager (agent) where the company owner wants to increase profits from investment returns while the manager will focus on the financial compensation given by the company for its achievements.

Many factors influence accounting conservatism. In this study, researchers took two factors: trading *volume activity* and litigation risk. *Trading Volume Activity* is a measurement to calculate the ratio between the number of shares traded and the number of shares outstanding, which can be used to measure the liquidity of a share in a certain period (Baker and C.Stein 2004). Although high stock liquidity can be an assessment that a company has good financial strength, this can be a *boomerang* for the company because the company can be sued by investors who feel disadvantaged if their expectations are not met.

Litigation risk as a factor of external circumstances is based on the assumption that investors and creditors are legally protected parties. Investors and creditors fighting for their rights and interests can sue the company if they feel threatened by the company's condition (Juanda 2007)

Litigation risk has the potential to incur high costs due to having to deal with legal issues, so managers try to minimize this risk. To prevent the high risk of litigation and reduce the effects of the financial crisis, Seetharaman *et al.* (2005) in Juanda (2007) explain that the threat of litigation encourages managers to disclose information that tends to lead to: (i) immediate disclosure of bad news in financial reports, (ii) postpone good news, (iii) choose accounting policies that tend to be conservative.

Previous research conducted by Malcolm Baker and Jeremy C. Stein (2004) titled "*Market Liquidity as a Sentiment Indicator*" stated that one measure of investor sentiment is to use *trading volume activity* which can show the level of stock liquidity. Furthermore, research by Rui Ge, Nicholas Seybert, and Feida (Frank) Zhang (2019) with the title "*Investor Sentiment and Conditional Accounting Conservatism*" shows the results of investor sentiment driving fluctuations in accounting conservatism. The research conducted by Mega Andani and Netty Nurhayati with the title "The Effect of Company Size, *Financial Distress*, Litigation Risk on Accounting Conservatism" The results show that litigation risk affects accounting conservatism in manufacturing companies in the food and beverage sub-sector. Meanwhile, research by Juanda entitled "The Influence of Litigation Risk and Types of Strategy on the Relationship Between Conflicts of Interest and Accounting Conservatism" shows that the moderating effect of litigation risk on the relationship between conflicts of interest and accounting conservatism is debilitating.

This study uses data from mining sector companies listed on the Indonesia Stock Exchange in 2019–2021. Researchers are interested in using mining sector companies because the sector requires very large, long-term investment costs, risk requirements, and high uncertainty, thus making funding issues a major issue related to company development. Uncertain situations tend to be faced by companies in preparing calculations, including those that occur in the mining sector, so there is always conservatism where there is uncertainty.

The difference between this research and previous research lies in the research object. Namely Mining Sector Companies listed on the Indonesia Stock Exchange in 2019–2021. This research is important to see the effect of *trading volume activity* and litigation risk on accounting conservatism. High *trading volume activity* indicates high stock liquidity, which can show symptoms of *over-valued prices*, which causes companies to accept litigation demands from investors. And the company needs a way to reduce the litigation risk that will be faced.

2 HYPOTHESIS FORMULATION

In accordance with *the Agency Theory*, which states that managers know more about company information than business owners, the level of accounting conservatism in financial reporting can be adjusted according to the conditions and needs of the company. Companies also have the flexibility to adjust for conservatism because accrual data is important for conservative reporting, and managers can influence those accruals.

Research conducted by Baker and C.Stein (2004) states that one indicator of investor sentiment is stock liquidity which can be measured using *trading volume activity*, namely, the higher investor sentiment in a stock, the higher its liquidity value. The research conducted by Ge *et al.* (2019) found that Investor sentiment fluctuated towards accounting conservatism.

Based on this previous study, researchers assume that *trading volume activity* can change disclosures in company financial statements more conservatively. This is because the higher value of *trading volume activity* indicates that a company's stock liquidity level is higher. High stock liquidity is a good assessment for investors because they assume the company has good financial strength. But this can lead to *over-valuation* of companies that do not have good company performance. Stocks that are *over-valued* will eventually move back toward their fair value. If that happens, investors who suffer losses will sue the company through litigation demands to cover their losses.

To avoid litigation costs, companies have incentives and the ability to increase conservatism in their financial reports because the recognition of *bad news* is done in a timely manner so that it is difficult for plaintiffs to claim that the company is hiding *bad news* that should be reported and exaggerating profits. Seeing from the description above, the hypothesis can be formulated as follows:

2.1 H_1 : *Trading volume activity has a negative effect on accounting conservatism*

In accordance with the agency theory, which states that there are differences in interests between the owner of the company (*the principal*) and the management (*the agent*) where the principal wants profits from dividends and share ownership. In contrast, the agent is more concerned with compensation for himself. Managers know more about company information than business owners, so the level of accounting conservatism in financial reporting can be adjusted to avoid threats of litigation from external parties which will increase litigation costs and reduce the company's image.

Managers avoid litigation risk inherent in the company because it will incur high costs. Murti and Muniarta (2021) researched to find out whether litigation risk affects accounting conservatism. This study found that litigation risk has a significant effect on accounting conservatism, meaning that the greater the litigation risk that occurs in a company, the greater the application of conservatism.

The company risks facing litigation threats from external parties, namely investors, creditors, and other interested parties who feel their rights cannot be fulfilled. Litigation risk that arises from investors is caused by the company carrying out operational activities that are detrimental to investors, which can be seen from the company's financial reporting, for example, hiding negative information that should be reported and *overstating* financial statements because investors want disclosure of *bad news* immediately compared to *good news* so that the investment decisions made are not too high (*overestimate*). From the creditor side, litigation threats can arise due to the company's inability to carry out its operations in accordance with the agreed contract, for example, the company's inability to pay debts. To avoid excessive expectations from users of financial statements about the condition of the company, the company applies conservative accounting. Based on this description, this study proposes the following hypothesis:

2.2 H_2 : *Litigation risk has a negative effect on accounting conservatism*

Framework

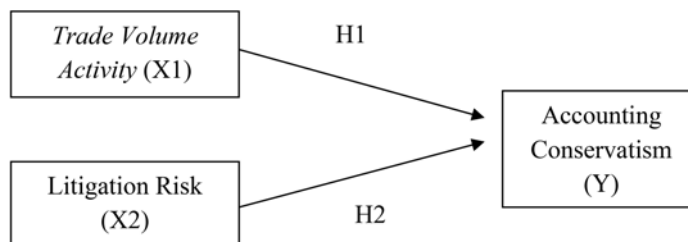


Figure 1. Conceptual framework.

3 RESEARCH METHODS

The type of research used is associative research, which aims to analyze the relationship between a variable and other variables (Ulum, *et al.* 2021). This study has 3 (three) variables: trade *volume activity*, litigation risk and accounting conservatism. This study uses secondary data, namely data published or used by organizations that do not process it (Ulum, *et al.* 2021). The secondary data is the financial and annual reports of mining sector companies listed on the IDX for 2019–2021.

The data used in this research are financial reports and annual reports of mining sector companies listed on the IDX for the 2019–2021 period. This data is in accordance with the sample used in this study. The data acquisition technique in this study uses documentation techniques by downloading the company’s financial reports and annual reports from the website: (www.idx.co.id).

The population in this study uses mining sector companies listed on the Indonesia Stock Exchange (IDX) in 2019–2021. The sample in this study was taken using the *Purposive Sampling method* in mining sector companies listed on the Main Board of the Indonesian Stock Exchange in 2019–2021. The criteria for the selected sample are as follows:

Table 1. Sample selection criteria.

No.	Sample Criteria	Amount
1	Listed as an active issuer on the Indonesia Stock Exchange (IDX) during 2019–2021	70
2	Did not issue periodic financial reports during 2019–2021	(0)
3	Does not have stock data traded regularly during 2019–2021	(7)
	Number of Company Samples	63

Based on the table above, it can be concluded that the population in this study is 70 mining companies listed on the Indonesia Stock Exchange in 2019–2021. The samples used according to predetermined criteria were 63 mining companies.

Variables The independent variable used in this study is *Trading Volume Activity*, which is the ratio between the number of shares traded and the number of shares outstanding. *Trading Volume Activity* is a measurement used to measure stock liquidity in a certain period (Baker and C.Stein 2004). The higher the value of *trading volume activity*, the more liquid the shares in a company. The following is the formula for *trading volume activity*:

$$TVA = \frac{\text{number of shares traded}}{\text{number of outstanding shares}}$$

The data collection method used to measure this variable is by using data taken from the annual summary volume of shares in mining sector companies listed on the IDX for the 2019–2021 period.

Next is Litigation Risk, is a risk inherent in the company that allows for the threat of litigation by parties with an interest in the company who feel disadvantaged. These interested parties include creditors, investors and other interested parties. Dispute resolution through litigation certainly must follow formal requirements and procedures in court and as a result the timeframe for resolving a dispute becomes longer (Sembiring 2011).

In this study, litigation risk will be measured using financial risk proxies and political risk proxies. Both factors will be analyzed (*component factor analysis*) to find factors that can explain the relationship or correlation between indicators. Financial proxies are represented by Liquidity which is calculated by the formula:

$$\text{Liquidity} = \frac{\text{Current Assets}}{\text{Short - term debt}}$$

The higher the value of liquidity in a company indicates that the company's ability to pay off its debts is higher, if the creditor feels that the company has not paid off its debts in accordance with the agreed contract, the company will accept litigation demands. A liquidity value that is too high is not always good, this indicates that the company cannot manage its current assets properly. In order to fight for their rights, investors may initiate litigation claims due to the *overstatement of financial statements*.

Political risk proxies are represented by company size which is calculated by the formula:

$$\text{Company Size} = \ln \text{Total Assets}$$

The more total assets in the company indicate that the company's size is getting bigger. The larger the size of the company, the more complex the management system is, the greater the profit generated, and the more political costs must be incurred.

The dependent variable in this study is accounting conservatism. Watts (2003) states that the principle of conservatism is the action of managers who are not in a hurry to recognize profits and recognize losses. This principle causes the recognition of costs or losses that will be incurred but does not immediately recognize future income or profits.

This study uses an adaptation from Givoly and Hayn (2000), *Conservatism Based On Accrued Items* (CONACC). This ratio focuses on the effect of conservatism on the income statement over several years. Conservatism results in continuous negative accruals; the greater the negative accruals, the more conservative accounting will be applied. This is based on the theory that conservatism delays revenue recognition and accelerates the use of fees (Savitri 2016). The following is the *Conservatism Based On Accrued Items* formula:

$$\text{CONACC} = \frac{(\text{NIO} + \text{DEP} - \text{CFO}) \times (-1)}{\text{TA}}$$

Information:

CONACC: *Earnings Conservatism based on accrued items*

NIO: *Operating profit of current year*

DEP: *Depreciation of fixed assets of current year*

CFO: *Net amount of cash flow from operating activities of current year*

TA: *book value of closing total assets*

This study uses secondary data types which are panel data from 2019–2021 using the *E-views 12* analysis tool. Research analysis in this case is used to test hypotheses. The stages of data analysis are as follows:

1. Perform tabulation on research data
2. Perform calculations for each variable to be tested
3. Performing Descriptive Statistical test analysis
4. Panel Data Regression Estimation Test
 - a. *Model Common Effect*
 - b. *Fixed Effects Model*
 - c. *Random Effects Model*
5. Model Fit Test
 - a. F Statistical Test (Chow Test)
 - b. Hausman test
 - c. *Lagrange Multiplier Test*
6. Perform the BLUE test
 - a. Normality test
 - b. Multicollinearity Test
 - c. Heteroscedasticity Test

7. Hypothesis test
 - a. The coefficient of determination (R^2).
 - b. F test (simultaneous model significance)
 - c. Partial Test (t-test)

4 RESULTS AND DISCUSSION

4.1 Descriptive statistical analysis

Table 2. Descriptive statistics.

	Y	X1	X2
Means	-0.373156	0.004783	0.000159
Median	-0.221477	0.000408	-0.33
Maximum	0.351180	0.218214	7.62
Minimum	-3.229768	0.00000001	-1.21
std. Dev	0.527431	0.018229	1.000089

Source. Results of Data Processing E-Views-12.

E-views 12 statistical tool, it shows that there are 189 observational data consisting of 63 mining companies using 3 (three) years as research objects, namely 2019–2021 and showing *mean, median, maximum, minimum values*, and the standard deviation.

4.2 Panel data regression estimation test

4.2.1 Common effects model

In testing *the common effect model*, the test is carried out by combining *all-time series* and *cross sections* then estimation is carried out using OLS (Ordinary Least Square). This model does not pay attention to the time or individual dimensions, so it is assumed that the behavior of company data is the same in various time periods.

Table 3. Common effect models.

Variable	Coefficient	std. Error	t-Statistics	Prob.
X1	2.571845	2.103832	1.222457	0.2231
X2	0.060673	0.038347	1.582224	0.1153
C	-0.385467	0.039435	-9.774811	0.0000
R-Squared	0.022749			
Prob (F-Static)	0.117645			

Source. Results of Data Processing E-Views-12.

4.2.2 Fixed effects model

Table 4. Fixed effect models.

Variable	Coefficient	std. Error	t-Statistics	Prob.
X1	1.962007	1.172251	1.673709	0.0967
X2	-0.091523	0.034525	-2.650923	0.0091
C	-0.382526	0.017574	-21.76697	0.0000
R-Squared	0.875693			
Prob (F-Static)	0.000000			

Source. Results of Data Processing E-Views-12.

In the *fixed effect model*, a dummy variable is included to allow different parameter values to occur, both *cross section* and *time series*.

4.2.3 Random effects model

The *random effect model* overcomes the weakness of the dummy variable which is experiencing uncertainty. The use of a dummy variable will reduce the degree of *freedom* which will ultimately reduce the efficiency of the estimated parameters. The *Random Effect Model* (REM) uses residuals which are thought to have a relationship between time, between individuals. So REM assumes that each individual has a different intercept which is a random variable.

Table 5. Random effect models.

Variable	Coefficient	std. Error	t-Statistics	Prob.
X1	2.128849	1.145492	1.858459	0.0647
X2	-0.053065	0.031017	-1.710821	0.0888
C	-0.383330	0.062016	-6.181181	0.0000
R-Squared	0.032928			
Prob (F-Static)	0.044431			

Source. Results of Data Processing E-Views-12.

4.3 Model fit test

4.3.1 Chow test

The Chow test will determine whether the panel data regression technique with a *fixed effect* is better than the *common effect panel data regression model*. Based on the results of the chow test, the following results were obtained:

Table 6. Chow test analysis results.

Effect Test	Statistics	df	Prob.
Cross-section F	13.723188	(62,124)	0.0000
Cross-section Chi-Square	389.715994	62	0.0000

Source. Results of Data Processing E-Views-12.

Based on the table, the significant level of Cross Section F is 0.0000 and Chi-Square is 0.0000. The significance level is less than 0.05 which means H₀ is rejected and H_a is accepted. This shows that the *fixed effect* model is accepted.

4.3.2 Hausman test

The Hausman test will determine whether the panel data regression technique with a *fixed effect* is better than the *random effect panel data regression model*. Based on the results of the Hausman test, the following results are obtained:

Table 7. Results of Hausman test analysis.

Test Summary	Chi-Sq. Statistics	Chi-Sq. df	Prob.
Random cross-sections	6.439152	2	0.0400

Source. Results of Data Processing E-Views-12.

Based on the table, the significant level of *cross section random* of 0.0400, the significance level is smaller than 0.05, which means that H₀ is rejected and H_a is accepted. This shows that the *Fixed Effect Model* is accepted.

4.3.3 Langrange multiplier test

The Langrange Multiplier (LM) test was not carried out because the Chow test and Hausman test showed that the most appropriate approach model was the *fixed effect model*.

Table 8. Summary of model fit selection.

	Chow test	Hausman test	Langrange Multiplier Test
Results	Cross-section F = 0.0000 Cross-section Chi-Square = 0.0000	Cross-section Random = 0.0400	–
Conclusion	Probability < alpha, then the selected model is <i>Fixed Effect Model</i>	Probability < alpha, then the selected model is <i>Fixed Effect Model</i>	LM testing was not carried out because the Chow test and Hausman test showed that the most appropriate model was the <i>Fixed Effect Model</i>

Source. Results of Data Processing E-Views-12.

4.4 Classic assumption test

4.4.1 Normality test

The normality test is not necessary because the *fixed effect model* uses the *Ordinary Least Square* (OLS) approach in its estimation technique. The normality test is basically not a *Best Linear Unbias Estimator* (BLUE) requirement and some opinions do not require this condition as something that must be fulfilled (Iqbal 2015).

4.4.2 Multicollinearity test

Multicollinearity test is a test conducted to test whether the regression model found a correlation between the independent variables. The following are the results of the multicollinearity test:

Table 9. Multicollinearity test results.

	X1	X2
X1	1.000000	0.078854
X2	0.078854	1.000000

Source. Results of Data Processing E-Views-12.

Based on the table above, it shows that the correlation coefficient between variables shows a value below 0.85, which means that there are no symptoms of multicollinearity.

4.4.3 Heteroscedasticity test

The heteroscedasticity test was carried out to test whether in the regression model there was an inequality of variance from the residuals of one observation to another.

Table 10. Heteroscedasticity test results.

Prob. F(2,186)	0.8918
Prob. Chi-Square(2)	0.8902
Prob. Chi-Square(2)	0.8195

Source. Results of Data Processing E-Views-12.

Based on the table above, it can be seen that the probability value results are greater than 0.05, which means there is no heteroscedasticity problem.

4.5 Hypothesis testing

Table 11. Regression linear fixed effect model.

Variable	Coefficient	std. Error	t-Statistics	Prob.
X1	1.962007	1.172251	1.673709	0.0967
X2	-0.091523	0.034525	-2.650923	0.0091
C	-0.382526	0.017574	-21.76697	0.0000
R-Squared	0.875693			
Prob (F-Static)	0.000000			

Source. Results of Data Processing E-Views-12.

4.5.1 Determination Coefficient Test (R^2)

Based on Table 11 above, it shows that the results of R-Squared are 0.875693 or 87.56%, it can be concluded that 87.56% of the accounting conservatism variable can be explained by independent variables, namely *Trading Volume Activity* and litigation risk, while 12.44% is explained by other variables outside study.

4.5.2 T-Test (Partial)

T test (partial) is a test conducted to determine whether the independent variables namely *trading volume activity* and litigation risk separately affect the dependent variable, namely accounting conservatism properly. Based on Table 11 above, it shows that the results of the (partial) T test of each independent variable on the dependent variable are as follows:

Based on Table 11 T test (partial) the *trading volume activity variable* obtains a probability value of 0.0967 which is greater than the predetermined significance value of $0.0967 > 0.05$. From these results it can be concluded that partially H1 is rejected, namely the *trading volume activity variable* has no significant effect on accounting conservatism variables.

Based on Table 11 T test (partial) the litigation risk variable obtains a probability value of 0.0091 which is smaller than the predetermined significance value of $0.0091 < 0.05$. So it can be concluded that partially H2 is accepted, namely the litigation risk variable has a significant effect on the accounting conservatism variable.

The F test (simultaneous) is a test conducted to find out whether the independent variables, namely trading volume activity and litigation risk, are jointly able to explain the dependent variable, namely accounting conservatism. Based on Table 11, it shows that the results of the F test have a probability value of 0.000000 which is smaller than 0.05, this shows that *trading volume activity* and litigation risk variables simultaneously have a significant effect on Accounting Conservatism.

4.6 Effect of trading volume activity on accounting conservatism

Based on the test results from Table 11 above, it can be seen that the *trading volume activity* variable has no significant effect on accounting conservatism. The results of the research test state that the *trading volume activity* variable does not affect the application of accounting conservatism to financial reporting in mining companies listed on the Indonesia Stock Exchange for the 2019–2021 period, which means that these variables and objects have not been able to represent the results of solving problems that are considered as research phenomenon. Based on research data from mining companies, the average value (*mean*) is 0.004783; out of 189 observational data, 31 companies are above the average value, which means that *the trading volume activity of* stocks in companies in the mining sector for the 2019–2021 period is still relatively low. The resulting level of accounting conservatism is still

low, where the average value is closer to the minimum value than the maximum. This means that mining companies do not respond to *trading volume activity levels* with accounting conservatism.

The results of this study are not in line with the theory used, namely the agency theory, which explains the difference in interests between the owner of the company (*the principal*) and the management (*the agent*), where the management should disclose financial reports more conservatively in response to high *trading volume activity*. to avoid the risk of claims from investors.

This hypothesis was rejected probably because the research object taken was a mining sector company in Indonesia. One of the causes of whether or not a stock price is liquid is sentiment in an industry. Baker and Wurgler (2006) explained that if companies are smaller, younger, do not pay dividends, incur losses, have high stock volatility and/or are depressed in high economic growth; they have the potential to have greater stock price sensitivity to investor sentiment. Companies with share prices sensitive to investor sentiment tend to increase accounting conservatism in their financial statements when investor sentiment is rising. If you look at the explanation above, it can be concluded that mining sector companies in Indonesia do not experience *over-valued shares* from high liquidity because Indonesia is one of the largest mining-producing countries in the world; all mining companies that are used as objects are large companies with average total assets of IDR 11,371,556,915. 230,-. Then, a mining company is a company that requires a very large investment capital. It is possible that mining sector companies did not increase accounting conservatism in financial statements in response to high stock liquidity because it aimed to attract domestic and foreign investors.

4.7 *Effect of litigation risk on accounting conservatism*

Based on the test results from Table 11, the litigation risk variable has a significant effect on accounting conservatism. This is in line with the theory used in this study, namely agency theory, in which the management (*the agent*) has interests that are not parallel to those of the company owner (*the principal*), namely shareholders, creditors, and other interested parties. The company's owner (*the principal*) is interested in increasing profits for himself, so he wants to disclose higher income and profits in the company's financial statements. In contrast, the management (*the agent*), who knows more about the company if he has the opportunity, chooses to be more selfish. Even if it conflicts with the interests of the company's owner (*the principal*). Management (*the agent*) has complete company information and knows more about the actual condition of the company, so they can develop a strategy for managing and presenting the company's financial statements more conservatively to avoid litigation risk from shareholders, creditors and third parties. Other interested parties. The higher the litigation risk in a company, the more conservative it is in presenting its financial statements. This study's results align with research conducted by Andani and Nurhayati (2021) and Murti and Muniarta (2021), which state that litigation risk has a significant effect on accounting conservatism.

Based on research data from mining companies, the average (*mean*) value of litigation risk is 0.00159. From this value, 87 companies are above the average value, which shows mining sector companies listed on the Indonesia Stock Exchange for the 2019–2021 period have a low level of litigation risk; this is probably due to weak law enforcement.) in Indonesia and the selection of the corporate sector, which is *highly regulated environment* (SGP) and politically connected. The average value of litigation risk is 0.00159, and the average value of accounting conservatism is -0.373156 . The higher the value of litigation risk, the higher the application of accounting conservatism to the company's financial statements, which is indicated by the greater the value of negative accruals. Because the average value of 0.00159 is far from -0.373156 , it can be concluded that litigation risk has a negative effect on accounting conservatism, and the H2 hypothesis is accepted.

5 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of testing the first hypothesis (H_1) obtained that *Trading Volume Activity* (TVA) has no significant effect on accounting conservatism. The greater the TVA value indicates that the more liquid the company's shares are, which can lead to demands from investors due to over-valued shares, so as to prevent this. This company discloses financial statements more conservatively, but the results of the study show that accounting conservatism is not affected by *trading volume activity*.

Based on the results of testing the second hypothesis (H_2) obtained that litigation risk as measured using factor analysis of the Liquidity Ratio and Company Size has a significant effect on accounting conservatism. The greater the value of litigation risk in a company, the greater the application of accounting conservatism to its financial statements to reduce litigation costs that must be issued as a result of litigation claims.

This study has limitations that can later provide an overview for further researchers to develop or improve. The limitations in this study are *the scope* which is still minimal because it only uses one company sector, namely the mining sector. 2020 was the year the Covid-19 pandemic occurred, in which many companies did not trade their shares regularly, which affected the number of samples in the study. Then due to the Covid-19 pandemic in 2020, there are different situations that affect the financial reports of each company with the years before the pandemic and after the pandemic. Data on the number of shares traded to calculate the value of *Trading Volume Activity* (TVA) which is used as an independent variable. Previous research regarding the effect of *trading volume activity* on accounting conservatism is still very limited, so the references in this study are also very limited.

Based on the conclusions and limitations above, the suggestions that researchers can give to further researchers are that future researchers can use other corporate sector subjects on the Indonesia Stock Exchange with different timescales. Then you can reproduce the data on stocks traded from daily, weekly or monthly data to calculate *trading volume activity*. Future researchers can also replace or add research independent variables that have a close relationship with accounting conservatism.

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The effect of electronic word of mouth (E-Wom) and destination attractiveness on visit intention at Blitar chocolate village

Eka Utari P. & Ratih

ABSTRACT: The purpose of the study is to find out and analyze the influence electronic word of mouth (E-Wom) and destination attractiveness on visit intention (study on prospective visitors to the Blitar Brown Vilage Tourism). Population in this study were residents of Blitar City who had never visited Blitar Brown Vilage Tourism, with 120 respondents for sample. The characteristics of the respondents are the people of Blitar who have never been to the Blitar Brown Vilage, Blitar people aged 17 to 35 years, Blitar people who know Blitar Brown Vilage from social media. The technique sampling used wase quota sampling. This research was conducted in Juni 2022 using on online questionnaire. Technique data analysis used multiple linear regression, t test, and dominant test. The results this study concluded that E-Wom and destination attractiveness has a positive and significant effect on visit intention. E-Wom dominantly affects visit intention.

1 INTRODUCTION

Visit Intention is related to the beliefs as well as the behavior of potential visitors to take action, it is considered important because it will be a determinant for visitors to determine an action before the decision to visit is actually made. The above statement is in line with the opinion of Kotler and Armstrong (2012) Visit Intention is an impulse that comes from an individual's internal stimuli that encourages them to take an action, where the impulse is influenced by stimulus and positive feelings about a tourist destination. According to Bian and Forsythe (2012), personal characteristics, such as consumer needs for uniqueness and self-monitoring, influence behavioral intentions and assume that traits have a direct impact on intentions regarding behavior.

Pangestika and Prasastyo (2017) define that Theory of Planned Behavior is a theory that emphasizes the rationality of human behavior and the belief that behavior is based on individual conscious control. Behavior does not only depend on a person's intention (Intention), but also depends on other factors that have nothing to do with individual control. defines Theory of Planned Behavior (TPB) as a person's actual behavior in taking action that is influenced by his behavioral intentions, which are simultaneously determined by subjective norms, attitudes, and perceived behavioral control of the behavior. Theory of Planned Behavior (TPB) is used to explain a person's intention which then explains the behavior. Fiandari *et al.* (2022) state that internal factors include attitude antecedents and behavioral control, while external factors include social norms.

Electronic Word Of Mouth (E-Wom) is considered very important because when visitors will choose the tourist destination they want, visitors look for various information related to these tourist destinations, Electronic Word Of Mouth (E-Wom) is a factor that is considered to form Visit Intention of potential visitors because positive statements can increase confidence and strengthen Visit Intention of potential visitors. The above statement is in line with the definition put forward by Jalilvand & Samiei (2012), which states that electronic word of mouth (E-Wom) is a form of positive or negative statements made by potential, actual or previous consumers about a product or company where this information is made

for many people and read through internet media. According to Wijaya & Paramita (2014), electronic word of mouth is a medium for exchanging information through internet-based electronic media, in this case many of them are confidential or anonymous.

Lamba and Manav (2014) argue that electronic word of mouth (E-Wom) is an informal information dissemination activity through a word of mouth message via online internet or Web media. This is supported by previous research conducted by Muzdalifah (2019), Jiwandono (2020), Rukmana (2020), Sholikhah (2018), Rachmaulida (2017), Dewantara (2021), Gosal *et al.* (2020), and Hafaz *et al.* (2018) which states that Electronic Word of Mouth (e-WOM) has a positive and significant effect on Visit Intention.

Destination Attract Destination Attractiveness has two fundamentals, namely demand and supply. Supply focuses on the destination while demand focuses on the traveler. Supply and demand involve four main aspects namely convenience, attractions, accessibility and ancillary services. Destination attractiveness also has basic attributes such as primary, secondary and tertiary. Secondary attributes are factors that support the geographical area such as accommodation and food. Primary attributes are the main basics such as location, region which also involves culture. Tertiary attributes are market-oriented activities to increase attractiveness data (Yacob *et al.* 2019). This is supported by previous research conducted by Angraini and Lupita (2021), Yacob *et al.* (2020), Chaudhary (2020), Cahyanti and Anjaningrum (2018), Nabila (2020), Yacob and Erida (2019), Kawatu *et al.* (2020), Armis and Kanegae (2020), and Susanto and Astutik (2020) which state that Destination Attractiveness has a positive and significant effect on Visit Intention.iveness berpengaruh positif dan signifikan terhadap Visit Intention.

According to Gunawan *et al.* (2020) The tourism industry, especially in East Java, is very large, one of the centers of the tourism industry in East Java is Kampung Coklat Blitar. Kampung Coklat is one of the tourist destinations located in Blitar City which has its own charm for those who visit it. However, there are some people who already know but have never visited Blitar Chocolate Village. Not only a tourist spot but Blitar Chocolate Village also offers a variety of products for souvenirs and various snacks with a variety of processed chocolate typical of Blitar. The center is a collecting place as well as a place to sell setotan chocolate from the collectors of cocoa farmers.

Kampung Coklat Blitar is a tourist destination that carries out cultivation starting from chocolate nurseries, chocolate processing to selling chocolate to consumers in an integrated business system in agriculture. Blitar Chocolate Village is also a very popular educational tour among the community because in addition to teaching chocolate cultivation, it also teaches a variety of variants produced from chocolate products. In addition to the education in Kampung Coklat Blitar, there are also many outlets that sell a variety of foods from processed chocolate. Blitar Chocolate Village produces a variety of processed chocolate products such as chocolate bars, flavored chocolate powder, chocolate sponge, chocolate chips, and others. However, the number of visitors experienced

Electronic Word of Mouth (E-Wom) affects Visit Intention of a tourist destination. If the message or perception of visitors who have visited the tour is positive, visitors will be more encouraged to intend to visit the tour. This is in line with and reinforced by the results of research conducted by Muzdalifah (2019), Jiwandono (2020), Rukmana (2020), Sholikhah (2018), Rachmaulida (2017), Dewantara (2021), Gosal *et al.* (2020), Goker and Ayar (2020), Pramudhita and Madiawati (2021), and Hafaz *et al.* (2018) which states that Electronic Word of Mouth (E-Wom) has a significant positive effect on Visit Intention. Therefore, the following hypothesis is obtained:

H₁ = electronic word of mouth (E-Wom) (X₁) has a positive and significant effect on Visit intention (Y) at Kampung Coklat Blitar.

Destination Attractiveness affects Visit Intention. When visitors visit a tour, they will see from several elements contained in Destination Attractiveness, namely supply and demand. This is in line with and reinforced by the results of research conducted by Yacob *et al.* (2020),

Chaudhary (2020), Cahyanti and Anjaningrum (2018), Nabila (2020), Culic *et al.* (2021), Yacob and Erida (2019), Kawatu *et al.* (2020), Armis and Kanegae (2020), and Susanto and Astutik (2020) which state that Destination Attractiveness affects Visit Intention. Therefore, the following hypothesis is obtained:

H₂ = Destination Attractiveness (X₂) has a positive and significant effect on Visit intention (Y) in Blitar Chocolate Village.

Word of Mouth (E-Wom) is the main thing when visitors will make their decisions in visiting intentions. The current situation is that visitors attach importance to the opinions of messages conveyed by previous visitors as a reference from them in visiting tourism. Visitors will first look at the content of the message to convince themselves before making a decision on a tourist destination so that they are not disappointed when they visit the tour. This is in line with Anggraini and Lupita's research (2021) which states that electronic word of mouth (E-Wom) has a greater direct effect than other variables on Visit Intention so that electronic word of mouth (E-Wom) is more dominant. Thus hypothesis 3 in this study is stated as follows:

H₃ = electronic word of mouth (E-Wom) (X₁) has a dominant effect on Visit intention (Y) at Kampung Coklat Blitar.

2 METHODS

This research uses a quantitative approach categorized as explanatory research. The population in this study were residents of Blitar City who had never visited Blitar Chocolate Village. The sample criteria used in this study, namely Blitar people who have never visited Blitar Chocolate Village, aged 17 to 35 years and know Blitar Chocolate Village from social media. The sampling technique in this study used Nonprobability Sampling technique. The data collection method in this study is a survey method. researchers used a Likert scale. Sugiyono (2016) Likert scale is used as a measure of opinions, attitudes, and perceptions of a person or group of people about social phenomena. the attitude is in the form of statements strongly agree, agree, neutral, disagree and strongly disagree. Respondents are asked to rank the choices stated in the choices strongly agree to strongly disagree, where each choice has a meaning of a number value of 1 to 5, the answer to each instrument item has a level from very positive to very negative. The tool used for the calculation is SPSS 25. The analysis used is Multiple Linear Regression.

3 RESULTS

This validity test is carried out to determine whether the measuring instrument (questionnaire) meets the valid criteria or not. The test results are categorized as valid if $r_{count} > r_{table}$ (two-sided test with sig 0.05). The validity test aims to determine the correctness of the instrument in this study, namely Electronic Word Of Mouth (E-Wom) (X₁), Destination Attractiveness (X₂), Visit Intention (Y). Respondents in this study were 120 respondents, so the r_{table} value was 0.177. Therefore, the results of the validity test of each variable can be seen in Table 1.

In Table 1, it can be seen that each indicator of this study which includes Electronic Word Of Mouth (E-Wom) (X₁), Destination Attractiveness (X₂), and Visit Intention (Y) has an r_{count} greater than the r_{table} which exceeds 0.177. Therefore, it can be said that the indicator items or statement items used in this study are feasible or valid for use as data collectors on potential visitors to Blitar Chocolate Village. A questionnaire can be said to be reliable if the respondent's answer to the statement is always consistent. This questionnaire test is said to be reliable if the Cronbach Alpha value is > 0.60 . The test results can be seen in Table 1.

Table 1. Tabulated results of validity and reliability tests.

Variabel	Item	<i>r</i> hitung	<i>r</i> tabel	Reliability
<i>Electronic Word Of Mouth (E-Wom) (X1)</i>	X1.1	0,644	0,177	0,895
	X1.2	0,732	0,177	
	X1.3	0,677	0,177	
	X1.4	0,689	0,177	
	X1.5	0,679	0,177	
	X1.6	0,659	0,177	
	X1.7	0,698	0,177	
	X1.8	0,710	0,177	
	X1.9	0,692	0,177	
	X1.10	0,758	0,177	
	X1.11	0,593	0,177	
	X1.12	0,665	0,177	
<i>Destination Attractiveness (X2)</i>	X2.1	0,764	0,177	0,751
	X2.2	0,769	0,177	
	X2.3	0,740	0,177	
	X2.4	0,782	0,177	
<i>Visit Intention (Y)</i>	Y.1	0,689	0,177	0,613
	Y.2	0,829	0,177	
	Y.3	0,573	0,177	
	Y.4	0,709	0,177	

Source. Primary data processed (2022).

Based on the table of reliability test results in Table 1 above, it can be seen that the Electronic Word Of Mouth (E-Wom) variable (X1) with a reliability coefficient of 0.895, Destination Attractiveness (X2) with a reliability coefficient of 0.751, and Visit Intention (Y) with a reliability coefficient of 0.613 so it can be concluded that the variables used in this study are reliable because the Cronbach Alpha coefficient is above 0.60.

Based on the results, it can also be said that the instruments in this study when tested repeatedly still produce consistent or the same results. So that it can be used in explaining Electronic Word of Mouth (E-Wom) and Destination Attractiveness on Visit Intention (study on potential visitors to Blitar Chocolate Village).

Multiple linear regression analysis is used to determine the relationship between the independent variable and the dependent variable. In this study to determine whether there is an influence of Electronic Word Of Mouth (E-Wom) (X1) and Destination Attractiveness (X2) on Visit Intention (Y) at Kampung Coklat Blitar. The results of the SPSS 25 calculation can be seen in Table 2 below:

Table 2. Multiple linear regression analysis test results.

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.293	.972		5.446	.000
	X1	.159	.071	.582	9.196	.000
	X2	.254	0.47	.341	5.385	.000

Source. Primary Data Processed, Year 2022. a. Dependent Variabel Y

Based on Table 2 above, the regression equation can be obtained as follows:

$$Y = a + b_1(X_1) + b_2(X_2) = 5.293 + 0,159(X_1) + 0,254(X_2)$$

In the equation above, the results of the multiple linear analysis equation can be explained or described as follows:

a: The constant value is 5,293, in this case it can be explained that the Electronic Word Of Mouth (E-Wom) (X1) and Destination Attractiveness (X2) variables are zero, then Visit Intention (Y) will be 5,293 or potential visitors will continue to make Visit Intention (Y).

b1 (X1): The regression coefficient value of Electronic Word Of Mouth (E-Wom) (X1) is 0.159 with a positive sign, which means that the higher the change in value in Electronic Word Of Mouth (E-Wom) (X1), the higher the Visit Intention (Y) or the better the content of a message from Electronic Word Of Mouth (E-Wom) (X1), the more Visit Intention (Y) will increase.

b2 (X2): The coefficient value of Destination Attractiveness (X2) is 0.254 with a positive sign, which means that the higher the change in value in Destination Attractiveness (X2), the higher the Visit Intention (Y), or the better the attractiveness of the destination, the more Visit Intention (Y) will increase.

Based on the results of the analysis that has been carried out above, the discussion of the results of the hypothesis testing in this study is as follows:

(1) The effect of Electronic Word Of Mouth (E-Wom) (X1) on Visit Intention (Y) at Blitar Chocolate Village (H₁)

The results of testing the first hypothesis, it is known that Electronic Word Of Mouth (E-Wom) has a positive and significant effect on Visit Intention at Blitar Chocolate Village. The independent variable Electronic Word Of Mouth (E-Wom) is measured in 3 dimensions, namely E-wom quantity, E-wom quantity and Sender's expertise. Each variable has 4 indicators, namely the e-wom quality dimension with indicators of easy-to-understand messages, the reality of visitor messages, the ability of visitor messages in the form of explanatory sentences, the ability of visitor messages in the form of photos. E-wom quantity is viewed from the indicators of the number of visitor comments, the number of visitor comments that recommend, the number of visitor comments indicates the number of visitors, the number of star ratings.

Sender's expertise with indicators of visitor messages able to express satisfaction with real evidence, visitor messages provide complementary information in the comments column, visitor messages can explain the reality of specifications, visitor messages can explain the reality of product details. Furthermore, the dependent variable Visit Intention is measured in four indicators of interest in the destination, having free time to visit, availability of transportation facilities and availability of infrastructure.

3.1 *E-Wom quality*

This research proves that the clarity and ease of visitor messages to be understood can attract potential visitors to visit Blitar Chocolate Village. This is because potential visitors will be interested in messages that are very easy to understand. Easy-to-understand message content can make it easier for potential visitors to understand the destination of Kampung Coklat Blitar. With easy-to-understand message content such as messages that are detailed / clear, not convoluted, brief, so that potential visitors will be more interested and convincing to find out more about the statements made by previous visitors.

Detailed and clear messages can also be understood and considered attractive to potential visitors because potential visitors feel helped. Potential visitors can immediately understand whether the destination can provide benefits to potential visitors. Destinations that provide

benefits to prospective visitors or support the needs of prospective visitors, the determination of prospective visitors will be unanimous to want to visit the Blitar Chocolate Village destination.

A detailed message is able to attract and convince potential visitors so that potential visitors are interested in the Kampung Colat Blitar destination. In the social media of Kampung Coklat Blitar destination, only visitors who have visited can write comments or reviews of tourist attractions, so that it is considered real because it comes from visitors who have visited Kampung Coklat Blitar destination. This attracts potential visitors to the Kampung Coklat Blitar destination. The messages or comments conveyed are considered real by potential visitors who solidify the reality of the message.

This study proves that previous visitors' messages in the form of photos related to Blitar Chocolate Village destination are able to attract potential visitors to visit Blitar Chocolate Village destination. According to potential visitors, messages in the form of photos in the comments or reviews column can be trusted with real evidence related to the images presented by previous visitors, so that potential visitors will see messages in the form of photo sentences and are sure to visit the Kampung Coklat Blitar destination. Messages with good photos will convince potential visitors to visit Blitar Chocolate Village destinations. This indicates that most potential visitors will see more clearly about the destination from the comments column which contains various photos submitted by previous visitors.

3.2 *E-Wom quantity*

This study proves that the more comments make potential visitors more interested in Blitar Chocolate Village destination. This is due to the social media destination Kampung Coklat Blitar there are many comments talking about the destination in the comments column. This indicates that the destination is on the rise or popular. Prospective visitors who really like up to date information. Prospective visitors will always look for various information related to the much-talked-about Blitar Chocolate Village destination. This is very good because it can indirectly attract potential visitors to the destination of Kampung Coklat Blitar.

The number of positive comments affects the search for information related to Blitar Chocolate Village destination. Positive comments also give the impression that the destination is worth visiting. This will also encourage the curiosity of potential visitors. When potential visitors see a destination that is popular or being talked about by many people with a large number of comments. The large number of comments can influence the intention of potential visitors in planning a visit to the Blitar Chocolate Village destination. The large number of comments in a destination and in its content saying that the destination is very good and so on can trigger interest in potential visitors and then a sense of desire to visit the Kampung Coklat Blitar destination.

Positive comments contain direct or indirect recommendations. Recommendations written in the comments column can influence interest in the Blitar Chocolate Village destination. This is because potential visitors see the number of previous visitors who recommend the destination of Kampung Coklat Blitar, which is recommended by the social media by appearing on the front page. This is to find out how good the quality of the destination is to the views of previous visitors. Destinations that are often recommended will be more attractive and convince potential visitors to the destination of Kampung Coklat Blitar. The number of recommendations is the basis for potential visitors before intending to visit.

On the other hand, this research proves that there is a role of star rating on the intention to visit Kampung Coklat Bintang. Star ratings have an influence on the interest in Blitar Chocolate Village destinations in potential visitors. The star rating owned by each destination will give clues to potential visitors about the quality of the destination. A high star rating can trigger the interest of potential visitors to visit the Kampung Coklat Blitar destination. A high star rating can be categorized as a reference to a destination that is worth visiting, so

potential visitors will look for information in terms of what the destination is considered good by visitors who have visited the destination before.

3.3 *Sender's expertise*

Visitor messages that provide real evidence related to the destination are very influential on the attractiveness of the Blitar Chocolate Village destination. This happens because the explanation in the form of real explanatory sentences contained in the comments column sent by visitors is a reality of the destination, so that potential visitors will be interested in the destination by seeing real evidence. Providing real evidence related to the destination is very influential on the plan to visit the Blitar Chocolate Village destination. This is because previous visitors provide real evidence that aims to tell the reality of the destination so that it indirectly forms a belief and increases trust so that potential visitors plan to visit the destination. Visitor messages are able to express a sense of satisfaction by providing tangible evidence that can increase prospective visitors' confidence that the destination can provide benefits to meet the needs of traveling. So that the desire to visit the destination arises.

This study proves that the content of different but complementary visitor messages affects the attractiveness of the Blitar Chocolate Village destination. This is because many visitor messages provide information about destinations that are different in terms of content, photos and videos, or language so that they make the visitor's message the center of attention or more attractive to potential visitors because they are considered

Different but complementary message contents can influence the search for information related to Blitar Chocolate Village destinations. This is because visitor messages provide prominent message content and unique impressions related to the destination. Potential visitors will be curious and find out more about the destination whether it is in accordance with the opinion of the visitor's message, by comparing the content of messages between visitors but complementing each other. This makes potential visitors interested in finding out the reality of the visitor's message, so that potential visitors will look for more information. Prospective visitors will look for the content of visitor messages that they think can provide positive perceptions related to the destination, the message conveyed is good related to the destination, the plan to visit the Kampung Coklat Blitar destination is getting bigger.

The content of visitors' messages that are different but complementary can affect the willingness to visit the Blitar Chocolate Village destination. This is because potential visitors are finding out through the most unique or different but still complementary visitor messages related to the destination, so that potential visitors can make up their minds to be willing to visit the Blitar Chocolate Village destination. Visitor messages can explain every fact of the Blitar Chocolate Village specifications.

Visitor messages can be in the form of reality photos of Blitar Chocolate Village. This is because the visitor message is able to explain every fact of the specifications of Blitar Chocolate Village, so that it can attract potential visitors to visit Blitar Chocolate Village. Prospective visitors will get experiences in the form of interesting photo spots in Blitar Chocolate Village. This is because potential visitors will get many interesting photo spots written in the reviews. Visitor reviews about aesthetic places will greatly support potential visitors to be more interested in visiting Blitar Chocolate Village.

Visitor messages explain honestly related to the details of the tourism product that they get with the details of the tourism product, when the tourism product is appropriate, so that potential visitors will be more interested in the tourism product of Kampung Coklat Blitar. Visitor messages are able to explain the reality of tourist product specifications in detail can affect the search for information related to Blitar Chocolate Village. This is because many previous visitor messages related to Blitar Chocolate Village explain in detail the specifications of tourism products such as what tourism products are in the destination of Blitar Chocolate Village that match the description and so on. This is what makes potential visitors will see and then search for information related to tourism products.

Berdasarkan dalam penjelasan diatas dapat disimpulkan bahwa semakin positif dan baik informasi dari sebuah pesan yang didapatkan oleh calon pengunjung, maka akan meningkatkan niat berkunjung. Hasil penelitian ini didukung oleh penelitian terdahulu yang dilakukan oleh Muzdalifah (2019), Jiwandono (2020), Rukmana (2020), Sholikhah (2018), Rachmaulida (2017), Dewantara (2021), Gosal *et al.* (2020), Pramudhita dan Madiawati (2021, dan Hafaz *et al.* (2018) yang menyatakan bahwa *Electronic Word of Mouth (E-Wom)* berpengaruh positif secara signifikan terhadap *Visit Intention* dapat diterima. Dalam pembahasan diatas, telah dijabarkan indikator dalam variabel yang dapat mengukur pengaruh *Electronic Word of Mouth (E-Wom)* terhadap *Visit Intention*. Dengan demikian hipotesis satu (H_1) yang menyatakan bahwa bahwa *Electronic Word of Mouth (E-Wom)* berpengaruh positif secara signifikan terhadap *Visit Intention* di Kampung Coklat Blitar. Based on the explanation above, it can be concluded that the more positive and good information from a message obtained by potential visitors, it will increase the intention to visit. The results of this study are supported by previous research conducted by Muzdalifah (2019), Jiwandono (2020), Rukmana (2020), Sholikhah (2018), Rachmaulida (2017), Dewantara (2021), Gosal *et al.* (2020), Pramudhita and Madiawati (2021), and Hafaz *et al.* (2018) which states that Electronic Word of Mouth (E-Wom) has a significant positive effect on Visit Intention can be accepted. In the discussion above, indicators have been described in variables that can measure the effect of Electronic Word of Mouth (E-Wom) on Visit Intention. Thus hypothesis one (H_1) which states that Electronic Word of Mouth (E-Wom) has a significant positive effect on Visit Intention at Kampung Coklat Blitar.

(1) The influence of Destination Attractiveness (X2) on Visit Intention (Y) at Blitar Chocolate Village (H2)

Destination Attractiveness is measured in 4 indicators, namely potential visitors see interesting visitor comments, facilities provided to visitors, potential visitors observe the ease of access to Blitar Chocolate Village from visitor comments. Furthermore, the dependent variable Visit Intention is measured in 4 indicators, namely interest in the destination, having free time to visit, availability of transportation facilities and availability of infrastructure.

Visitor comments also indirectly influence potential visitors to visit. This is because potential visitors will be very interested when previous visitors' comments explain about Blitar Chocolate Village in detail so that potential visitors will be very interested in visiting. Visitor comments can make potential visitors want to visit Blitar Chocolate Village destinations. Interesting visitor comments can captivate the attention of potential visitors so that they are determined to visit the Blitar Chocolate Village destination, by seeing the most interesting visitor comments, potential visitors will be even more interested in visiting.

Prospective visitors will see the facilities provided from visitors' comments regarding Blitar Chocolate Village. This shows that potential visitors will see what facilities are provided to support their visit, so that potential visitors will be interested in visiting Blitar Chocolate Village. Visitor comments can also make potential visitors look for deeper information related to Blitar Chocolate Village. This is because potential visitors want to increase their confidence related to the destination of Kampung Coklat Blitar, by seeing information related to the facilities provided whether it suits potential visitors.

Visitors' comments about the facilities provided can also make potential visitors plan to visit Blitar Chocolate Village. This is because when prospective visitors feel that the facilities provided by Blitar Chocolate Village are appropriate, it will further increase the confidence of prospective visitors. along visitors also observe the ease of access to get to Blitar Chocolate Village from previous visitors' comments. The ease of access to Blitar Chocolate Village is easy to reach, which can ease potential visitors to visit. Visitor comments related to ease of access can make potential visitors search. Information can be related to various accesses that can support a visit to Blitar Chocolate Village, so that prospective visitors will choose the best access to get to Kampung Coklat.

The results of this study are supported by previous research conducted by Yacob *et al.* (2020), Chaudhary (2020), Cahyanti and Anjaningrum (2018), Nabila (2020), Culic *et al.* (2021), Yacob and Erida (2019), Kawatu *et al.* (2020), Armis and Kanegae (2020), and Susanto and Astutik (2020) which state that Destination Attractiveness affects Visit Intention. So, this research can be used to strengthen the results of previous research. In the discussion above, variable indicators have been described that can measure Destination Attractiveness on Visit Intention. Thus, hypothesis two (H₂) which states that Destination Attractiveness (X₂) has a positive and significant effect on Visit Intention (Y) at Kampung Coklat Blitar can be accepted.

- (1) The dominant influence between Electronic Word Of Mouth (E-Wom) (X₁) and Destination Attractiveness (X₂) on Visit Intention (Y) (H₃)

Based on the results of the dominant test in the research that has been conducted, the results show that Electronic Word Of Mouth (E-Wom) has a dominant effect on Visit Intention. This is in accordance with the researcher's conjecture, where the researcher's third hypothesis suspects that Electronic Word Of Mouth (E-Wom) has a dominant effect on Visit Intention at Blitar Chocolate Village, and is supported by Anggraini and Lupita's research (2021) which says that electronic word of mouth (E-Wom) has a greater direct effect than other variables on Visit Intention so that electronic word of mouth (E-Wom) is more dominant. Prospective visitors really prioritize the information they get in order to attract them to make a visit intention. Therefore, it can be said that the hypothesis (H₃) which states that electronic word of mouth (E-Wom) has a dominant effect on Visit Intention is accepted.

4 CONCLUSION

Based on the results in the research and discussion that has been carried out, it can be concluded that:

- (1) This study proves that Electronic Word Of Mouth (E-Wom) has a positive and significant effect on Visit Intention. This shows that the more positive and good information from a message obtained by potential visitors, it will be able to increase the intention to visit as well. Positive messages here are in the form of messages that are easily understood by potential visitors so that they will be able to increase potential visitors to visit Blitar Chocolate Village.
- (2) This study proves that Destination Attractiveness has a positive and significant effect on Visit intention. This shows that the higher the attractiveness of prospective visitors, the higher the intention to visit by prospective visitors.
- (3) This study proves that electronic word of mouth (E-Wom) has a greater direct effect than other variables on Visit Intention so that electronic word of mouth (E-Wom) is more dominant. Prospective visitors really prioritize the information they get to strengthen their intention to visit.

5 SUGGESTIONS

Based on the above research, the researcher will provide the following suggestions:

- (1) For Practitioners

The amount of competition for destinations in Blitar city, it is hoped that Blitar Chocolate Village can always improve tourist destinations and products provided to potential visitors. electronic word of mouth (E-Wom) consists of 3 dimensions that must

be considered in balance. First, E-Wom Quality, must pay attention to the form of ease of messages received by prospective visitors. The second dimension, namely E-Wom Quantity related to comments submitted by previous visitors, must be maximized to attract potential visitors to visit Blitar Chocolate Village. The third dimension, Sender's Expertise, related to previous visitors' messages must be more clear about the reality of Blitar Chocolate Village. Destination Attractiveness must pay more attention to the availability of facilities to visit in order to support potential visitors to visit.

(2) For Academics

In this study, there are two variables that can influence Visit intention, namely Electronic Word Of Mouth (E-Wom) and Destination Attractiveness which only provide 57% influence. For future researchers, it is hoped that they can examine more deeply the variables that influence Visit Intention or add travel motivation variables because the tendency that arises because of needs encourages a person to take various actions that must be fulfilled. To mend

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