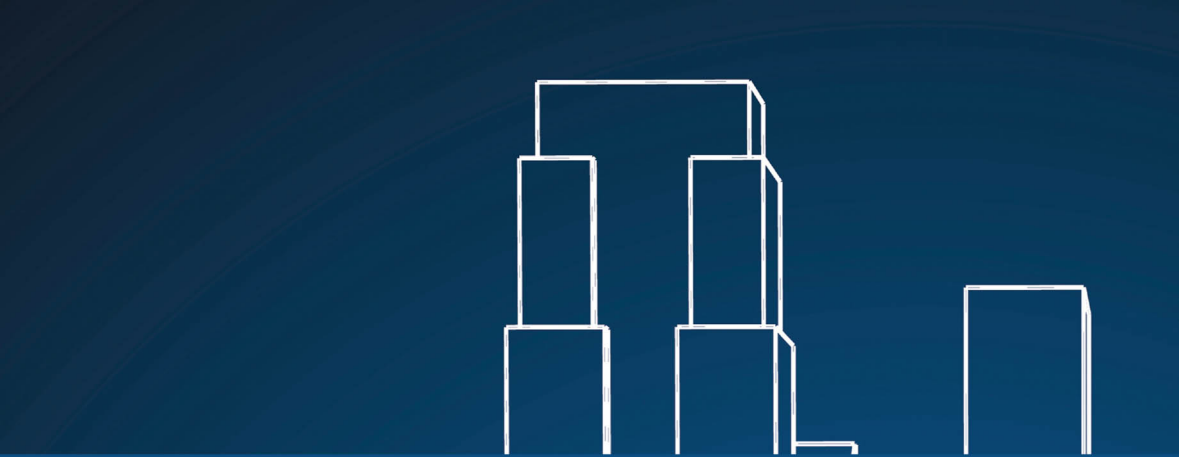




Routledge Studies in Accounting

ACCOUNTING AND AUDITING SMALL AND MEDIUM-SIZED PRACTICES

**TRANSFORMATIVE CAPABILITIES IN A RAPIDLY
CHANGING SOCIETY**

Edited by

Anatoli Bourmistrov, Levi Gårseth-Nesbakk,
Toomas Haldma, Jan Mouritsen and Roman Vakulchuk



Accounting and Auditing Small and Medium-Sized Practices

This book addresses the recent trends, developments, and future of accounting and auditing small and medium-sized practices (AASMPs) in the public and private sectors.

The book has three main objectives: firstly, to provide an analysis of how different societal trends, including digitalization, impact AASMPs and what role education and training play in proactive adaptation to those trends; secondly, to outline major scenarios for global AASMP development by 2035; and thirdly, to offer a conceptual framework for better understanding of AASMPs' dynamic and transformative capabilities that are necessary to create sustained competitive advantage in a rapidly changing society. Beyond presenting a conceptual framework, this book also offers a discussion of future scenarios for AASMPs' development and their role in the global economic development. This book is unique, as it disseminates the findings of a large research project carried out by both academics and practitioners from the accounting and auditing industry. Readers of this book will be better equipped to understand the development trends in the accounting and auditing industry, impacts those trends create for AASMPs, and the way different actors can work proactively to maximize AASMPs' chances for success amidst rapid technological and regulatory change.

This book is aimed primarily at accounting and auditing academics; however, it will also be of benefit to managers of accounting and auditing firms, leaders of professional associations, and professional bodies that regulate accounting and auditing practices, setting the foundations for future research endeavors on this topic.

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Abbreviations

A&A	Accounting and Auditing
AASMPs	Small and Medium-Sized Accounting and Auditing Practices
AI	Artificial Intelligence
APIs	Application Programming Interfaces
BFN	The Swedish Accounting Standards Board
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CISA	Certified Information Systems Auditor
Difi	Norwegian Agency for Public Management and eGovernment
Digdir	Norwegian Digitalisation Agency
EBM	Swedish Authority Crime Office
ECTS	European Credit Transfer and Accumulation System
EEA	European Economic Area
ERM	Enterprise Risk Management
ERP	Enterprise Resource Planning
EU	European Union
HEIs	Higher Education Institutions
IAASB	International Auditing and Assurance Standards Board
IAPC	International Auditing Practices Committee
IDEA	Interactive Data Extraction and Analysis
IFAC	International Federation of Accountants
ISA	International Standard on Auditing
KM	Knowledge Management
LCE	Less Complex Entities
LGA	Local Government Auditing
MCSs	Management Control Systems
MRR	Master's Degree in Accounting and Auditing
NGO	Non-Governmental Organisation
NKRF	Norwegian Association of Local Government Auditors
OCR	Optical Character Recognition
PCA	Principal Component Analyses
PCAOB	Public Company Accounting Oversight Board

PIOB	Public Interest Oversight Board
RBV	Resource-Based View
RMSs	Risk Management Systems
SAI	Supreme Audit Institution
SAP	Statement on Auditing Procedure
SCRO	Swedish Companies Registration Office
SDGs	Sustainable Development Goals
SDL	Service-Dominant Logic
SIA	Swedish Inspectorate of Auditors
SMEs	Small and Medium-Sized Enterprises
SMPs	Small and Medium-Sized Accounting Practices
TPB	Theory of Planned Behaviour
TRA	Theory of Reasoned Action
TRANSACT	Transformative Capabilities of the Accounting Profession
VAT	Value Added Tax
VIF	Variance Inflation Factor

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Foreword

We all stand at the early stages of a transformation for the global business community and for the accountancy profession. It is a pivotal moment—the rapid pace of change brought about by digitalization, evolving regulatory and geopolitical landscapes, and increasing sustainability demands is reshaping how we operate. This transformation is particularly significant for AASMPs.

AASMPs play a critical role in supporting our economies, serving millions of SMEs that contribute significantly to global GDP and employment. As trusted advisors, AASMPs are uniquely positioned to lead SMEs through the sustainability journey. Their role is not just vital, but it is also indispensable.

At International Federation of Accountants (IFAC), we recognize the challenges that AASMPs face in adapting to these seismic shifts. However, we also see immense opportunities. Embracing sustainability in both reporting and business practices, embracing technology, ensuring equitable access to finance, and nurturing talent, all these factors offer AASMPs a chance to build resilient, future-ready firms, as part of their sustainable business transformation. Our work, including our 2021 report on sustainability opportunities for practitioners and the 2023 Small Business Sustainability Checklist, reflects our commitment to supporting AASMPs in this transformation.

This book provides a very timely exploration of the factors that influence AASMPs' transformative capabilities and offers valuable insights into how AASMPs can thrive amidst change. The scenarios for Norwegian AASMPs' development by 2035 and the conceptual framework for dynamic capabilities presented here are crucial tools for navigating the future.

Let this book serve as both a guide and an inspiration for AASMPs to embrace change, innovate, and lead in building a sustainable future.

Lee White, Chief Executive Officer, International
Federation of Accountants (IFAC)



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Part I

Introduction to the volume



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Introduction

*Anatoli Bourmistrov, Brynjar Gilberg,
Jan Mouritsen, Levi Gårseth-Nesbakk and
Roman Vakulchuk*

In memory of Toomas Haldma

This book addresses the recent and future developments of accounting and auditing of small and medium-sized practices (AASMPs)¹ in the public and private sectors with regard to their capability to proactively change and develop a sustained competitive advantage in a rapidly changing society. The turbulent environment has, for a long time, been the new normal for the accounting profession (ACCA, 2012; Vakulchuk et al., 2023). Digitalisation, increasing concerns about climate change, the adverse impacts of economic activities on eco- and social systems and corresponding changes made by national and global regulators have challenged the nature of accounting and auditing activities. This makes it necessary for the industry to rethink the nature of its business models (Richins et al., 2016). Moreover, Frey and Osborne (2013) predicted that, in the coming decade, the accounting profession as it was known at that time might face extinction because of technological and regulatory changes that seemed to have the potential to transform accounting organisations beyond recognition.

The potential effects of those transformations appeared to be especially profound for AASMPs. International Federation of Accountants (IFAC, 2016) in their report indicated that AASMPs hesitate to adopt new innovations and emphasised the need for greater proactivity from AASMPs in gaining new business and services. Supporting those conclusions, IFAC's (2018) Global SMP Survey Report indicated that a significant number of AASMPs worldwide experienced significant challenges in accommodating transformations in digital technologies, services they could offer, ways to recruit talent and regulations. Those reports highlighted many factors that prevented AASMPs from responding to emerging development trends. At the same time, it is important to better understand what factors could facilitate the adoption of new technologies and regulations so that AASMPs gain sustained competitive advantages for the benefits of their customers and society at large.

In the case of AASMPs not being able to embrace and adapt to new trends, they could be placed at risk of losing competitiveness, being dismantled in favour of global accounting and auditing multinationals and/or potential new emerging digital platform solutions (e.g., “accounting Amazons”). This could bring unwanted societal consequences; e.g., AASMPs' clients might lose access to important sources of local business intelligence, while national governments might face weaker taxation bases, eventually leading to poorer societal welfare. Therefore,

better understanding of the factors that promote and hinder development of the transformative capabilities of AASMPs is important to ensure the survival and prosperity of the accounting/auditing profession in general and AASMPs in particular.

Hence, this book addresses some of those challenges, by unravelling factors that affect the transformative capabilities of the accounting and auditing professions. This book has three main objectives. First, it provides an analysis of how different societal trends, including digitalisation, impact AASMPs and the role of education and training in proactive adaptation to those trends. Second, driven by empirical and contextual anchoring in the Norwegian AASMPs, it outlines three scenarios for Norwegian AASMPs' development by 2035. Finally, it offers a conceptual framework for better understanding of AASMPs' dynamic and transformative capabilities that are necessary to create a sustained competitive advantage in a rapidly changing society.

Research context

This book is a research anthology that disseminates the results of a large-scale four-year research project, "Transformative Capabilities of the Accounting Profession: Study of Norwegian Small and Medium Accounting Practices" (TRANSACT). The project was funded by the Norwegian Research Council programme PROFESJON, project # 301717. One aim of the project was to study how different societal trends, including digitalisation, impact AASMPs. Another aim was to study the role of accounting and auditing education and training in proactive adaptation to those trends.

The research was executed by a group of researchers at Nord University Business School, international academic partners and partners from the Norwegian accounting and auditing sector. Norway constitutes an interesting research context to study AASMPs because it is amongst the top five countries within the digitalisation area in Europe (DESI, 2022). In addition, Norway has a tradition of transparency in the public sector. It makes detailed data publicly available, thus facilitating research in Norway more than is the case in other countries.

Over the course of four years, the TRANSACT project has created a unique database that includes data from extensive surveys/questionnaires, as well as a large number of interviews. This dataset was used by different research teams within TRANSACT when composing the chapters. Besides experienced researchers, the TRANSACT project has also included PhD fellows and master students in both the data collection and analysis processes. The attentive reader will notice that several chapters of this book are co-authored by experienced researchers and PhD or master students. In this sense, this book has succeeded in including young academics (future practitioners) as contributors.

Chapter summary

This book makes a synthesis of knowledge gained in the TRANSACT project over a four-year period, including analysis of new data collected, as well as the use of

existing academic literature and prior data. The reader of this book will be better equipped to understand trends in accounting and auditing fields, the impacts of those trends on AASMPs and the way different actors can work proactively to maximise AASMPs' chances of success in a rapidly changing society.

Part 1 of this book introduces the volume. This introductory chapter outlines this book and briefly introduces the reader to original contributions in the subsequent chapters. It is followed by Chapter 1, "Scenarios for the future development of Norwegian accounting and auditing small- and medium-sized practices by 2035" by Roman Vakulchuk, Anatoli Bourmistrov and Oliver Henk, which presents three scenarios for Norwegian AASMPs' development: "Climauditors" (in which accountants and auditors are at the forefront of climate oversight), "Digauditors" (the rise of the accounting and auditing profession as a strategic leadership) and "Extinction of SMEs in accounting and auditing" (the development where Big Tech is in the driving seat). The chapter also presents an innovative methodological approach used to develop those three scenarios. Traditionally, scenarios are built on using preliminary desk research and inputs from a team of 7–15 experts only. Chapter 1 describes the new methodology, which takes two additional steps forward – a large-scale survey of 510 AASMPs' representatives in the TRANS-ACT project and validation of scenarios with expert participation, using an interactive game format.

Part 2 of this book puts together six chapters that highlight the impact of digitalisation on AASMPs. It starts with Chapter 2, "Digitalisation and its impact on small- and medium-sized accounting and auditing practices: insights from public and private sectors", by Tatenda Mugwira, Tamara Volodina and Zahid Ali. The chapter presents the result of a literature review focusing on understanding digitalisation and its impact on AASMPs in both the public and private sectors. The chapter demonstrates that even though turbulent times such as the COVID-19 pandemic enhanced the appreciation and use of simple technological tools among AASMPs in both the private and public sectors, they are still facing several challenges. Examples include the nature of their clients and access to necessary resources facilitating the adoption of advanced digital technology. Despite these challenges in AASMPs, the authors of this chapter show that it is paramount for business schools to integrate digital technology-related tools and discussions into their curriculum, to better equip students with technological skills.

Chapter 3, "Dealing with digital transformation: tensions of professionals working at small- and medium-sized accounting firms", written by Daniela Argento, Marita Blomkvist and Oliver Henk, examines how digital transformation creates tensions for professionals working at small and medium-sized accounting practices in Norway and Sweden. The chapter highlights several paradoxical tensions arising from professional accountants being "in between" their clients and employer. They navigate between four paradoxical tensions that are labelled: coercive versus enabling technological development, the digitalisation strategy of the accounting firm versus the readiness of the client, interacting with clients versus being part of a professional industry and staying versus leaving the industry. The chapter points to the importance of being aware of the time and efforts associated with digital

transformation, resulting in the asynchronous achievement of digital transformation and the paradox of being digital while still working with paper.

In their chapter, “Towards digital transformation of local government auditing: leveraging digital affordances” (Chapter 4), Tamara Volodina, Brynjar Gilberg, Tatenda Mugwira and Chamara Kuruppu move the reader’s attention towards public sector auditing. The chapter discusses how public sector auditors leverage the affordances of digital innovations for digital transformation. The authors apply affordance theory to consider the material properties of digital innovations in the public sector as well as their recursive effects on public sector auditing. By examining two identified cases of digital innovations in local government auditing in Norway, the chapter describes and analyses the underlying conditions that allow for the affordances of digital innovations to transform the audit, e.g., the increasing availability of and access to public data in Norway, improving digital literacy and data analysis skills, and knowledge sharing. This allows the building of new or reengineering of existing auditing processes.

The next chapter, “Internal organisational arrangements and engagements with environment in small and medium-sized accounting practices” (Chapter 5), by Zahid Ali and Jan Mouritsen, provides analysis of variation in the strategic engagement of accounting small and medium-sized practices (SMPs) with their environment. Dynamic capability theory is used to test the relationships between firms’ ability to “sense and seize” the opportunities in order to act as small business advisors and multiple organisational arrangements, such as firm size, governance structures and market size. Using responses in the TRANSACT questionnaire and Kruskal–Wallis test, the chapter highlights that firm size does not matter per se when it comes to explaining the engagement with the environment. It relates more to dispersed governance structures and the level of market differentiation, as well as the horizon of foresight practices. The chapter concludes that the difficulties associated with serving the customer as small business advisors can be overcome by opting for certain organisational arrangements.

Chapter 6, “Perceived risks and preparedness to deal with ‘black swans’: A mismatch between competence and perceived knowledge about potential risks”, by Oliver Henk, Roman Vakulchuk and Anatoli Bourmistrov, analyses the ability of AASMPs to handle “black swans” by configuring risk management systems for increased preparedness and successful crisis prevention. In theory, better preparedness requires a more sophisticated risk management system, especially in the case of the accounting industry, which is vulnerable to the effects of digitalisation. Chapter 6 analyses responses from the TRANSACT project questionnaire, focusing on understanding relationships between perceived preparedness for handling risks and the level of sophistication in a risk management system. Results show three clusters of firms: (1) “uncertain”, with low preparedness and low sophistication, (2) “well-prepared”, with higher preparedness and high sophistication and (3) “overconfident”, with highly perceived preparedness but low sophistication in firms’ risk management systems. The chapter discusses the existence of the so-called “Dunning-Kruger effect” – individuals with limited knowledge in a particular area tend to overestimate their competence (Vakulchuk et al., 2023).

Generally, firms can improve their preparedness by introducing future scenario building alongside their risk management system.

The final chapter in the first part, Chapter 7, “(Absence of) use of management control systems to manage cyber risk in SMEs”, by Silje Aakre, Camilla Fleines Christoffersen, Jakob Severinsen Grønmo and Karianne Pettersen Sunde, analyses how small and medium-sized companies use management control systems to manage cyber risk, which represents the dark side of digitalisation. Using Simons’ four levers of control framework, this chapter reports cyber risk management in four medium-sized case studies. The findings suggest that management control systems are only to a limited extent used to manage cyber risk or ensure cybersecurity: while the belief systems are absent, the boundary systems dominate and are used in a reactive way. The diagnostic control of cyber risk is often outsourced to third parties, and the possibility of executing interactive control seems to be crippled by limited in-house competence.

Part 3 of this book focuses on issues of education, training, competences and skills development at AASMPs. Chapter 8, “Masters’ supervision and academic growth of accounting and auditing students in Norway – from understanding to creativity”, is written by Evgenii Aleksandrov, Olga Iermolenko, Elena Dybtsyna and Nadezda Nazarova. The chapter develops an analysis of how academic supervisors support the personal academic growth of accounting and auditing students during the writing of their master theses. In doing so, the authors combine the notion of theory development and revised Bloom’s taxonomy on learning, teaching and assessing. The authors use memory work methodology. They claim that supervisors should support master students in defining answers to three major questions regarding their master theses: “What and why? How? So what?” This is paramount for fostering students’ analytical skills and critical thinking, which are highly demanded in the modern accounting and auditing professions.

Next, Bjørn Willy Åmo and Oliver Henk, in their chapter, “Accounting firms as business advisors: small and medium-sized enterprise’s (SME’s) expectations and accounting firms’ capabilities” (Chapter 9), examine the changing capabilities of accounting firms to be business and strategic advisors for SMEs, particularly in the context of digital transformation. By using a purposefully selected case study approach and integrating theories from the resource-based view and service-dominant logic, the chapter examines the evolving roles of accounting firms in Norway in providing strategic, non-compliance advice, leveraging both digital tools and interpersonal relationships. The authors reveal how accountants not only respond to but also anticipate the needs of their clients, facilitating tailored business intelligence and strategic guidance. This is due to the dynamic nature of the interaction between the supply and demand for business advice, which is aligned with the varied advisory needs of SMEs across different stages of their business life cycle.

Chapter 10, by Anne-Cathrine Bernhoft, Sander Husebø, Espen John Isaksen, Johan Kosmo Larsen and Tatenda Mugwira, deals with “Intentions of bachelor students to study accounting and auditing at the master level”. This chapter uses theory of planned behaviour to predict the student’s intention and analyses 827 responses, which were gathered from 13 business schools in Norway. The results

show that work opportunities are positively associated with the intention but not the salary level. The subjective norms have a positive influence on students' intention to study accounting and auditing, as well as perceived behavioural control. The chapter concludes that the audit profession will benefit from enhanced communication strategies promoting the work opportunities associated with these master programmes. This concerns both students and their social environment. As for business schools, they need to enhance students' confidence in their ability to obtain the necessary skills and competences to pursue a master's degree in accounting and auditing.

The next chapter, "Neither detecting nor preventing: analysis of the auditors' role in the outcome of financial crime cases", by Anatoli Bourmistrov, Brynjar Gilberg, Marita Blomkvist and Sofie Varmedal (Chapter 11), analyses the auditor's role in the outcome of financial crime cases in Norway and Sweden. Generally, it is increasingly expected that the auditor acts to prevent and detect financial crime, something which has dramatically increased worldwide. To analyse whether this is happening, the chapter examines whether those expectations are reflected in the auditor's actual actions in financial crime cases in the district courts, and whether those roles have changed over the period from 2017 to 2021 in Norway and Sweden. In these countries, auditors' roles are regulated by the law, and the summaries of court decisions are public information. The reported results reveal that the auditor appears to rarely contribute to detecting financial crime but has played an important role in providing evidence in criminal cases. By analysing those findings based on institutional logic theory, it is shown that a persistent gap exists between the auditor's legally mandated professional responsibility to detect financial crimes and the extent to which the auditor is able to deliver on this responsibility.

The final chapter, which concludes part three of this book, "The effect of the new ISA 315 on perceived audit quality in SMPs – does it support or undermine auditors as knowledge workers?" (Chapter 12), by Brynjar Gilberg and Thomas Johansen Sortland, examines how new "International Standard on Auditing (ISA) 315: Identifying and Assessing the Risks of Material Misstatement" is perceived to impact audit quality in SMPs in Norway. Theoretically, this chapter looks at the auditor's role as "knowledge worker", considering important concepts such as professional judgement, professional scepticism and the Norwegian legal auditing standard "good auditing practice", as well as Bloom's taxonomy of knowledge. The findings from the TRANSACT questionnaire and additional interviews with auditors demonstrate that the new standard has led to perceived improvements in audit quality, but the improvements seem to stem from the implementation process rather than improvements in the standard itself. The chapter concludes that the way the standards are increasingly becoming elaborate and descriptive can undermine the role of the auditor as knowledge worker because they encourage a compliance approach to auditing rather than the development of essential auditor capabilities, such as professional judgement and professional scepticism.

Finally, Chapter 13, "Understanding proactivity and strategic duality of small and medium-sized accounting and auditing practices – a summary", by Anatoli Bourmistrov, Brynjar Gilberg, Jan Mouritsen, Levi Gårseth-Nesbakk and Roman

Vakulchuk, brings together finding from other chapters and concludes this book. This chapter analyses a dual response by AASMPs to changes in their institutional environment: some AASMPs exhibit proactive and transformative changes, while others maintain the status quo or show reactive changes. The concept of “strategic duality” is introduced, highlighting how some firms adapt by leveraging digital technology, while others resist due to concerns like cyber threats. The chapter also discusses five key paradoxes that create tensions, influencing AASMPs’ adaptation strategies. Using institutional work theory, the chapter explains how cognitive, social and regulatory structures impact the development of dynamic capabilities. Two extreme cases of reflexivity are identified: “hybrid professionals”, who are proactive, and “withdrawing individuals”, who are reactive. The chapter concludes with implications for improving dynamic capabilities, emphasising the need for AASMPs to develop reflexivity among employees and collaborate with higher education institutions to ensure a sustainable future for accounting and auditing professionals.

Use of this book

This book is primarily meant for accounting and auditing academics at business schools and universities. The hope is that knowledge that is disseminated with the help of this book can influence both teaching and the direction of future research in the field of accounting and auditing, especially when it comes to the development of new types of skills and the dynamic capabilities of graduates. However, this book can also be used in the entrepreneurship field, as well as the strategic management of other types of SMEs, because it partly covers the dynamic capabilities and sustained competitive advantage of small and medium-sized firms (with a case study of the accounting and auditing industry).

Another expected readership is managers of accounting and auditing firms, especially small and medium-sized ones, as well as leaders of professional associations. Both the future scenarios developed and the analysis of dynamic capabilities necessary to sustain the competitive advantages of AASMPs can be useful in developing firms’/associations’ strategies. It could also be useful to customers who are using accounting and auditing services provided by SMPs.

Finally, the professional bodies regulating accounting and auditing practices can be inspired by future scenarios developed in their strategic work. This is because scenarios can provide insights about the most significant uncertainties to be faced and the potential consequences for accounting and auditing regulation that different scenarios bring.

Potential impact

We hope that this book can contribute to UN Sustainable Development Goal (SDG) 4, “Ensure inclusive and equitable education and promote lifelong learning opportunities”. This not only concerns the employees at AASMPs but also the employees at the SMEs they serve, by making sure that AASMPs obtain the necessary

competencies to compete with large accounting and auditing multinationals. Equally important, this book can also contribute to UN SDG 8, “Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all”, by contributing to AASMPs maintaining or even increasing the market share for their services by offering relevant and useful services for the future. Furthermore, this book can have an impact on UN SDG 9, “Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovations”, by contributing to AASMPs being part of the future industrial structure of accounting and auditing services and delivering business intelligence, strategy development, quality and care.

Indirectly, this book can also contribute to other UN SDGs. Reading this entire book or some of its chapters can motivate accountants and auditors to contribute towards supporting the government’s attempt to fight economic crime, as well as assisting small businesses and public sector institutions to produce their goods and services in a favourable way, while making sound economic decisions. We sincerely believe that, by such means, skilled, ethical, concerned accountants will contribute to achieving the UN’s SDGs.

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Note

- 1 According to the International Federation of Accountants, there are no standard definitions of small and medium-sized practices (SMPs). Usually, these are small and medium-sized firms/agencies that provide services to other small and medium-sized enterprises (SMEs) and public sector agencies. Today, SMPs hold a significant market share of accounting and auditing services to SMEs worldwide. Those services may include, but are not limited to, auditing, acquisition, financial management, business strategy, tax planning, cash-flow advice, debt administration, business valuation, forensic accounting, bankruptcy, costing and pricing, financial planning and budgeting, human resources, pensions, remuneration schemes and payroll, environmental sustainability, IT services, secretariat, training and skill development and risk management.

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1 Scenarios for the future development of Norwegian accounting and auditing small- and medium-sized practices by 2035

*Roman Vakulchuk, Anatoli Bourmistrov and
Oliver Henk*

Introduction to scenarios

Scenario 1: “Climauditors” – accountants and auditors at the forefront of climate oversight

Climate change has surged as the existential threat to humanity. The role of accounting and auditing professionals has changed the focus from crunching financial numbers to focusing on sustainability reporting and auditing. Accounting and auditing professionals serve as the climate watchdogs of corporate Norway. The state gave accountants and auditors a significant voice in shaping and enforcing regulatory measures. New professionals such as “The Green Accountant” and “The Green Auditor” actively use digital technology to lower the cost of gathering and analysing sustainability-related information.

Scenario 2: “Digauditors” – the rise of strategic leadership in accounting and auditing

The impact of climate change is significant but not decisive. Accounting and auditing professionals in Norway have continued to enhance their skills, based on gradual advances in digitalisation, big data analytics and automation. Technology remains a collaborator, not a competitor. Firms have found their strategic innovative niches and compete over the talented workforce. This is fuelled by advancements in data analytics through “Data War”. Artificial intelligence (AI) and new technologies automate operations, and managers have more time to carry out analytical and strategic work. Continuous accounting is widespread. Basic education is multidisciplinary, with a strong focus on soft skills. Working in accounting and auditing is prestigious – many professionals work in the parliament, the government and as board members of large companies.

Scenario 3: “Extinction of SMEs in accounting and auditing” – Big Tech in the driving seat

Because governments failed to efficiently regulate Big Tech corporations, the latter steer us into a reality where they hold significant power. Climate change has been largely solved. The Big Tech corporations co-opted the state to enforce their

strategies for accounting and auditing. The scenario gives birth to more bigger companies, while leaving only a few small companies operational, which continue to exist because they have found highly specialised niches. The creative capabilities of the accounting and auditing profession stayed with Big Tech, which monopolised the production of creativity and imagination within the accounting and auditing profession. Data become even more important than before. Because banks possess much data, they become more powerful than before. However, in auditing, banks' power is limited.

Background for the scenarios

Turbulence and strategic uncertainty are becoming the new normal for the accounting profession (ACCA, 2012; Vakulchuk et al., 2023). The potential effects of those transformations seem to be especially profound for accounting and auditing of small- and medium-sized practices (AASMPs). The International Federation of Accountants (2018) highlights various factors that prevent AASMPs from responding to emerging development trends, indicating, at the same time, that there is still a lack of knowledge about the factors that can facilitate the adoption of new technologies in order to find appropriate ways of gaining sustained competitive advantages for their accounting and auditing practices, their customers and society at large.

Much of the literature pinpoints strategic uncertainties that AASMPs are likely to face in the future (Moll & Yigitbasioglu, 2019; Malo et al., 2020; Ali, 2023). To shed more light on how such a future may look, we composed three scenarios for AASMPs. Our chapter illuminates possible transformative capabilities of the accounting industry, to ensure the survival and prosperity of the accounting profession in general, and AASMPs in particular, in the future. If AASMPs are unable to adapt to new trends and innovation challenges, then they will be at risk of losing their competitiveness, dismantling the accounting industry in favour of global accounting and auditing multinationals and/or potential digital platform solutions (e.g., “accounting Amazons”). This could bring unwanted societal consequences. This chapter develops a foresight model that is based on the well-known Shell scenario methodology and incorporates elements of creative and proactive thinking. The purpose is to diagnose and improve anticipatory skills among accounting professionals in Norway.

Conceptual and methodological approach

The goal behind scenario building was to compose a model that could be used to accommodate various development trends in the accounting and auditing profession over time, including trends at both the micro and macro levels. The scenario-building approach that was developed is innovative, as it includes primary data from two different sources: (1) a survey of 510 accounting and auditing firms in Norway, carried out during 2022–2023, and (2) several focus-group discussions with industry experts, involving elements of the Delphi method. The innovative element of

scenario building is that, in addition to the traditional foresight methodology that is based on expert opinion, a survey of private accounting and auditing firms in Norway was added (Figure 1.1). Thus, in our study we used an upgraded multi-layered version of foresight methodology. Traditional scenario-building methodology that is based on the interpretative school does *not* usually involve survey-based data collection from a large number of industry representatives. Traditionally, scenarios are built based only on preliminary desk research and inputs from a team of 10–25 experts (Bradfield et al., 2005; Irnazarov & Vakulchuk, 2020). In this study, two more additional steps forward were taken to identify trends, assumptions and uncertainties that fed into our scenarios.

The methodology draws on the approach of Vakulchuk et al. (2023), Chen et al. (2020), Bourmistrov (2020), Gattringer and Wiener (2020), Belton et al. (2019) and Schwartzmann et al. (2013). In developing and applying the focus-group method, additional literature was consulted, to avoid risks and mitigate concerns and the weaknesses of focus-group discussions regarding scenario building (Chen et al., 2020; Minkinen et al., 2019; Poli, 2015; Bonaccorsi et al., 2020).

Figure 1.1 shows how the approach differs from traditional scenario-building methods. The scenario-building methodology was enriched by adding two more

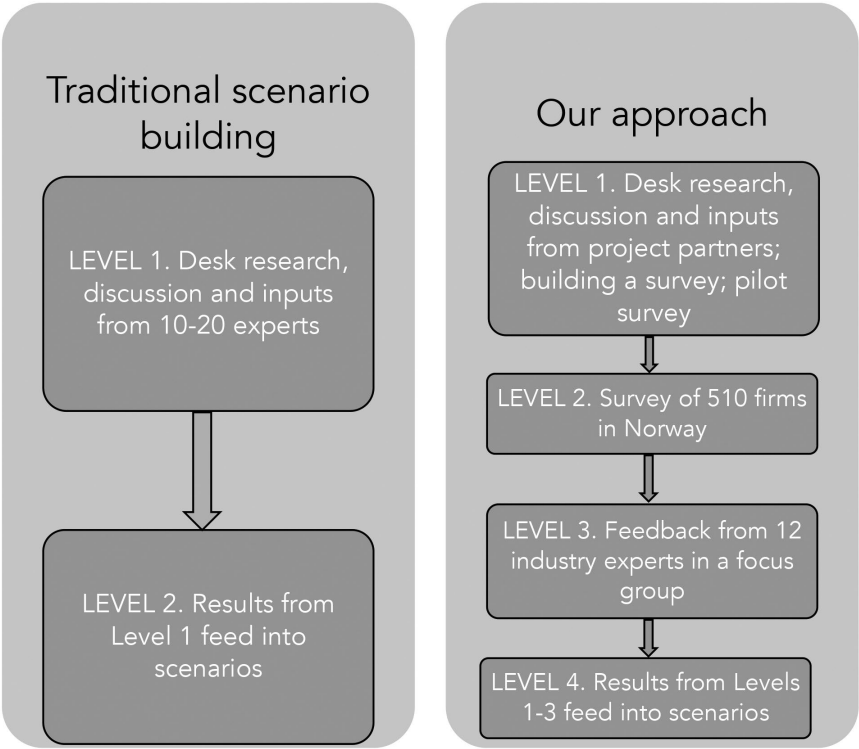


Figure 1.1 Methodological approach.

layers of data collection and refinement. In turn, Step 1 feeds into Step 2, while Step 2 feeds into Step 3. Moreover, each of the steps ultimately feeds into the final phase of scenario building. This approach involves a large-scale survey of 510 actors in accounting and auditing in Norway, thus making Steps 2–3 the key source of data for our scenarios.

After that, the Delphi method was applied to the statistical results of 510 survey responses. The Delphi method is a process involving

a group of experts who anonymously reply to questionnaires and subsequently receive feedback in the form of a statistical representation of the ‘group response’, after which the process repeats itself. The goal is to reduce the range of responses and arrive at something closer to expert consensus.

(RAND, 2020)

In this work, the experts were replaced with 510 respondents from AASMPs. The traditional approach was also modified in the sense that the extent of agreement/disagreement per se was not of interest, but this technique was used in order to come up with a distilled list of assumptions and uncertainties that would feed into scenarios (Figure 1.2). Those questions that received scores of 0.7 or more were treated as assumptions (e.g., 70% or more of respondents agreed about a certain trend), whereas those that received less than 0.7 were treated as uncertainties. Later, in Step 3, the focus-group discussion with industry experts was instrumental in finalising the scale and level of uncertainties in each scenario.

Using a multi-layered approach provides a comparative advantage in scenario building because it can help reduce the experts’ bias, which is always a concern when perceptions of experts are surveyed (see Bonaccorsi et al., 2020). This study was also supplemented by considering the application of AI, including the GPT Chatbot and Big Data approaches. Recent advancements in AI, particularly in areas like causal AI, have significantly increased its ability to process large datasets and identify complex correlations and emerging trends (Gartner, 2023; McKinsey, 2024). However, while AI has improved in its ability to identify potential future trends and disruptions, it still faces challenges in handling highly complex, uncertain environments where human judgement is necessary (Rincón, 2020). As Boysen (2020, p. 8) argues, “while providing more comprehensive data and analytic capabilities, AI is not likely to replace the human capacity to ponder various future outcomes”. At the same time, we did, however, choose to apply AI-powered software for the generation of images – GPT-4o for the imagination of the prompt for the images and ideogram 2.0 for the accurate generation – that show the essence of each scenario (Figures 1.6–1.8).

Primary data: survey of 510 accounting and auditing firms

Primary data includes the data from the survey of 510 AASMPs in Norway. The questions were aimed at revealing key trends, assumptions and uncertainties that

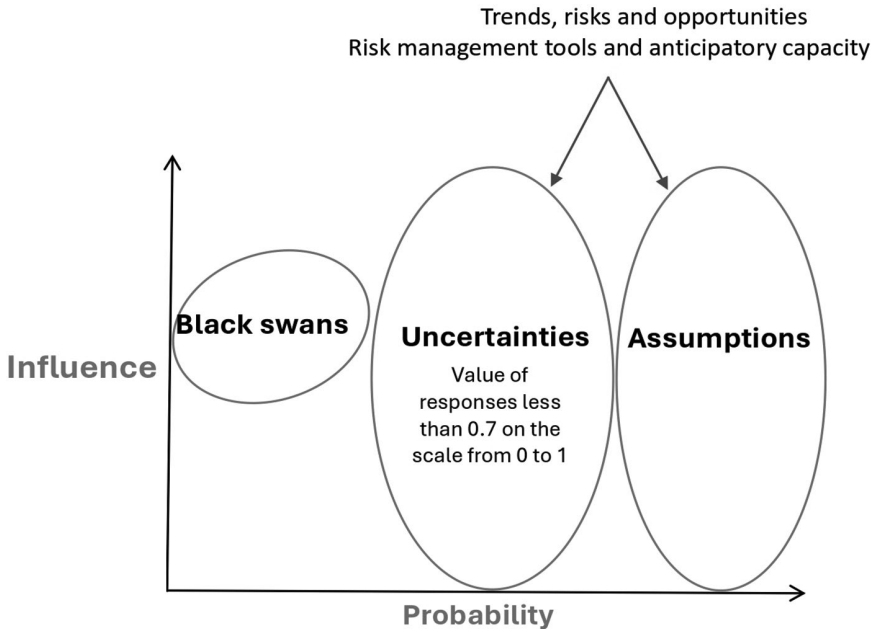


Figure 1.2 Shell's scenario-building methodology.

may matter in the near- to long-term future. The questionnaire was developed in four stages: (1) the questions were composed and discussed by the project team and TRANSACT project partners, (2) the questionnaire was tested with eight industry experts, (3) the questionnaire was sent to AASMPs chosen randomly for pilot testing, and (4) the project team incorporated feedback and finalised the questions.

The sample includes firms of different sizes: more than 200 firms with 10 or fewer employees, 102 firms with 11–20 employees or 21–50 employees. Further groups include firms with more than 50 employees (Figure 1.3). Figure 1.4 demonstrates the size of firms by the number of customers. Figure 1.5 shows that 297 female and 213 male employees took part in the survey.

Main survey findings

Table 1.1 demonstrates the main assumptions with respect to possible factors that can revolutionise the workplace of auditors and accountants. There is an expectation that, during 2025–2035, accountants and auditors will face even greater pressure for the digitalisation, automation and standardisation of services, as well as pressure for sustainable development. It is likely that there will be an increasing drift between industries, tougher competition for customers and the need to change the pricing of services. Industry players perceive that most new employees need to be equipped with IT knowledge and a high degree of flexibility with respect to continuous learning, retraining and obtaining new skills. The total responses show that there is a high degree of convergence with respect to the influence of digitalisation,

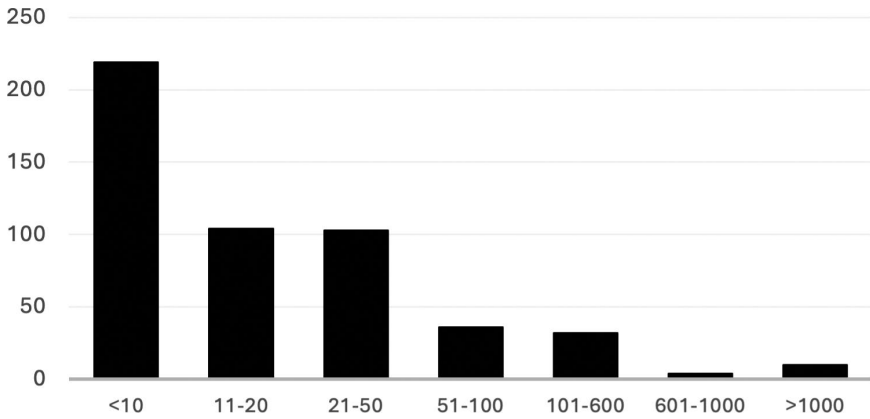


Figure 1.3 Size of the firm, by employees ($n = 510$).

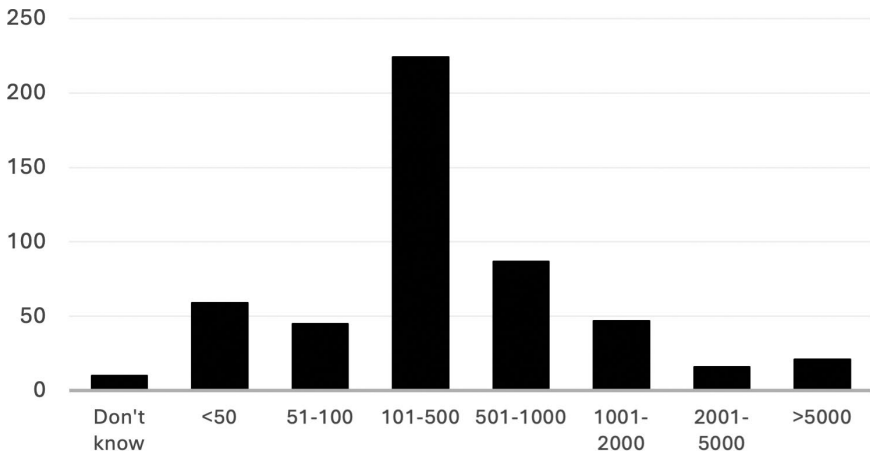


Figure 1.4 Size of the firm, by customers ($n = 510$).

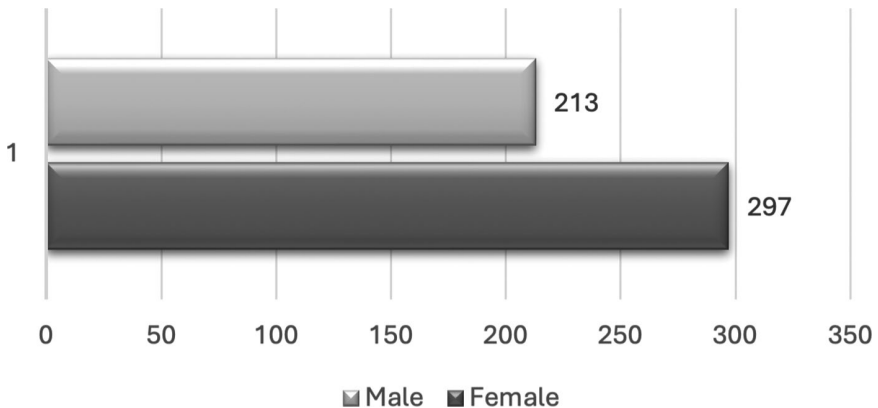


Figure 1.5 Gender distribution of 510 respondents.

Table 1.1 Main assumptions with high convergence of responses with respect to factors that can revolutionise the workplace of auditors and accountants

<i>Assumptions (N = ca. 500)</i>	
<i>Factor</i>	<i>The level of convergence between respondents</i>
<i>Key factors that will revolutionise your workplace during the next ten years (% agree)</i>	
Increased digitalisation regarding new working methods, tasks and solutions	92.55%
Introduction of new technology, e.g., a greater degree of automation and learning machines	88.43%
Need for recruitment of employees with IT knowledge and willingness to change	87.25%
Increased opportunities for communication and accessibility	85.10%
Increased standardisation/coordination of reporting to authorities	84.71%
Need to change the pricing of services	81.37%
Increased industry drift, e.g., between banking, enterprise resource planning and accounting	78.24%
Tougher competition for customers, e.g., more need for advising, differentiation and an increased value proposition	76.27%
Increased need for sustainable development, e.g., meeting current needs without destroying opportunities for future generations	74.31%

automation and robotisation in auditing and accounting. According to the majority of respondents, tougher competition is expected among firms for customers, due to the emergence of a new operational environment, in which most firms and their services are likely to be fully digitalised. As a result, only those firms which can offer an increased value proposition to customers will grow and thrive.

At the same time, much variation in responses and less convergence can be observed for such factors as increased supervision and control from the authorities in Norway and the EU, data policies and the implications of climate change (Table 1.2). The lowest degree of agreement was established with respect to the increasing power of large global digital platforms, e.g., Google and Amazon, which are increasingly expected to enter other markets and offer (or even take over) local services in financial functions, accounting and auditing. Therefore, these factors were treated as factors of uncertainty and will form the basis of three scenarios presented later.

Table 1.3 summarises the factors that represent significant opportunities and are likely to become a competitive advantage for firms. These were deemed as high important and were supported by a high degree of convergence. They are

Table 1.2 Main assumptions with low convergence of responses regarding factors that can revolutionise the workplace of auditors and accountants

<i>Factor</i>	<i>The level of convergence between respondents</i>
<i>Key factors that will revolutionise your workplace during the next ten years (% agree)</i>	
Increased supervision and control from the authorities in Norway and the EU	53.92%
<i>Factors that represent big opportunities for becoming a competitive advantage (% agree)</i>	
Big data, e.g., quantities of data that are too large and too diverse to analyse with traditional analysis tools	54.71%
Regulatory changes, e.g., General Data Protection Regulation/privacy	54.71%
Climate change, e.g. increased demand for climate-related/sustainability-related accounting services	48.82%
Reduced demand for standard services	43.92%
Increased power from large global digital platforms, e.g., Google, which are increasingly expected to enter other markets and offer (or even take over) local services in financial functions, accounting and auditing	35.1%

as follows: digitalisation, i.e., the transition from analogue, mechanical and paper-based solutions, processes and systems to electronic and digital solutions; the industry's ability to adapt; robotisation and automation, i.e., using software to perform tasks previously performed by human employees; and the standardisation and unification of requirements, for instance due to reporting to authorities or other reasons.

Table 1.4 summarises factors with low convergence that represent significant risks for the accounting and auditing industry. Reduced demand for standard services is seen as a possible risk factor. Similarly, Big Data, the toughening of national regulations and the impact of climate change were also perceived as risk factors, although by the minority of firms, while more than half of the surveyed firms provided highly diverging responses to these questions. This indicates that all the factors listed in Table 1.4 should be viewed as carrying a high degree of uncertainty. Thus, most of these could possibly lead to disruptive changes in the accounting and auditing profession in the future.

Validation of results

In October 2023, a focus-group meeting was organised, in which a group of 12 experts was brought together in order to, first, examine and validate the results of a survey-based scenario building and survey-based assumptions and uncertainty factors (Tables 1.1–1.4). Second, the purpose was to present three scenarios and

Table 1.3 Factors that represent big opportunities to become a competitive advantage (% agree)

Digitalisation, i.e. the transition from analogue, mechanical and paper-based solutions, processes and systems to electronic and digital solutions	88.43%
The industry's ability to adapt	87.45%
Robotisation and automation, i.e. using software to perform tasks previously performed by humans	74.9%
Standardisation and unification of requirements, e.g., due to reporting to authorities	71.76%

Table 1.4 Factors with low convergence that represent serious risks for the accounting and auditing industry (% agree)

The industry's ability to adapt	52.35%
Digitalisation, i.e. the transition from analogue, mechanical and paper-based solutions, processes and systems to electronic and digital solutions	48.43%
Robotisation and automation, i.e. using software to perform tasks previously performed by humans	45.69%
Reduced demand for standard services	43.33%
Increased power from large global digital platforms, e.g., Google, which are increasingly expected to enter other markets and offer (or even take over) local services in financial functions, accounting and auditing	44.31%
Standardisation, e.g., due to reporting to authorities	36.86%
Big data, e.g., quantities of data that are too large and too diverse to analyse with traditional analysis tools	36.08%
Regulatory changes, e.g., tightening of national and global regulations	30.98%
Climate change, e.g., increased demand for climate-related/sustainability-related accounting services	22.75%

exchange feedback and views with the invited experts, in order to strengthen the plausibility of scenarios and improve their coherence. The list of experts included several representatives from accounting firms, as well as one representing a public sector accounting practice, several representatives from professional associations in Norway, mostly from accounting and auditing associations, and several representatives from academia.

The interaction with the experts was organised as follows. First, two weeks before the workshop, all experts were asked to send the scenario team five to seven

major uncertainties (negative developments) and five to seven opportunities (positive developments) as regards the future development of the accounting and auditing profession. They were asked to complete this task without prior knowledge of the three scenarios.

Second, after sending their list of uncertainties and opportunities, all the experts received three scenarios about the future of the accounting and auditing profession. Each scenario incorporated a short abstract, followed by key selected assumptions and uncertainties. Third, when the experts met during the workshop, they expressed their views regarding whether they agreed or disagreed with the list of selected assumptions and uncertainties in each scenario.

To achieve a high level of intellectual participation, the scenario-building exercise was conducted in an interactive game format. The experts were involved in the following scenario-building exercise. In Step 1, experts were divided into three groups. Each group had to work with one of the scenarios and then present the case for it. The discussion lasted two hours. In Step 2, each group presented its scenario in turn, followed by comments from the other groups. Each team needed to support their arguments; other teams needed to critically question the presented arguments. One hour was allocated for each team to present their arguments and receive feedback from other teams. In Step 3, the authors of the scenarios presented main highlights received from the group work and indicated areas in the scenarios that could be modified and improved.

It should be noted that this work has not addressed wildcards. However, the inspiration for wildcards came from master students with a specialisation in management control and accounting and auditing.¹ During the autumn of 2024, students were engaged in group work to develop scenarios for the accounting and auditing industries by 2035, and some of their wildcards were further developed in this chapter.

Scenarios: the future of accounting and auditing profession

In this section, three scenarios for global AASMPs' development by 2035 are presented. Table 1.5 introduces the major uncertainty factors shaping each of the scenarios. These factors are the driving forces behind each scenario, meaning that the extent of influence of each particular factor can be defining for how scenarios are formed and evolve.

Scenario 1: "Climauditors" – accountants/auditors are at the forefront of climate oversight

In this scenario, climate change has surged as the existential threat that governments and organisations can no longer ignore. The role of accounting and auditing professionals has changed the focus from crunching financial numbers to essentially focusing on sustainability reporting and auditing. Accounting and auditing professionals serve as the climate watchdogs of corporate Norway. The state, recognising this vital role, has empowered accountants and auditors by giving them a

Table 1.5 Major uncertainty factors across three scenarios

<i>Major uncertainty factor</i>	<i>Scenario 1: “Climauditors” – accountants and auditors at the forefront of climate oversight</i>	<i>Scenario 2: “Digauditors” – the rise of strategic leadership in accounting and auditing</i>	<i>Scenario 3: “Extinction of SMEs in accounting and auditing” – Big Tech in the driving seat</i>
Impact of climate change	Very high	High	Low
Standardisation of services	High	Medium	Very high
Degree of regulations, regulatory change and supervisory mission of authorities (in Norway, the EU)	Very high	Medium	Low
Degree of digitalisation (big data, large actors, robotisation, automation)	Medium	Very high	High but monopolised
Firm adaptation capability	High	Medium	Declining

significant voice in shaping and enforcing regulatory measures. Even national and international accounting regulatory authorities have converged their principles of traditional financial reporting towards sustainability reporting. One specific evolution within this sector is the emergence of both “The Green Accountant” and “The Green Auditor”. These are professionals within accounting and auditing companies that are making themselves specialists, based on their adherence to stringent environmental regulations. For large firms, it is becoming essential to hire green accountants and auditors. These are specialists who use digital technology to lower the cost of gathering and analysing sustainability-related information (Figure 1.6).

There is a general consensus that, in this scenario, the differences between auditing and accounting firms will be significant. Finding the right balance between people and technologies is tricky but critical. The growing state regulatory power over the years has triggered a large-scale rise in the demand for quality accounting and auditing services. Small- and medium-sized firms have found their footing in this rapidly expanding landscape, particularly in sustainability reporting and helping companies adapt to environmental regulations.

In response, a wave of start-ups introduces regulation-based digital technology solutions, aiming to automate the complex process of sustainability reporting, thus filling a crucial market gap. Educational institutions and professional organisations have to significantly restructure their training models and independent verification. Smart use of big data is essential. Accountants and auditors benefit from an advanced use of analytical information that can help them solve complex accounting and auditing tasks in sustainability reporting. Various AI technologies help provide basic services at a low-cost, saving resources and time to focus on strategic climate-related tasks. This enhances communication opportunities between auditors/accountants and customers and allows the effective provision of customer feedback solutions. One also observes enhanced cooperation between different branches: customers, auditors,



Figure 1.6 Artificial intelligence (AI)–generated future under Scenario 1.

accountants, banks and regulatory bodies. Auditors and accountants connect their data with business data in real time, in order to improve operational and strategic decisions and solutions. This cooperation helps solve complex issues but also add more stress among auditors and accountants working in small- and medium-sized companies, as they need to interact with many more stakeholders than before.

Scenario 2: “Digauditors” – the rise of strategic leadership in accounting and auditing

The impact of climate change is significant but not decisive, as governments and organisations have found ways to adapt to and mitigate climate change. Accounting and auditing professionals have continued to enhance their skills, based on gradual advances in digitalisation, big data analytics and automation. However, technology remains a collaborator, not a competitor, meaning that new digital technologies are greatly supporting the work of the accounting and auditing profession, not threatening it. This complementary relationship has manifested itself in the synergy of

human expertise with machine efficiency to provide a holistic service package. Accounting and auditing companies innovate and also attract a high number of talents, making the industry highly competitive. Both small and large firms have found their strategic niches and compete over a talented workforce (Figure 1.7).

The accounting and auditing professions in Norway have gradually pivoted towards a long-term, strategic approach. This has been fuelled by advancements in data analytics, also referred to as “Data War”, as companies increasingly rely on big data to inform long-term decision-making. Data wars have also helped promote more advanced service provision in the industry. The accounting and auditing profession has gained more prestige than ever – increasing recruitment to business schools’ programmes in accounting and auditing. Being an accounting and auditing professional implies increasingly that you are not just a number-cruncher but a visionary leader, capable of steering a company through complexities that go well beyond the financial spreadsheets. Over time, more and more accounting and auditing leaders have been seen to take high-level positions and become members of the parliament and the government, as well as of the boards of large companies.



Figure 1.7 AI-generated future under Scenario 2.

The industry has become an important source of data for the government. It has more resources and many more capabilities to better advise the government about some major macro-economic indicators and trends in the economy. Continuous accounting is widespread. It helps balance the workload throughout an accounting period, using technologies to automate many of the daily tasks. In this way, the accounting process is transforming from a sporadic activity to continuously ongoing and transparent analyses of a business' finances and performance in real time. Continuous accounting helps to reduce stress levels, as many of the previously existing reporting deadlines no longer exist. As one of the focus-group experts noted, "Digitalisation is a real deal here. It helps move the focus from deadlines to real matters in accounting".

Since digitalisation, AI and other new technologies are automating many operations, there is a strong belief that managers will have more time to carry out more analytical work and strategic accounting. As a result, this quality work also reduces stress levels among employees and improves contacts and communication with industry customers. Industry specialisation is likely to remain high in this scenario and can even grow further. Complexity leads to more specialisation; universal accounting and auditing are almost impossible.

More work and cooperation with customers requires soft skills. Basic education will be multidisciplinary, with a strong focus on soft skills. Respective reforms in higher education will be required. The following education areas will be prioritised: short AI courses; solution-oriented education; the provision of interdisciplinary knowledge and education; effective use of data; more courses and time dedicated to education in strategic leadership.

Scenario 3: "Extinction of SMEs in accounting and auditing" – Big Tech in the driving seat

Because governments have failed to efficiently regulate Big Tech corporations, they are steering us into a reality where they hold significant power and influence over societal structures. In this scenario climate change has been largely solved.

Big Tech corporations have co-opted the state to enforce their strategies and frameworks for accounting and auditing. In the scenario, AI comes as one of the technical instruments of big corporations that facilitates their penetration into various social realms. Small- and medium-sized firms have found it increasingly challenging to compete with the technological prowess and extensive reach of these global giants. The creative capabilities of the accounting and auditing profession have stayed with Big Tech, which monopolised the production of "creativity and imagination" within the accounting and auditing profession.

Given the high degree of automation and robotisation, Big Tech has limited the space for small- and medium enterprises (SMEs) and start-ups in the accounting and auditing sectors (Figure 1.8). As a survival tactic, some SMEs start to focus on decentralised finance solutions, specialising in blockchain-based accounting and auditing services. While this niche allows them some breathing space, it is the Big Tech companies that set the pace and define the playing field. Big Tech corporations practise the sale of franchises to local firms which distribute licensed automated products/solutions to their clients, similar to the business model of Microsoft and



Figure 1.8 AI-generated future under Scenario 3.

its Windows software in the 2000s. Those SMEs that do survive find that their role has significantly shifted from being service providers to becoming labour farms for bigger firms, providing specialised, high-skilled labour capable of navigating the complexities of Big Tech's automated systems.

This scenario gives birth to more bigger companies, while leaving only a few small companies operational, which continue to exist because they have found highly specialised niches. Data becomes even more important than before. Because banks possess much data, they appear to be an important player in the accounting industry and become more powerful than before. In auditing, their power is limited.

Wildcards

“Conscious Robots”

The gloomy scenario projected in the *Terminator 2* movie, where conscious Skynet machines take control over humanity, will find its relevance in the Conscious Robots taking over the accounting and auditing firms and automating all the professional functions. AI tools, blended with advanced quantum technologies, make it possible to transfer the accounting and auditing functionality to Conscious Robots. However, a rebellious group of accountants and auditors prove that robots are not error-free and lack flexibility, giving hope of the return of human professionals to the management and strategic oversight of accounting and auditing firms.

“Discredited profession”

Depending on earnings from selling services in the market, auditing and accounting firms were unable to adequately respond to emerging societal issues and trends,

such as the need to fight increased economic crimes and improved services to battle climate change and strengthened sustainability. Society has faced an accelerating number of accounting and auditing scandals, resulting in the accounting and auditing profession losing much of society's trust. As a result, the central government has used its power and accelerating digital technology to take over private firms and centralise both accounting and auditing services in the hands of the public sector.

“Cryptocurrency is the world currency”

Traditional fiat currencies have been replaced by cryptocurrencies as the medium of exchange worldwide. The global financial system now operates entirely on decentralised blockchain platforms, eliminating the need for central banks and other traditional financial institutions. This transformation has significantly impacted the accounting and auditing industries, and professionals find themselves in a new reality where all transactions are transparent, immutable and recorded in real time on public ledgers. Many of the traditional routine functions in the sector have been automated, pressuring the industry to adapt in terms of new skills and capabilities that are necessary to remain relevant.

Note

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Part II

Impact of digitalisation on accounting and auditing SMPs



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2 Digitalisation and its impact on small and medium-sized accounting and auditing practices

Insights from public and private sectors

Tatenda Mugwira, Tamara Volodina and Zahid Ali

Introduction

The professional field of accounting and auditing is vast and highly diverse. Despite the fact that the majority of members in the profession could be classified as “small” (Ramirez et al., 2015), the research on small and medium-sized accounting and auditing practices (SMPs) did not take off until recently, as researchers were mostly focusing on the elite Big Firms. Although the emerging empirical studies have identified various challenges (e.g., Berry et al., 2006; Sarens et al., 2015; Blackburn et al., 2018; Malo et al., 2020; Otia & Bracci, 2022; Ali, 2023), the potential implications of digitalisation still need to be established.

Researchers have well reflected upon the digital disruption and consequences for the accounting and auditing profession (Moll & Yigitbasioglu, 2019; Yigitbasioglu et al., 2023). The bulk of the literature has focused on Big Firms, while thoughts and discussions on the implications of digitalisation for SMPs remain in their infancy. Thinking about the potential implications for SMPs is critical because these practices not only hold a considerable proportion of the accounting and auditing industry and employ the majority of practising professionals, but they also serve one of the primary segments of the economy – small and medium-sized enterprises (SMEs) – as well as various public sector institutions. To ensure the survival of the accounting and auditing profession and especially the SMPs, it is timely to bring insights regarding digitalisation and its potential implications for this understudied segment of the professional field. The lack of attention on the small practitioner segment from scholars may leave these practices at a risk of losing their competitiveness, which could bring unwanted consequences for both private and public sector entities.

Given these circumstances, a number of scholars have echoed the sentiment that little research has been done on SMPs (Ramirez et al., 2015; Durocher et al., 2016; Loscher & Kaiser, 2020; Ali & Mustafa, 2023; Ali, 2023) and on accounting and auditing education. We can see recently emerging reviews addressing the role of accounting functions (Kapiyangoda & Gooneratne, 2021), their usefulness (Pelz, 2019), execution (Sandgren et al., 2023) and SMPs as external service providers (Ali &

Mustafa, 2023) for SMEs. Therefore, this review chapter follows an agenda that is very concerned about the possible implications of digitalisation and aims to answer the following research question:

How does digitalisation impact accounting and auditing SMPs in the public and private sectors, and what are the implications for accounting and auditing education?

To answer this research question, we have systematically analysed 81 peer-reviewed articles and revealed that SMPs are still facing challenges, especially in adopting advanced technological innovations. We further offer interesting insights into the obstacles SMPs face in technological adoption, as well as recommendations for educational institutions to prepare accounting and auditing professionals with the necessary technological skills. The following section provides an overview of SMPs, then we explain our methodology, followed by the findings and conclusions.

Overview of SMPs

The professional field of accounting and auditing is dominated by Big Firms because of their presence across the national and international boundaries and their serving of multinational corporations. Similarly, standing behind the Big Four are Mid-Tier firms, which also have a significant presence in the professional field. Apart from these firms, a substantial space at the lower end of the professional field is constituted of SMPs, which employ the majority of practising professionals and serve one of the most significant segments of the economy (Malo et al., 2020). The term “SMPs”, however, is not frequently used in both private and public sector accounting and auditing literature. This lack of a closer inspection of SMPs has been well raised by Ramirez et al. (2015), who referred to the segment as a “marginalized silent continent” in the accounting and auditing profession. SMPs primarily serve small businesses, which indicates their significance, as most small businesses are managed by individuals with less acumen and knowledge regarding management (Watson et al., 2000). This is the reason why most small businesses rely on external service providers for numerous services, including accounting, auditing and taxation. Research suggests that, among other external service providers, accountants are the ones who are most frequently approached by small businesses (Gooderham et al., 2004). Multiple scholars have not only acknowledged the critical role of SMPs but also called upon accountants to serve the small business sector with its emerging needs (Berry et al., 2006; Chikweche & Bressan, 2021) and to expand their service portfolio (Carnegie et al., 2022; Jackson et al., 2023). Therefore, we can see that, despite the implicitly accepted notion of SMPs as small business advisors, there remains a lack of concrete agreement among scholars on the role of SMPs as advisors for small businesses (Ali & Mustafa, 2023). Similarly, the public sector accounting and auditing literature tells us that the digitalisation of SMPs in the public sector requires a change in culture and people, to adopt advanced technologies (Otia & Bracci, 2022). Hence, a holistic approach is required, to take a

closer look at the digitalisation of SMPs in the public sector (Agostino et al., 2022). Studies indicating the lack of research on the small practitioner segment in private and public sector literature suggest that we still need to initiate discussions and investigations on pressing issues facing SMPs, especially rapidly evolving market conditions such as digitalisation and its implications.

Taking stock of the literature on digitalisation and drawing out its implications for the accounting and auditing profession is critical because technological advancements are considered among the fundamental factors influencing the profession (Petani et al., 2021). Although we can see voices raised by accounting and auditing scholars on digital disruption (Moll & Yigitbasioglu, 2019; Ma et al., 2021), less emphasis has been paid to showing the implications for SMPs in both private and public sector accounting and auditing. Compared to other actors in the professional field, SMPs seem more vulnerable to digital disruption. This is because these practices have a reputation as basic accounting and auditing service providers, and digital advancements such as cloud accounting may enable customers to conduct these tasks themselves. Although it has been stated that digitalisation may equip SMPs to deliver value-added services (Ma et al., 2021), the subsequent concerns are regarding the adoption of these digital tools and how SMPs perceive and react to emerging digital trends in the industry. Notwithstanding the expected benefits of digitalisation, worldwide survey reports (e.g., International Federation of Accountants [IFAC], 2016, 2018) indicate the reluctance of SMPs to adopt digital tools. The results of these reports emphasise how crucial it is to explore and understand the factors that could help practices to adopt the digital tools. Specifically, in the context of SMPs, practices are more likely to gain benefits from adopting digital tools, as the research suggests that technological adoption may mitigate the gap between large firms and small firms when it comes to developing skills related to information technology (Riggins & Dewan, 2005).

Digitalisation may influence not only the behaviour of accounting and auditing information users but also the firms, accountants and auditors in terms of service provision and carrying out their jobs (Yigitbasioglu et al., 2023; Otia & Bracci, 2022). Like other actors in the professional field, SMPs are also believed to be influenced by changing market conditions (Alam & Nandan, 2010). If this is true, technological advancements and digitalisation, as one of the fundamental factors influencing this profession, could also have many implications for these practices. It is timely to take a step apart from the elite actors in the professional field and initiate discussions on the implications of digitalisation for SMPs. This is much needed today because, as well as the role of SMPs being crucial for private and public entities, firms across the professional field are equally exposed to digital disruption. This review chapter aims to take up one of the less discussed issues facing SMPs in both the private and public sectors and urges accounting and auditing scholars to take a closer look at this understudied segment of the profession. Dividing the profession into categories related to size and drawing out the implications of digitalisation may offer an opportunity to understand the profession holistically (Ramirez et al., 2015). The discussions in this chapter could elicit an interest among future scholars to examine the impact of digitalisation on practices

operating at the lower end of the professional field and extend the literature to understand the whole profession.

Methodology

This chapter proceeded by adopting three fundamental stages crucial for conducting a literature review. These stages are: first, identifying all pertinent literature pertaining to a specific research question or area of interest; second, evaluating this literature; and, finally, interpreting it (Kitchenham, 2004). To fulfil these fundamental stages, the chapter followed the following steps:

- 1 First, the chapter commenced the literature search by typing a keyword search on Scopus, entering [(“account*” AND “audit*”) AND (“digi*” OR “techno*”) AND NOT “Big 4*”]. The first search yielded 2,850 documents. This search was limited to articles (1,656), English only (1,569) and business management accounting (537).
- 2 The chapter then reviewed these articles by assigning two authors to read the title and abstract and scan through the whole article to have a general appreciation of what it is about. During this process, the two authors coded articles into PRI (related to private audits and accounting), PUB (related to public audits and accounting), EDU (related to accounting and auditing education), PRI, PUB (related to both private and public) and N/A (for articles that did not belong to any of the above-mentioned categories).
- 3 The chapter then proceeded to review the reference lists of the selected articles, aiming to identify any potentially overlooked articles from the initial step, possibly resulting from the choice of keywords in the article.
- 4 Steps 2 and 3, respectively, were repeated for the articles found from step three.
- 5 The final number of articles is shown in Table 2.1.

Of these articles, 19 (23%) were published between 2010 and 2015, 21 (26%) between 2016 and 2020, and 41 (51%) between 2021 and 2024. From this descriptive data, we can see that there is a growing interest in the topic, with a significant increase in publications between 2021 and 2024. The majority, 49 (60%), are published in journals broadly categorised as accounting and auditing journals, 12 (15%) in information management journals and 6 (9%) in manpower and education journals. This shows that research is concentrated within the core disciplines,

Table 2.1 Number of articles used in the study

	<i>Number</i>
SMPs in private audits and accounting	40
SMPs in public audits and accounting	28
Accounting and auditing education	13
Total	81

and interdisciplinary insights exist with the presence of articles from information management, manpower and education journals. The interdisciplinary approach provides a comprehensive understanding of the topic and would benefit from attracting more scholars from other disciplines such as entrepreneurship. Regarding journal rankings using the Chartered Association of Business Schools (ABS) list, 28 (34%) are in ABS 2-level journals, 21 (26%) in ABS 3-level journals, 12 (15%) in ABS 1-level journals and 20 (25%) in non-ABS ranked journals. The distribution of articles highlights potential areas of improvement in terms of quality of the articles.

Digitalisation of SMPs in the public sector

Digitalisation of SMPs in public sector accounting

The discourse present in public sector accounting literature sets expectations about the utilisation of various digital tools (such as cloud computing, blockchain technology, big data, artificial intelligence [AI], machine learning, and internet of things) for efficient accounting data processing, automation, increased accuracy and transparency in reporting and improved decision-making (Shapovalova et al., 2023). Those expectations are based on the possibility of enhancing SMPs' capacity to meet social demands in the public sector more efficiently and effectively while improving accountability performance (Ahmad et al., 2020; Aswar et al., 2022; Irwansyah et al., 2022). Moreover, with the use of digital tools, SMPs might activate a broader spectrum of stakeholders and involve them in providing accounts on various new relationships supporting the horizontal forms of accountability (Grossi & Argento, 2022; Agostino et al., 2021). However, current research on the digitalisation of accounting SMPs often maintains a futuristic tone, emphasising only the potential benefits. It is crucial to shift the focus from theoretical expectations to actual investigations of digitalisation and accounting SMPs in the public sector, to address the real threats and opportunities in the evolving public sector landscape (Aquino et al., 2022).

Digitalisation alone does not automatically result in changes in the government-to-citizen relationship and accountability practices in the public sector. It relies heavily on existing social and political structures and requires synergy with institutional reforms (Korol et al., 2022; Pina et al., 2010). For instance, while blockchain technology presents opportunities for increased trust and control in government accounting, challenges, such as a lack of information about its cost-benefit ratio, implementation difficulties and a shortage of use cases demonstrating its application, hinder public sector SMPs from adopting it (Prux et al., 2021). Additionally, there is a need to closely examine individual-level factors, including behavioural, psychological, ethical and contextual elements, due to the effects of digitalisation on accountants within SMPs in the public sector. The perception and operationalisation of new technology by accountants can vary significantly within the same organisation, depending on their role and level of responsibility (Schmitz & Leoni, 2019; Agostino et al., 2022).

Digitalisation of SMPs in public sector auditing

The rapid advancement of digital technologies is profoundly reshaping the landscape of public sector auditing SMPs. Power (2022) highlights an explosion of data-driven metrics, visualisations and dashboards, which are shifting the nature and intensity of organisational control and evaluation. On one hand, digitalisation in the public realm is opening up new capacities to define, track and measure performance by SMPs in public sector auditing (Power, 2022). On the other, it poses threats for the SMPs in public sector auditing to be replaced by a multitude of citizen armchair auditors or online ranking systems, such as TripAdvisor, prioritising transparency as the primary mechanism instead of accountability (Ferry et al., 2022). By transforming digitally, public sector auditing SMPs are able to demonstrate relevance and legitimacy to key stakeholders, avoiding the potential replacement of their profession.

Accelerated by the COVID-19 pandemic, SMPs in the public sector are undergoing rapid changes in work practices, moving towards virtual and hybrid formats rather than being predominantly onsite (Ferry et al., 2022). They have also adopted computer-assisted auditing tools and techniques to improve and accelerate daily audit work, influenced by peer practices or enforced by the accounting firm itself (Kartikasary et al., 2021; Aquino et al., 2022). However, the use of these simple technologies does not fundamentally change the core aspects of SMPs' audit practices (Aquino et al., 2022). There are many directions for the progression of SMPs in utilising more advanced digital technologies and further transformation. For instance, Wang et al. (2020) introduced the Continuous Compliance Awareness Framework empowered by AI, designed to autonomously and promptly audit purchasing activities. Yaqoub et al. (2023) propose that public sector SMPs could rely on software programs to determine auditing sample sizes based on specific characteristics due to their recognised benefits in enhancing sample size accuracy in private audits. SMPs in public sector auditing could also leverage digital and big data technologies to facilitate the achievement of sustainable development goals (Corderly et al., 2023), increase cybersecurity (Kurniawan & Mulyawan, 2023) or minimise the chances of fraud by providing efficient and timely preventive measures (Yaqoub et al., 2023).

The use of these more advanced technologies has the potential to move public sector auditing from a compliance approach to a more emancipatory role, supporting societal, environmental and economic changes (Otia & Bracci, 2022). At the same time, making audit SMPs over-reliant on technology to collect and analyse large amounts of data results in less autonomy and reflectiveness about the audit task, while simultaneously empowering the Information and Communications Technology teams within the SMPs (Aquino et al., 2022). Facing the lack of advancement in the auditee's IT environment, an absence of the right strategy or resources and challenges regarding new skill requirements and audit evidence gathering, the SMPs in public sector auditing are advancing slowly in applying technologies. To keep up with the speed of digital change, SMPs have begun taking steps to facilitate the integration of technologies through internal innovation labs and participation in international working groups (Otia & Bracci, 2022).

Digitalisation of SMPs in the private sector

Digitalisation of SMPs in private sector accounting

Most SMPs in private sector accounting have benefited from adopting cloud-based accounting information systems. Cloud accounting, which can also be referred to as online accounting, is the provision of accounting services on cloud-enabled computer systems through services such as e-ledgers (Al-Okaily et al., 2023). Cloud accounting enables SMPs to access their clients' data from anywhere in real time, which facilitates remote working (Dimitriu & Matei, 2014; Ma et al., 2021). Working remotely and accessing information in real time positively contributes to better accounting reports and communication with their clients (Asatiani et al., 2019; Dimitriu & Matei, 2014; Ma et al., 2021). In addition, leveraging cloud accounting allows SMPs to utilise advanced accounting software without incurring substantial costs, as the online services can be rented on a flexible subscription basis (Dimitriu & Matei, 2014; Ma et al., 2021). Furthermore, cloud accounting enables SMPs to remain abreast of technological advancements, by providing them with the opportunity to update to newer versions of accounting software (Dimitriu & Matei, 2014; Ma et al., 2021). Additionally, the use of cloud accounting has improved transparency in financial reporting, enhancing small organisations' accountability to statutory authorities (Ma et al., 2021; Shaffer et al., 2020). This has allowed SMPs to not only focus on mundane routine tax-related tasks but also venture into tax advisory roles (Ma et al., 2021; Shaffer et al., 2020).

When implementing cloud accounting, SMPs are facing some challenges which include cloud-based cybersecurity risks (Dimitriu & Matei, 2014). Prior research concurs that security-related risks are amongst the most important risks which influence SMPs to stay away from cloud-based information systems (Ali et al., 2015). Therefore, for successful adoption of cloud-based accounting systems, there is a need to offer security against cloud-based cyberattacks and unauthorised access to information. Ensuring the safety of cloud-based accounting platforms will enhance trustworthiness among users. Other risks also include risks of service interruptions due to unavailability (Ma et al., 2021). Moreover, there is a need to make use of resources such as training activities and guidelines during the installation process.

In addition to cloud-based accounting, SMPs have been adopting Optical Character Recognition (OCR) technologies, in a bid to increase efficiency in capturing data from paper documents (Shaffer et al., 2020). OCR technology enables users to convert the client's paper-based data to digital formats with a high degree of accuracy, making it easier to store and work with it for further analyses (Shaffer et al., 2020). Once information has been converted using OCR, it can be utilised in various technological software applications, including cloud-based accounting software. Other technologies being adopted include shared interfaces, which enable the sharing of information with clients (Jemine et al., 2024) and continuous accounting (Appelbaum et al., 2016; Izzo et al., 2022). Adopting these technologies allows SMPs to automate their accounting system, thereby improving error detection capabilities (Cong et al., 2018). This ultimately improves the quality of

the financial information produced (Cong et al., 2018; Ma et al., 2021). Despite these advantages, SMPs have been slow in adopting these technologies, mainly due to a lack of resources, as their clientele has primarily consisted of small enterprises, which may not provide sufficient returns to justify the high investment in technology (Jemine et al., 2024). In addition, the clientele served by SMPs is so diverse that it is difficult to adopt a technology that can be universally applied to all small to medium enterprises and entrepreneurs, who typically have unique datasets characterised by outliers (Jemine et al., 2024).

Digitalisation of SMPs in private sector auditing

Compared to the Big Four audit firms, the effect of digitalisation on SMPs in auditing has been minimal, primarily due to the characteristics of their client base and resource limitations (Buchheit et al., 2020). Nevertheless, in recent years, SMPs have made great strides towards the adoption of technology in private sector audits, with turbulent times such as the COVID-19 pandemic accelerating this transition (Altiero et al., 2023). The pandemic resulted in a shift from in-person audits to remote auditing (Lorentzon et al., 2023). Digital technologies played an important role in enabling remote auditing, as they facilitated auditors collecting audit evidence while not physically present at the client's premises (Ahn & Wickramasinghe, 2021; Rakipi et al., 2021). Audit firms relied on technologies such as video and teleconferencing platforms to perform audit procedures and collect audit evidence (Albitar et al., 2020). These platforms enabled auditors to conduct interviews with their clients and facilitate live and real-time sharing of documents (Tysiac, 2020). Additionally, they promoted communication within the audit team, enhancing collaboration (Appelbaum et al., 2020). This enhanced efficiency in audit work and improved work–life balance (Lorentzon et al., 2023). Therefore, the pandemic accelerated the adoption of simple technologies in SMPs, as they sought to capitalise on these benefits (Altiero et al., 2023).

Moreover, SMPs have positive perceptions regarding the use of technology in the audit process (Buchheit et al., 2020), as they aim to narrow the disparity between themselves and the Big Four audit firms (Altiero et al., 2023; Lowe et al., 2018) and gain the competitive advantage enjoyed by the Big Four. Technology has enabled the Big Four to realise efficiency and effectiveness in their work (Austin et al., 2021), enhancing audit quality (Barr-Pulliam et al., 2022) and improving fraud detection (Tang & Karim, 2019) and insights into clients' data. Therefore, by embracing technological innovations, SMPs can harness these benefits, enhance their competitiveness and thrive to penetrate markets previously dominated by the Big Four audit firms.

Despite the positive perceptions and steps towards narrowing the gap between themselves and the Big Four audit firms (Altiero et al., 2023; Lowe et al., 2018), SMPs are still facing challenges when implementing technology in the audit process. These challenges include lack of guidance on how to use the tools (Buchheit et al., 2020). Furthermore, the characteristics of the clientele served by SMPs provide another challenge to adopting technology. The transactions conducted by

their clients are typically manually based, resulting in auditors receiving the information in a format that is difficult to use technologically (Altiero et al., 2023). Moreover, the clientele served by SMPs is not sophisticated enough (Ahmi & Kent, 2013) and is highly heterogeneous, making it complicated to use technology (Jemine et al., 2024). Other challenges include the technology skill level in SMPs, which prior research suggests is self-assessed to be of a lower level in smaller firms than in the Big Four audit firms (Feliciano & Quick, 2022). Furthermore, there are cybersecurity concerns regarding the client information shared on portals, as well as the integrity of the source of data, since most clients have weak internal controls (Altiero et al., 2023).

Implications for digitalisation for accounting and auditing education

To make use of the new tools available to auditors, today's entry-level accountants and auditors are expected to possess a number of professional skills. In addition to general knowledge and other technical skills (Bressler & Pence, 2019; Keneley & Jackling, 2011; Plant et al., 2019; Siriwardane et al., 2014; Wells et al., 2009), they are expected to have excellent problem-solving skills so they can use the information gathered from the technological tools.

The desire of accounting and auditing firms to hire entry-level auditors with technology-related skills is increasing (Fay & Negangard, 2017; Huerta & Jensen, 2017). During the *Journal of Information Science* Conference in 2017, panellists agreed that accounting and auditing firms will, in the future, compete with other prospective employers for graduates with data analytics skills, with one recruiting partner at a Big Four audit firm stressing that they are willing to hire "as many graduates as the colleges are producing" with data analytics skills (Huerta & Jensen, 2017, p. 104). There was also a consensus among the panellists that the skills set expected of accounting and auditing graduates is shifting, and the development of technology-related skills is inevitable in this profession (Huerta & Jensen, 2017).

Currently, technology-related skills are lacking in the accounting and auditing profession (Fay & Negangard, 2017; Pan & Seow, 2016), and, as a consequence of this fact, there have been requests from employers for the accounting and auditing curriculum to include technology-related skills (Ballou et al., 2018; Tan & Laswad, 2018). Additionally, the Association to Advance Collegiate Schools of Business, Accounting Accreditation standard number A5 on accounting education issued in 2018, revised in 2022, emphasised the need for students to have technology and data analytics skills. Therefore, there is a need for business schools to integrate technology-related tools and discussions into their curriculum. To do this, several strategies can be used, such as offering data analytics-related courses, fostering close collaboration with industry partners, to align the curriculum with the needs of the industry and investing in faculty development for them to stay up to date with the changes in the business environment. These initiatives should go beyond theoretical rhetoric and focus on involving practical hands-on experience with these tools. The challenge of implementing such a strategy is that there are several tools out there; hence, it might be difficult for business schools to choose which ones to use in the curriculum. However,

as doing something is better than doing nothing, it might be beneficial for students to learn a few tools. Once they learn a few, it will be easier for them to navigate the galaxy of tools available for use in their careers (Table 2.2).

Conclusion

The systematic literature review conducted in this chapter highlights several key findings regarding the digitalisation of SMPs in both the public and private sectors. By

Table 2.2 Summary of results

	<i>Public</i>	<i>Private</i>
Accounting	Digitalisation of accounting SMPs often maintains a futuristic tone, emphasising only the potential benefits. The possibility of enhancing SMPs' capacity to meet social demands in the public sector more efficiently and effectively. Depends on existing social and political structures and must be synergised with institutional reforms.	SMPs are using cloud-based accounting information systems, enabling remote working and transparency. SMPs are using integrating Optical Character Recognition technologies to capture data from paper documents, which enables other technologies to use the data. SMPs are facing a number of challenges such as cybersecurity risks, a lack of resources and the unique heterogeneous nature of clientele and their data.
Auditing	Digitalisation is reshaping SMPs by enhancing performance tracking and evaluation, while also posing the risk of replacing traditional auditors with citizen auditors and online ranking systems, thus necessitating digital transformation to maintain relevance and legitimacy. Accelerated by the COVID-19 pandemic, public sector SMPs are rapidly shifting to virtual and hybrid work formats and adopting computer-assisted auditing tools, though these changes do not fundamentally alter core audit practice.	Digitalisation in SMPs has been slow, compared to the Big Four audit firms; however, COVID-19 accelerated the adoption of technologies in SMPs, narrowing the gap between the Big Four and SMPs. SMPs are still facing challenges when implementing technology in the audit process, such as lack of guidance on how to use the tools, the characteristics of the clientele served by SMPs, lower self-assessed technology skills level, cybersecurity concerns.
Education	The desire by SMPs to hire people with technological skills is high, but there is generally a shortage of entry-level professionals with such skills. There are calls from employers and accreditation institutions, such as Association to Advance Collegiate Schools of Business, to include technology-related skills in the accounting and auditing curriculum in education institutions. Several strategies can be used, such as offering data analytics courses and fostering close collaboration with industry partners, to align the curriculum with the needs of the industry and invest in faculty development.	

focusing on SMPs, it provides insights to an often-overlooked area in prior research, which has predominantly focused on elite entities such as the Big Four firms.

Our review reveals a notable gap in the studies of SMPs and digitalisation, particularly within the public sector. This indicates a dual challenge: to understand the lack of digital change within public sector SMPs and tackle the insufficient scholarly attention on this area. The lack of digital transformation in public sector SMPs suggests underlying issues that need to be explored and resolved to facilitate progress and support the SMPs. Our review further highlights that the COVID-19 pandemic has catalysed the recognition and use of basic technological tools among SMPs, in both the public and private sectors, driven by the necessity for remote work and digital solutions. More research is needed to explore the usage of these technologies and their impact on SMPs. Despite this progress, SMPs still encounter significant challenges in adopting more advanced technologies that offer additional benefits from automation and data analytics procedures. Advancement in this area is hindered by several factors. By their nature, SMPs' clients often lack the resources or willingness to invest in advanced digital solutions, and SMPs themselves often have limited resources. The literature points out that the obstacles SMPs face in technological adoption are complex and require closer investigation, taking into account the specifics of the SMPs. These include financial constraints, a shortage of technical expertise and resistance to change from both practitioners and clients. Additionally, there is a need to examine behavioural, psychological, ethical and contextual elements, due to the effects of digitalisation on accountants and auditors within SMPs. By providing more insights into these areas, scholars can better support SMPs, which play a crucial role for both private and public entities. Understanding not only the obstacles but also the factors that could facilitate the adoption of digital tools and help SMPs navigate digital disruptions is essential. This comprehensive approach can help mitigate the challenges and leverage the benefits of digital transformation for SMPs.

To address these challenges, our study also examined the implications for accounting and auditing education, responding to calls from practitioners. Our findings underscore the necessity for business schools and educational institutions to integrate technology-related tools and discussions into their accounting and auditing curricula. Equipping students with technological skills is crucial for preparing them to navigate the profession's evolving landscape. While SMPs have made efforts to adopt simple digital tools, there remains a significant gap in the uptake of advanced technologies, primarily due to the gap in expertise. Bridging this gap will require dedicated efforts from educational institutions to provide future professionals with the essential technological competencies. This preparation is vital to closing the current technological divide and enhancing the overall capabilities and resilience of SMPs in both public and private sector accounting and auditing. Therefore, we propose that scholars work more closely with practitioners to investigate educational issues and create necessary programmes. This collaboration can address the shortage of qualified specialists in the area, ensuring that future professionals are well prepared to meet the demands of a digitalised accounting and auditing environment.

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3 Dealing with digital transformation

Tensions of professionals working at small- and medium-sized accounting firms

Daniela Argento, Marita Blomkvist and Oliver Henk

Introduction

The literature focusing on the impact of the digital revolution on the accounting and auditing industry has been flourishing in recent decades (e.g., Knudsen, 2020; Kokina & Davenport, 2017; Lehner et al., 2022; Yigitbasioglu et al., 2023; Sonnerfeldt & Jonnergård, 2024). Both accounting and auditing firms and their respective clients are going through change journeys, moving from *digitisation* to *digital transformation* via *digitalisation* (Knudsen, 2020). While *digitisation* is intended as a technical process that involves converting analogue signals into digital ones, creating data for information system processing and computation, *digitalisation* is a broader socio-technical process, involving both organisational and human capital (Eller et al., 2020). The greatest change is *digital transformation*, which goes beyond technology and involves organisational strategy. It entails major organisational changes driven by digital technologies and reconfigurations of the strategy and conduct of business (Knudsen, 2020). Digitalisation has influenced large firms, as well as small professional service firms, including, for example, accounting, auditing, law and tax firms (Cardinali et al., 2023).

Digital transformation not only entails a change in current ways of working, aimed at adopting digital technology. It also demands acceptance and flexible mindsets, that is, a full organisational transformation, with shifts in established ways of thinking and in the deeper structure of organisations (Baptista et al., 2020). Digital transformation “requires an organization-wide change program, which embraces all impact factors from new strategic initiatives to detailed human resource management measures such as personnel selection, incentivization, or specialized training, to be successful” (Gilli et al., 2023, p. 51).

The accounting literature focusing on digitalisation addresses multiple topics, such as network technologies, information disclosure, audit and control, IT use, data, IT valuation, enterprise information system, system reliability and security, research and education, knowledge dissemination, IT strategy and IT assurance, while the preferred research methods used in those studies are archival and literature reviews (Jans et al., 2023).

Digital transformation is changing the way accountants work (Moll & Yigitbasiglu, 2019). This also holds true for small- and medium-sized accounting firms, leading to the question of what services they can or want to offer beyond the traditional mandatory standard accountancy services, such as financial advisory, management consulting and legal services (Døving & Gooderham, 2008; Ali & Mustafa, 2023). The changes at the organisational level influence the professionals that work at these firms and how they interact with their clients (Kokina & Davenport, 2017; Cardinali et al., 2023). Their relations to the employer and clients are in a phase of dynamic development. Clients whose size is small to medium tend to ask for statutory accounting services because they cannot afford an in-house accounting and finance function (Døving & Gooderham, 2008). Small- and medium-sized enterprises (SMEs) lag behind larger firms when it comes to digitalisation. Their resources' constraints might influence their readiness regarding digitalisation (Eller et al., 2020). In turn, accountants have to adapt to the clients' needs, which might not fully match the digitalisation-related strategies of the accounting firm.

Although some research has been conducted (see Ali & Mustafa, 2023), more is needed regarding the professionals working at small- and medium-sized accounting firms. The aim of this book chapter is to explore how professionals working at small- and medium-sized accounting firms deal with digital transformation. It contributes to the accounting and digitalisation literature, by illustrating how accounting professionals reinvent themselves in this era of digital transformations, navigating through the paradoxical tensions that characterise their work at the interface between the strategies of their employer and the needs of their clients.

The remainder of this book chapter is arranged as follows. The next section deals with relevant literature that frames this study. This is followed by a description of the empirical context and an explanation of the method used to conduct the empirical investigation. Thereafter, results are presented, by illustrating four paradoxical tensions related to how accountants navigate digital transformation. Conclusions, limitations and further research avenues close the chapter.

Literature review

The impact of digitalisation on the accounting industry is multifaceted and generates various tensions (Cardinali et al., 2023). It makes the boundaries of accounting more elusive, influences the configuration of power relations in terms of which actors determine how digitalisation is embraced and poses issues in connection with the proliferation of available data and knowledge for decision-making (Knudsen, 2020).

Harnessing the opportunities of emerging technological development is a challenge faced by various organisations (Gilli et al., 2023). Small- and medium-sized accounting firms have different perceptions of the risks associated with digitalisation and enact different strategies to cope with those risks. While some firms act as “defenders”, by maintaining a more cautious approach and sticking to traditional practices, others can be defined as “opportunists”, as they selectively adopt a few technologies to gain short-term benefits. Other firms, instead, integrate technological

solutions more strategically in their operations. These firms can be labelled “advancers”, as they make more strategic use of new technologies, yet without changing the focus of their core business model. Finally, there are firms that fully embrace digitalisation, often leading to more transformative changes in their business operations. These firms can be called “revolutionists” (Henk et al., 2022). Accounting firms may provide additional services due to technological advancement, leading their accountants to take on the role of advisors (Yigitbasioglu et al., 2023).

Digital transformation has consequences for how accountants work and the skills they need for successful accounting (Moll & Yigitbasioglu, 2019; Knudsen, 2020; Kokina & Davenport, 2017; Kokina et al., 2021). The research by Yigitbasioglu et al. (2023) shows that digital transformation has an impact on the work, knowledge and skills of accountants in their role as advisors. Rather than ending the profession, digital advancement can stimulate the reconfiguration of professional work and relationships with clients and other firms (Faulconbridge et al., 2023), in which effective communication skills are important (Kokina & Davenport, 2017). Contrary to what could be thought, technical skills and in-depth expertise in information technologies play a secondary role, while skills to successfully master digital transformation within organisations are collaboration, strategic thinking, leadership, customer orientation and communication skills (Gilli et al., 2023).

The changing demand from statutory standard accountancy services to advisory services leads to diversified reactions by small- and medium-sized accounting firms. While some firms display resistance towards the provision of advisory services, acting like bulls, others distance themselves and act like turtles. Instead, the firms that show adaptation (acting like chameleons) develop advisory services (Ali, 2023). It has been argued that, in order to expand the scope of services provided beyond the statutory standard accountancy services, firms need to possess dynamic capabilities, including heterogeneous human capital, internal routines that facilitate development and innovation, and alliances with complementary service providers (Døving & Gooderham, 2008).

However, the claims made regarding the role of small- and medium-sized accounting firms as business advisors are limited to specific country settings and cannot be fully generalised (Ali & Mustafa, 2023). The individual characteristics of clients matter because a trustful accountant-client relationship enables, but is not a necessary condition for, the purchase of business advice by SMEs from their external accountants (Blackburn et al., 2018). If clients perceive that accountants are competent, credible and possess good communication skills and technical knowledge, then their propensity to ask for advisory services increases (Ali & Mustafa, 2023).

In addition to the interpersonal skills needed to work in the digital world, accountants are exposed to the risks related to the veracity and representativeness of digital data (Knudsen, 2020). As business processes become more data intensive, accountants need to comply with legal and ethical requirements while handling large amounts of data (Yigitbasioglu et al., 2023). Accounting-related decision-making, which relies on digital technologies, poses ethical concerns of objectivity, privacy, transparency, accountability and trustworthiness (Lehner et al., 2022).

The discussion above seems to indicate that accountants working at small- and medium-sized accounting firms might perceive some tensions due to the non-synchronised digitalisation journey of their employer and their clients and the risks associated with digital transformation. Apart from the digitalisation strategy embraced by the accounting firm, clients that are small and medium sized might not be fully ready for digitalisation (Eller et al., 2020). Such a mismatch needs to be met by the professional accountants who nurture the relationship with their clients and may feel “in between”.

In this chapter, tensions are intended to be the competing demands that become evident and inevitable in the digitalised organisational life which accountants must respond to (see Gaim & Wåhlin, 2016; Gaim et al., 2018; Smith & Lewis, 2011). Tensions can appear at both the intra-organisational and inter-organisational levels and in connection with the service offering (Cardinali et al., 2023). They can take various forms and be approached differently by the accountants working at small- and medium-sized firms. Paradoxical tensions entail that competing demands are contradictory yet interdependent and need to be dealt with simultaneously (Gaim & Wåhlin, 2016; Smith et al., 2017) by accountants. Empirical research is needed to deepen our understanding of how accountants navigate the potential tensions stemming from digital transformation.

Empirical context and research method

To achieve the aim of this book chapter, an empirical study was conducted, focusing on accountants working at small- and medium-sized accounting firms in Norway and Sweden. These two neighbouring Scandinavian countries are characterised by cultural similarities but also differences, which makes them relevant to study (Booth, 2014; Fagerström & Lundh, 2009; Holmberg et al., 2016).

In Norway, the accounting sector is strictly regulated, and accountants need formal educational qualifications and professional authorisations to practice. To qualify as an accountant with responsibility for clients, individuals typically require a bachelor's degree in economics and accounting. However, achieving the designation of a state authorised accountant (in Norwegian: Statsautorisert regnskapsfører) is more demanding. Here, one would need a bachelor's or master's degree with a specialisation in accounting or a related field, supplemented by several years of relevant professional experience, and mandatory continuing professional education of 80 hours over three years, which is required by the Financial Supervisory Authority of Norway (in Norwegian: Finanstilsynet) (<https://www.bliregnskapsforer.no/>; <https://www.regnskapnorge.no/faget/karriere/jobb-og-karriere/>). The primary distinction between an accountant and a state authorised accountant lies in the legal authorisation the latter receives, which allows them to handle third-party accounting services under the supervision of the Financial Supervisory Authority. As such, accountants authorised by the state are allowed to handle the accounting of clients and establish their own firms, while accountants without authorisation are allowed to be employed as staff in accounting firms but cannot establish their own firm or take responsibility for client accounts.

Most accountants are members of sector-representative organisations such as Regnskap Norge (Accounting Norway, the largest actor in Norway) and Økonomiforbundet (The Economic Association). There are some notable differences between these two organisations. Økonomiforbundet primarily serves as a trade union that focuses on labour rights and professional support for employees in the accounting industry, while Regnskap Norge is a professional body that focuses on education and quality for state authorised accountants in Norway. In addition to that, these organisations are instrumental in shaping the accounting profession in Norway, as they are part of the Norwegian Accounting Standards Committee (in Norwegian: Bransjestandardutvalget), which develops the standards for good accounting practice (god regnskapsføringsskikk GRFS), in collaboration with other professional bodies.

In Sweden, there are two accounting bodies that entitle accountants to hold “authorised” status, namely, the Institute for the Accountancy Profession (in Swedish: Branschorganisation inom redovisning, revision och rådgivning FAR) and the Swedish Association of Accounting and Payroll Consultants (in Swedish: SRF Konsulterna). The FAR members use the Swedish standard for accounting and payroll services called Reko (<https://www.far.se/>), while the authorised accountants of SRF Konsulterna must follow the Swedish standard of accountancy called Rex (<https://srfkonsult.se/>). There are also accountants working in the profession who do not hold “authorised” status.

Contrary to the Norwegian context, in Sweden, a bachelor’s degree in economics and accounting is not compulsory to qualify for the test to become an authorised accountant. However, there is a need for several years of work experience in an accounting firm, as well as employment, or a combination of economic and accounting education and work experience. An authorised accounting consultant undertakes continuous education on new accounting rules and encourages client safety (<https://www.far.se/>; <https://srfkonsult.se/>).

A qualitative research design was adopted, by conducting 11 interviews with accountants working at medium- to very small-sized firms providing statutory accounting and advisory services in Norway and Sweden (directed sampling). All of the Norwegian interviewees are authorised and members of Økonomiforbundet. The Swedish interviewees are authorised, with the exception of one. The interviews took place from May 2021 to May 2024. They were conducted via Zoom/Teams or face-to-face, depending on the pandemic and geographical distance. The interviews lasted between 43 and 90 minutes, were recorded and transcribed verbatim, to facilitate further analysis. See Table 3.1, which provides an overview of the participants.

The interview guide was developed to cover specific themes, i.e., the meaning of digital transformation and its impact on the role and work of the accountant, the development of new services, relationships with clients, risks and future developments. In addition to the interviews, relevant information was gathered through the authors’ roles. This included their collaborations, established within the frame of the TRANSACT project, with the software provider, PowerOffice and the two representative organisations, Økonomiforbundet and Regnskap

Table 3.1 Overview of the participants in the empirical study

<i>Interviewee</i>	<i>Professional experience (no. of years)</i>	<i>Interviewee's client portfolio (industry of clients)</i>	<i>Firm size (no. of employees)</i>	<i>Firm type (no. of offices)</i>
I1	20	Small- and medium-sized firms (all industries)	396	Limited company (26 offices)
I2	40	All types of firms (all industries)	190	Limited company (11 offices)
I3	30	Small- and medium-sized firms (mostly agricultural sector)	13	Cooperative (1 office)
I4	40	Small firms (all industries)	0	Sole proprietorship (1 office)
I5	35	Small- and medium-sized firms (mostly agricultural sector)	10	Cooperative (1 office)
I6	25	Small- and medium-sized firms (all industries)	2	Sole proprietorship (1 office)
I7	25	Small- and medium-sized firms (all industries)	1	Sole proprietorship (1 office)
I8	44	Small- and medium-sized firms (all industries)	1,200	Limited company (55 offices)
I9	30	Small firms (all industries)	25	Limited company (3 offices)
I10	20	Small family firms (construction industry and start-ups)	5	Limited company (1 office)
I11	15	Small family firms (consulting companies and construction industry)	4	Limited company (1 office)

Norge (concerning the Norwegian context). In addition, two of the authors being, respectively, a member of the Swedish accounting standard setting board (BFN) and a former deputy director of the bachelor programme in accounting and auditing at the university, provided valuable insights into the Swedish context.

The analysis of the transcripts aimed at understanding how accountants deal with digital transformation. By focusing on the narratives of the accountants, relevant emerging themes were clustered. This approach led to the identification of a number of tensions experienced by accountants navigating the journey of digitalisation. Those tensions were paradoxical (Gaim & Wählin, 2016; Smith et al., 2017) because they highlight both the advantages and disadvantages of digitalisation that

need to be dealt with. No particular differences between Norwegian and Swedish interviewees were visible, nor was it the aim to compare the two countries. Therefore, the results, which are presented in the next section, are organised around the four identified tensions.

Results

The results show that accountants navigate between four paradoxical tensions, labelled as: coercive versus enabling technological development, digitalisation strategy of the accounting firm versus the readiness of the client, interacting with clients versus being part of a professional industry and staying versus leaving the industry. These tensions are illustrated below.

Tension 1 – Coercive versus enabling technological developments

Professional accountants, both those who are owners of accounting firms and those hired by accounting firms, are under pressure to meet the ongoing transformations related to digitalisation in the accounting industry. The analysis of the findings indicates that accountants deal with technology developments which can be both enabling and coercive.

Digitalisation has been in the accounting industry for a long time. One interviewee, who is also the owner of an accounting firm, perceived that it is important to continuously enhance the digital transformation. The quote below indicates a willingness to experiment with digital technologies to gain benefits for the firm and the client:

And then, for quite a while, I would like to say that digital transformation was actually digitisation. So, this means that we moved physical things to a digital format: more of a filing thing. Then it has accelerated very much in just how information flows have become digital in a different way. When we started the firm in 2015–2016, then these solutions started to come so that the client could send things digitally into the programs. It was just at the beginning there. Ever since we started the firm, we have tried to embrace all digital tools as much as possible... We have started jumping on new stuff. And then we have found what works well for which clients and what works in our process. But I would like to say that now, for the last two, three, four years, digital transformation for us has been very much about how to share data with the client in shorter intervals. That is, to share information.

(19)

Digitalisation is seen as an enabling opportunity to develop the accounting firm and provide new advisory services. Time left for the client has shifted from bookkeeping to advisory services, as indicated in the following quote:

What we have seen has been that the ongoing accounting, the time you save in it, is being moved to financial management and consulting. By that, I mean

consultancy in the day-to-day operations. It is what the client demands. So, digitisation has become more services. I would say that because, before, a whole person was needed who was only allowed to do ledgers. When there is no longer a need for a person who is only allowed to do ledgers, then you have time to do other things. Then there will be much more work with the numbers together with the client.

(19)

Interviewees pointed at the possibility of riding on the advantages of digitalisation to be proactive and anticipate the needs of the clients. That is, by using the data that is available, they can predict which services might potentially be valuable for the client. For instance, clients might need assistance with management control, reporting, taxes, law, etc. This capacity to be proactive was not fully possible before the digitalisation processes. It was the clients that had to ask for a particular service that they assumed would be necessary. Thus, digitalisation and the availability of data lead to a value-adding activity, exercised by the accountant, which is beneficial for both the client and the accounting firm. One interviewee further suggested that creating new services can be done in collaboration with the client, even though these interactions are often initiated by the accounting firm that sees the potential benefits of certain services:

Yes, it happens that we develop together with the client, but mainly I would say it's us who try to make it clear to the clients that: "Here you have opportunities to do something". But it has also happened that clients have come and requested things, but mainly it's probably us who present to the client that: "This could be useful for you".

(15)

While the accountants see the enabling effects of digitalisation, they also have to consider the demands/needs of their clients, who are not all "fully digital".

So, we are fully digitised already, at least paperless... [The clients] think it's very good. I think that's why the clients I have find it very convenient not to have to carry around their accounting in a binder. And then there's the system we use, where clients can decide for themselves how much they want to do: whether they want us to do everything or if they want to do parts of the accounting themselves. We have some clients who do everything themselves, all I do is calculate and check, and, for some, I only do the annual settlement. Then I have those [clients] who submit receipts and invoices so that we can scan them in and take care of them for them. So, we have all variations, and they are very happy with that. They can manage their accounting day as much as they want to.

(16)

The analysis of the findings indicates that digitalisation also has coercive effects. If digitalisation allows accountants to spend time differently, i.e., offer more

consultancy services and find new solutions, then it is also true that more time is needed, for example, to secure correct accounting. When clients scan invoices and accountants do not see them as they did in the past, a sense of loss of control arises in them. Accountants cannot blindly trust digitalised data, and they claimed that there is a need to conduct critical checks and risk assessment. The following quote is revealing:

What we sense in this is that we lose clients' knowledge and knowledge of the clients' transactions when we no longer see them. When we no longer see the invoices, certain things become more difficult to reasonably assess, for example. It's more difficult to ensure quality. We spend a lot more time on monthly accounts, for example, because we have a lot more quality assurance that needs to be done. We need to check more stuff.

(19)

Digitalisation generates a proliferation of data which is not risk free, as highlighted by one interviewee:

Digitisation has led to much larger amounts of data that need to be handled – without data necessarily being handled in a more secure way than it was when you had it on paper... You have to work cognitively in a completely different way.

(110)

Also, changing mindset could lead to an overreliance on digital technology:

Yes, it is likely that the person in our professional role becomes too lax in their control. There are so many invoices now that are interpreted, and when you don't check, you rely too much on the computer.

(111)

In addition, the existence of a great deal of software and many systems can increase complexity, as pointed out below:

These systems are often pretty bad at talking to each other. Even those which are built to work together are often quite bad at talking to each other in ways that are useful to the company.

(19)

Finally, digitalisation creates opportunities but also more questions on the client side. As one interviewee articulated:

There is much more telephone contact, and clients come in for shorter or longer meetings more often. Contrary to the belief that clients would be less engaged, they are more hands-on and have more questions.

(11)

To overcome the disadvantages of losing control, accountants claim that meeting clients in person facilitates information exchange which can be valuable when bookkeeping is digitalised.

Tension 2 – Digitalisation strategy of the accounting firm versus the readiness of the client

The digitalisation strategy of the accounting firm is important. Some firms aim for full digitalisation and engage with clients that are striving in the same direction. One interviewee very proudly stated:

In 2018, when I chose to start my own firm, I said from the start that it should be as digitised as possible, because now I have the chance, when I start from scratch again, and we will not accept clients who do not want to be digitised, so we shall not have any paper here.

(I11)

Yet, accountants can feel challenged by their firm's full digitalisation strategy, which they must forward to the client. Clients' readiness for digitalisation varies, and there are some that are comfortable to continue as before and, in some circumstances, continue with "paper". Therefore, some accountants may prefer not to exert too much pressure, as indicated below:

I try to get some clients to digitalise a bit more, but not everyone is equally interested, and they don't do too much either. So, I haven't pushed too hard on that, if they don't want to. That's how it is.

(I4)

As articulated by one accountant from a larger accounting firm that wants a completely digital office, the market is differentiated, and the clients are not all ready:

But then it's difficult, and, preferably, you can say that among slightly smaller clients they may not be very interested. And so, it [digitalisation] has affected [the working day] in that you can be more in the office. You don't always have to go out to the client, but all material must be sent digitally. Some clients love it. They don't want any paper. But it's very difficult [to push smaller clients to digitalisation] Not at this stage, but for the next generation or in ten years from now. So, perhaps then you can say that everything must be digital. But that is precisely a gateway for many before it becomes fully digital.

(I8)

The difficulty of forwarding the full digitalisation strategy to the clients is also evident to some accountants who own their firm. Accountants can feel in between the vision of the firm and the wish of the clients. Some clients prefer to communicate

with the accountant in another, more traditional way, and the accountant follows the client rather than the firm's strategy. The following quote is revelatory:

Yes, we have clients who come in with a [name of grocery store] bag with unsorted receipts and half of them are their personal ones. We have to sort them out on the carpet. And we are happy to do that for those clients because we like him. He is a very cute little man and we have had them since we started. We call them heart clients. And when it comes to heart clients, we are willing to go the "extra mile".

(19)

Another accountant expressed the paradox of being fully digitised but accepting paper in the following terms:

Everything is digitised, but [there are] those [clients] who come in or send vouchers by mail. My oldest client is 95 years old, and she is allowed to send vouchers by mail. We scan them in and digitise them, scanning.

(17)

The reluctance regarding digitalisation and the non-100% acceptance of all the possibilities it offers is not only on the clients' side. It can also be related to the age of the accountant and where an office is located (big city versus smaller village). One interviewee, who has worked in the accounting profession for a long time, was asked to reflect on how the digitalisation journey evolved from the 1980s to today and responded as follows:

You have had to ask yourself that so badly. You have not always thought that everything has been super simple. But it has gone well, oh my God it has. But then I'm not 100% digitised and neither are my clients. Not many of my clients are. I don't think there are many people in our office who are. There are just some who don't want to deal with paper. Most people still want paper... there are also young people who want to still have paper. Yes, they do. It's pretty funny.

(18)

And added:

Yes, then it's the case that I am so old that I actually listen a little to what the client wants. Then I would say, maybe I am not proactive enough, but one still has to listen a little to what the client likes and thinks. So, ... I go to the client, I have papers in my hands, we have papers on the desks and so on....

(18)

In sum, some accountants do not always feel comfortable with the firm's full digitalisation strategy and inclination to only accept clients that fully embrace

digitalisation. If clients, for different reasons, do not want digitalisation, then the accountant feels that it is counterproductive to pressurise them, despite the strategy of the accounting firm.

Tension 3 – Interacting with clients versus being part of a professional industry

Digitalisation has opened up possibilities for accountants to interact differently with their clients, offer new services and be their advisors. However, digitalisation should not hamper their professionalism and the legitimacy of the accounting industry. Some accountants receive requests from their clients that may go beyond the boundaries of accounting, and they need to clarify what can be done. One interviewee claimed:

It doesn't happen very often, but if they want it, we have to jump into action and provide it. I very rarely say: "No, I can't do that." If I do, it's because I don't have the ability to acquire the competence or because it's legally unfeasible. Some people ask for help in writing a will, and I say: "I'm sorry, I can't help you with that. What I can do is show you how to find a template online and tell you what the content of the will should be, but you'll need to consult an attorney for that." So, it's more about setting boundaries in terms of what I am legally allowed to work on.

(I3)

While discussing the effects of digitalisation on their work practices and "new" roles as financial management advisors, the accountants referred to the way they handle the requests of clients who require services they cannot offer. One interviewee argued that:

We try to accommodate the client's wishes as much as possible. But there have been cases where we couldn't take on the client and had to pass them to another office [the office of a competing firm]. This could be because one office uses the system the client has, but another office lacks the expertise. In such cases, we refer them [i.e., clients] to the more competent office.

(I1)

Sending clients to competing firms is a necessary evil when the accounting firm cannot meet the expectations of the client. The findings also revealed that collaboration with law firms seems important to ensure that clients, who pose questions related to legal issues that go beyond accountants' responsibility or generic expertise within tax law, get served properly. One interviewee mentioned the reasons:

We've made a strategic decision that we don't want to [offer] that kind of advice ourselves. If someone comes and says they want to do a generational change or that they want to sell their property, or that they want to make a

tax plan to buy a subsidiary in [name of country omitted] or that they have a conflict on the Human Resources side so that they have to arrange a buyout, we have made a strategic decision to forward such questions to the respective lawyer. We have tax lawyers and company lawyers that we work with because it can happen [that we get those questions], but it may not be that often. No, and above all it is difficult if you think from the current legal perspective. It is not possible to keep up to date enough when you do it so rarely. The specialist knowledge and the liability insurance do not cover it.

(19)

The tension between having the possibility of offering more services and the need to recognise the boundaries of what can be done and what cannot be done is also shown in the next quote, which refers to the possibility for clients to outsource the finance function to the accounting firm:

What do clients think of this concept that we will be their economic and administrative function? It is very two-sided. One is those who are totally dismissive, who say, “No, we definitely will not do that; we will not bring any consultants here,” almost before being told what the concept is about. They want to hire themselves, the classic model. Perhaps the term “outsourcing” has a negative connotation, so we do not use the word “outsourcing” for this concept. And then you have those who are innovative: “This is great! Why hasn’t anyone else come up with this before?! This is perfect for us!” So, the reaction to this is very different.

(12)

Interacting with clients is crucial for accountants in the digital era. A flexible approach is important, especially when clients are reluctant to switch their accounting system to the one the accounting firm proposes, meaning that accountants have to adapt:

We have clients who have their accounting system but lack the expertise or capacity. We can’t go to them and say: “We have another accounting system that is tailored to you.” We have to work on the system they have, and our people do that. Some of the systems are ground-based, meaning [that] we have to sit at the client’s premises and do the work, not in our own offices. [...] It’s a very situational thing; we have to be flexible when we get the client onto what we want, which is most advantageous for us, which we find most effective. Or we have to adapt to the system the client has. We will probably see more of this going forward because the client is getting used to their cloud system, and either they like it or don’t, and we switch or we do not switch.

(12)

Other accountants think that flexibility is not optimal and try to convince their clients that following their digitalisation view is an investment. The accountant who is the owner manager of the accounting firm and favours full digitalisation argues that the

firm's vision of digital transformation is communicated to the (new) client as an investment that the client must pay for at the beginning but which will pay off in the future.

So, when we take over a client, there will be a big peak at the beginning because we will digitise everything. We must have room for several problems and we simply charge an hourly rate at the beginning. We usually charge an hourly fee for everything that we run on the hourly table for 2–3 months. Then, we get to a point at which we think that the client can be charged a fixed price. But sometimes we have made a deal directly and sold services at a fixed price. So, it's a little different... We usually call it an investment. Most of the time, we can look at what their price has been in the past and then we can say that we will probably be able to give them a better fixed price. But, in the beginning, there will be some work with it, and it will be like an investment.

(111)

Accountants need to preserve their professional scepticism while developing the rhetoric when interacting with clients. In connection with invoicing, for example, in the past, accountants received the supplier invoices from their clients and had to bookkeep them. Nowadays, instead, accountants receive their clients' supplier invoices through the digital system, have to check them and then ask the client to approve them for payment. This inverted order of practices, plus an increase in the working tempo, means that the accountant must ensure quality while asking the client for confirmation. The following quote explains what happens when the supplier sends the invoice to the client digitally:

The normal flow then is that we look at the pre-accounting that is proposed [by the digital system]. We do some checks, like make sure it looks reasonable, that the VAT is correct and things like that. And then we send it to the client to confirm. So, instead of the client sending a [supplier] invoice [to us] ... and basically saying ... "Hey, I bought this. It's a business thing," now it [the supplier invoice] goes through a complete flow and reaches the client in the last step. [We ask the client to confirm] "You have bought this. You have bought this." ... And then the client can say "yes", for example. And what the client actually approves is what must be paid.... And so it is, then it will be a direct entry according to the proposed posting. So, my role has changed a lot. My role has become very much more of a critical questioning and quality assurance function.

(19)

Tensions between interacting with clients, trying to guide them through digitalisation possibilities, stepping back when needed and remaining competitive in the accounting industry are also connected to the next tension.

Tension 4 – Staying versus leaving the industry

As mentioned previously, the findings reveal that the accounting firm might be interested in digital transformations, but the staff might not be fully on board. Some

accountants do not feel pressure to change or push their clients towards full digitalisation. They have a stable market and portfolio of clients who are satisfied with the current services. One interviewee discussed the risk of repetitive tasks being overridden by digitalisation in the following terms:

There are many risks involved in this transformation, which are related to the fact that there are people [accountants] who do not find this exciting. They don't want to do it; some quit and say, "I'd rather go across the street to the small accounting office because they still work in the old way, and that's what I want." Or some stay but dig in their heels and do not want to join in. There is basically resistance to all the elements that you have in change management or a change process, regardless of the industry. You also have this here – and perhaps even more so because you initially have a conservative staff, who have chosen a job with repetitive tasks and have adhered to it for years.

(12)

Yet, accountants that engage with digitalisation feel competitive pressures and try to keep clients satisfied.

For the most part, we try to find solutions, so that we can retain the client. It has happened once that a client chose another firm because they had a solution that was integrated with their system; that has happened once. ... We must compete; we must be competitive if we are to survive; we must endure competitors. If we don't, we don't have a good enough product if we can't manage that. We have to live with it.

(15)

One interviewee also remarked on the importance of being able to clarify and explain to clients what additional/new services are offered, so that they are willing to pay:

When it comes to new services in accounting, the challenge is that we have largely been offering consultancy services to clients already. Much of the accounting service has included bookkeeping, reconciliation, payroll, annual accounts and consultancy, all in one package. The challenge now is to separate what has been offered before. Clients are more willing to pay when they see it as a new service, beyond what has been offered before.

(11)

Apart from clients' willingness to pay, setting prices for the services offered has become challenging. The changes brought by digitalisation influence the pricing. One interviewee explained that:

One thing that's a bit risky, or should I say a bit more difficult with this, is the pricing of such services. Clearly, it becomes a completely different way than

how we have traditionally worked on hours and such, and now it's a completely different job, ...posting is no longer a thing, it goes automatically for many clients who have spent a lot of time on it before. So, we must recoup some of the costs we have with digitisation. Of course, the client should also feel this. This is absolutely necessary; otherwise, we have priced ourselves out of the market. But, at the same time, we must recover the cost we have incurred with the digitisation, and that's a bit challenging, since we have only used hourly rates so far. So, we have to find a new way to calculate this.

(15)

It is possible to set a fixed price on the preparation of financial statements because it is a standardised service. One interviewee stated:

Financial statements ... are a slightly more standard product. You know what will be included in them. And then it is a fixed price, based on the client's size and complexity. So, we look at the national accounting standards. Do they [the clients] have financial instruments? Do they have a large machine bank? Do they work with project reporting and work in progress? ... And then we have a price list which is a fixed price based on those things. And it works very well... But there are cases where we have lost money ... or ... profitability. For example, we have set a fixed price and set it too low. The risk when you set a fixed price is that you no longer have as much control over the follow-up of your hours. And then it can drag away in volume in an assignment, without you noticing....

(19)

Digitalisation generates direct costs but also entails indirect costs, as it leads to the risk of clients leaving. One interviewee admitted that they had lost clients because their services were deemed too expensive and explained:

... And then they [the clients] may have gone to some small accounting firm that charges a completely different amount of money to do it. And then they [the clients] say "she is much cheaper" or "he is much cheaper." ... I can't say whether it is more expensive because it has become digital, but everything has become much, much more expensive. So, they [the clients] have to pay, as they have to pay for the accounting software or whatever. A monthly fee or so, they have to pay for that so quickly. And then, for the supplier invoices, they [the clients] pay a penny per supplier invoice and so on. So, everything has become more expensive.

(18)

Discussion and conclusions

This book chapter contributes to the accounting and digitalisation literature (Knudsen, 2020; Kokina & Davenport, 2017; Lehner et al., 2022; Moll & Yigitbasioglu,

2019; Yigitbasioglu et al., 2023), by showing how accountants working at small- and medium-sized accounting firms in Norway and Sweden navigate four types of tensions related to digital transformations. While previous studies have tried to classify small- and medium-sized accounting firms in terms of how they cope with digitalisation and its associated risks (Ali, 2023; Henk et al., 2022), this book chapter aimed at understanding how accountants as individuals deal with digitalisation.

The results show that the *accounting industry* is characterised by variation, because accounting firms, accountants and clients are at different stages of their digitalisation journey. While some of them have embraced the idea of digital transformation, others are still working to fulfil digitisation (Gilli et al., 2023; Knudsen, 2020). In addition, the environment is dynamic because digital technologies continue to develop, along with changes in the regulation and sustainability matters, and influence the way of thinking, learning and working (Sonnerfeldt & Jonnergård, 2024).

Accounting professionals are in between the accounting firm and their clients, as they act as mediators of digitalisation. They navigate through four paradoxical tensions (Gaim & Wåhlin, 2016; Smith et al., 2017). First, while technological development is enabling in terms of innovative solutions and additional services to be offered to clients, it is also coercive because of the need to work differently, and working with more data is not risk free. Second, the digitalisation strategy of the accounting firm is not always fully aligned with the will and readiness of the clients, meaning that accountants have to decide the extent to which they push clients towards digitalisation. Third, interactions with clients have changed, and accountants need to preserve their professionalism while trying to meet the demands of their clients. Fourth, some accountants are not willing to fully change towards digital transformation, and pricing issues make it difficult to stay competitive in the industry with the risk of clients leaving.

By identifying these four paradoxical tensions, this book chapter enriches previous research about tensions in small professional service firms (Cardinali et al., 2023). While confirming that digitalisation transforms the *modus operandi* of accountants who need to deal with the availability of more data and digital software and platforms, develop new sets of skills and act as advisors (Ali & Mustafa, 2023; Knudsen, 2020; Kokina & Davenport, 2017; Moll & Yigitbasioglu, 2019; Yigitbasioglu et al., 2023; Faulconbridge et al., 2023; Blackburn et al., 2018; Lehner et al., 2022), this chapter presents a more nuanced understanding of the positions of accountants in between the accounting firm and their clients. The following figure presents the tensions associated with “being in between” (Figure 3.1).

Small- and medium-sized accounting firms have different strategies related to digitalisation and the service or digital solutions they can offer to clients. The size of the accounting firm matters because smaller firms might be less inclined towards digitalisation. The local context of the offices also influences certain choices and behaviours. Digitalisation strategies also relate to client selection policy and the advisory services provided. Within accounting firms, the accounting professionals might not all have the same inclination regarding digitalisation. Some are reactive, others are more proactive. Depending on their capacity and possibility to offer new and/or multiple services to clients, accounting firms might compete or collaborate with other service providers.

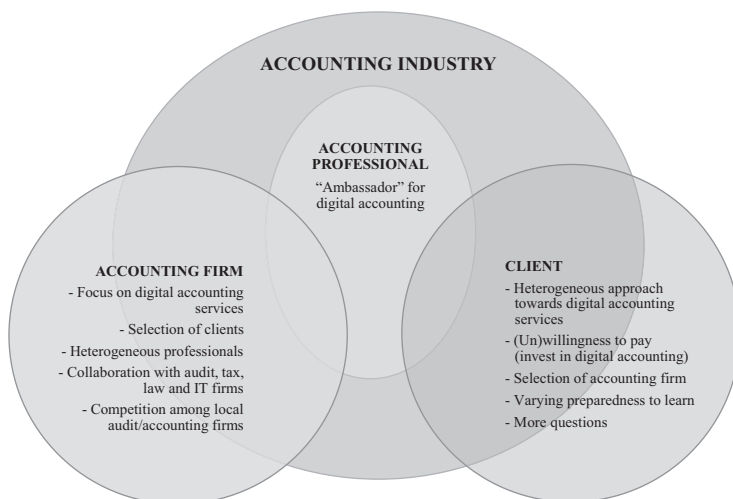


Figure 3.1 On being in between (own elaboration).

Clients also have divergent approaches to digitalisation. Some favour digital accounting services, others prefer the status quo and are not willing to pay for digital technologies. Their preparedness varies and influences the selection of the accounting firm. The clients who engage with digital transformation might pose more questions to the accountants than they did in the past.

Accountants can be more technologically advanced than their clients and, in this case, might feel a sense of frustration when they cannot develop their services at the pace that they would like to. Instead, they have to educate their clients and help them to integrate their platforms or even help them to make invoices digitally available. As such, it is a balancing act of constantly trying new ways of automating, while making sure that traditional clients do not develop trust issues.

When clients use digital accounting systems that are advanced (meaning that they have invested and believe in digital accounting services) and do not easily integrate with the accounting firm's solution, for the sake of "earning" or keeping clients, accountants need to learn and work with those systems. That is, accountants are required to develop entirely new skill sets and acquire new knowledge. This developmental work entails new knowledge, in terms of both IT systems and how to become better advisors, and the development of new communication skills, since more automation frees up time for closer connections with clients. The alternative is to send the client to a competitor's accounting firm. It is quite understandable that there is some evidence for resistance to change, particularly from older accountants, who are no longer willing to innovate and digitalise their services, as they are on the verge of retirement.

To conclude, the paradoxical tensions encountered by accountants working at small- and medium-sized accounting firms in Norway and Sweden indicate three

key concerns to be considered in further studies and by the accounting industry. First, digitalisation promises efficiency and improved service. However, clients – which are quite often SMEs – are slow in their implementation, which hampers innovation; accountants need to be careful, in their interactions, to balance traditional practices with innovative ones. Second, digitalisation leads to a proliferation of systems and data. This can create a sense of loss of control and trust issues that require more frequent and detailed verification, thereby reducing the potential efficiency gains. That is, time is not really saved because accountants spend it in restoring comfort. Third, accountants aim to enhance their services through digital tools and fulfil the digitalisation strategy of their employer (i.e., the accounting firm). However, they must meet the reality of their clients, who might not be willing to fully embrace digital transformation.

The results of this chapter contribute to the accounting industry on the practical level, by pointing to the importance of being aware of the time and efforts associated with digital transformation. The asynchronous achievement of digital transformation is the reason why accounting professionals are “in between”, and their ambassadorial role is not smooth. Clients are not ready, and small- and medium-sized accounting firms live with the paradox of being digital while still working with paper.

This chapter has some limitations which pave the way for future research. First, the reflections presented reflect the analysis of a limited number of interviews with Norwegian and Swedish accounting professionals. While many similarities were detected, a systematic comparison between the two countries was out of the scope of this study, which aimed to explore the tensions perceived and experienced by individuals. Future research could extend the number of interviewees, in order to reach a more systematic and comparative analysis of similarities and differences between countries. Involving more countries could enrich the accounting literature with more nuances of the digitalisation journey.

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4 Towards digital transformation of local government auditing

Leveraging digital affordances

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Introduction¹

The public sector encounters an increasing number of calls to digitalise its work practices and move towards so-called “digital governance” (Dunleavy et al., 2006; Leicht & Fennell, 2008; Nerland, 2022). Digital governance refers to the use of different forms of digital innovations that offer the possibility of more efficient, transparent and effective government, while challenging traditional models of public administration, management, organisation, accountability and engagement (Gil-Garcia et al., 2018). Such changes to public governance influence the fate of public sector accounting, which is becoming increasingly complex as it spans organisational boundaries at the pace of digital innovations (Grossi & Argento, 2022). While accounting programs have already long been used for the digital records of an organisation’s transactions, the digitisation of accounting documents in the public sector has been happening at a gradual pace, together with the digitisation of other types of documentation (for example, medical records). Consequently, during the last few years, most of the paper-based data has been digitised. This exerts pressure on traditionally institutionalised methods for delivering professional services, while enabling the production and dissemination of new types of data and information, their use and possible consequences, referred to as “datafication” (Redden, 2018; Rogge et al., 2017; Ruijter et al., 2020). Moreover, there is a shift from more traditional data, with predefined rules and standards for book-keeping, towards unstructured, textual and (often) user-generated data that is not associated with the rules and standards for data collection, recording and translation (Agostino et al., 2021).

The changes in the audit environment place requirements on public sector auditors to adapt their work procedures and acquire new digital skills to fit the digital age (Möller et al., 2020). Public sector auditors are, moreover, expected to leverage the combined possibilities of various digital innovations in the public sector (e.g., digital technologies and infrastructures, data resources and even capabilities associated with digital technologies) for the digital transformation of the public sector audit (Hinings et al., 2018; Manita et al., 2020; Otia & Bracci, 2022). The transformation of the public sector audit in a general sense is seen in the further advancement and move beyond the still largely used manual auditing to robotic process

automation (Moffitt et al., 2018). Those advancements will enable the benefits of opportunities emerging from the increased use of digital systems and datafication in the public sector to be reaped (Dunleavy et al., 2006; Grossi & Argento, 2022; Margetts & Dunleavy, 2013). As demonstrated by Aquino et al. (2022), the introduction of digital innovations adds to auditors' action possibilities, as well as reinforcing remote auditing. Due to the integration of different information systems, public sector auditors could download batches of data for purposes of structuring, analysing and comparing them. The use of a wide range of data provides opportunities to make more meaningful and insightful observations (Antipova, 2019). Advanced technologies, such as big data analytics, natural language processing and semantic document search, enable the processing of unstructured textual data resulting from activities such as public tenders and procurement (ECA, 2020). Therefore, public sector auditors are expected to transform, to ensure audit quality and improve the efficiency and effectiveness of auditing tasks in the long run, as well as to account for the digital changes in their environment (Curtis & Payne, 2008).

In light of the digital changes, public sector auditors find themselves largely confronted with a challenge to remain relevant, respond to the changing expectations and sustain the provision of assurance to stakeholders (Hay & Cordery, 2018; Lahdelma & Gullichsen, 2020; Pearson, 2014). Public sector auditing literature remains silent on the application of digital innovations, with only a few studies bringing empirical insights into this emerging issue (Aquino et al., 2022; Otia & Bracci, 2022). While digital innovations afford many possibilities for goal-oriented actions in auditing, interpreting and enacting those possibilities is an ongoing process that plays a crucial role in the acceptance of any digital change (Leonardi, 2011; Salijeni et al., 2019). The possibilities of digital innovations in auditing have become a significant area of interest, particularly in response to the evolving digital landscape (Aquino et al., 2022). Audit practitioners in digitally advanced nations (e.g., Belgium, Norway, United Kingdom, South Korea) have shown a proactive approach by creating in-house innovation labs to identify and experiment with digital innovations in the public sector audit (Otia & Bracci, 2022). While heavily investing in and acquiring the latest and most sophisticated technologies, we are unaware of how the possibilities of those are then recognised and used for the transformation of auditing processes (Otia & Bracci, 2022). Therefore, our study aims to shed light on this gap by answering the following research question:

How are public sector auditors leveraging the affordances of digital innovations for digital transformation?

To answer the research question, this study applies affordance theory (Gibson, 1977), which takes into account the material properties of digital innovations in the public sector, as well as their recursive effects on public sector auditors (Faraj & Azad, 2012). Our study focuses its attention on the case of Norway, one of the leading countries in Europe in terms of digitalisation in its public sector (DESI, 2022). As municipalities and counties play a vital role in the production of public services in the Nordic countries (Johnsen et al., 2001), this study explores the local government auditing

(LGA) subject to inter-municipal cooperation or contracting out since 2004 (Johnsen, 2021). This study is based on four interviews with three LGA companies in Norway, equivalent in size and partially covering the northern, central and southern parts of Norway. In doing so, this study heeds the call to improve and develop new knowledge about the auditing processes in Norwegian local government (Gilberg & Bardal, 2019).

Despite the introduction of various digital innovations in LGA several decades ago (e.g., NVivo, Interactive Data Extraction and Analysis [IDEA], Visma and Teams application), their use has primarily supported auditing activities rather than driving digital transformation in auditing processes. However, this study identified two instances of early adoption of digital affordances in LGA, indicating a shift in direction towards digital transformation. Our first observation is the utilisation of system-to-system data connections through Application Programming Interfaces (APIs) for partially automating financial auditing processes. The second finding indicates the use of data analytics tools, such as text mining and web scraping, leading to changes in LGA methodology beyond traditional sample-based approaches. This study shows that the increasing availability of and access to data in Norway, combined with the increase in computing power, public sector auditors' digital literacy (data analytics or coding skills) (Du et al., 2019), organisational support (resource allocation and learning) and knowledge exchange (within the Norwegian Association of Local Government Auditors [NKRF], other audit companies or the Supreme Audit Institution [SAI]), allows advantage to be taken of one or more affordances of digital innovation to transform the auditing by building new processes or reengineering the existing processes. While it is too early to declare full-scale digital transformation of LGA, these findings show the early steps towards transforming auditing practices.

This research adds to the existing body of literature on public sector auditing, by offering insights into the potential use of digital innovations for transformation of the auditing process. Drawing from the Norwegian case, it contributes to our understanding of the digital transformation of LGA. Furthermore, it enhances theoretical knowledge of digital affordances, shedding light on their utilisation for digital transformation goals and the associated conditions. The study also delivers practical insights for auditing professionals aiming to leverage digital innovations in transforming the auditing processes. The following sections of this study encompass the discussion of the theoretical framework, methodology, empirical findings and the subsequent discussion and conclusions.

The theory of affordances

Conceptualised as “possibilities for goal-oriented action afforded to specified user groups by technical objects”, the affordances concept (Gibson, 1977) is widely adopted in information systems research (Markus & Silver, 2008, p. 622). Digital innovations may afford many possibilities for action (Leonardi, 2011). Therefore, affordances refer to action possibilities and opportunities that emerge from actors engaging with digital innovations (Faraj & Azad, 2012). They have *material properties*, that is, particular, enduring forms in place and time and performativity

to afford a particular set of actions when individuals interact with them (Leonardi, 2013). However, the interaction with digital innovations is constrained by our ability to perceive these affordances, as individuals have intentionality and are goal oriented when interacting with such digital innovations (Aquino et al., 2022). Although the material properties of digital innovations are common, affordances are unique individual perceptions (Leonardi, 2011), based, in part, on the *goals of the users*. Thus, the concept of affordances has a relational nature, as visualised in Figure 4.1, and considers both (1) the material properties of the digital innovations and (2) the user with its specific goals (in this study, public sector auditors) (Strong et al., 2014). An affordance offers potential action possibilities, but these remain latent potentials; in order to exert influence, the affordances must be actualised (Vaast & Kaganer, 2013; Vaast et al., 2017). *Affordance actualisation* is “the actions taken by actors as they take advantage of one or more affordances through their use of the technology to achieve immediate concrete outcomes in support of organizational goals”. This process is iterative because the actualisation actions of individuals generate outcomes, and these immediate concrete outcomes, in turn, provide *feedback* for adjusting (as needed) those individual actions, as well as adjusting the elements giving rise to the affordances (Strong et al., 2014, p. 70).

This theoretical view on affordances was recently shifted by Davis (2020) from the question, “What do objects afford?” to the more multi-faceted question, “How do objects afford, for whom, and under what circumstances?” It is proposed that

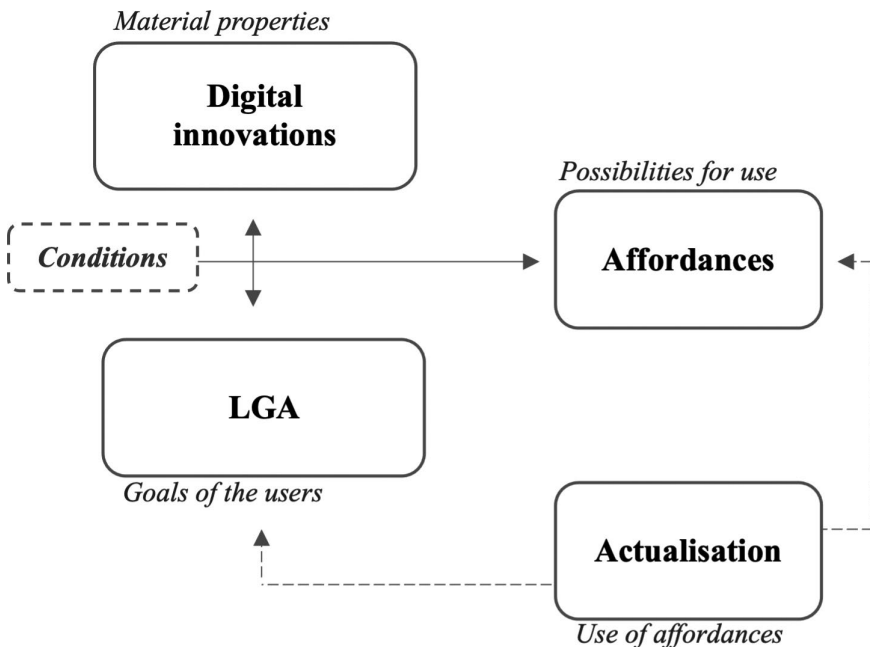


Figure 4.1 A theoretical framework for analysing the affordances of digital innovations (based on Davis & Chouinard, 2016; Strong et al., 2014).

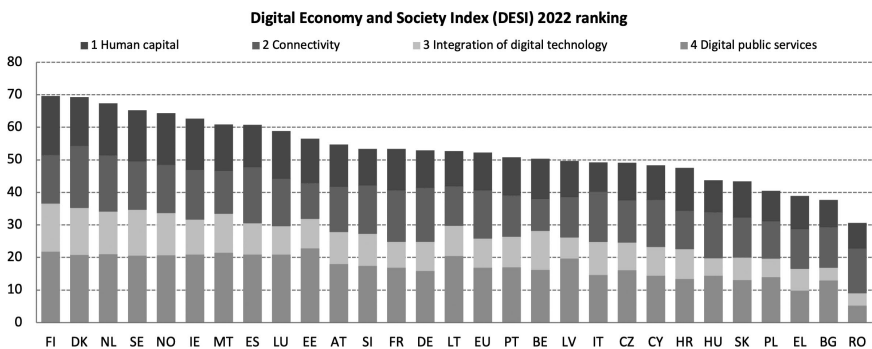


Figure 4.2 Norway’s position among EU member states based on their level of digitalisation.
Source: DESI (2022).

how an object affords varies under *conditions* such as subjects’ perception of the object (how the user perceives the object and the extent to which the user recognises range of functionalities), dexterity with the object (skill in manipulating the object) and cultural and institutional legitimacy to deploy the object towards desired ends (degree of support a user has in engaging the object for a range of purposes) (Davis & Chouinard, 2016). Moreover, increasing the digital literacy of employees could allow them to take advantage of one or more digital innovations (Cetindamar Kozanoglu & Abedin, 2021; Du et al., 2019). Users leverage and adapt to digital innovations and continuously form and re-form certain affordances based on their cognitive abilities to perceive and realise an opportunity in the environment (Cetindamar Kozanoglu & Abedin, 2021).

Therefore, affordance theory provides an appropriate lens for studying digital innovations and organisational change (Leonardi, 2011; Volkoff & Strong, 2013). By simultaneously considering the material aspects of digital innovations and public sector auditors’ goals and perceptions regarding the utilisation of these digital innovations, an affordance perspective proves a valuable lens to explain how digital innovations might be leveraged by public sector auditors for digital transformation.

Methodology

Research context

Norway presents a unique, interesting case on the digital transformation of LGA, since it is one of the leading countries in terms of digitalisation in Europe (see Figure 4.2). While, in other Nordic countries, LGA functions have largely been acquired or replaced by private auditing firms, in Norway, LGA has remained an auditing environment distinctly separate from the private sector. LGA in Norway is typically performed by small- and medium-sized audit firms established and owned by the local governments that are subject to auditing (17 as of the date of this study). There are only a few exceptions to this rule, as two cities in Norway are

audited by an internal auditing function and one local government has appointed a private auditing firm. Local government accounting in Norway is a unique hybrid accounting model that combines elements from both cash and accrual accounting systems. This may explain to a large extent why there is no similar LGA development towards private auditing in Norway as in other Nordic countries (Gilberg & Bardal, 2019).

LGA in Norway includes financial statement auditing, performance auditing, compliance auditing and other assurance services. The scope of the financial statement audit is substantially the same as in the private sector: to issue a similar auditing opinion, also including comments on the budget. Performance auditing involves implementing systematic assessments of finances, productivity, rule compliance, goal achievement and impact based on the resolutions of the local government. Additionally, LGA is required to perform a simplified compliance auditing of the financial management, to ensure that the local government's financial management is per current regulations (according to Local Government Act no. 83 of 22 June 2018).

Data collection and analysis

Since there is little prior research about the digital transformation of LGA and the leveraging of digital affordances, the study adopted a qualitative approach characterised by the discovery and exploration of this phenomenon (Edmondson & McManus, 2007). A qualitative approach endeavours to seek an understanding of a phenomenon, employing a non-statistical approach to typically tackle questions concerning “how” and “why” (Malina et al., 2011). Purposive sampling was used “to select respondents that are most likely to yield appropriate and useful information” (Kelly, 2010, p. 317). The authors selected respondents who were (1) public sector auditors, (2) employed in small- and medium-sized auditing firms established and owned by local governments and (3) possessing relevant knowledge about the digital transformation of LGA in Norway. In total, the authors conducted four semi-structured interviews with public sector auditors from the three largest small- and medium-sized LGA firms in Norway. Through collaboration with experts in the field, we confirmed that these firms alone had the necessary resources to provide insights for our study. Notwithstanding the limited number of interviews, we achieved a comprehensive coverage of diverse LGA practices across the country, as the selected auditing firms geographically cover the northern, central and southern parts of Norway.

The authors followed an interview guide with semi-structured questions to cover the topic of interest (please see Annex 1). The interview guide was developed based on a comprehensive review of the existing literature and the empirical observations of an expert in Norway's LGA (who was involved both in the stage of drafting the interview guide and during the interviews, allowing more reflexive questions to be posed). This technique enabled us to have a deeper and more accurate understanding of the subjective topics that emerged through the interviews (Pessoa et al., 2019). The interviews were further recorded, transcribed and sent back to the participants to read through. This was done to verify the accuracy of the

information recorded, allow the interviewees to validate their contributions to this study and clarify some contexts regarding their statements. The interviewees in the study were assured anonymity.

During the analysis of empirical data, the authors searched for, analysed and reported patterns or themes within the data (Braun & Clarke, 2006). The thematic analysis is based on the review of the literature and the chosen theoretical framework. In the data, we focused on identifying the goals of public sector auditors, the properties of the mentioned digital innovations and the conditions for the use of the digital innovations mentioned by the respondents. Due to the feasible amount of data, the coding was done manually without the help of any particular software program.

Findings

Leveraging affordances of the APIs' connection to the open data for the automatisisation of the value-added tax financial auditing

In November 2010, the Ministry for Government Administration and Reform issued a circular letter, stating that every ministry should demand that their subordinate state bodies open up their data. This was followed up by the launch of the Norwegian Open Data Portal² in September 2011, together with the “datahotell”, which hosts data on behalf of many organisations. These are further supported by other tools such as the Open Data Guidelines, which all public organisations should follow, the Norwegian open data licence and the handbook for the sharing of public sector data. The support and advisory role of that time was delivered by the Norwegian Agency for Public Management and eGovernment (Difi) (Broomfield and Skagemo, Difi³). Since 2020, this role has been allocated to the Norwegian Digitalisation Agency (Digdir), subordinate to the Ministry of Digitalisation and Public Governance of Norway.

The open data is technically shared through the Application Programming Interfaces,⁴ commonly referred to as APIs, that help extend agency information to other users and support the open data government initiatives. The dataset provided in an API supports both single lookups, complex searches and downloads of complete datasets.

Another thing that is very important for me at least is the availability of data through APIs, like getting large quantities of data through, for example, the Bureau of Statistics in Norway (Statistics Norway) or from the company registry in Brønnøysund Register Centre. Both of those are valuable sources of information for confirming facts essentially. And it's really something that's come a long way in the last few years.

(Interviewee 4)

Statistics Norway is the national statistical institute of Norway and the main producer of official statistics; it released the first version of an API open to external

users in 2013. The Brønnøysund Register Centre⁵ is a government body under the Ministry of Trade, Industry and Fisheries of Norway. Brønnøysund Register Centre develops and operates many of Norway's most important registers and electronic solutions; to the date of this study, it consisted of 17 different national computerised registers.

With the availability of APIs affording the system-to-system connections to the data, this study finds an example of the goal-oriented use of those possibilities for the automatisisation of the tasks in the financial audit. The affordance of APIs was actualised by developing an algorithm for the automatisisation of value-added tax auditing, which runs every two months.

We do the value-added tax reports every two months, which is independent of the year-round or from the yearly audit. And there's a question later, where it's what kind of technology are you using and tools developed. We use that for every transaction that a municipality does with value-added tax; we run it through a system that we've developed where we essentially cross-reference it with the company registry, the official company registry in Norway, where we... so we can see whether or not the transaction is valid, if it's a valid transactional partner, which is something that can do, I don't know, 10,000 transactions in two minutes. It's kind of the whole... it's a completely technical or technological control. There's no human touch at all, apart from building the original code. But that's something that's been quite efficient.

(Interviewee 4)

The respondent was driven to enhance the auditing process and recognised an opportunity when the company registry began providing this data via an API, aligning with the objectives of the LGA. There is no human involvement in the cross-reference check, which is run automatically through the API every two months. Currently, it is undergoing an internal test, demonstrating success in identifying discrepancies, although the magnitude of the errors detected is typically minimal. However, there are occasional false positives that necessitate auditor intervention.

I know that Visma⁶ has a similar tool. They beat us to market, but we developed the idea before they publicly started selling it. But it's the same system [...] it's around the same time that the company registry started offering this type of data as an API.

(Interviewee 4)

The present example highlights several conditions that facilitated the identification and utilisation of the affordance offered by digital innovation in this context connected with (1) the motivation of the respondent and the supportive environment "Let's use this as a tool to make our own audit better", and (2) the digital literacy of the respondent, who had "some training and experience with information security,

as well as some self-taught coding programming in order to use computer tools in a more efficient manner”. However, in other cases, digital literacy can be an issue, and most public sector auditors do not keep pace with the digital change in their environment.

...we have to increase the continuing education to have satisfactory skills in this area. So, we are working on it, but I think the development is going so fast that some auditors are still happy with their pen.

(Interviewee 1)

There is also an increase in the computing power and the availability of digital technologies for the auditors “It’s an exponential growth. So, it just gets better and better [...] availability of tools like Power BI, for example, as a replacement to Microsoft Excel”. LGA is characterised by the cooperation between the auditing companies based on the signed agreements. There is also “the organisation called NKRF,⁷ which has a digitalisation forum where we discuss these matters.” (Interviewee 1).

The realisation of this affordance resulted in positive feedback on outcomes, contributing to the enhanced efficiency of financial auditing and marking the first attempt at automation within LGA that the authors could identify from the sample of this study. However, full automation within LGA is challenging, due to data accessibility (as not all data is accessible through the APIs) and the absence of related auditing systems (artificial intelligence [AI] systems that can run automated checks through an algorithm created by auditors). Despite initial presentation as an AI tool, the auditing tool used in financial auditing, IDEA, was identified as a data analytics program that involves manual data uploading and script development by auditors.

It’s not AI. It’s another, it’s a data analysis program. Yeah. It’s not AI. We have to do scripts to automate the tests and so on, but it’s not AI.

(Interviewee 1)

Regarding further automation of financial auditing, public sector auditors are considering substantial investments in the development of digital innovations which could offer the material properties of AI use and discussing the potential outsourcing of such system creation. The feasibility of this digital innovation is facilitated by the availability of data in Norwegian municipalities, coupled with the repetitive nature of tasks inherent in financial auditing that are well suited to automation.

What will be outsourced is the creation or automation of the task, but we will still have control of the data, the analysis, and the reporting. It’s just to create the necessary tools for us, so we can release time and create more time for us to do other tasks.

(Interviewee 3)

Table 4.1 Summary of findings on the use of APIs' affordances for LGA automatisisation

<i>Elements giving rise to affordances</i>	<i>Conditions</i>	<i>Affordances (possibilities of use)</i>	<i>Actualisation (goal-oriented actions)</i>
<i>Digital innovation's properties</i>	<i>Public sector auditors' goals</i>		
Open data through APIs has a material property of system-to-system data connection.	Due to the repetitive nature of tasks in financial auditing, there is potential to automate certain auditing tasks.	– Open data policies in Norway – User digital literacy and coding skills – Computing power – User motivation and support for improvement in audit – NKRF digital forum	Running the cross-reference auditing check on the open data of the public registry through the APIs.
			Developing an algorithm for the automatisisation of value-added tax auditing, which automatically runs every two months, through the APIs.

Abbreviations: APIs, application programming interfaces; LGA, local government auditing; NKRF, Norwegian Association of Local Government Auditors.

Leveraging data analytics tools to change the sample-based performance auditing methodology

The digitalisation of the public sector is compelling LGA to incorporate IT considerations into auditing, particularly in the examination of digital systems within the public domain. LGA “can’t answer the auditing questions doing the audit the same way we used to 15 years ago. It would not be valid evidence anymore”. Additionally, the surge in data volumes presents auditors with a significant challenge, alongside the increasing accessibility of digitised documents that have potential for use in performance auditing.

The change is happening all around us, and we are adapting. It’s a part of the auditing business being able to adapt to changes in the outside world. The digitalisation and the evaluation of use of IT is evident, it’s there. And the risk in the municipalities is changing. So, if we don’t adapt to that, we’re not doing our job.

(Interviewee 2)

However, it is hard for performance auditing to use the affordance of particular digital innovations, as performance auditing is designed *for each particular auditing aim*, it is not standardised or repeated each year as the financial audit is. Auditors

are using NVivo for quality text analysis; however, the application of this tool is supportive and allows the data to be visualised but does not transform the processes of LGA. There was a need to invest in the competence of auditors, rather than in technology itself.

The design is for one audit, and next time we'll do something quite different. So, the cost of implementing a very technological way of using it – it's maybe not being efficient. We haven't seen how we have tried to think, what can we now use in a way that benefits us? But it's hard. We haven't succeeded so far.

(Interviewee 2)

This study observes instances of leveraging the affordances of data analytics tools like text mining and web scraping in performance auditing. By harnessing these affordances, public sector auditors develop novel auditing methodologies for scrutinising extensive datasets. This innovative approach enables LGA to transition from sample-based testing to comprehensive analysis of all audit-relevant documentation. Consequently, this enhances the validity, comprehensiveness and efficiency of performance auditing. Notable examples of auditing reports applying these methods include (1) the auditing of procurement documentation from Dofin,⁸ (2) the examination of building applications and (3) the assessment of the nutritional status of individuals in nursing homes.

The first time we really used IT successfully was a few years ago, when we actually got a prize for it, the Norsk evalueringsforening⁹ design award, for using or trying out different simulations or methods. We use it when we have a lot of documents that are similarly structured, to identify the text that we are interested in in such a way that we are able to go through and analyse a lot more documents, a lot of the totality.

(Interviewee 2)

Performing such auditing manually is technically possible; however, it would be a time-intensive process, introducing a higher likelihood of errors and reducing overall reliability. The magnitude of the data involved, coupled with the intricacies of the auditing requirements, makes manual execution impractical in terms of efficiency, which does not correlate with public sector auditors' goals.

For example, all the health journals I was talking about, we now could say how many of all the people with the actual risk of being undernourished did not have them, as that was not being addressed in a journal in a time-space of three months. So, I mean, it's certainly an important fault in internal control. We used those methods, but we could have found the same by manually going through 50 records or the records for 20 people, but that would have been much less valid, I believe, and also more time-consuming.

(Interviewee 2)

Recognising the affordances offered by data analytics tools within performance auditing became feasible as a result of the enhanced digital literacy of public sector auditors, a proficiency that evolved gradually over time.

We're improving our knowledge all the time. I got CISA¹⁰ in 2015, I think around then. And several of my colleagues have done the same. And we are, a couple of years ago, we started using data mining and web scraping using programming in R¹¹ as a new skill in our business. So, we're trying to use new tools as we see they are necessary or might be an opportunity for us.

(Interviewee 2)

Additionally, the supporting environment fostered an elevation in digital literacy, along with the allocation of financial and temporal resources for experimenting with data analytics tools within LGA. Public sector auditors needed to learn to use the new methodology in order to see the affordance of the data analytics tools for the goals of performance auditing.

It's got to be a cost, learning to use new technology. So, when we started using it, we weren't sure if it would succeed. We had a design that would produce a good report without our attempts, but we did that as an addition to try it out, and it succeeded. If you don't find the best application of the methods at once, at some point you really have to use the resources to learn how to use it anyway because, well, if not, you will not be able to see and take advantage of the possibilities, I believe.

(Interviewee 2)

Furthermore, the utilisation of data analytics tools within LGA is endorsed and facilitated by the Office of the Auditor General in Norway, which serves as the country's SAI. This collaborative effort between the SAI and LGA demonstrates a proactive stance towards embracing the affordances of digital innovations within LGA.

We have gotten examples of code from them [SAI]; we've got a description design and methodology in different cases, especially when we wanted to use web scraping and data mining. So, they're really helpful, and I think it's a very good thing that they are seeing them helping LGA with their mission too.

(Interviewee 2)

Moreover, public sector auditors are preparing themselves concerning AI applications in the public sector, by reading the white paper on auditing machine learning algorithms compiled by the SAIs of Finland, Germany, the Netherlands, Norway and the United Kingdom.¹²

Discussion and conclusions

This study aimed to understand how public sector auditors leverage the affordances of digital innovations for digital transformation. By applying the affordances

Table 4.2 Summary of findings on the use of data analytics tools for change in LGA methodology

<i>Elements giving rise to affordances</i>		<i>Conditions</i>	<i>Affordances (possibilities of use)</i>	<i>Actualisation (goal-oriented actions)</i>
<i>Digital innovation's properties</i>	<i>Public sector auditors' goals</i>			
Data analytics tools have material properties to extract data from the extensive volumes of data.	Digitisation of the public sector provides a vast amount of data available for performance auditing. A need to deal with the growing amounts of unstructured data.	– The availability of databases (such as Doffin) with digitised data in Norway – Data analysis skills, CISA certificate – Organisational resources spent on learning data analytics – SAI knowledge sharing	Running text mining on similarly structured documents or web scraping to identify the text of auditing interest and gather information from the internet.	1 Using in the auditing on building applications through health reports to identify the nutritional status in nursing homes 2 Running reports to identify the nutritional status in nursing homes 3 Using data analytics tools on procurement documentation from Doffin

Abbreviations: CISA, Certified Information Systems Auditor; SAI, Supreme Audit Institution.

theoretical lens, the authors of this study looked at the empirical evidence collected through the interviews conducted with public sector auditors performing LGA in Norway.

Despite the introduction of various digital innovations to LGA several decades ago (e.g., NVivo, IDEA, Visma and Teams application), their use has primarily supported auditing activities rather than driving the digital transformation of auditing processes. However, our study presents two instances of early leveraging of digital affordances for changing LGA processes, indicating a shift in direction towards digital transformation. Our first observation is the utilisation of system-to-system data connections through APIs for partially automating financial auditing processes (Table 4.1). The second finding indicates the use of data analytics tools, such as text mining and web scraping, leading to changes in LGA methodology beyond traditional sample-based approaches (Table 4.2). These advancements mark LGA's initial steps towards Audit 4.0, a concept that has already been long discussed in the private sector. Audit 4.0 is expected to automate audit procedures, expand audit scope, reduce audit times and, ultimately, enhance overall quality assurance (Dai & Vasarhelyi, 2016). To reconfigure the nature and organisation of LGA towards digital transformation, there is a dynamic interaction happening between digital innovations and public sector auditors. The use of affordances of digital innovations is, therefore, not simply determined by the human or technological agency but is a product of “interpenetration” between the goals of the users and the technology’s

properties (Orlikowski & Scott, 2008; Salijeni et al., 2021). Therefore, organisational culture, leadership, people and strategy are playing an important role in digital transformation (Otia & Bracci, 2022). Moreover, since affordances are goal oriented, the ultimate goal of the type of auditing task being performed (whether it is compliance, performance or financial auditing) matters in how devices would create the possibilities for auditors (Aquino et al., 2022).

While it is too early to declare full-scale digital transformation in LGA, our findings show the early steps towards transforming auditing practices. However, the authors were interested in going further than just identifying whether digital innovations “afford or not”, to understand and answer the question of *how* they afford. By applying a more dynamic view of the technological affordances, proposed by Davis (2020), the authors could obtain an understanding of the underlying conditions of how public sector auditors leverage digital innovations. This study highlights the increasing availability of and access to data in Norway, which has allowed public sector auditors to leverage digital innovations to transform LGA by developing new auditing processes or reengineering existing ones based on the data available. This finding underscores the importance of timely audit regulations and data policies given the rapid pace of digital business advancements, as emphasised by Manita et al. (2020). We further find that other underlying conditions also played a key role in how public sector auditors leverage digital innovations, such as the surge in computing power, public sector auditors’ digital literacy (data analytics, coding skills, etc.) (Du et al., 2019), organisational support (resource allocation and learning) and knowledge exchange (within NKRF, other auditing companies or SAI).

This research adds to the existing body of literature on public sector auditing, by offering insights into the potential use of digital innovations for auditing transformation. This study addresses the call to add to the understanding of the impacts that stem from technology adoption in public sector auditing (Aquino et al., 2022; Mattei et al., 2021). We contribute to our understanding of the digital transformation of LGA with the first insights from the Norwegian case. Furthermore, we enhance the theoretical knowledge of digital affordances, shedding light on their utilisation for digital transformation goals and the associated conditions. By illustrating the underlying conditions for the use of digital innovations, we add to the theoretical discussion by Davis (2020).

To further promote digital transformation within LGAs in Norway, policymakers should ensure that the conditions mentioned above (availability of and access to data, digital literacy, organisational support and knowledge exchange) are met and enhanced. Moreover, the findings of this study provide practical insights for auditing professionals seeking to leverage digital innovations in transforming auditing processes. By attracting talent into the public audit sector, LGAs can increase their competitiveness with the Big Four and private audit companies. Additionally, there is a recognised need to develop university educational programmes that enhance the digital literacy of public sector auditors.

This study suggests that future studies should further advance research on the digital transformation of public sector auditing by moving beyond the mere

technological perspective. We urge scholars to experiment with various methodological approaches to explore leveraging digital affordances further. The comparative analysis could be valuable in gaining a deeper understanding of the role of institutional setups in the adoption of digital innovations, while mixed-methods strategy could enhance both theory testing and theory building (Grafton et al., 2011). Additionally, this study aims to draw the academic community's attention to the necessity for more studies conducted at the local level in diverse contexts.

Annex 1.

Interview guide for public sector auditors conducting LGA:

- 1 What have been the main technological changes affecting your work during the last few years? Please provide examples. What are the opportunities and threats to your work resulting from these technological changes?
- 2 What are the main regulatory changes affecting accounting and auditing during the last few years? What are the opportunities and threats to your work resulting from these regulatory changes?
- 3 How do other auditing firms' approaches to new technologies influence your work?
- 4 Have your clients' expectations and demands for your services changed significantly during the last few years? If yes, how exactly did they change, and what was the main reason for the change?
- 5 How have technologies changed the way you communicate your findings and assessments?
- 6 Explain how you elicit further explanations and information from management/the accounting department in order to corroborate your findings and interpretations.
- 7 Has the client at any point requested that you change your auditing approach due to the introduction of more digitalised solutions or for some other reason?
- 8 What knowledge, skills or competences have you had to improve during the last few years? What was the main reason you had to make these improvements?
- 9 How has the increased digitalisation affected your understanding of the client and your auditing risk assessments?
- 10 How does your firm contribute to improving employees' knowledge, skills or competence?
- 11 Have you introduced any new methods or tools to perform your auditing during the last few years? Please explain. Why did you find it necessary to introduce such methods and tools?

Notes

- 1 We would like to extend our gratitude to Professor Toomas Haldma for his active involvement and contribution to the initial phases of the study development.

- 2 www.data.norge.no
- 3 <https://www.w3.org/2013/share-psi/wiki/images/d/d2/NorwegianPublicSectorSharePSISamos.pdf>
- 4 APIs enable applications to connect to other applications and to data, as well as engage developers and provide the foundations of business ecosystems.
- 5 <https://www.brreg.no/en/about-us-2/>
- 6 Visma is a privately held company headquartered in Oslo, Norway, which provides business software and information-technology-related development and consultancy.
- 7 The Norwegian Association of Local Government Auditors.
- 8 Doffin is the Norwegian web-based database for notices of public procurement and procurement in the utility sector (water and energy supply, transport and telecommunications) that are subjected to European Union regulations. <https://www.doffin.no/>
- 9 Norsk evalueringsforening is a professional forum. The association's role is to be a driving force for increased quality and the better implementation and use of evaluations.
- 10 CISA stands for Certified Information Systems Auditor, a certificate issued by ISACA – a professional membership organization committed to the advancement of digital trust by empowering IS/IT professionals to grow their skills and knowledge in audit, cybersecurity, emerging tech and more.
- 11 R is a language and environment for statistical computing and graphics.
- 12 <https://www.auditingalgorithms.net/index.html>

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5 Internal organisational arrangements and engagements with environment in small and medium-sized accounting practices

Zahid Ali and Jan Mouritsen

Introduction

Given the rapidly changing demand for better reporting requirements and their implications for the accounting profession, the discussions on the evolving role of accountants and their services remain prominent in accounting literature (Carnegie et al., 2021; Jackson et al., 2022; Ali & Mustafa, 2023). Although there has been an increasing interest among scholars in documenting the sensing and seizing of opportunities in elite accounting firms to act as business advisors (Brock & Powell, 2005; Greenwood & Suddaby, 2006), less attention has been paid to other significant segments such as small and medium-sized accounting practices (SMPs). The emerging empirical studies in the last two decades indicate the engagement of SMPs with the environment (see Berry et al., 2006; Jarvis & Rigby, 2012; Sarens et al., 2015; Blackburn et al., 2018; Ogane, 2021). The common premise in these studies seems to be the changing environment inviting practices to act as small business advisors. However, analysis of the current stock of literature indicates that a coherent picture of sensing and seizing capabilities in these practices is lacking (Ali & Mustafa, 2023). It is possible that internal organisational arrangements may create differences among the practices in sensing and seizing the opportunities. Unlike the previous literature, this chapter aims to consider the internal organisational arrangements and how these may account for the variation of sensing and seizing among practices.

One of the reasons for differences among elite actors and SMPs in sensing and seizing the opportunities for developing services could be firm size. We know that SMPs are not a scaled-down version of elite actors. The size is often associated with administrative acumen and power. Thus, division of labour, knowledge specialisation and infrastructure investments in technology, market development and human resources' improvements are more likely in larger firms than in smaller ones. This implies that large firms have more structured work processes, governance systems and monitoring systems than their smaller counterparts, which could eventually enable elite actors to sense and seize the opportunities for developing new services. Yet, this does not mean that size is only an indication of lack of organised capabilities. Indeed, SMPs also have organisational characteristics that help maintain a certain continuity with their own accumulated experiences. These

firms have developed – more or less consciously – ways of attending to their environment and created lenses through which they understand it (Ali, 2023). Therefore, there is also structuring in these firms, even if it may be that such structuring is more a consequence of historical events than perhaps of systematic management and decision-making. It is at least a possibility. This is the theme of the chapter, and the specific question raised is: *How are internal organisational arrangements related to SMPs' engagement with their environment?*

There are several motivations behind this question. First is the research on SMPs, which exhibits the engagement with environment by developing advisory services (Berry et al., 2006; Jarvis & Rigby, 2012; Sarens et al., 2015; Blackburn et al., 2018; Ogane, 2021). This research generally contends that SMPs should provide advisory services but also that they are hesitant to do so. This hesitation is a general one that does not explain the variation among SMPs. Several studies indicate substantial differences among SMPs regarding serving as small business advisors (Marriot & Marriot, 2000; Gooderham et al., 2004; Tanewski & Carey, 2007). The recent empirical evidence also suggests that not all SMPs are equally likely to sense and seize the demand for advisory services (Ali, 2023). Second, change always has a counterpoint in continuity. Resource-based theory sees organisations not only as size but also as interrelated with time. Through time, resources are accumulated, and over time organisations thus become an expression of their historical pathways. Therefore, there is a dilemma that becoming good at something over time to some extent stands in the way of doing other things that have not yet been incorporated into the organisational repertoire of action. Rather than considering these dilemmas, there are fewer studies that only provide some fragmented evidence on factors associated with service diversification among SMPs (Ciccotosto et al., 2008; Døving & Gooderham, 2008; Alam & Nandan, 2010; Sarens et al., 2015). Third, it is important to consider the increasing concerns regarding the changing demand for the nature of services from accounting firms, irrespective of their size (Alam & Nandan, 2010; Chikweche & Bressan, 2021). The research and professional associations such as the International Federation of Accountants recognise this change and suggest greater proactivity from SMPs to respond to the demand for advisory services. Furthermore, these practices are believed to employ the greatest number of professional accountants worldwide and typically serve small businesses – commonly referred to as the engine of economic growth and innovation (Malo et al., 2020). Despite this critical significance, literature continuously reports the expectation gap between the demand and supply of advisory services (Kirby & King, 1997; Blackburn et al., 2018; Ali & Mustafa, 2023). Therefore, it is timely to better understand what matters most for sensing and seizing the demand for advisory services.

To study the question raised, this chapter assumes that different organisational arrangements may enable different ways of engaging with the environment. This assumption is used to relate multiple organisational characteristics with sensing and seizing, i.e., identifying the demand for advisory services as an opportunity and transforming the opportunity into service provision. More specifically, the governance structures, foresight practices, firm size and market size are considered, to

investigate whether these arrangements are related to the identification and transformation of opportunities from the environment. A resource-based view (RBV) posits that the firm's competitiveness stems from a distinctive collection of valuable, rare, irreplaceable and sustainable tangible and intangible assets (Barney, 1991). Among other assets, internal organisational arrangements and strategic orientation are also considered unique and valuable assets influencing organisational effectiveness (Zheng et al., 2010). However, whether they may influence the organisational effectiveness in capturing the demand for advisory services and capitalising on the demand to act as small business advisors in the context of SMPs remains an understudied question.

To test the proposed hypotheses, data was collected from Norwegian practices with a final sample size of 196 respondents. Analysis of data by a Kruskal–Wallis test in SPSS indicates that SMPs' ability to sense and seize the opportunity to act as small business advisors can be attributed to the possession of dispersed governance structures, longer foresight practices and lower market size. Statistical results further indicate that firm size does not make any difference in SMPs acting as small business advisors. These results suggest that firm size does not matter per se, and the notion of size could have multiple explanations. However, it is important to consider the appropriate governance structures, foresight practices and market size, to sense and seize opportunities from the environment. In doing so, the chapter provides an enhanced understanding of organisational arrangements and their role in sensing and seizing to enable SMPs in acting as small business advisors. It also responds to recent calls for further research to be conducted on service developments in SMPs and the relevant factors in explaining the differences among SMPs in developing new services (Ali & Mustafa, 2023; Ali, 2023). The main contribution of this chapter is in demonstrating the relevance of organisational arrangements for engagements with environment in SMPs. Consequently, SMP owner-managers could rethink the core organisational arrangements and opt for the most appropriate ones to explore and exploit opportunities from the environment. The following section provides an overview of theoretical orientation and hypothesis development, then we explain our methodology, followed by the results, discussion and concluding remarks.

Theoretical orientation and hypotheses' development

In the following subsections, first, a review of the prior literature is provided to establish the potential relevance of organisational arrangements for SMPs to sense and seize opportunities from the environment. A proposed theoretical mechanism is illustrated in Figure 5.1. Second, hypotheses are developed to test the proposed relationships in the form of four hypotheses.

RBV of the firm

The internal arrangements of organisations make up salient resources for success. The RBV, which states that the competitiveness of the firm originates from unique resources and assets, provides the basis for examining the pertinence of unique organisational

arrangements necessary for identifying and translating opportunities from the environment. The resources the firm possesses include assets, capabilities, firm attributes, information, knowledge and others, as controlled by the firm (Daft, 2015). Among other assets, internal organisational arrangements such as structure, culture and strategy are considered unique assets influencing the effectiveness of organisations (Zheng et al., 2010). The same view sheds explanatory light on the relevance of governance structures, foresight practices, firm size and market size as potential arrangements that could make differences among SMPs in sensing and seizing.

Organisational researchers have started paying more and more attention to the differences between various governance structures. Characterising the governance in terms of ownership, the fundamental claim made is that the ownership type has an impact on business decisions, operations and results (Daily & Thompson, 1994). The business decisions are believed to influence the development and mobilisation of organisational resources and capabilities (Camisón-Zornoza et al., 2020). Scholars have analysed the effects of different ownership structures on an array of organisational outcomes such as firm performance (Demsetz & Villalonga, 2001), diversification strategies (Banalieva & Eddleston, 2011) and resilience to external environment (Crespí-Cladera & Martín-Oliver, 2015), to mention just a few. For instance, a dispersed ownership structure is believed to enhance the transformation of research and development activities for new service development (Chen et al., 2008). Similarly, the strategic orientation, as a key asset of a firm, is believed to be strongly rooted in the idea of the desired future. This dimension represents the relative significance of foresight practices in firms – longer-term considerations for achieving effectiveness and shorter-term considerations for achieving efficiency as critical factors in strategic decision-making (Venkatraman, 1989). Research suggests that the time dimension acts as a key resource in achieving competitive advantage (Hui, 2004). For example, longer planning horizons are associated with the stimulation of ideas and new service development (Sołoducho-Pelc, 2015; Posch & Garaus, 2020). These works indicate the relevance of different governance structures and foresight practices as potential arrangements which might explain the differences among SMPs in sensing and seizing to act as small business advisors. The chapter also incorporates firm size and market size as additional arrangements to further refine and test the determinants, to attain a more comprehensive view of organisational arrangements and environmental engagements.

It is necessary to understand that SMPs entered the market via the provision of basic accounting services such as bookkeeping and the preparation of financial statements for small businesses. This implies that, to act as small business advisors, SMPs must first sense the opportunities in terms of identifying the demand for advisory services and then seize the opportunities by providing advisory services. “Sensing” refers to the identification of opportunities in relation to customer needs while “seizing” involves the mobilisation of resources to capture value from the identified opportunities. Therefore, it is necessary for practices to go through the following two stages, to act as small business advisors:

Stage 1: Sensing: Identify the demand for advisory services as an opportunity.

Stage 2: Seizing: Translate the opportunity in terms of advisory service provision.

In the following lines, four hypotheses are proposed to exhibit how SMPs may differ in both stages according to organisational arrangements. Figure 5.1 presents the theoretical mechanism. The arrows are intended to represent not causal effects but, rather, the proposed correlations.

Governance structures

Governance structures such as ownership structures deal with the matter of how and by whom company shares are owned, as well as who is involved in strategic decision-making (Crossland & Hambrick, 2007). Cross-national research on ownership has adopted a criterion to differentiate structures based on ownership share and compared *concentrated vs dispersed* as two primary structures (Aguilera & Crespi-Cladera, 2016). “Concentrated ownership” refers to structures allowing individuals or shareholders to exercise power over organisations, while “dispersed ownership” represents firms with shareholders, none of whom can individually influence the organisation. Despite the influence of ownership structures on multiple organisational outcomes such as firm performance (Colpan & Yoshikawa, 2012) and innovation (Brossard et al., 2013), how ownership structure might make a difference in engagement with the environment is yet to be explored.

The small business context is often dominated by concentrated ownership structures (Camisón-Zornoza et al., 2020), where controlling shareholders are mostly individuals or families. This type of ownership is quite evident among sole proprietors in the small practitioner segment. On the one hand, in sole proprietorships, there are fewer eyes on the environment, which may lead to less understanding of and capitalising on opportunities from the market. Research suggests that concentrated ownership structures hamper the initiation of innovation projects (Schulze et al., 2003). This is because a high degree of ownership concentration dissuades organisations from involvement in research and development activities and thus negatively influences the innovation capabilities (Ortega-Argiles et al., 2005). Similarly, high ownership concentration is found to negatively influence the development

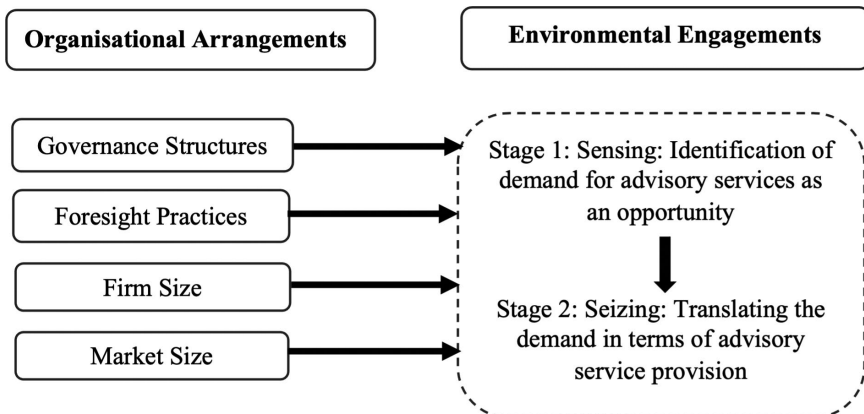


Figure 5.1 Theoretical mechanism.

of dynamic capabilities (Camisón-Zornoza et al., 2020), which are necessary conditions to broaden the services beyond standard accounting services (Døving & Gooderham, 2008). On the other hand, there are several eyes on the environment in firms with dispersed structures, such as enterprises and corporations. In these types of firms, monitoring of the environment happens through different media and types of attention. Empirical studies show that diversity in shareholders increases the firm's propensity to identify opportunities from the external environment and innovate (Kochhar & David, 1996; Aghion et al., 2013). The positive influence of a dispersed ownership structure on innovation is due to the diversification among board groups of shareholders. The valuable resources brought by shareholders in this case are believed to reduce the environmental uncertainty and foster efficient conversion of research and development activities into new product and service development (Chen et al., 2008). Therefore, different compositions of governance structures could be expected to create differences among SMPs' engagements with the environment. Accordingly, it is hypothesised that:

H1: Firms with dispersed governance structures will be more likely to sense and seize, as compared to firms with concentrated governance structures.

Foresight practices

Research on organisational behaviour suggests that the strategic orientation of a firm influences the way it responds to events in the environment (Chattopadhyay et al., 2001). The strategic orientation of a firm can be assessed by how heavily it emphasises certain factors, such as aggressiveness, analysis, futurity, proactiveness and riskiness (Morgan & Strong, 2003; Venkatraman, 1989). Regarding futurity, extant strategy literature supports a long-term strategic perspective as desirable and supportive for the firm's health and opting for changes in the market (Lumpkin & Brigham, 2011).

This means that the time dimension of foresight practices matters in identifying and translating opportunities from the environment. For this reason, the time dimension in foresight practices is considered a key determinant of competitive advantage (Hui, 2004). In the same vein, research pinpoints the differences in multiple organisational outcomes based on foresight practices. In the context of small businesses, a study by Mitchelmore and Rowley (2013) revealed that firms with longer strategic planning horizons were more active in seeking new markets and developing new products, as opposed to firms with short-term planning horizons. These findings implicitly indicate the role of time length in foresight practices in identifying and capitalising on emerging opportunities in the external environment. Similarly, a study by Soloduch-Pelc (2015) demonstrates that a long-term planning horizon on the organisational level leads to competitive advantage, compared to short-term planning, enabling firms to prioritise the broadening of their product and services portfolio. This makes sense because, if firms are thinking for the future, they might be able to know about what might lie ahead. More recently, Posch and Garaus (2020) also added that strategic planning leads to stimulating innovative ideas and enhanced innovation within organisations, and long-term planning has been declared essential

for the achievement of these goals. Longer foresight practices mean preparation for uncertainty in the future, which might enable firms to think about possible actions to mitigate changes in the future. Ready-made planned actions and activities to mitigate the changes could facilitate smooth responses, to cater for the uncertainty. This stream of literature, thus, has well established that the time length of the planning horizon influences not only the way organisations identify the opportunities but also how they settle with the environment by capitalising on opportunities from it. Therefore, it is possible that the time length of foresight practices may create variation among SMPs in sensing and seizing. Hence, it could be expected that:

H2: Firms with longer planning horizons will be more likely to sense and seize, as compared to firms with shorter planning horizons.

Firm size and market size

Organisational size is a crucial factor that may affect both the identification and translation of opportunities from the external environment. Larger organisations have more tangible and intangible resources, which could well attend to changes in the market and facilitate action, than smaller organisations. The research and development departments in big firms allocate professionals to analyse the markets and see what the possible changes in future markets might be, as well as how – and what kind of competencies they might need – to cater for those changes. This mirrors how big accounting firms transformed themselves by structural and strategic changes to adapt to the environment. Similarly, research on SMPs also gives an indication that firm size affects the sensing and seizing. Alam and Nandan (2010), for example, reported evidence of the impact of firm size on the seizing of demand for advisory services among SMPs. The evidence from the fieldwork indicates that SMPs that are larger in size offer wide-ranging services, compared to smaller firms. This is because more resources enable the much easier settlement with the environment, which may not necessarily be the same in smaller firms. Similarly, Jarvis and Rigby (2012) found that the size of the firm impacts the ability of SMPs to provide support beyond the basic accounting services. The authors reveal that the smallest practices were not willing to get deeply involved in services beyond their core competencies. Furthermore, Sarens et al. (2015) argue that it is important to distinguish between sole proprietors and accounting firms, while analysing the ability of external accountants in broadening the scope of service provision. This can be seen as an indication that firm size, which represents the number of employees as well as a pool of tangible and intangible resources in a firm, can influence the ability of SMPs to sense and seize opportunities from the environment. One could expect more employees and more resources to make it more possible to identify changes in the market and help move beyond the narrow and technical compliance-driven tasks. Thus, it could be expected that:

H3: Medium-sized firms will be more likely to sense and seize, as compared to small and micro-sized firms.

Organisations operate by taking inputs from and delivering outputs to the market. The most efficient operations arise when outputs are willingly taken up by the market. The relationship with market and external stakeholders requires the firm to align what it should offer to what is demanded in the market. One way of getting this alignment comes from creating relationships with customers. Research in the context of SMPs supports this view and suggests that SMPs need industry-based knowledge to establish competencies in designing and offering services according to what the customer needs (Alam & Nandan, 2010). Closer ties with customers enable SMPs to discuss the issues on a more regular basis. That is why customers also prefer to build personal relationships with accountants, so that they can convey what they need (Blackburn et al., 2018). Ali and Mustafa (2023) also revealed the significance of relationships for accountants to understand the customer's need. Thus, personal relationships and communication as well as industry-based knowledge play a crucial role in understanding market demand. The degree of communication appears to be a function of market size. Larger market size may lead to less time for communication, while smaller market size may make it easier to communicate. These works indicate that the greater the market size, the fewer the chances to understand the market, because there will be less communication on a regular basis, and the ability of firms to understand customer needs will be less. Conversely, the smaller the market size, the better placed will SMPs be to build relationships and the better the communication to understand the customer's needs will be thus, the better will be the service according to their needs. Empirical evidence supports this view. Tan et al. (2016) suggest that communication facilitates the appropriate service acquisition from SMPs. Notwithstanding the apparent influence of this arrangement, previous studies somehow failed to empirically examine whether it could make any difference in the ability of SMPs to identify and translate the demand for advisory services. Therefore, it can be assumed that:

H4: Firms with smaller market size will be more likely to sense and seize, as compared to firms with larger market size.

Methodology

This section provides a summarised overview of the methodology used in the chapter. However, the technical aspects or supporting evidence, such as relevant tables on variables and statistical analysis and their explanations, are provided in the Appendix. The data for analysis is a part of a survey from a bigger project called TRANSACT. It has been collected from Norwegian practices, with the help of a professional association of accountants, called Regnskap Norge. A link to an online questionnaire was circulated during the period of September–November 2022. The survey questions were formulated based on hypothetical assumptions, to assess how different firms in the industry perceive and respond to changes in the market, such as changing demand for services. Apart from organisational arrangements, the respondents were asked to mention the services they work with and to rate the demand for advisory services as an opportunity. Consequently, a list of

services, along with the ratings on demand for advisory services, made it possible to draw a comparison of SMPs according to organisational arrangements. Initially, 210 accountants completed the questionnaire; however, 14 entries were excluded from the data to ensure representation of each firm by a single individual, leading to a final sample size of 196 respondents. The majority of the participating firms represented the local private sector across the different cities in Norway. Regarding firm size, 41% of participating firms fell into the size category of 1–10 employees, 35% into the category of 11–50 employees and 24% into the category of more than 50 employees. Thus, this could be called an appropriate sample of SMPs.

As the link to the questionnaire was circulated via a professional association, all the respondents had equal chances of being included in the sample. Any random respondent was allowed to participate with willingness and without any limitations. Thus, the sampling procedure was random sampling. The investigation uses two types of data: (a) nominal and (b) ordinal. Organisational arrangements were measured by nominal data, while ordinal data was used to measure sensing and seizing. Further details on variables and their descriptions are available in Tables 5.2 and 5.3 in the Appendix. The central aim of the current chapter was to determine whether the proposed organisational arrangements could make any difference in SMPs' engagements with the environment. Independent variables were nominal data, while the dependent variables were measured on an ordinal scale. The purpose was to test the differences among SMPs according to organisational characteristics. A statistical test – *Kruskal–Wallis one-way ANOVA test* in SPSS – was preferred because it can identify differences between group means with three or more groups, without assuming a normal distribution of data. The appropriateness of this technique for the current analysis is further provided as notes with the tables in the Appendix. Finally, a correlation matrix of organisational arrangements is generated (Table 5.5 in the Appendix), to obtain insights into whether and how these arrangements are interrelated, and what implications they may have for SMPs regarding sensing and seizing.

Results

In the pursuit of testing the proposed hypotheses, H1–H4, the results of the *Kruskal–Wallis one-way ANOVA test* in SPSS were used (Table 5.4 in the Appendix). The acceptance or rejection of the hypotheses follows the decision rule, as stated by Pallant (2020), by observing the significance values of differences in mean ranks.

Hypothesis 1 states that “Firms with dispersed governance structures will be more likely to sense and seize, as compared to firms with concentrated governance structures”. Based on mean ranks, there are indeed significant differences among SMPs according to their ownership structure. The mean ranks indicate differences among sole proprietorships with a concentrated structure and other firms with dispersed structures. The higher mean ranks of firms with dispersed structures show that firms with dispersed ownership structures are more likely to sense the opportunities in the environment. However, although there are slight differences among mean ranks in the case of seizing among firms with concentrated and dispersed ownership structures, these differences are not much stronger, compared to

differences in the case of sensing. This is interesting because sensing and seizing are not related as expected. This implies that, although dispersed governance structures may facilitate sensing, they do not necessarily lead to seizing the opportunities. Accordingly, H1 can be partially accepted.

Hypothesis 2 was framed based on the time length of the planning horizon among SMPs and its relevance for sensing and seizing. The results convey that a stronger relationship exists between the firm's level of planning horizon and sensing and seizing. The difference in mean ranks among firms who do not have planning horizons and firms with more than three years of planning horizons shows a clear difference in sensing. Firms with longer planning horizons with higher mean ranks are more likely to consider the demand for advisory services as an opportunity, as compared to firms with no planning horizons. Similarly, the results underlined the significant differences among SMPs in seizing, which indicates the role of planning horizon in advisory service provision. The findings suggest that the time dimension of the planning horizon influences both the sensing and seizing in such a way that the longer the planning horizon is, the better the SMPs will be in capturing and translating opportunities from the external environment. Thus, foresight seems to be the fundamental aspect among organisational arrangements that influences not only the sensing but also the seizing. This provides enough evidence to accept hypothesis 2.

Regarding hypothesis 3, there are differences in mean ranks among medium, small and micro firms in sensing and seizing, but the results show that these differences are not significant. This means that firm size does not make any difference in sensing and seizing among SMPs. There is not much evidence to support what has been proposed in the case of firm size. Hence, the hypothesis cannot be accepted. This is surprising, because it is something that goes against what we know from general literature. The notion of size appears to be a complex thing. The distinction based on big or small size among SMPs is strange. The multiple possibilities of notion of size are further discussed later in the chapter. Finally, with respect to market size, although there are differences among SMPs in considering demand for advisory services as an opportunity based on market size, these differences are not significant. However, it can be observed that market size is related to seizing. This is interesting, because it shows something different from the general pattern of sensing and seizing. Firms initially sense and then seize, but seizing without sensing implies that these firms seize the opportunities episodically. This could be a picture of response to customers whenever services are needed, because the smaller market size enables the firms to communicate on a regular basis and understand their needs. This allows us to partially accept hypothesis 4.

Finally, in addition to Kruskal–Wallis, correlation among organisational arrangements has been examined (Table 5.5 in the Appendix), which exhibits how these arrangements are interrelated. The significant correlations were found among ownership structure and market size, firm size and market size, market size and ownership structure as well as firm size. The correlations between the arrangements could have various implications for firms, which are considered in the discussion part. Summing up the results, a summary of hypotheses, decisions and interpretations is provided in Table 5.1.

Table 5.1 Summary of hypotheses, decisions and interpretation

<i>Properties</i>	<i>Hypotheses</i>	<i>Decision</i>	<i>Interpretation</i>
Governance	H1: Firms with dispersed governance structures will be more likely to sense and seize, as compared to firms with concentrated governance structures.	Partially accepted	Governance question seems to be related only when it comes to sensing, i.e., identification of demand for advisory services as an opportunity. However, non-significant values in terms of translation suggest governance may not be related to seizing, i.e., the translation of identified opportunities.
Foresight	H2: Firms with longer planning horizons will be more likely to sense and seize, as compared to firms with shorter planning horizons.	Accepted	Foresight practices not only make differences in sensing but also create variation in making the translation possible. Both significant values suggest variation because of foresight practices. The forward looking seems to be much more related than governance.
Firm size	H3: Medium-sized firms will be more likely to sense and seize, as compared to small and micro-sized firms.	Rejected	Firm size does not make any differences in both explorative and exploitative modes. This means that size of firm is not much related per se in identifying the opportunities in the environment and seizing them.
Market size	H4: Firms with smaller market size will be more likely to sense and seize, as compared to firms with larger market size.	Partially accepted	Market size seems to be related merely in the case of translating the opportunities. This means that market size is not relevant to understanding market dynamics. Seizing without sensing shows an episodic settlement with the environment.

Discussion

The purpose of this chapter was to investigate whether organisational arrangements are related to engagements with the environment, i.e., sensing and seizing. The results provided enough evidence to support the RBV of specific organisational arrangements as key assets. Differences among SMPs in sensing and seizing opportunities can be partially explained by governance structures and market size; however, the data fully supported variation across SMPs in relation to foresight practices. Furthermore, no differences were found regarding firm size. There are various theoretical schools that could explain the differences among firms in sensing and seizing the opportunities, such as the role of education among managers. Considering the role of education among managers could be another important factor, leading to differences among firms in sensing and seizing. However, SMPs

are mostly managed by single individuals or a smaller number of people. The existence of diversity in educational level may not be present in the case of SMPs. Thus, organisational arrangements could be more suitable factors to explain the differences among SMPs. This is because firms do hold some structures and plan for the future, irrespective of their size. Therefore, the results of the current analysis are discussed in terms of how internal organisational arrangements can explain the differences among practices in sensing and seizing, which is beyond what has been established by the existing literature.

The significant differences in sensing and seizing because of time length in planning horizon suggest that people's orientation towards the future is much more important than whatever structure we could imagine establishing in SMPs. The way people deal with the environment by identifying opportunities and translating in terms of service provision seems to be less dependent on structures in SMPs. The only thing that matters most and makes a significant difference among SMPs acting as small business advisors is futurising – the foresight to see what lies ahead. These findings are consistent with previous studies asserting the role of strategic orientation as a key asset for achieving organisational effectiveness and innovation (Zheng et al., 2010; Sołoducho-Pelc, 2015; Posch & Garaus, 2020). The planning horizon is the only grouping variable in this investigation contributing to explaining differences in both sensing and seizing. Thus, the primary thing that matters most is the people and how they see and respond to what they see. This is not so surprising. The idea of forward-looking capabilities is abstract in a single test, and therefore how this happens is absent. Thus, it is useful to dive a bit more into the organisational details that make this foresight capability possible.

It is interesting that dispersed governance structures are more related to sensing than concentrated structures. The axis “dispersed – concentrated” may say something about the variations in competencies and diversity in knowledge represented in the management group. This is because there are more eyes on the environment in dispersed structures, and therefore the monitoring of the environment happens through many different media and types of attention. Conversely, in concentrated structures, there are fewer observations about the environment, and it may be that there is less internal challenge as to the understanding of the markets as they are. This axis thus shows that understanding potentialities are organised differently. But it is not so clear that such understanding will necessarily lead to changes in actual efforts to make a difference to the market situation. The previously held claim regarding the role of governance structures for identifying opportunities and innovation (Kochhar & David, 1996; Aghion et al., 2013) within organisations seems to be partially true in the context of SMPs. The problem here is probably that change in the market requires a “hook”. There must be not only an abstract possibility but also a particular episode that makes it possible to enact a relationship with a customer or a market segment. This is a much more precarious activity that depends both on the understanding of the market and on an actual opportunity to render a service delivery stable. While sensing depends on the concentration of the eyes that look at the world and the stability of a collective world view, seizing depends much more on a settlement with an environment that needs to be associated not with

forward looking but perhaps more with opportunity that is more haphazard. One possible hook for seizing could be knowledge and skills; however, these attributes have been continuously mentioned as critical issues facing SMPs (Ciccotosto et al., 2008; Alam & Nandan, 2010). This could be a possible reason for ownership structures not explaining differences in seizing, which implies that the role of people and their competencies, knowledge and skills could also count for seizing.

Firm size is not related to forward looking. This is quite strange, as it shows that size can be used for many different things. Size is not a fundamental property of a firm; it is a possibility into which many different things can be poured. There are at least two possibilities of how the notion of size can be interpreted. Since the firms in the small practitioner segment have their own ways of defining the environment and their responses (Ali, 2023), some firms act as specialists, while others are generalists. The idea among specialists is that we experience being successful because we continuously reproduce what we have, and customer likes it. This could be the notion of size as maintaining a particular competence. Here, size appears to be a production machine more than a monitoring capability. This interpretation of size may lead to a competency trap, because getting good at doing something specific is like getting trapped in the success of the past. Thus, one notion of size looks like operating and reproducing similar things in a constrained market that is willing to take up the outputs continuously produced by these firms. The second idea of size could be that the market imposes the requirement on the firms to be different. There is a demand function that might drive what the firms should do. In this case, the firms may do what the market needs. Thus, the notion of size is really a complex thing. That is why it would be naïve to say that all SMPs should adapt to the environment because the firms in the first category may not adapt, as they already have a marketplace where they want specialisation. However, the firms with a generalist orientation may prefer to adapt to the environment according to market dynamics. These different interpretations of size are reflected in Ali's (2023) distinction among SMPs as bulls and chameleons. These different orientations will tend to create different SMPs – with bulls as rigid against the environment, while chameleons are more adaptive. Therefore, to say big or small SMPs do something is strange, because big or small SMPs do less than expected from the general literature. Moreover, the demand for constantly changing tailor-made services, adapted to the context of small businesses, can only be catered for with continuous professional development and by recruiting the relevant employees. A mere employee count may not explain the differences among firms. The relevant recruitment and efficient utilisation of employees could bring differences, rather than an employee count. The reason for firm size not being an explanatory factor could be attributed to the lack of updated professional competency and efficient utilisation of employees within SMPs.

Finally, market size is an indication of differentiation. Firms with smaller market size differentiate themselves into seizing a variety of possibilities. This is concerned with finding opportunity more than planning strongly for it. Market size is a source of exploration that comes probably from relations with customers. Many customers ask many questions and ask for solutions that are required

instantaneously. There is not so much time for sensing because seizing is much faster. SMPs may not be able to capture what customers need in the case of greater market size, due to resource constraints to maintain regular communication and closer ties. However, the non-significant difference in sensing suggests that market size is not linked to understanding the market dynamics. It is interesting that sensing and seizing are not related as expected. Sensing may happen because of governance and foresight; however, having many eyes and longer planning horizons may not necessarily mean that these firms are always able to exploit what they found as an opportunity. Seizing seems more episodic. This shows that firms adapt not because of thinking but because of the feeling in situations. An RBV shows that sensing and seizing are related, but people seem to be doing it by leaping and jumping. Thus, the firms are not involved in the broader picture that could be drawn by means of sensing, but it is more as if firms exploit the opportunity right away when they are exposed to it. So, it is not a rational problem with knowing the world. It seems a response to opportunity exposition. Thus, confrontation with the world leads to engagement with opportunity. The relation between sensing and seizing could be true on an institutional level, but for an individual it could be a leap. This suggests that thinking about the world and activity are not correlated. The smaller market size enabling SMPs to seize the opportunities could have consequences in terms of facing the paradox of either sacrificing market size or seizing opportunities. This is a question which needs further attention and inquiry.

Concluding remarks

While answering the question of how internal organisational arrangements are related to SMPs' engagements with the environment, this chapter highlights that, generally, firm size does not matter per se for the sensing and seizing of opportunities. However, what matters is whether there is dispersed governance and whether there is a differentiated market, as well as how long the length of foresight practice is. The chapter demonstrates the relevance of governance, foresight and market size for SMPs to adapt to the changing market dynamics. In doing so, the insights also shed light on the inadequacy of previous studies relying upon single theoretical frameworks to explain differences among SMPs. For instance, the partial relevance of governance structure suggests using integrated theoretical frameworks, such as RBV and knowledge-based view, together to better understand the underlying differences among SMPs acting as small business advisors. In addition, the results pinpoint an important potential paradox facing SMPs in serving an enormous number of customers vs advisory service provision. This particularly opens many key areas for further research to explore the priorities of SMPs and their responses to the paradox. This has been somehow ignored by previous studies, which attempted to enhance our understanding of differences among SMPs in acting as small business advisors.

The implication for owner-managers of SMPs is that they should emphasise opting for certain organisational characteristics to align the services offered to what is demanded in the market. Embracing at least the features of dispersed ownership

structures, longer planning horizons and focusing on fewer target customers could help SMPs to overcome the hurdles of sensing and seizing to transform themselves from bean counters to small business advisors. Enabling owner-managers to foresee the future and act accordingly may create real differences to adapt to the changing market dynamics.

Despite the several contributions of this chapter, the results should be interpreted in the light of their limitations. Unlike traditional analysis techniques such as regression analysis, it relied on non-parametric tests. Future studies could examine the direct impact of these organisational characteristics on the ability of SMPs to sense and seize. The results reveal that, despite recognising the opportunities, SMPs fail to translate the opportunities in terms of advisory service provision. Future research could explore the underlying reasons behind the differences in what SMPs aim to deliver and what they deliver in practice. Further investigations into the priorities of SMPs in dealing with the paradox of greater market size vs advisory service provision could be another interesting area to explore.

Regarding the variables and measurements, the current investigation employed nominal data for independent variables. Although the combination of nominal and ordinal data is considered suitable for multi-group analysis techniques such as the Kruskal–Wallis test (Pallant, 2020), future studies should consider other approaches to test and extend the findings of this study. The measurement of both dependent variables is limited to single items, which is an acceptable tradition when the concepts measured are not complex in organisational studies (Matthews et al., 2022). The method of multi-item constructs can be employed. For example, ownership structure could be measured by using multi-item ordinal data to examine its direct relationship with sensing and seizing in SMPs. It is likely that these relationships may not be linear, due to differences in possession of knowledge and skills among SMPs. Therefore, it is further recommended to incorporate potential moderating factors and mediating mechanisms while examining direct relationships.

To ensure the generalisability of current results, researchers are welcome to replicate the research design in other countries in which results could be contrasted because of institutional differences. The data in this study is collected from Norwegian practices, where the authorities place no restrictions on SMPs providing services outside the traditional accounting domain. The guidelines from authorities may or may not be same in other countries, which consequently might affect the engagement of these practices with the environment, irrespective of any form of organisational arrangements.

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Appendix*Table 5.2* List of standard and advisory services reported in survey

<i>Traditional accounting services (12)</i>	<i>Advisory services (17)</i>
Bookkeeping, Annual Accounts, Payroll, Invoicing, Annual Settlements, Reconciliation, Financial Control, Tax Returns, Data Entry, Reporting, VAT Calculation and Tax Reports	Administrative Routines, Sales and Marketing, Transference of Ownership, Financial Advice, Management/HRM, Mergers and Acquisitions, Systems Support, Team Management, Data Support, Financial Management/Budgeting, Quality Control, Inheritance Issues/Firm Transfers, Consultancy and Modernisation, Counselling, Digitisation of Accounts, Salary Administration, Tax Advisory

Abbreviations: VAT, value added tax.

Table 5.3 Variables and construct descriptions

<i>Data</i>	<i>Arrangements and engagements</i>	<i>Characteristics</i>	<i>Construct description and measurement</i>
Categorical	Governance	Ownership structures	A single item asked the respondents to select the business model of their workplace
	Foresight	Planning horizon	A single item asked the respondents to select the planning horizon period
	Size	Firm size	A single item asked the respondents to mention number of employees
	Market	Market size	A single item asked the respondents to mention number of serving customers
Numerical	Sensing	Identification	A single item asked the respondents to rate demand for advisory services as an opportunity
	Seizing	Translation	Number of advisory services provided by each firm

Note: Organisational arrangements included ownership structure, planning horizon, firm size and market size. To measure sensing, a single item asked the respondents to rate the statement of increasing demand for advisory services as an opportunity. A 7-point Likert scale was used to record the ratings of respondents, ranging from 1 (completely disagree) to 7 (completely agree). To measure seizing, the chapter follows the tradition previously established by Døving and Gooderham (2008). As part of the survey, the respondents were asked to mention the current services they provide to customers. From the open-ended question, a list of standard and advisory services has been generated (Table 5.2), resulting in a total of 12 standard and 17 advisory services. Using a list of advisory services generated from the open-ended question, the number of advisory services provided by each firm was counted to assess the degree of seizing, which is taken as an ordinal variable for analysis.

Table 5.4 Arrangements, mean ranks on engagements and significance values

Arrangements	Groups	Mean ranks on engagements and significance values			
		Sensing	Sig. value	Seizing	Sig. value
Governance	Sole proprietorships	61.00	0.017*	100.50	0.785
	General partnerships	117.38		78.50	
	Cooperative enterprises	84.55		99.50	
	Limited liability corporations	107.41		98.52	
Foresight	Do not plan	84.83	0.003*	85.50	0.003*
	Up to 1 year	95.96		90.22	
	Between 1 and 3 years	93.72		104.02	
	More than 3 years	125.43		112.38	
Firm size	1–50 Employees	96.92	0.577	97.94	0.283
	51–100 Employees	109.07		97.71	
	More than 100 employees	109.68		115.82	
Market size	1–100 Customers	81.64	0.263	109.52	0.043*
	101–200 Customers	94.56		82.73	
	More than 200 customers	101.70		99.63	

Dependent variables: (1) sensing and (2) seizing.

Grouping variables: ownership structure, planning horizon, firm size and market size.

Note: The appropriateness of this test for analysis is due to considerable differences in the number of subjects in each group for independent variables. Since the Kruskal–Wallis test examines the variation in average ranks rather than actual scores to evaluate whether they are significant (Gibbons & Fielden, 1993; Siegel 1957), the test is considered a quality measure in this case for multi-group analysis (MacFarland & Yates, 2016). Therefore, the application of this approach is considered suitable, as it has also been used in previous studies from multiple management science domains, including human resources (Sanz-Valle et al., 1999), marketing (Clark et al., 2017) and accounting (Abdel-Kader & Luther, 2008). Furthermore, to analyse how organisational arrangements are interrelated and implications of correlations, a correlation matrix of organisational arrangements is generated by using SPSS.

*Significance level: 95%, $p < 0.05$.

Table 5.5 Correlations in arrangements

		O. Structure	P. Horizon	F. Size	M. Size
O. Structure	Pearson correlation	1	−0.107	−0.015	0.400**
	Sig. (two-tailed)		0.135	0.833	<0.001
	N	196	196	196	196
P. Horizon	Pearson correlation	−0.107	1	0.126	0.056
	Sig. (two-tailed)	0.135		0.080	0.432
	N	196	196	196	196
F. Size	Pearson correlation	−0.015	0.126	1	0.175*
	Sig. (two-tailed)	0.833	0.080		0.014
	N	196	196	196	196
M. Size	Pearson correlation	0.400**	0.056	0.175*	1
	Sig. (two-tailed)	<0.001	0.432	0.014	
	N	196	196	196	196

* Correlation is significant at the 0.05 level (two-tailed).

** Correlation is significant at the 0.01 level (two-tailed).

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6 Perceived risks and preparedness to deal with “black swans”

A mismatch between competence and perceived knowledge about potential risks¹

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Introduction

Current organisations are increasingly operating under conditions of dynamic, complex and unpredictable external environments and, therefore, also under increasing uncertainty (McMullen & Shepherd, 2006). The growing use of disruptive technologies and shifting societal trends can represent both threats and new business opportunities (Frey & Osborne, 2013). Moreover, COVID-19, accelerating climate change and the increasing number of human-made disasters (e.g., war in Ukraine) alter the landscape in which organisations operate, necessitating a higher level of preparedness to handle future hazards and crises.

The design and use of appropriate risk management systems (RMSs) is supposed to enhance organisational preparedness to handle those risks, by improving anticipation of, and helping to develop procedures to handle, possible hazards and crises (Brustbauer, 2014; Radner & Shepp, 1996; Alchian, 1950). While large organisations tend to develop sophisticated RMSs, research shows that small and medium-sized companies (SMEs) do not use – or use inadequate – RMSs in their practices (Watt, 2007). A low level of sophistication in RMSs can put SMEs at considerable risk of being severely affected by disasters and crises, sometimes even threatening their survival (Verbano & Venturini, 2013). Because SMEs are playing a fundamental role in society from an economic and social point of view, by generating around 50%–60% of the total gross value added (Ecorys, 2012), for example in Germany and other economies (Vakulchuk, 2014), we need to better understand the factors that prevent SMEs from developing adequate RMSs and becoming more resilient towards potential disasters and crises.

This chapter is dedicated to the study of accounting and auditing of small and medium-sized practices (AASMPs) operating in Norway. Environmental turbulence is a new normal for the accounting profession worldwide (ACCA, 2012). Digitalisation, increasing concerns about climate change and the adverse impacts of economic activities on eco- and social systems and corresponding changes in national and global regulators challenge the nature of accounting activities and make it necessary for accounting and auditing practices to fundamentally rethink

the nature of their business models (Brands & Smith, 2017; Richins et al., 2016). Some authors even claim that the accounting profession as we know it today may face extinction (Frey & Osborne, 2013), but it is difficult to anticipate how accounting and auditing services may look in the future. The potential effects of those transformations seem to be especially profound for AASMPs that justify investments in more sophisticated RMSs. Therefore, this study explores the nature of the relationship between the sophistication of RMSs and the perceived level of preparedness, based on surveying managers/employees of Norwegian AASMPs.

Perceptions of risks are always subjective, as risk does not exist “out there” independently of human perceptions (Slovic, 1992). One way to investigate the relationship between preparedness and risk management sophistication is to focus on employees’ attention regarding preparedness and risk management (Nam, 2019). Therefore, this study has chosen to focus on the social and psychological processes that can influence people in their work to prepare for risks and crises (Paton, 2019). Research indicates that there is a direct positive link between high-risk perception and increased demand for measures that can reduce this risk (Sjöberg, 1999). There is a danger in risk ignorance, meaning that people overlook important dangers and threats without being aware of their ignorance (Dunning, 2011). This can lead to employees not feeling any need for the development of sophisticated RMSs (Henk, 2022).

This chapter addresses the following research question: *What is the nature of the relationship between the perceived level of sophistication in RMSs and the perceived level of preparedness among employees in AASMPs, when facing different types of risks?* Based on our understanding of risk management literature, the expectation is that increased preparedness should be closely related to the level of sophistication in RMSs, as well as in AASMPs.

To examine this, this chapter presents the findings of a survey of 510 small and medium-sized Norwegian accounting and auditing firms. Data shows that companies can be grouped in three clusters, with different combinations of perceived preparedness and sophistication: (1) firms with low preparedness and low sophistication in their RMS (uncertain), (2) firms with high preparedness and high sophistication in their RMS (well-prepared) and (3) firms that perceive themselves as highly prepared but have low sophistication in their RMS (overconfident). Further analysis shows that firms in the overconfident group display what is known as the “Dunning–Kruger effect”, known from psychology, where lower sophistication is associated with a higher perception of preparedness. This unfounded overconfidence regarding preparedness can lead to the potential downfall of firms and can represent looming danger to the industry or a “ticking bomb”.

The chapter is structured as follows. First, we will present the relevant literature on risk management and preparedness, focusing particularly on small and medium-sized accounting firms. We then go on to discuss the methodology that we used for the collection of data and analysis, the results of which we present in the findings. Finally, we conclude the chapter by discussing the findings and their implications for both theory and practice.

Literature review

Risk management in AASMPs

The previous literature on risk management within small and medium-sized accounting practices (SMPs) offers a limited perspective of how these entities harness technology and knowledge management (KM) to bolster their risk-handling capabilities. At the same time, we know that SMPs differ in their response to external challenges, such as digitalisation (Henk, 2022), and that the efficacy of the risk management practices often hinges on the availability of resources. Enterprise Risk Management (ERM) has emerged as a comprehensive approach to managing risks across organisations, integrating risk management into all aspects of strategic decision-making (Brustbauer, 2014). Unlike traditional risk management, which often focuses on isolated threats, ERM provides a holistic framework for identifying and mitigating risks that could affect an organisation's ability to achieve its objective (Alam & Nandan, 2010).

Studies across different industries have emphasised the importance of ERM in improving organisational resilience and preparedness. For example, research in the healthcare sector highlights how ERM frameworks have been employed to manage both operational and compliance risks, particularly in response to regulatory changes and the evolving landscape of healthcare delivery (Anton & Nucu, 2020). Similarly, in the energy sector, ERM has been applied to navigate environmental risks and regulatory uncertainties, contributing to better decision-making and compliance in industries subject to strict environmental regulations (Gorzen-Mitka & Wieczorek-Kosmala, 2023). These sectors demonstrate how ERM contributes to a proactive and structured approach to managing risk, offering insight that can be applied across various industries, including accounting and auditing firms. This broader understanding of ERM provides valuable lessons for SMPs, which often lack the resources to implement comprehensive RMSs, as Fink (2001) notes. Similar findings have been presented by Berry et al. (2009), who indicate that the strategic adoption of KM systems in larger firms contributes significantly to their superior risk management capabilities.

From a more technical perspective, Pan et al. (2014) present a case study on IT implementation in a medium-sized accounting firm that underscores the transformative impact of strategic IT upgrades on risk management practices. They detail how the integration of an enterprise resource planning system streamlined operations and significantly mitigated operational risks by enhancing data integrity and process efficiency (Pan et al., 2014). This case study is supported by other studies (Robson & Bennett, 2000; Marriott & Marriott, 2000) that emphasise the critical role of IT in enhancing operational efficiency and risk management in SMPs. In addition, Ali and Mustafa (2023) discuss the broader implications of risk management practices within SMPs, focusing on the need for a comprehensive approach that integrates both technological and strategic measures. Drawing on insights from Bennett and Robson (1999), who illustrate how strategic foresight and the deployment of comprehensive risk management frameworks

can significantly enhance the resilience of an SMP against risks from the external environment, the authors argue for a blend of proactive and reactive strategies to effectively manage risks. The resilience and the dynamic responses of SMPs to these challenges are critical, as they must navigate a continuously changing business environment that demands strategic flexibility and innovative responses (Alam & Nandan, 2010).

As such, the previous literature suggests an important role for technology and strategic management in enhancing the risk management capabilities of SMPs. However, the effectiveness and efficiency of these practices often depends on the availability of resources, which varies significantly across different-sized firms.

Preparedness and sophistication of the RMSs

The term “preparedness” can be defined as both the knowledge and capacities developed by organisations to effectively anticipate, respond to and recover from the impacts of likely, imminent or current disasters (Paton, 2019; UNISDR, 2016, p. 21). This definition assumes that preparedness is about both (1) the acquisition of an appropriate knowledge base about potential risks and threats, and (2) the development of capacities within an organisation to apply this knowledge base to frame organisational decision-making and action. From the perspective of management studies, the preparedness of organisations to anticipate and handle changes in the external environment requires organisations to design and use appropriate RMS (Brustbauer, 2014; Alchian, 1950; Radner & Shepp, 1996). Those systems are supposed to help to explore opportunities and minimise risks. In this sense, the development and use of appropriate RMSs are paramount for organisational survival and improving the level of preparedness for future crises. Successful crises prevention depends on firms having capabilities to anticipate and assess potential risks, “black swans” and the consequences of those for the firm, to develop necessary strategies and contingency plans.

While large organisations usually tend to develop sophisticated RMS that can prepare organisations for different types of adverse future events, the development and use of a similar level of sophistication in RMSs in SMEs have been reported to have a number of challenges. On the one hand, an appropriate RMS is expected to help SME managers to both identify significant risks and allow time to develop strategies to efficiently cope with those risks (Miller, 1992; Brustbauer, 2014). This is especially important in the case of special types of risks – “black swans”, i.e., events with a low probability of occurring but with huge impacts, where, especially, SMEs are much more vulnerable because they do not have sufficient buffers against the adverse effects of different types of crises and hazards (Verbano & Venturini, 2013). SMEs’ managers failing to recognise or misinterpreting those risks can lead to potentially disastrous consequences, making investments in an adequate RMS an important preparedness factor for SMEs to survive and become more resilient to environmental shocks (Spillan & Hough, 2003; Hollman & Mohammad-Zadeh, 1984).

On the other hand, research shows that many SMEs do not – or often do not adequately – use RMS in their practices. Being entrepreneurial organisations, SMEs rely on the role of the firm owner in developing an RMS (Falkner & Hiebl, 2015; Watt, 2007). In this sense, it is the owner's view on risk perceptions, their risk-taking attitude and their general ability to manage risks that would define the sophistication of the risk management approach (Herbane, 2010; Leopoulos, 2006; Nocco & Stulz, 2006; Vickery, 2008; Acar & Göc, 2011), which can be quite limited to personal opinions.

A related significant reason for inadequate risk management practices in SMEs is their limited access to different types of resources (Marcelino-Sádaba et al., 2014), which can deprive SMEs of adequately preparing for future potential crises (Barton, 1993). For instance, SMEs' managers simply do not have enough time resources to be preoccupied with crisis planning, because the solving of everyday problems overwhelms them and leaves no time to consider and plan for the uncertainties of tomorrow (Spillan & Hough, 2003; Caponigro, 2000). Consequently, managers in SMEs usually have little concern for crises they have not previously experienced, meaning that preparedness for crises is derived from the past experience of those crises (Spillan & Hough, 2003).

Given this prior knowledge in the literature, there seems to be a knowledge gap regarding whether neglecting the application of RMSs, leading to a low level of preparedness, is a common characteristic of all SMEs, or whether we can expect some diversity in SMEs regarding the relationships between the level of sophistication in RMSs and the level of preparedness. This also applies to AASMPs. Therefore, this study examines potential psychological factors that could explain the diversity of relationships between the level of sophistication in RMSs and the level of preparedness. One way to explore the relationship between awareness of perceived risks and threats and preparedness is to focus on managerial/employee attention and interest vs cognitive understanding and practical application (Nam, 2019). Therefore, we choose to focus on the social and psychological processes that may impact the extent to which people and firms prepare for risks (Paton, 2019).

Methodology

We developed a questionnaire that consisted of elements presented in Table 6.1. The survey's questions were formulated to capture ongoing and future changes, related risks and opportunities in the accounting and auditing industry, the use of RMSs and the assessment of the level of preparedness to handle risks. The first version of the questionnaire was tested for consistency and relevance during a round table with an experts' panel, consisting of representatives from key accounting and auditing industrial associations in Norway in 2021. A short memo representing the overall goals and the draft version of the questionnaire was sent to the experts in advance. The first draft of the survey also included a part that generated open-ended issues for consideration by the experts. The Delphi method of discussion helped to establish the degree of disagreement amongst experts (convergence vs divergence). Those issues that saw the largest divergence were a subject of special attention and discussion. Ultimately, through in-depth

exploration, some of the issues were reconciled and a higher convergence of responses was recorded.

As Table 6.1 indicates, we have used indexes to calculate sophistication and preparedness. The index for how sophisticated the risk management (X_s) was calculated as median index based on the following formula:

$$X_s = \Sigma(C021 + C022 + C023 + C024 + C025 + C026 + C027 + C028 + C029) / 9$$

In addition, we measured the degree of preparedness by calculating the following index: where X_b is the median index of employees' experience of preparedness:

$$X_b = \Sigma(F011 + G011 + G013) / 3$$

In cases where an employee indicated that their company does not use scenario planning (F03), we have reduced the median index X_b by 1 point.

The questionnaire was used to conduct surveys among members of accounting and auditing associations in Norway in the period 2021–2023. It was distributed via newsletters to members of the associations, which represent collectively approximately 9,000–10,000 individuals. However, the exact number of people who had the opportunity to view the survey invitation remains unknown, due to the indirect nature of the distribution. This method was used to ensure total anonymity of the respondents, as it allowed us to avoid accessing email lists or directly targeting individuals. We could therefore ensure that their privacy was protected and that we complied with General Data Protection Regulation. In total, we received 510 completed responses. These were used to create a joint database, which was analysed to identify patterns related to risk preparedness and risk management sophistication.

Findings were further analysed by using cluster analysis in SPSS, which was done in two steps. During the first step, SPSS was used to run a hierarchical cluster analysis. According to Karna and Gibert (2022), hierarchical cluster analysis is the optimal method to determine the number of clusters in a given data set, as it allows the researchers to use their expertise in the interpretation of the dendrogram. Following the argumentation that different clusters should group respondents that are similar with each other (Li et al., 2008) yet very dissimilar with other groups, the analysis has indicated that it can be a range from three to seven clusters (see Appendix 6.1). Using this information, we performed a k-means analysis in the second step. K-means requires the user to input the number of clusters before the analysis, and, based on the previously discussed dendrogram, we decided to set $k = 3$. The result of this analysis is presented in the next section.

Empirical findings

Analysis of the different clusters in the accounting sector in Norway suggests that there are three distinct clusters where respondents differ in their perceived degree of sophistication of the RMS (high/medium/low) and perceived degree of preparedness (high/medium/low). Appendix 6.1 presents the initial findings from both

Table 6.1 Selected variables in the survey

<i>Type</i>	<i>Title</i>	<i>Explanation</i>	<i>Variable code</i>	<i>Scale</i>
Degree of sophistication in risk management (X_s)	Digitalisation	Transition from analogue and paper-based processes to digital solutions	C021	Completely disagree – completely agree
	Big data	Handling large quantities of diverse data that require advanced analysis tools	C022	Completely disagree – completely agree
	Robotisation and automation	Using software to perform tasks previously handled by humans	C023	Completely disagree – completely agree
	Standardisation and unification	Standardisation of requirements, e.g., due to regulatory compliance	C024	Completely disagree – completely agree
	Climate change	Increased demand for climate and sustainability-related accounting services	C025	Completely disagree – completely agree
	Regulatory changes	Tightening of national and international regulations	C026	Completely disagree – completely agree
	Industry's adaptability	The industry's ability to adapt to changing market and environmental conditions	C027	Completely disagree – completely agree
	Global digital platforms	Increasing power of large global platforms like Google to offer local services in accounting and auditing	C028	Completely disagree – completely agree
	Reduced demand for services	The risk of reduced demand for traditional accounting services	C029	Completely disagree – completely agree
Degree of preparedness (X_p)	Time spent on strategic work	Your organisation spends sufficient time on strategic thinking about the future	F011	Completely disagree – completely agree
	Risk management system	The management systems of your organisation are appropriately designed according to the uncertainty in the environment	G011	Completely disagree – completely agree
	Access to information	The management systems reveal the necessary information for making informed decisions in today's environment	G013	Completely disagree – completely agree

(Continued)

Table 6.1 (Continued)

Scenarios	Use of scenarios	Has your organisation used scenario planning for risk management?	F03	Yes/no/don't know
Personal characteristics	Age	Year of birth	A01	Numerical value
	Education	Highest level of education completed	A03	High school/bachelor's/ master's/PhD
	Position	Current position in the firm	A04	Owner/top manager/middle manager/employee without managerial responsibility
Business characteristics	Business model	The firm's business model	A06	Sole proprietorship/ partnership/cooperative/ corporation/franchise
	Number of employees	The total number of employees in the firm	A08	Numerical value
	Number of customers	The number of clients served by the firm	A09	Numerical value

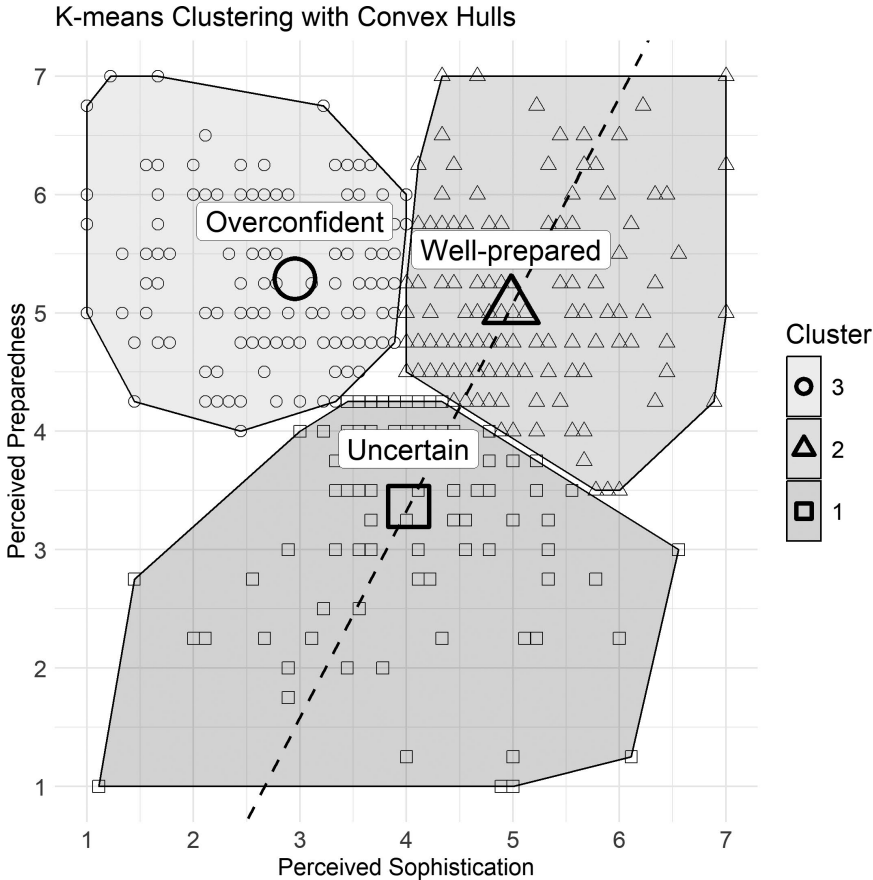


Figure 6.1 Illustration of average values for perceived sophistication and perceived preparedness, for three clusters.

a hierarchical dendrogram analysis, as well as a more detailed analysis of how the respondents of those three clusters respond to the individual questions in the survey.

Interestingly, when performing the analysis, there was an expectation that there would be a positive linear relationship between the perception of how sophisticated the RMS is and perceived preparedness. What was observed, however, is rather different because types of responses vary greatly among respondents in the three clusters. This is an interesting finding that is further analysed in Figure 6.1. The figure shows average values for perceived sophistication and perceived preparedness for each cluster group. What can be observed from the figure is that Cluster 3 deviates from the general (somewhat linear) pattern represented by Clusters 2 and 1.

A more detailed analysis of respondents in those three clusters shows some interesting relationships between perceived sophistication and perceived preparedness (Table 6.2).

Table 6.2 Characteristics of AASMPs in three clusters, based on the perception of their employees

	Cluster 1	Cluster 2	Cluster 3
Type of AASMP	Muddling through/ uncertain	Well-prepared	Overconfident/ disillusioned
Relationships preparedness vs sophistication	Middle/middle	High/high	High/low
Number of AASMPs in a cluster	157 (31%)	206 (40%)	147 (29%)

Abbreviation: AASMPs, accounting and auditing small and medium-sized practices.

Cluster 2 consists of the largest number of respondents, who, to a more or lesser degree, tend to strongly agree that most trends represent risks for their companies. At the same time, they also tend to strongly agree that their organisation’s control systems are adequately constructed to meet those risks in the environment. These responses indicate that employees in this cluster perceive that their companies are well-prepared for the future, for example “We know about risks, and we are well prepared to handle those”. Those companies are termed “well-prepared”.

Cluster 1 differs from Cluster 2. This cluster consists of around 30% of total responses. These are individuals working at AASMPs who tend to be more uncertain about how to relate to those trends, for example whether those trends represent risks or not. At the same time, they also seem to be unsure about whether control systems at their companies are adequately constructed to meet those trends/risks in the environment. This means that employees in this cluster perceive that their companies are uncertain about how well they have prepared for the future, “We don’t know much about risks, and we are not sure whether we are well prepared”. Alternatively, these results can also be interpreted as those employees who perceive their preparedness level as medium tending to compensate for lack of knowledge by developing and using various risk management tools, though they do not know whether those are effective. Employees in such companies may believe that they need more information to improve their competence and capacity to meet future challenges in the industry. Those companies are termed “muddling through/uncertain”.

The most interesting cluster is Cluster 3, which is made up of 29% of respondents in the sample. The cluster consists of responses where individuals working in AASMPs tend to disagree that those trends represent risks for their companies. At the same time, these individuals strongly agree that control systems are adequately constructed to meet the risks in the environment. This cluster represents an interesting tension between preparedness and sophistication – what can be perceived as less sophisticated risk management is positively related to a high level of preparedness. Employees report that preparedness is high, but this is probably unfounded, as the company has few or perhaps no tools and practices for risk management. The reason the company does not have such tools and practices may be that it assumes it has enough competence and abilities to handle any expected risk and thus sees

Table 6.3 Average personal characteristics of respondents in three clusters

	<i>Age (the higher the value, the younger)</i>	<i>Sex (1-female, 2-male)</i>	<i>Education (the higher the value, the lower the level of education)</i>	<i>Number of employees (the higher the value, the more the number of employees)</i>	<i>Number of customers (the higher the value, the more the number of employees)</i>	<i>Planning horizon (the higher the value, the longer)</i>
Uncertain	3.61	1.42	8.19	1.85	3.02	2.46
Well-prepared	3.65	1.43	7.74	2.32	3.27	2.75
Overconfident	3.82	1.39	7.74	2.67	3.5	2.9

limited value in improving its risk management competence. Those companies are therefore termed “overconfident/disillusioned”.

Table 6.3 provides details on the personal characteristics of respondents in those three clusters. Comparing averages, those respondents who belong to the overconfident cluster, on average, appear to be relatively younger, tend to be female and employed in relatively larger entities, in terms of both number of employees and number of customers, as compared to respondents in the other two clusters. However, they also tend to say that they are using a longer planning horizon.

To enhance the initial findings from the cluster analysis regarding the sophistication of RMSs and perceived preparedness, the analysis focused further on the use of scenario planning, the type of business models and the different positions of the respondents across clusters. For instance, looking at the business model of the employer (Table 6.4), it becomes clearer that most of the respondents that were classified as “overconfident” are employees of larger organisations, usually limited liability companies, with one or several locations.

Interestingly, we also see that many of the respondents that were classified as “uncertain” are part of limited liability firms, yet it appears that the majority here are employed by smaller firms with single locations, cooperatives or even sole proprietorships. Given that these smaller firms are at a greater risk of failing in the market, it seems understandable that the respondents from these firms appear to be more cautious and tend to feel less prepared in their daily operations.

At the same time, the data indicates that the larger the firm grows, the more likely it is that managers might rely on central support and resources that could protect them in times of crisis, thus leading to an overly optimistic self-assessment of their preparedness.

These findings are supported by the following analysis of the positions that the respondents held when answering our survey (Table 6.5). In turn, Cluster 1 (“Uncertain”) has the highest proportion of owners and top managers, while Cluster 3 has the highest proportion of middle managers. Employees without management responsibilities are fairly distributed across all clusters. This underlines the

Table 6.4 Cross-tabulation for the different clusters regarding question A07 “What is the business model of the organisation where you are employed?”

	<i>Sole proprietorship</i>	<i>General partner ship/partner ship with joint liability</i>	<i>Cooperative</i>	<i>LLC – One department</i>	<i>LLC – Multiple departments</i>	<i>Franchise</i>	<i>Others</i>	<i>Total</i>
Uncertain	10	3	41	101	45	2	4	206
Well-prepared	6	3	38	49	57	1	3	157
Overconfident	1	2	18	57	67	1	1	147
Total	17	8	97	207	169	4	8	510

Abbreviation: LLC, Limited Liability Company.

Table 6.5 Cross-tabulation for the different clusters regarding question A04 “Which position do you hold?”

<i>T</i>	<i>Owner</i>	<i>Top management</i>	<i>Middle management</i>	<i>Employee without management responsibility</i>	<i>Total</i>
<i>Uncertain</i>	52	31	25	98	206
<i>Well-prepared</i>	27	16	36	78	157
<i>Overconfident</i>	25	12	39	71	147
<i>Total</i>	104	59	100	247	510

previous analysis for business models, as Cluster 3 is represented by larger firms with more possibilities for hierarchical structures. Employees at the medium levels might feel more protected by the system, which can employ more specialised roles that might lead them to feel that their RMSs are more sophisticated, without having to rely on them in their daily operations. On the opposite side, Cluster 1 is represented by more managers at the upper level that hold responsibility for the survival of their firms. Here, risk management is a more integral part of the daily routines, and the data suggests that this leads them to have a more realistic picture of the actual preparedness of their firms.

In addition to this analysis, our findings show that there are some interesting differences when it comes to the use of scenario planning as a planning tool for

Table 6.6 Cross-tabulation for the different clusters regarding question F03 “Did your organisation use scenario planning?”

	<i>I don't know</i>	<i>Yes</i>	<i>No</i>	<i>Total</i>
<i>Uncertain</i>	76	13	117	206
<i>Well-prepared</i>	63	13	81	157
<i>Overconfident</i>	72	17	58	147
<i>Total</i>	211	43	256	510

Table 6.7 Cross-tabulation for the different clusters regarding question F0321 “Do you have knowledge about scenarios as a planning tool?”

	<i>I don't know</i>	<i>Yes</i>	<i>No</i>	<i>Total</i>
<i>Uncertain</i>	20	17	92	129
<i>Well-prepared</i>	7	15	66	88
<i>Overconfident</i>	4	14	56	74
<i>Total</i>	31	46	214	291

organisational practices (Tables 6.6 and 6.7). The data reveals that, on average, scenario planning is not yet widely adopted, with just 8.7% of firms across all clusters using scenario planning. However, there are some differences between the clusters. Particularly, the “overconfident” cluster (Cluster 3) exhibits the highest engagement, with 11.6% of firms employing scenario planning. This suggests that a higher reported usage of comprehensive future-oriented strategies could be contributing to the perceived higher preparedness in this cluster. At the same time, we observe that 49% of the respondents in this cluster do not know whether scenario planning is used at all. This might reflect a structural issue within larger firms, where middle managers may not be fully aware of or involved in the strategic risk management initiatives led by top management. Their high level of perceived preparedness could therefore be more indicative of a reliance on the broader organisational infrastructure, rather than a detailed understanding of specific risk management tools and practices.

Clusters 1 and 2 use scenario planning relatively less than Cluster 3. In fact, just 6.3% of firms in the “uncertain” cluster (Cluster 1) engage in scenario planning, which relates to their lower level of perceived risk management sophistication and preparedness. Moreover, Table 6.7 shows that 73% of the respondents in this cluster say that they do not know about scenarios as a planning tool. Given that the managers in this cluster represent owners or top managers of smaller firms and that they report on a shorter planning horizon, the data seems to indicate that the respondents in this cluster are more focused on the daily operations than long-term planning. In the “well-prepared” cluster (Cluster 2), slightly more firms use scenario planning (8.3%). While the managers in this cluster express more confidence in their current systems and processes, the still modest level of scenario planning use could indicate a vulnerability to

unforeseen changes that are currently not covered by their current risk management approach.

Discussion

Successful crisis management and prevention in SMEs depends on the companies being able to both foresee potential “black swans” and the consequences of these for the company and develop necessary preparedness plans (Spillan & Hough, 2003; Verbano & Venturini, 2013). Previous literature assumes that the design and use of appropriate RMSs, including procedures for handling possible risks and crises, contributes to increasing the organisation’s preparedness to handle the risks (Brustbauer, 2014). In this study, a close relationship between the perceived degree of preparedness and the perceived degree of sophistication of the SMEs’ RMS was expected.

The analysis of employees’ perceptions in Norwegian AASMPs seems to confirm this expectation, particularly in relation to companies in Cluster 2, where there is a positive relationship between perceived preparedness and perceived sophistication of risk management. Firms in Cluster 2 (“well-prepared”) display a notably proactive approach to risk management. This demonstrates that these firms can be well-prepared, with established processes, reinforcing a structured approach to handling risks. As Brustbauer (2014) and others have noted, having such structured approaches can significantly enhance preparedness. In contrast, firms in Cluster 1 appear more uncertain about their risk management practices. This highlights a lack of deep engagement with risk management processes, which might explain the lower perceived sophistication and preparedness in this group. As noted in the literature (Marcelino-Sádaba et al., 2014), the limited resources available to SMEs often prevent them from implementing more advanced risk management practices, leaving them vulnerable to future crises.

A deviation from the expected pattern emerges in Cluster 3, where companies with a lower level of perceived sophistication in risk management still report a high degree of preparedness. This phenomenon may reflect overconfidence stemming from a misunderstanding of the complexities of risk management. Inherently, risk management can be perceived as an obligation rather than an activity that would strengthen the organisation; in the long run this is not beneficial.

At the same time, we know from previous literature (Fink, 2001; Berry et al., 2009) that the adoption of more advanced knowledge systems in larger firms is one of their key success factors and clearly sets them apart from smaller firms. Both the integration of more advanced IT solutions (Pan et al., 2014; Robson & Bennett, 2000) and more strategic integrations of advanced KM systems (Ali & Mustafa, 2023) are known to improve the risk management practices of larger firms significantly. As such, the finding that managers in smaller firms are often less aware of the actual risks in their environment or perceive themselves to be more prepared than they actually are (based on the systems that they employ at their firm) appears to be overly optimistic and – perhaps – scary.

To explain this conundrum, it can be useful to focus on the social and psychological processes that can influence whether and to what extent people and organisations prepare for risks (Paton, 2019; Nam, 2019). When the mismatch between capacity and assumed knowledge of potential risks is observed, this may be an indication of the so-called Dunning–Kruger effect (Kruger & Dunning, 1999). The Dunning–Kruger effect describes how individuals with limited knowledge in a particular area tend to overestimate their competence (Kruger & Dunning, 1999) because a person’s lack of knowledge in a particular area leads him or her to overestimate their own competence. According to the official definition, “The Dunning–Kruger effect ... also causes those who excel in a given area to think the task is simple for everyone, and underestimate their relative abilities as well...” (Decision Lab, 2022). In a similar interpretation, the Dunning–Kruger effects were originally put forward in psychology to indicate

... a cognitive bias whereby people with limited knowledge or competence in a given intellectual or social domain greatly overestimate their own knowledge or competence in that domain relative to objective criteria or to the performance of their peers or of people in general.

(Duignan, 2025)

In the context of Norwegian AASMPs, some respondents may overestimate their ability to manage risks due to a lack of understanding about the risks themselves and how they should be addressed. It may be the case that some respondents overestimate their ability to handle new risks because they do not have enough knowledge about these risks and how they can be handled. Those results can present a useful analysis angle with respect to risk management literature. Overconfidence that stems from a low level of sophistication in RMSs can be a problem for SMEs, caused by lacking competence in risk management and its regular application, which, in turn, requires investment in time and resources that SMEs very often do not have (Marcelino-Sádaba et al., 2014; Barton, 1993). As such, this study confirms and extends previous findings that almost one-third of AASMPs in Norway can have unfounded high confidence in their preparedness and knowledge level when it comes to handling risks (Vakulchuk et al., 2023).

Conclusions and implications

In our study, for most of the firms in the sample, the positive relationship between perceived preparedness and the level of sophistication was confirmed by this study (70% of the sample). However, 30% of employees/firms in the sample constitute a divergent pattern, demonstrating a mismatch between the perceived level of sophistication of the (risk management) system and perceived preparedness. Some employees display overconfidence in their level of preparedness to handle risks, which seems to

be unfounded based on the low level of sophistication of their RMSs. This could be an indication of the Dunning–Kruger effect. Applied to the case of Norwegian AASMPs, for as many as 30% of firms, the effect can potentially be detrimental to its operations, as well as to an individual who overestimates their ability to manage risks.

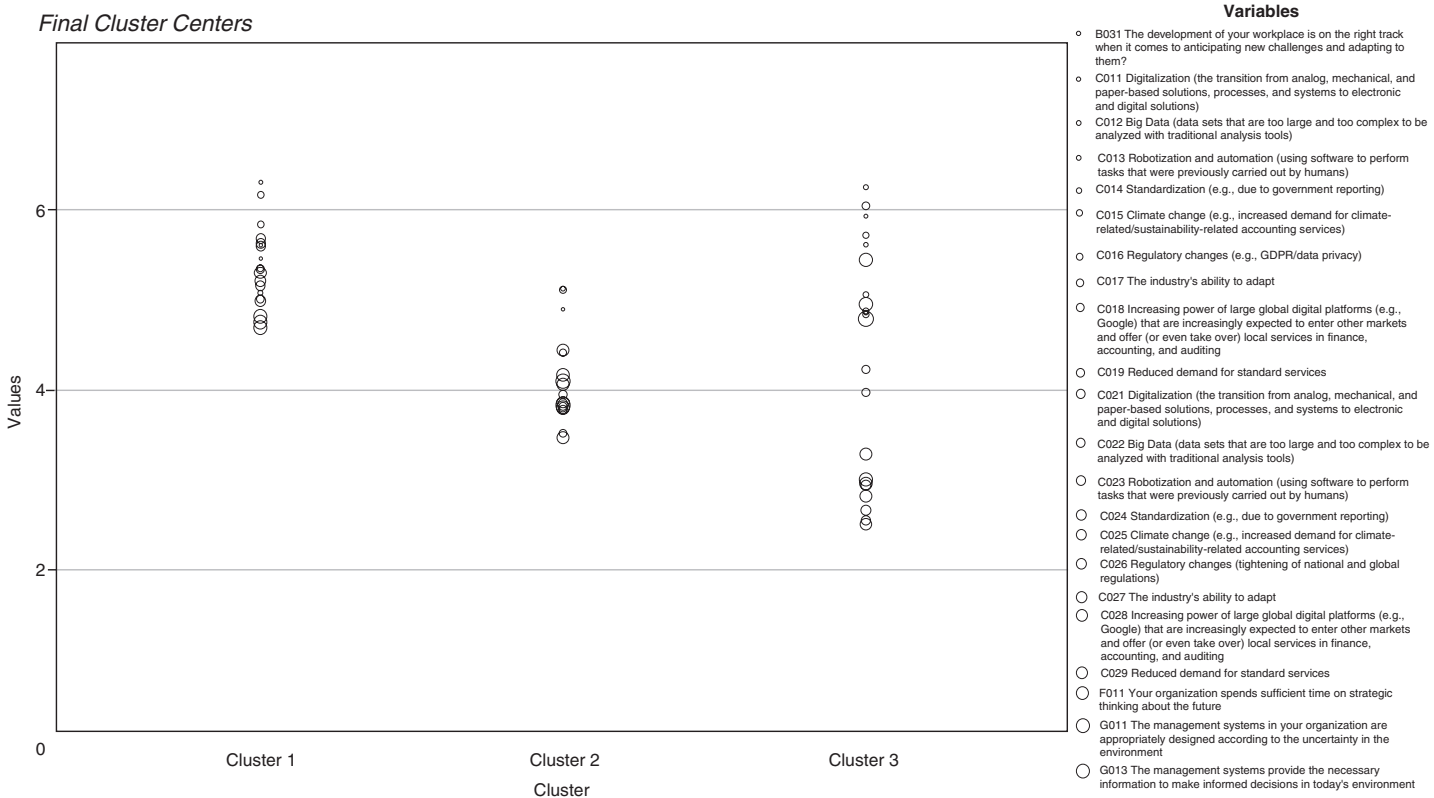
What can the possible consequences of the Dunning–Kruger effect be in accounting and auditing practices? The consequences can be extensive, as companies that are not well-prepared to face potential “black swans” are likely to suffer more severely from serious unforeseen events than companies with a well-established toolkit for risk management. We can discuss whether their post-factum risk management strategies will be *ad hoc* and poorly equipped to effectively handle new market risks and threats. As a result, such companies may experience increasing productivity losses, loss of market share, sales failures, employee turnover and a damaging impact on customer relationships (The EDHEC School, 2021). Similarly, limited understanding of risks can go hand in hand with limited understanding of new market opportunities (Henk, 2022), thus likely putting such companies in a latecomer group of firms, many of which usually tend to cease to exist. In the accounting and auditing industry, this could mean that firms will hesitate to introduce innovations and knowledge that could improve their services (Gårseth-Nesbakk & Åmo, 2013), which, in turn, could mean that small companies may become bankrupt or be bought up by larger companies.

The contribution of this chapter is twofold. First, this study contributes to examining the connections between the psychological traits of employees, firms’ capabilities and characteristics, and the way both can affect plasticity or resistance to change and future planning in companies. Thus, we demonstrate the utility of the Dunning–Kruger model in risk management research. Second, existing research on Dunning–Kruger effects has traditionally been part of psychology studies and has only recently been applied to business economics (see, e.g., Boz & Erdogan, 2021). However, there are still many gaps in understanding how these effects influence company practices. Thus, this study contributes to bridging some of these gaps.

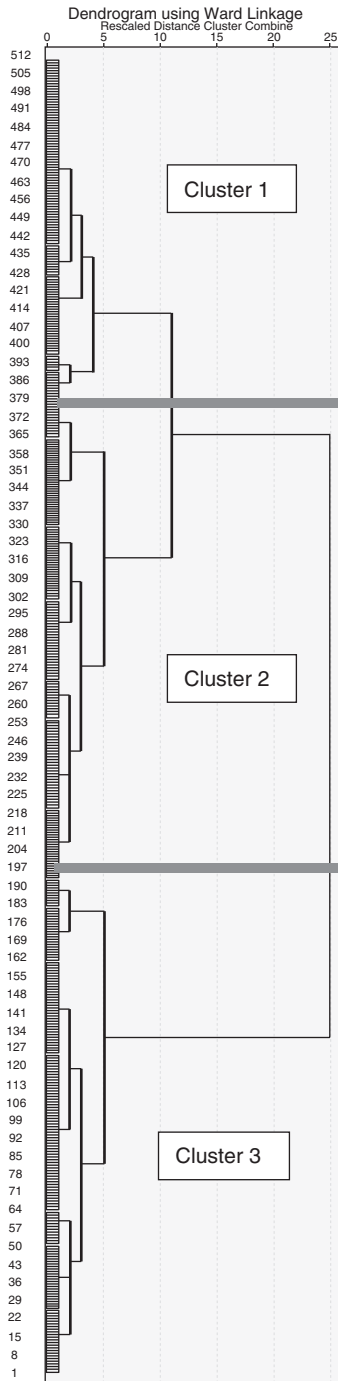
As a practical implication, SMEs can benefit from institutionally developed and shared competences via foresight methods that can improve a firm’s ability to anticipate potential “black swans”. Thus, companies can improve their approach to risk management by introducing, for example, scenario planning. Anticipating potential futures at an individual employee level can strengthen mental abilities. In turn, this can develop confidence about future potential risks, threats and opportunities at an organisational level. Scenario planning can in general help employees to ask critical questions about their own knowledge of risk, risk management and preparedness practices (Scoblic, 2020). In this sense, foresight, as an embedded practice, can have a commercial and corporate value (Hammoud & Nash, 2014). One practical way to do this is to share foresight practices that may be developed by accounting and auditing professional associations (see, e.g., Bjørnvoll & Tjønnøy, 2021).

Appendix 6.1. Results from the SPSS cluster analysis

Responses to different survey questions that went towards the constructed sophistication and preparedness indices



**Hierarchical dendrogram for the identification of the number
clusters for the constructed indices**



Note

- ¹ Preliminary findings from this research based on a much smaller sample have been reported in Vakulchuk et al. (2023).

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7 (Absence of) use of management control systems to manage cyber risk in SMEs

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Introduction

Firms that cannot turn opportunities into value – as determined by the market – will be replaced by organizations that can.

(Simons, 1995b, p. 14)

Management control systems (MCSs) facilitate the manager's work in reaching the organisation's objectives, creating value and, inherently, surviving. While traditional MCSs tended to be oriented mainly around internal processes, recent developments emphasise the importance of MCSs as a premise for the organisation's activity in the face of increased uncertainty in the organisation's environment (Truant et al., 2024). Organisations are facing increasingly complex environments, driven by changing technologies that challenge existing patterns of value creation and put new demands on MCSs (Dávila et al., 2024, pp. 1–2). This implies that an organisation's survival is not only about turning opportunities into value but also about managing risks. Over recent decades, risk management and management control tasks have become intertwined (Hiebl, 2024; Posch, 2020; Soin et al., 2014, pp. 179–180). Previous research has found that strategic risk and uncertainties, such as technology, drive the importance and role of control systems (Widener, 2007, pp. 763, 781).

The impact of technology and digitalisation on management control has grown into a substantial body of literature (Fähndrich, 2023). On the one hand, digitalisation has impacted *how* management control is performed. This stream of research includes how technological developments and tools have impacted MCSs (Berry et al., 2009, pp. 12–13). Examples include studies of whether and how the implementation of enterprise resource planning systems (Dechow & Mouritsen, 2005), cloud technologies (Quinn & Strauss, 2017) and big data (Vitale et al., 2020) affects MCSs. A recent review (Fähndrich, 2023, pp. 30, 42) of this stream of literature points towards competence's role in unlocking the potential benefits of digitalisation.

On the other hand, digitalisation has impacted *which* risks management control must address. Digitalisation has not only introduced new potential tools and markets but has also changed the organisation's environment by introducing cyber risk

as a risk to be avoided and cybersecurity as a criterion for navigating as securely as possible towards the organisation's objectives. The interface between management control and modern information technology, how it can be understood and how it changes has gained limited attention from researchers (Granlund, 2011). Cyber risk holds the potential for severe consequences, may threaten the livelihood of organisations and therefore demands the manager's attention. For instance, survey results found that cyberattacks threaten the solvency or liability of one in five businesses and rate exposure to a cyberattack as the number one business risk (Hiscox, 2023, pp. 3, 7). To address this challenge, Gordon et al. (2008) suggest that MCSs can play a key role. If MCSs are meant to, ideally, serve as an all-encompassing tool for managers to steer the organisation safely towards its goals, avoiding critical risks and creating value: *How do organisations use their management control systems to manage cyber risk?*

This chapter investigates and discusses the use of MCSs as an important factor in the business environment of organisations facing cyber risk. Cyber risk management is studied in four medium-sized Norwegian case organisations, applying Simons' (1995b) levers of control framework. The framework is "practice-informed" (Martyn et al., 2016, pp. 281, 283), while it has gained a prominent position in both research and management control thinking (Bellora-Bienengräber et al., 2023, p. 16; Kruis et al., 2016, p. 27). The framework is widely applied in empirical studies, which suggests its ability to explain how MCSs are used (Martyn et al., 2016, p. 299). Therefore, the "levers of control" are applied as a theoretical framework to map how, and to what extent, organisations use MCSs to manage cyber risk and enhance cybersecurity.

The remainder of the chapter is structured as follows. The next section provides a brief overview of the literature on cyber risk management, with a focus on MCSs and small and medium-sized enterprises (SMEs). Then, the theoretical framework, Simons' levers of control, is presented. The fourth section describes the qualitative approach and deductive analysis of data applied. The findings address the four levers and suggest that, to a limited extent, MCSs are used to manage cyber risk or ensure cybersecurity. Cyber risks are met with absent beliefs systems, reactive boundary systems, outsourced diagnostic systems and interactive systems crippled by a lack of competence. Therefore, the following discussion is centred around the "absence of use" of MCSs to manage cyber risk and the role of outsourcing, before the conclusions.

Literature review

MCSs have gained substantial attention from accounting scholars over the past 50 years, which has led the field to develop and new themes to emerge (Truant et al., 2024). One such established theme is the relationship between management control and risk (Berry et al., 2009, p. 12; Truant et al., 2024), a "popularity" which is typically associated with changes in the organisational environment, such as crisis (Truant et al., 2024) and technological developments (Dávila et al., 2024). Consequently, risk management and management control have become intertwined

(Posch, 2020; Soin et al., 2014, pp. 179–180), which is argued to have the potential for positive outcomes for organisations, such as increased resilience if successfully managed (Hiebl, 2024, p. 12).

Digitalisation has the potential to disrupt practices, business models and the organisational environment (Möller et al., 2020). The vital role of digitalisation and the growing dependence on IT in organisations has turned cybersecurity into one of the most significant risk management challenges (Haapamäki & Sihvonen, 2019, pp. 830–831). Cyber is broader than information security and information and communications technology security (von Solms & van Niekerk, 2013) and contains a wide spectrum of risks caused by digitalisation (Aakre, 2022, pp. 47–49). To address the challenges to managing cyber risk, it has been suggested that MCSs can play an important role (Gordon et al., 2008, p. 215). Further, a review of the accounting literature found that organisations should put efforts into programmes or strategies concerning cybersecurity, noting that proactiveness is important in this sense (Haapamäki & Sihvonen, 2019, p. 830).

Management of cyber risk has received limited attention in the broader business literature compared to computer science and information systems (Eling, 2020, p. 304). Still, cyber risk management is acknowledged as a global risk in need of interdisciplinary research attention (Falco et al., 2019). Different streams of research and scholars have proposed approaches, ranging from proactive technical tools (Marotta & McShane, 2018) to insurance (Eling, 2020), to manage cyber risk. Despite the emergence of frameworks and technical tools, organisations face challenges associated with cyber risk management and need awareness and well-defined management structures (Kosub, 2015).

Challenges associated with cyber risk management are argued to be of particular importance in SMEs (Alahmari & Duncan, 2020). Studies have found that, even though SMEs view cyber risk as a critical concern, they are prone to hold an attitude of “it won’t happen to me” (Hoppe et al., 2021, p. 249; Wilson et al., 2023). In contrast, SMEs are typically seen among the most vulnerable to cyberattacks, as they face similar cyber risk to that of larger organisations but possess limited resources to manage it (Benz & Chatterjee, 2020, pp. 531–532; Raineri & Resig, 2020). Limited resources affect the ability to facilitate cybersecurity training (Raineri & Resig, 2020, p. 20; Wilson et al., 2023, p. 399) and acquire the necessary competence and personnel in-house (Hoppe et al., 2021, pp. 249–250; Watad et al., 2018, pp. 23–24). The lack of knowledge and awareness also influences the organisation’s ability to assess the necessary competence and acquire suitable solutions (Watad et al., 2018, p. 29). In other words, knowledge and competence have become an important prerequisite for cyber risk management. Nevertheless, previous literature lacks sufficient empirical data and research on how MCSs are used to manage cyber risk, especially in SMEs.

Theoretical framework: four levers of control

Since the early developments of MCSs, multiple themes (Berry et al., 2009), definitions, types and frameworks have emerged (see, e.g., Strauß & Zecher,

2013, pp. 244–263). Some of the more influential frameworks include Malmi and Brown's (2008) "management control systems as a package", Ferreira and Otley's (2009) "performance management systems framework" and Simons' (1994, 1995b) "levers of control". Simons views MCSs as "formal, information-based routines and procedures used by managers to maintain and alter patterns in organizational activities" (Simons, 1987a, in Simons, 1994, p. 170). This means that the framework is concerned with, e.g., routines that convey information to impact organisational activity, rather than unintended unwritten norms of behaviour (Simons, 1994, p. 170). The four levers in the framework are *beliefs systems*, *boundary systems*, *diagnostic control systems* and *interactive control systems*.

The *beliefs systems* describe the formal systems that managers use to define, communicate and reinforce the purpose and direction of the organisation (Simons, 1994, p. 170). Beliefs systems can be identified in the organisation's vision, mission, values, "credos" or statement of purpose (Simons, 1995b, p. 178). In contrast, the *boundary systems* aim to establish limits and rules to be respected (Simons, 1994, p. 170), such as code of conduct, principles, rules, "dos and don'ts", including sanctions (Simons, 1995b, pp. 39–54). Although the boundary systems tend to be stated in negative terms or minimum standards (Simons, 1995b, p. 40), they are not "negative" or constraining systems per se. Rather, they are compared to the brakes on a car, in the sense that they allow organisations to operate at high speeds (Simons, 1995b, p. 41) or higher risk. Simons (1995b, p. 57) argues that these two levers working together can be described as yin and yang – the inspiration and constraints.

The last two levers can be explained as feedback and measurement systems (Simons, 1995b, p. 180). The *diagnostic control systems* are feedback systems to monitor organisational outcomes and correct (potential) deviations (Simons, 1994, p. 170). These are systems traditionally associated with management control, where the classic metaphor is adjusting the thermostat to achieve the desired temperature. Examples of diagnostic control systems include budgets, project monitoring and planning systems (Simons, 1995b, p. 179), standardisations, "indoctrination" and making sure employees follow instructions (Simons, 1995b, pp. 61–62).

Lastly, *interactive control systems* emphasise the regular involvement of managers to stimulate dialogue and learning throughout the organisation (Simons, 1994, p. 171). This can help the organisation to focus on emerging threats and opportunities (Simons, 1990, p. 140). These activities question and debate assumptions, actions and goals frequently involving different levels of the organisation (Martyn et al., 2016, pp. 320–323). Interactive control systems are perhaps best understood *in contrast to* diagnostic control systems. These are more inductive, creative and future-oriented (Simons, 1995b, p. 124). In practice, Simons (1995a, p. 83) suggests focusing on dialogue and learning. Herein lies the acknowledgement that the interactive control systems will demand a different role, approach and effort by managers, from reactive "controllers" to (pro)active facilitators of an intended process. For instance, the "cost" of interactive control systems is higher, as they demand more attention from the manager (Widener, 2007, p. 781).

The four levers should complement each other, and Simons (1995a) views the manager's challenge as balancing adequate control while allowing the creativity needed in a competitive business. While Simons (1995b, p. 57) describes the beliefs and boundary systems as yin and yang, Chenhall et al. (2010, p. 751) found that dominant beliefs systems can circumvent the need for boundary systems. Further, Widener (2007, p. 781) found that the beliefs systems influence the three other levers and that the interactive systems influence the diagnostic and boundary systems. Mundy (2010, p. 515) found that the relation between interactive use and the other levers is particularly important in the managers' attempts to achieve balance and that the "*absence of use*" affects the manager's control and thereby organisational performance (Mundy, 2010, p. 515).

Methodology

The study utilised qualitative methods, drawing on interview and questionnaire data to study how organisations use MCSs to manage cyber risk. Interviews and questionnaire responses were collected from four case organisations and supplemented by expert interviews and a control group for the questionnaires. The data was collected in the spring of 2023 as part of a master's thesis project by Christoffersen et al. (2023) affiliated with the TRANSACT research project.¹

The sample of case organisations aimed to achieve a broad perspective on the management of cyber risk and consists of organisations from different industries and regions in Norway. Of the four organisations, one can be categorised as a non-governmental organisation (NGO), the second as an accounting practice, the third as an IT developer (of accounting software) and the fourth as a fishery. All the case organisations can be categorised as medium-sized organisations with the number of employees ranging from 60 to 130. Semi-structured interviews were conducted with the manager or IT manager, depending on the defined roles in the case organisations, and aimed to uncover the use of MCSs (operationalised through Simons, 1995b) concerning cyber risk. As MCSs aim to influence employees' behaviour (Strauß & Zecher, 2013, p. 235), a questionnaire was distributed to the employees to reveal behaviour related to the levers, as well as to control whether the interview findings from the manager aligned with the rest of the organisation. Each organisation received a unique link to allow the data to be analysed separately. The two organisations with 100+ employees (org. 1 and org. 4) have a rather small administrative department and larger operative departments. The operative departments were considered less exposed to cyber risk as part of their work, and the questionnaire was therefore distributed to the administrative departments.

To strengthen the findings from the case organisations, four expert interviews and a control group for the questionnaire results, consisting of 112 responses, were gathered. The "experts" (as listed in Table 7.1) represented different organisations and institutions, including academics, industry experts and suppliers. The expert interviews focused on gaining insights into cybersecurity in SMEs and to critically

Table 7.1 Overview of interviews

<i>Acronym</i>	<i>Interview type</i>	<i>Industry</i>	<i>Role</i>
O1	Case organisation	NGO	IT manager
O2	Case organisation	Accounting	Head of technology
O3	Case organisation	IT developer	Head of development (technical manager)
O4	Case organisation	Fishery	Manager
E1	Expert interview	University	Professor in cybersecurity
E2	Expert interview	IT	Head of IT security business development
E3	Expert interview	IT	IT architect
E4	Expert interview	IT/university	PhD fellow

Abbreviation: NGO, non-governmental organisation.

reflecting upon the case findings. All interviewees were anonymised using the acronyms in Table 7.1. In addition, mentions of suppliers are anonymised, e.g., as “Supplier 1”, where the number corresponds to the organisation using that particular supplier.

The control group for the questionnaire was recruited from a panel of previous business school students. Almost half of the respondents work in the administrative department, and the remaining respondents work in the operative department or both. Only nine have been working in the organisation for less than a year, and 35% have been working in their current organisation for 10+ years and should therefore be familiar with the management control structures. The respondents represent all age groups, and the sample is gender balanced. The control group received the same questionnaire as the case organisations. An overview of questionnaire responses is presented in Table 7.2.

Simons’ (1995b) four levers of control framework was used as an analytical tool, or method theory (Lukka & Vinnari, 2014), to analyse the data. The analysis followed a deductive approach, in which the data was coded based on predefined categories (here: the control levers) while other data was disregarded (Elo & Kynäs, 2008). For instance, information unrelated to MCSs and the four levers of control is not reported in the findings. The wide application of Simons’ (1995b) framework by researchers suggests that it is suited to explain how MCSs are used in organisations (Martyn et al., 2016, p. 299). Further, all four levers are studied

Table 7.2 Overview of questionnaire responses

<i>Questionnaire samples</i>	<i>Industry</i>	<i>No. of respondents</i>
Case organisation 1	NGO	22
Case organisation 2	Accounting	11
Case organisation 3	IT developer	13
Case organisation 4	Fishery	6
Control group	N/A	112
Total number of questionnaire respondents		164

to gain a better understanding of how managers guide, direct and control organisational activities (Mundy, 2010, p. 516).

Findings: (absence of) use of four levers of control to manage cyber risk

The case organisations all emphasised the importance of cybersecurity and had experienced cyberattacks. Common kinds of cyberattacks included scam emails, phishing and CEO fraud. One of the case organisations reported becoming a victim of a “successful” ransomware attack and another of hacking. In both cases, hardware fell under the control of malicious actors. They still considered the impact moderate, as the attacks affected a smaller part of their IT infrastructure. Although the attacks varied in sophistication, none of the case organisations reported any cyberattacks they considered serious. The remainder of the findings are structured according to the four levers of control (Simons, 1995b) and summarise how the different control systems are used in the case organisations.

Beliefs systems without a link to (cyber)security

Beliefs systems are often deliberately made broad, to appeal to employees at all levels (Simons, 1995b, p. 38). Visions were quite general and oriented around how the organisation wished to impact or be perceived by their customers, while formal values were to a greater extent aimed towards the internal work environment. Three out of four case organisations expressed having a formal vision and set values. In addition, values must be communicated to be effectively implemented and rooted in the employees and influence behaviour. The questionnaire showed that most employees (73%), in the case organisations and the control group, responded that they strongly agree that they know the organisation’s values well.

None of the beliefs systems in the case organisations had a clear, or even subtle, connection to cyber risk or security in broader terms, such as promoting secure behaviour or avoiding risks. Quite the contrary, values like “unafraid and innovative” (O3) concerning new technology, as brought forward by Organisation 3, may even promote “risky” behaviour. In a sense, a limited connection to cyber risk is expected, as beliefs systems are related to core activities. However, this does not mean that the beliefs systems keep a single-minded or narrow-focused perspective. For instance, sustainability, referring to resource management and local communities, was promoted in two of the organisations’ beliefs systems. This shows how other aspects beyond the core objective can be included if deemed important. Two of the case organisations (“Accounting” and “IT developer”) deliver software as (part of) their core operations. This made them reflect upon how cyber incidents have the potential to harm the organisation substantially. “It is damaging to the brand if you are associated with cyber-attacks. [...] it would be harmful to us, and it would affect our integrity” (O2). Nevertheless, security or values guiding employees towards a low-risk appetite were not represented in any beliefs systems.

In contrast to the three other case organisations, a clearly stated vision and values were not found in Organisation 4. This is surprising for an organisation with 100+ employees. Although formal mission statements were considered a “recent organizational innovation” at the beginning of the 1980s, they quickly became common (Simons, 1995b, p. 36). Organisation 4 did, however, have defined values “in the health environment and safety and security system” and a “slogan”, which may be interpreted as a vision but stated “But we don’t really have such an overarching corporate vision. Never thought about it” (O4). This indicates that the beliefs system is unclear, which was reflected in diverging responses in the questionnaire results from Organisation 4.

The expert interviews did not address topics directly related to beliefs systems beyond some stating how cybersecurity may not get top priority in organisations with limited relation to IT.

In summary, although beliefs systems tend to be implemented and communicated throughout organisations, the findings show no relation to cyber risk or cybersecurity, either directly or indirectly.

Reactive boundary systems

Boundary systems were strongly associated with payments, invoices and contracts in the case organisation interviews, and all described clear boundaries for these activities. O4 explained the relation between these boundaries and cybersecurity based on several attempted frauds where employees were asked to transfer money while travelling. These boundaries were typically defined by roles, e.g., “Not everyone is allowed to make payments, only the finance manager and such” (O3) and “We have different mandates for purchasing and signing agreements” (O1) or procedures for approving invoices and purchases, e.g., “It is the four-eyes principle on everything” (O4). Similar procedures were found in other organisations.

Routines for steering employee behaviour related to cybersecurity were more varied across the organisations. Boundary systems can be investigated as the defined “appropriate” and “inappropriate” behaviour and whether this is communicated to the employees (Martyn et al., 2016, p. 320; Widener, 2007, p. 785). As O2 explained, they had a “one-pager” in each office, with a routine for whom to notify in case of incidents, a more “advanced” plan for the IT manager and a contingency plan: “It deals with things like if you lose the internet at the office. What to do then. Or if all the PCs should stop working” (O2). In the same organisation, more than 90% agreed that they knew what to do in the case of a cyberattack, which is significantly higher than in the control group (71%). A contingency plan was also brought up by O4. A common determinator for the routines related to cybersecurity mentioned in the interviews is that they seem to be oriented around unwanted incidents or cyberattacks rather than daily operations. Indeed, guidelines, code of conduct, etc. were not identified in the interviews. However, a broad majority of employees in the case organisations stated that they were familiar with the rules and routines regarding cybersecurity, which is in line with the control group. The exception is Organisation 1, where more than half of the respondents reported that they did not know of such rules.

Simons (1995b, p. 44) points out that managers often do not recognise the benefits (strategic or economic) of establishing boundaries and, if they do, the effects are difficult to estimate as they represent *avoided* costs. This is a relevant concern for boundary systems promoting cybersecurity. Regulations regarding financial misconduct and the “tangibility” of financial losses might explain why boundary systems concerning economic activity were in place. The case organisations all had some experience with cyberattacks; however, these were considered relatively small in impact and low in criticality. Andrews (1989) found that businesses tend to install codes of conduct *after* public scandals or investigations. A challenge with boundaries established after incidents is that they tend to be rather specific (Simons, 1995b, p. 45), which means they may lose relevance quickly or be unsuited to mitigate the next incident and therefore create the “wrong” boundaries.

The experts explicitly addressed how cyberattacks are broad in *modus operandi* and reach, e.g., “Every company is targeted because it is possible, not because they are more attractive [as a target]” (E2), which highlights the importance of boundaries. In addition to technical barriers, the experts also reflected on having plans and instructions to guide employees during incidents, such as: “Many businesses have not thought enough about having good preparedness. [...] You need to have a rehearsed plan for handling incidents; of course, this takes time” (E1).

In summary, the boundary systems described in the interviews seem to be purely reactive, focusing on the organisation’s reaction to cyberattacks, while the questionnaire responses indicate that routines to maintain cybersecurity are also in place. Although the use of boundary systems varied across organisations, tended to be more reactive than proactive and to some extent were unclear, this lever seems to be the most widely used to manage cyber risk.

Outsourced diagnostic control systems

One type of feedback system seemed to be common in the case organisations, namely routines for employees to report suspicious emails. All four managers stated that suspicious incidents were reported either in-house or directly to their supplier. From the manager’s perspective, this seemed to be working well. “They [employees] are very good at reporting if things are suspicious – at times almost too good. But it is better that three or four give notice of the same thing than that no one does” (O2). The questionnaire responses are a bit more varied; however, almost three in four of the case organisations stated that they always or often report suspicious emails, which is in line with the control group.

Three of the four case organisations had outsourced their IT functions to external suppliers. The last used suppliers for specific services, such as protection against distributed denial of service attacks. Therefore, external suppliers have an important role in diagnostic control systems. This included responsibility and monitoring of key hardware: “This is monitored and protected by a supplier” (O2) and reporting incidents: “The largest systems are operated by Supplier 1. So, they tend to

discover mistakes before we do. [...] We don't have any local servers that we have to monitor ourselves anymore" (O1). This shows how the suppliers are monitoring metrics for cybersecurity and present them to the organisations. "We get quarterly reports from Supplier 4, with graphs of how often they [attackers] try to attack. It's quite a lot, so I was actually a bit shocked the first time" (O4).

Diagnostic control can involve how managers (1) set and negotiate goals, (2) receive update and exception reports and (3) follow up on significant exceptions (Simons, 1995b, pp. 70–71). O1 explained how their supplier provides security recommendations, scans systems and reports quarterly. The manager is responsible for approving changes. Furthermore, O1 elaborated that, when facing larger incidents, they follow instructions from the supplier. This means that both the *negotiation of goals* and the *follow-up function* for significant incidents are moved from the manager to the supplier. A similar workflow was described by O4. Even when organisations are taking a more active approach towards diagnostic control, such as testing their systems or controlling suppliers, external third parties tend to define goals, monitor, report and suggest measures. This indicates that, in some sense, the diagnostic control – or "the backbone of traditional management control" (Simons, 1995b, p. 59) – is no longer performed by the manager.

The reasons for organisations to outsource IT were typically explained by constraints in resources and competence. The organisations typically had zero, one or a few working with security in-house. Therefore, external suppliers were seen as both a "sparring partner" (O1) and a "must have" (O4) for the organisation's competence, resources and efforts related to IT and cybersecurity.

The experts with industry experience (E2, E3, E4) confirmed that outsourcing of IT and cybersecurity services was very common. Still, the experts offered different views on controlling cyber risk through outsourcing. While some saw it as sensible, e.g., "That's [outsourcing] good because it's much more expensive to acquire this expertise through hiring" (E1) and forward-looking: "That is often what forward-leaning managers are looking for: how can we lower the payload or workload of the employees. Experts in this field don't grow on trees, so buy it as a service" (E2). Others were more critical and argued that outsourcing might increase cyber risk, due to the lack of control throughout the supply chain and IT infrastructure. "[...] watch your step when choosing a supplier. You might connect to a consulting house in India that promises to deliver, but, before you know it, they have access to your systems. (E3)"

Furthermore, challenges in controlling the supplier and supply chain of IT services were raised as a concern. "People just think it's an easy fix. But, in theory, you must deal with a relationship with a completely different infrastructure. So, you should not just outsource" (E4). This demonstrates different perspectives on how outsourcing can either strengthen or weaken control of cyber risk.

In summary, the majority depend on outsourcing to manage IT and cybersecurity. This creates a dependency on the supplier and, as the empirics show, transfers parts of the traditional diagnostic control function from the manager to an external supplier.

Interactive control systems crippled by a lack of competence

To facilitate interactive control through dialogue and encourage learning (Simons, 1995a, p. 83), the organisation's communication and training on topics related to cybersecurity were addressed through tools such as short, mandatory courses/e-learning or physical meetings. "Cybersecurity is part of the security management system. So, it will be assessed in the audit with those responsible on the boats present at the meeting. Then a meeting is held with the entire crew on board" (O4). Such face-to-face communication was challenging for organisations with multiple departments and made the role of the IT manager demanding: "The geography of it, with seven cities, is a bit challenging. It's easier to have personal contact in a small department. Now, I have become the intermediary" (O1). In the questionnaire, Organisation 4 responded with the highest rate of face-to-face contact and satisfaction with the cybersecurity training, while the majority in Organisation 1 were unsatisfied with their cybersecurity training and reported less face-to-face communication. Overall, the questionnaire responses showed variations between the organisations, and a clear pattern was not identified.

Training of employees was highlighted as important but also seemed to evoke a bad conscience among the managers. "Well, we are not perfect either. So, we had a round of courses after we got the report. But then we haven't been training as much since then. So, we can get better at that" (O2). Similarly, most managers emphasised how they should have done more. "When it comes to IT, it is on the agenda that it is poorly communicated today. [...] Both information flow and learning are ongoing projects, to get better systems. As of today, it is a bit lacking" (O1). This shows that, although the organisations acknowledge and emphasise the need for more competence and training, they struggle to prioritise cybersecurity.

The potential for lack of control, as the result of depending on external suppliers, was briefly described in the previous section. However, external suppliers can also be used interactively. One of the organisations used an external firm to "hack" (test) their systems. "Yes, we do that once a year or so. [...] Different angles of attack are then tried. Afterwards we get a report, so we can take measures where they see potential dangers" (O3). Another organisation appointed externals to get a second opinion on their IT solution. "So, we began by hiring a small security or consultancy advisors to analyse our environments and how we work. Then they came up with recommended measures" (O2). These actions show how organisations question their assumptions of whether they, and by extent, their supplier, are "doing the right things" in managing cybersecurity, which can enable double-loop learning.

Limited competence is both a reason for outsourcing and a challenge in the outsourcing process. The organisations found different approaches to coping. Whereas one hired an IT auditor to control their supplier, others relied on trust:

We trust it [that the supplier sells us what we need], since we do not have much internal expertise in cyber and IT security. Of course, we try to ask

critical questions: What is necessary and why do we have to have it? However, we don't have as deep expertise.

(O4)

O2 echoed how limited competence is an important barrier to assessing cybersecurity services from external suppliers:

When someone recommends a solution, it can be difficult to argue against it. If you're buying a car, for example, it's a bit easier. Then you know what you need... But when it comes to IT security, you have no idea. I think many people don't grasp it or don't bother to take it in. It is almost like the 'luxury trap' [reality TV with people in financial debt], where they stop opening invoices.

(O2)

This describes how limited competence, or the impression that they do not have the competence to manage cybersecurity, can lead people to disclaim responsibility and "look the other way".

The expert interviews emphasised how small and medium-sized organisations are in a difficult position competence-wise. "On the one hand, they are in a difficult position because they know they need to be well prepared, but, on the other hand, they lack the people and expertise to achieve exactly that" (E1). In addition to external conditions such as the scarcity of cybersecurity professionals, there were other opinions on why organisations struggle:

I think the biggest mistake we who work in information security make is that we speak a language that users don't understand. We are so deep in our own world that we use terminology that between us makes sense, but, if you go to someone who works with payrolls, HR or in other areas, and start talking about the jargon, social engineering, ransomware, it just goes over their head anyway.

(E3)

Experts in the field, either in-house or external, can have an important role in the interactive control, as terminology and poorly adapted communication can worsen the feeling of being "at a loss" (O2).

In summary, the findings show clear examples of how the organisations aim to mobilise interactive control through dialogue, learning activities and by questioning existing solutions. However, the case organisation interviews also highlight barriers to conducting these activities. Further, the findings indicate that lack of competence may weaken communication, dialogue and learning and the organisation's (perceived) possibility to manage cyber risk.

Discussion

The findings from four case organisations, supplemented by expert interviews, show that MCSs, operationalised as Simons' (1995b) four levers, to a limited

extent are used to manage cyber risk and that outsourcing is a prevalent aspect of cyber risk management in SMEs. This is, with some variations and exemptions, consistent across the case organisations. The “*absence of use*”, including potential for use and *managing through outsourcing*, therefore receive special attention in the following discussion.

“Absence of use” of MCSs for managing cyber risk

Beliefs systems for managing cyber risk were not identified in the case organisations. Rather, aspects somewhat related to security and management of new technology were considered unsuited to promote cybersecurity (i.e., risk-taking). This lever is therefore considered absent in the case organisations. The suggested “dominance” of the belief systems, i.e., in influencing other levers (Chenhall et al., 2010, p. 751; Widener, 2007, p. 781), indicates that this has the potential to become a powerful lever for managers. When the beliefs systems are absent, the boundary systems gain importance to guide behaviour. For years, studies on cyberattacks have pointed towards humans as the “weakest link” (Europol, 2024, p. 8). This means that employees are exposed to risk while being the organisation’s “first line of defence”. The findings identified routines and procedures such as emergency plans related to cyber incidents. Boundary systems are considered the most used lever to manage cyber risk. However, the measures identified were mainly reactive, which offers employees (and the organisation) limited protection against cyberattacks and guidance on how to *maintain* cybersecurity in daily operations. Boundary systems may benefit from guiding behaviour more proactively to limit the employee’s opportunities to make mistakes in the first place.

The findings showed that diagnostic control of cyber risk was largely managed through outsourcing. On the one hand, the lever can be viewed as “in use”, as monitoring and attending to critical deviations was reportedly implemented by a supplier while the manager can oversee the process. On the other hand, the findings offered limited insights into how diagnostic control was performed by the supplier, as it is partly absent *within* the organisation. Therefore, this lever is considered to be used to some extent to manage cyber risk. A more active approach towards supplier management might strengthen this lever. Interactive control was present in varying degrees in the organisations and included training, communication, face-to-face dialogue and questioning existing IT solutions. As opposed to other levers (such as beliefs systems), the case organisations and experts seem to be very much aware of how this lever may improve cybersecurity. This is in line with previous research, such as that of Broccardo et al. (2024), who found that training employees in digitalisation is key to achieving a more mature MCS and higher performance. Overall, it may seem that the execution of interactive control is weakened by a (perceived or actual) lack of competence. This lever is considered partly used to manage cyber risk.

Taking the widespread application of MCSs (Martyn et al., 2016) and the integration of risk management (Hiebl, 2024) into account, MCSs to address cyber risk are almost conspicuous by their absence in the findings. Mundy (2010, p. 516) suggests that “absence of use” can cause dysfunctional consequences, underlining the importance of taking all levers into account to guide, direct and control organisational activities. SMEs are known to adopt less technical and formal mechanisms (Pešalj et al., 2018, p. 2183), which may limit the identified use of MCSs. While the findings show an absence of beliefs systems and challenges to mobilise interactive control, Pešalj et al. (2018, p. 2183) found that these systems become a prominent feature in SMEs’ less formal approach and were tightly linked to boundary and diagnostic systems. Such linkage was not found in this study.

Managing cyber risk by outsourcing

The outsourcing of IT services is common. This was emphasised in the expert interviews and confirmed by the case organisations. Three of the four case organisations had outsourced their IT functions, including cybersecurity services, to external suppliers. As noted in a previous study, IT and security are often synonymous in small organisations (Osborn & Simpson, 2018, p. 478). This (mis) conception might explain why cyber risk, alongside IT, is often managed by outsourcing. However, Osborn and Simpson (2018, p. 492) argue that cyber risk itself cannot be outsourced because the related risk of reputational damage cannot be outsourced.

The rationale for outsourcing expressed by the managers and experts was mainly linked to limited in-house competence and resources, which is in accordance with previous literature (see, e.g., Hoppe et al., 2021, p. 250). The majority stated that outsourcing was seen as a necessary, suitable and *only* solution to acquire the competence needed to manage cyber risk. Dhillon et al.’s (2017, pp. 460–461) study of information security in IT outsourcing rated concerns and showed that clients were found to expect *more* than the supplier when expecting competence beyond skills, mandatory compliance with regulations and trust that the supplier is applying appropriate control. The managers and experts in this study expressed similar concerns, with a particular emphasis on limited supplier control. However, a lack of competence also influences the ability of organisations to assess needs and acquire suitable solutions (Watad et al., 2018, p. 29). This suggests that organisations may lack the competence to ensure suitable cyber risk management solutions when outsourcing. Competence is key to managing cyber risk (Hoppe et al., 2021, pp. 249–250; Watad et al., 2018, pp. 23–24). When organisations rely on outsourcing, they risk not building in-house competence. If so, managers risk “throwing the baby out with the bathwater”, as they outsource cyber risk management to compensate for insufficient competence while decreasing the possibility of building competence.

Conclusions

This chapter has addressed and discussed the (absence of) use of MCSs to manage cyber risk in SMEs. Cyber risk affects the environment that organisations must navigate to meet their objectives, create value and survive. To assist organisations in this realm, it has been suggested that MCSs can be key to managing cyber risk and reducing losses related to cyberattacks (Gordon et al., 2008). Therefore, this work was motivated by the research question: *How do organisations use their management control systems to manage cyber risk?* In doing so, this study contributes to the call for more empirical research on the intersection of technology, digitalisation and MCSs (Fähndrich, 2023, p. 45; Granlund, 2011, p. 16; Möller et al., 2020) in the empirical context of SMEs (Alahmari & Duncan, 2020). The findings from four case organisations, supplemented by expert interviews, show that MCSs, operationalised as Simons' (1995b) four levers of control, to a limited extent are used to manage cyber risk and that outsourcing is a prevalent aspect of cyber risk management in SMEs. This is, with some variations and exemptions, consistent across the case organisations. The findings show that the beliefs systems are absent, and the boundary systems are considered the most well-established, although mainly reactive. The diagnostic control systems are outsourced in most organisations. Lastly, the interactive control systems are difficult to mobilise, due to limited competence. In addition, this study sheds light on the “absence of use” of MCSs (Mundy, 2010, p. 504) and cybersecurity concerns in outsourcing (Dhillon et al., 2017).

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Note

- 1 Transformative Capabilities of the Accounting Profession: Study of the Norwegian small and medium accounting practices.

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Part III

Education, training, competences and skills



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8 Masters' supervision and academic growth of accounting and auditing students in Norway – from understanding to creativity

*Evgenii Aleksandrov, Olga Iermolenko,
Elena Dybtsyna and Nadezda Nazarova*

Introduction

The accounting and auditing (A&A) profession faces growing pressure to adapt and change its functions under the agenda of digitalisation, sustainability and dynamics in business and society worldwide (Altbach & Knight, 2007; Carnegie et al., 2021; Desplebin et al., 2021). Such change and adaptability require new knowledge and technical skills' formation and the ability to see the world differently and act beyond existing taken-for-granted practices in A&A (Satava et al., 2006; Hopwood & Unerman, 2010). A&A education literature has increasingly addressed such demands. Those have included, for example, the need to develop accountants' and auditors' technology-related skills for the future (Jackson et al., 2023); "soft" skills in communication, presentation, negotiation and relationship building (Asonitou, 2022); non-technical skills for sustainable development (Othman & Ameer, 2024); and general critical thinking, creativity and analytical skills (Chabrak & Craig, 2013). This skills development is addressed via a discussion of necessary changes in courses' content and structure, forms of interaction and evaluation, and university administration and tutors' roles (Apostolou et al., 2023). Yet, despite the need for change in A&A education (Herbert et al., 2021), there is still a gap between labour market demands and responses from A&A educational institutions to develop the necessary skills. We know relatively little about how to move from the demands to actual actions to be undertaken for the new skills' formation via higher education.

To address this concern, this book chapter discusses the importance of the personal academic growth of A&A students as a crucial component of developing such skills as critical and analytical thinking. The general idea of personal academic growth is to help students acquire the knowledge, competence and skills to conduct in-depth theoretical and empirical studies of a particular field through a master's thesis (Glatthorn & Joyner, 2005; Mauch & Park, 2003). Here, we devote special attention to the development of a master's thesis as an essential and culminating part of A&A students' skills formation for future employment (Dragomir & Dumitru, 2023).

In general, most academic master's programmes in Western Europe, including Norway, are completed with master's thesis research projects that students undertake independently but with the guidance of a supervisor. Typically, a master's thesis is written within six months and awards 30 ECTS (The European Credit Transfer and Accumulation System).¹ While there are variations in master thesis requirements, formats and supervisory work in different countries, the literature stresses the assurance of a certain level of academic skills, progress and personal academic growth (Anderman et al., 2015). Much research has raised the challenges of student progression in a master's thesis, including the selection of topic and research design (Glatthorn & Joyner, 2005), students' background (Dysthe, 2012), language (Pudelko & Tenzer, 2019), interest, self-discipline, institutional environment, evaluation and outcomes (de Kleijn et al., 2016; Dragomir & Dumitru, 2023; McKinley, 2019; Iermolenko et al., 2021). Moreover, supervision has been stressed as crucial for both progression and fostering master students' personal academic growth (Macfadyen et al., 2019; Neupane Bastola & Hu, 2021; McKinley, 2019; Filippou et al., 2017). Research is growing regarding student-supervisor relations in facilitating master students' analytical skills (e.g., Jusslin & Widlund, 2021). It emphasises that we need to go beyond the general formal guidelines for master thesis writing by A&A students and, instead, focus on how academic writing skills are developed *in practice* (Dragomir & Dumitru, 2023). Thus, despite variations in master thesis requirements and supervision among institutions, research highlights the importance of ensuring academic skills, personal growth and effective supervision to overcome challenges in student progression and develop practical academic writing skills. Yet, there have been few attempts (see Lawrence, 2014) to capture the progression of students' academic growth and the related challenges they face in action, from the supervisors' perspective.

Regarding this gap, this book chapter focuses on the supervision perspective of A&A master's thesis writing in action, as a part of a student's personal academic growth. In particular, we explore: *How does the supervisor support the personal academic growth of A&A students during their master's thesis writing?* To answer this question, we theorise students' personal academic growth as a learning process of academic writing and research that can foster non-technical skills' development and "seeing and acting A&A differently" (Chabrak & Craig, 2013). We capture this process by applying and combining two perspectives, namely, the notion of theory development for the social or individual phenomena of interest (Whetten, 1989) and revised Bloom's taxonomy on learning, teaching and assessing (Anderson & Krathwohl, 2001; Bloom & Krathwohl, 1956). The former is valuable in assessing students' ability to develop academic writing skills in the "what, why, how, so what?" questions, as essential dimensions of scientific work (Whetten, 1989). The latter, in turn, is valuable for tracking their ability to remember, understand, apply, analyse, evaluate and create knowledge (Anderson & Krathwohl, 2001; Bloom & Krathwohl, 1956) during different stages of the research process.

Empirically, we bring to the readers our own experience as supervisors of students with different backgrounds enrolled in several master's programmes in a Norwegian business school. Engaging in memory work (Johnson et al., 2018;

Katila et al., 2020) and focusing on retrieving and analysing subjective events and aspects that we consider essential for students' academic personal growth, we highlight the different experiences in supervision and trace particular challenges faced by the students during their master thesis and the supervisors' role within them.

The book chapter is structured as follows. First, we discuss the role of supervision and master students' personal academic growth. Further, we theorise the personal academic growth of master students and explain how this conceptualisation will be used for further analysis. In the third section, we provide details on the research method, data collection and analysis. This is followed by the findings, discussion and conclusions.

Theoretical framing

The research carried out in a master's thesis project is determined by the student, to a large extent, in terms of both topic and research design (Glatthorn & Joyner, 2005). Yet, unlike most coursework assignments, neither the student nor the supervisor knows for sure what the results of the research will be (de Kleijn et al., 2016). As the student or a small group of students work(s) on one research project over half a year, this leads to a dynamic supervision process, in which the thesis is discussed at each meeting (Macfadyen et al., 2019). Thus, the supervisors' role in fostering master students' personal academic growth during their master thesis journeys is reported to have crucial importance (Neupane Bastola & Hu, 2021; McKinley, 2019; Filippou et al., 2017). In general, supervisory feedback on their thesis is arguably the most important source of information for master students to conduct, complete, report and improve their graduate research and benefit from the process (Neupane Bastola & Hu, 2021). Thus, it is suggested that supervisors and students need to conduct early discussions on supervision, expectations, ethics and culture (Filippou et al., 2021; McKinley, 2019). Trust, topic selection, supervisors' support and the initial stage of supervision are regarded as the most important features during supervision (Filippou et al., 2021).

Most business schools, including Norwegian ones, have become more internationally oriented and thus require supervision and writing of the master thesis in the English language. Research shows that master students with different backgrounds often experience even more challenges in master thesis writing, than local students, because of the asymmetric views of students regarding the division of responsibilities between themselves and their supervisors (Filippou et al., 2017). Still, master thesis writing is a demanding process for students in any context (Samara, 2006). Moreover, while the language is an important issue for foreign students (Pudelko & Tenzer, 2019; Sadeghi & Shirzad Khajepasha, 2015), they also carry their "academic baggage", which often causes confusion about academic writing styles and traditions, study expectations, understanding of the examination forms and course requirements (e.g., Filippou et al., 2017; McKinley, 2019; Iermolenko et al., 2021).

Therefore, there is increasing acknowledgement of the need to go beyond the formal guidelines for master thesis writing. Still, there is little knowledge about how personal academic growth is developed *in practice*. We suggest

theorising personal academic growth as a two-dimensional process of honing academic writing skills (Figure 8.1). As a first dimension, we theorise the personal academic growth of master students as the development of students' ability to reflect upon the "what, why, how, so what?" questions around their research projects (Whetten, 1989). Originally, Whetten (1989) used "what, why, how and so what?" to evaluate the theoretical contribution when conducting a research project. In this study, we choose to apply it to the master thesis as an example of the independent delimited research project that A&A master students conduct under supervision.

However, Whetten's (1989) theorisation of scientific work in the management discipline has progressed to become the general benchmark for evaluating excellence in research field progression and for how academic work is performed on different levels, including the master level (Cloutier & Langley, 2020). In this regard, we see master thesis writing as a process of learning to reflect on a group of questions. In particular, we consider that the "what and why, how, and so what?" questions are the central or basic blocks for master thesis research. These questions are also adapted for the qualitative research tradition in business administration studies. Generally, "what and why" questions help students define the study's topic and research question and provide background for the introduction, literature review and problem statement. "How" refers to the theoretical and methodological part of the thesis, while the "so what" question guides master students towards their findings, discussion and conclusion (contribution of the thesis).

As the second dimension, we also theorise the personal academic growth progression as a learning process with different levels of how well or deeply students' progress in learning academic writing skills. In particular, we apply the revised Bloom's taxonomy on learning, teaching and assessing (Anderson & Krathwohl, 2001; Bloom & Krathwohl, 1956) to master thesis writing practice. In particular, we see master thesis writing as the ability to remember, understand, apply, analyse, evaluate and create new knowledge (Anderson & Krathwohl, 2001; Bloom & Krathwohl, 1956). The above are traditionally known as the six elements of Bloom's taxonomy, which is a hierarchical classification of the different levels of thinking and learning. Applied to the master thesis writing process, Bloom's taxonomy can be revised as follows (Anderson & Krathwohl, 2001). "Remember and Understand" will be related to students being able to retrieve, recognise and recall relevant knowledge and construct meaning under each building block of academic writing work (see more details for particular aspects in Table 8.1). "Apply and Analyse" will be related to students' ability to interpret and relate knowledge to particular aspects in focus, i.e., in our case, the "what and why", "how", and "so what" blocks. Finally, "Evaluate and Create" will be related to students' ability to summarise, reorganise and put together into a new whole each part of the thesis in focus.

Altogether, both dimensions, Whetten's (1989) theorisation and Bloom's taxonomy, are valuable for integrating the scientific work evaluation and understanding of how well students have been progressing in their scientific

Table 8.1 Conceptualisation of personal academic growth

<i>Building blocks of the academic writing work/basic elements of Bloom's taxonomy</i>	<i>What and why? Topic and research question</i>	<i>How? Theoretical lens and methods</i>	<i>So what? Findings, discussion and conclusions</i>
Remember and understand Recognise and recall relevant knowledge and construct meaning	1.1 Working with the literature on a particular topic, including categorising and summarising, defining and explaining core terms or concepts in relation to own research	2.1 Identifying key theoretical lenses and methods potentially used with clear definition and explanation of key concepts, their foundations and procedures	3.1 Presenting and explaining key patterns/results from the data and how they align with the research question(s)
Apply and analyse Interpret and relate knowledge to particular aspects in focus	1.2 Comparing and contrasting previous studies, identifying weaknesses and missing areas and drawing connections to own research	2.2 Demonstrating how the mentioned theoretical lens and methods can be applied, their value for covering the research gap identified, along with analysing their pros and cons	3.2 Exploring relationships, patterns and anomalies in the data and connecting them to your theoretical lens and previous studies
Evaluate and create Summarise, reorganise and put together into a new whole	1.3 Critical evaluation of previous studies, clearly identifying the gap(s) and producing original research question(s)/new directions to cover	2.3 Creating a robust theoretical framework that guides your research, along with its connection with methodology and research question(s)	3.3 With the theoretical framework in mind, critically assessing aha moments arising from the data and denoting them as findings, together with making solid arguments for literature contribution, practice and further research

work – from understanding to creating new knowledge. Being driven by these two dimensions, our empirical analysis is guided by the following set of questions:

- The “What and why?” comprises: Which phenomenon will the student study and the reason for that (empirically and theoretically)? What is the research

topic/research problem/research question(s)? What do we know from the literature about this phenomenon? What is a literature gap that the master student thinks to cover?

- The “How?” defines which theoretical lens and method the student will use to research the topic/question(s): Whether and how the theoretical lens is borrowed from a particular discipline, described and applied to their phenomenon? What data collection techniques are relevant?
- The “So what” answers the major findings from the study, as well as the conclusions and contributions to the literature, theory and practice it produces. Will the theory be likely to change the practice of organisational science in this area? Are linkages to research evident (either explicitly laid out or easily, reliably deduced)?
- How do the addressed “what, why, how, so what?” questions progress within students’ ability to “remember and understand”, “apply and analyse” and “evaluate and create” knowledge within the master thesis?

In summary, the provided framework equips us with the necessary analytical vocabulary and gives an opportunity to trace the personal academic growth of master students. Regarding relations between Whetten’s (1989) theorisation and Bloom’s taxonomy, the table shows how each stage of academic writing builds on the previous one, with Bloom’s taxonomy providing the skills needed at each step and Whetten’s academic writing work stages forming the research process. Each block in Table 8.1 (1.1–3.3) creates our initial assumptions of students’ abilities under Bloom’s taxonomies under each of Whetten’s stages. Moving along the table as our theoretical frame, we explore how the supervisors support A&A master students to “climb” in their personal academic growth from “remember and understand” to “evaluate and create”. However, this does not mean personal academic growth is linear. Multiple variations of the learning process and connections between the stages might exist. In this research, we describe a typical personal academic growth “cycle” and focus on the supervisor’s support of A&A students during the writing of their master’s thesis, according to the above-described framework.

Methods

We rely on our experiences of academic supervision of master student² with different backgrounds from international study programmes in one business school in Norway. We build on the memory work approach and focus on written individual memories and their collective analysis and theorising (Johnson et al., 2018; Katila et al., 2020). This entails acknowledging our own participation in the formation of past experiences and, in our case, of us as academic supervisors of master students. In memory work, the academic researchers’ role is to position themselves as members of the researched group, where all participants become co-researchers. Six qualitative researchers (two males and four females), including one professor and five associate professors with a PhD degree, took part in the memory work exercise. In total, they supervised 227 master students, who worked on 162 master theses (master

students worked in groups of two to three people or independently) from 2000 to 2023. Our memory work concerned our own journeys as master theses supervisors at a business school. In the memory work, we tried to search and balance the challenges and opportunities of critical thinking formation among students, use illustrative examples/problems and describe what we tried to do to help students grow academically. A major limitation of this study is that we do not include the perspective of master students for consideration and describe solely our experiences as academic supervisors. Further, we do not analyse the differences between working with small groups of students and working with individual students.

The memory work method consists of three phases: individual reflection, collective reflection and further theorisation of the materials (Johnson et al., 2018; Katila et al., 2020). During two collective meetings and two writing seminars in August–November 2022, and based on Johnson et al. (2018), we employed the following procedures for memory work (Table 8.2). Before writing our memories, we defined topics that we considered essential elements of students' personal academic growth in relation to the development of their master theses (Table 8.1): (i) What and why? How? So what? and (ii) Remember and Understand, Apply and Analyse, Evaluate and Create. We wrote personal reflections on each of the nine elements.

Table 8.2 Memory work exercise in practice

<i>Stage</i>	<i>Description</i>
Stage 1: Defining the main focus of the memory work exercise	We needed a frame for our memory work and therefore spent our first meeting brainstorming it. We decided to adopt Whetten's (1999) approach to theory development for the social or individual phenomena of interest and revised Bloom's taxonomy on learning, teaching and assessing (resulting in the development of Table 8.1).
Stage 2: Filling the table with the nine cells based on Figure 8.1	Each researcher wrote a few pages (approximately 800–1,200 words). We agreed that the writing must be as detailed as possible. The memory work texts were factual, without interpretations and analysis.
Stage 3: Sharing and analysing	Each memory work group member read and expressed opinions on the other memories. We paid attention to similarities and differences between the memories. Among the memories, group members looked for continuous elements whose relation to each other is not immediately apparent.
Stage 4: Collective rewriting and theorising	The group examined what is not written in the memories but that might be expected to be. The memories were rewritten and developed into one collective narrative. The group constructed a generative narrative around the three major elements – the "1) What and why? 2) How? 3) So what?" questions in relation to Bloom's taxonomy.

After that, we presented our narratives and discussed them with the group. Surprisingly, the struggles were very similar, and the ways of coping with challenges and boosting opportunities for students' progression appeared to differ little.

We produced one generative narrative that summarises our common experiences. Following Johnson et al.'s (2018) suggestions on aggregating individual memories to common synthesised themes, we organised a final-round memory work presentation by each researcher. We discussed commonalities and differences in our interpretations, based on theory-driven aspects. The process was not straightforward but, rather, creative, moving between memory work narratives and theory-driven themes, namely, Whetten's (1989) approach to theory development for the social or individual phenomena of interest and revised Bloom's taxonomy on learning, teaching and assessing. This resulted in the formation of aggregated themes around our narratives. In that sense, when presenting findings, our memories were rewritten and developed in one collective narrative, giving the most illustrative examples of those themes.

Empirical material

What and why?

As previously stated, "what and why" questions help students define the study's topic and research question and provide a background for the introduction, literature review and problem statement.

Remember and understand

Any research work, including the work on a master's thesis, starts with choosing a research area and finding a research topic. Students usually tend to come up with a very broad and general topic. They remember something from previous classes, media or their own experience as being interesting, but they are not necessarily always able to explain why a certain topic is interesting to them or the broader audience. Hence, they often tend to choose huge topics or famous cases, as they see the relevance and contribution of their work being guaranteed by a well-known company name or fancy topic. We observe that students try to demonstrate the relevance of the chosen topic by providing multiple references or, conversely, claiming that nobody has been talking about it so far. In either case, the role of the supervisor is to help the student understand the rationales behind the choice of a certain topic, e.g., what makes this topic interesting to study in the first place and what kind of dilemma(s) they are trying to solve. However, we notice some differences between students. Students with less working experience often come up with "big ideas" for their research projects. Students with some previous experience tend to formulate practical problem statements for their master theses, which are sometimes less ambitious.

To facilitate remembering and understanding, we motivate students to read previous master theses and relevant peer-reviewed research articles. The supervisor can

assist the student in time-demanding working with the literature on a particular topic, by suggesting some key references on the topic to start with or/and some disturbing references that could challenge students' rather normative perspective at the very beginning. For those with long lists of references, a discussion on understanding core terms and concepts within their topic and/or drafting categories of the materials read could be very helpful. In addition, we have noticed that it is necessary to spend time on the technicalities of a master's thesis and the basics of referencing (this more often concerns international students). Some students have even struggled to understand the articles' main points, as well as to differentiate between what is a scientific peer-reviewed paper and what is not. It seems important to explain to students that, to use a reference, one needs to take time to understand. One can say that the role of the supervisor in contributing to personal academic growth at this stage is demanding, in "settling down" the ideas and explaining the "cocktail party"³ of the academic research and the formalities of the master thesis process.

Apply and analyse

When the "homework" of reading and understanding the existing potentially relevant literature is finished, the task of defining its relevance for the chosen topic begins. The main challenge at this stage is, on one hand, to recognise and address different perspectives, while at the same time relating them to a bigger problem discussed in the academic literature. Students often face an expectation gap between what they already know and understand and being ready to problematise. This often results in several rounds of a rather chaotic literature review and a first draft of a research question, which tends to be formulated as either overly broad or extremely narrow. However, while the draft version of the research question is there, it usually simply follows the least researched literature stream. The supervisor can facilitate students' analytical work by asking them to write summary paragraphs of three to four main sources of literature and by running several rounds of talking about "what is there". Eventually, visualising the core literature discussed from different standpoints turned out to be a useful practice for students to move from the topic of the study to the research question based on the literature review (e.g., see Booth et al., 2003).

Evaluate and create

The stage of justifying a student's stand and producing new or original work turns out to be the most challenging for the students. It becomes specifically challenging to spot theoretical problems and formulate a clear research gap. In other cases, the broad focus of the study (as we showed above) disables students from having a critical point when selecting a topic, analysing literature and working on the problem statement. This is the top level in Bloom's learning taxonomy, and therefore not all students can reach this level at the very beginning of their academic writing process. Still, the supervisor can facilitate the students in doing coherent research work.

At this stage, it is not enough to analyse different research background perspectives in silos. Now, a master candidate has to demonstrate his/her ability to critically evaluate previous studies and how they relate to each other, i.e., how they speak to each other. Our findings from memory work show that what helps students to reach and fulfil “Evaluate and create” is the writing and rewriting of the “what and why?” part. Receiving feedback at the supervision meetings and during compulsory presentation rounds, where students can test their ideas, also turned out to be useful. Techniques such as playing with quotes and metaphors from the key references can facilitate the process of papers talking to each other. The goal is to clearly identify the gap(s) in the previous research across the multiple perspectives applied at the earlier stages. The role of the supervisor at this stage is not to confound the student with missing knowledge but, instead, to inspire him/her to see the opportunity to produce/create new and original research question(s) that have the potential to contribute to the literature. In this respect, the ability of a student to build the link between the topic, research question and intended contribution (see, e.g., Booth et al., 2003) can be used as mental training to facilitate students’ understanding of what is expected from them to join the academic “cocktail party”. This is a successful kind of litmus test of a student’s ability to evaluate and create knowledge.

How?

The “how?” defines how well the students are “equipped” to perform a scientific study of a selected phenomenon. This includes the theoretical lenses students select to frame their research and the methodology used to gather empirical data.

Remember and understand

To proceed with the master thesis when the topic and the research question are defined, a candidate has to identify a key theoretical lens, with clear definitions and an explanation of key concepts, as well as the key steps and procedures of their methodological considerations relevant to the particular research problem. We find that, as a rule, students can memorise/name at least some methods and theories taught during their master’s programme. Often, they come up with almost everything they can remember from the course materials, with a strong belief that the more the better. However, while an extensive list of theories may demonstrate how much a student remembers, it does not mean that the student understands those multiple perspectives. The student may either refer to many very close theories that they remember or, conversely, describe just one, as the only one(s) they understand at this point. The role of the supervisor would then be to extend the horizon and/or to separate the wheat from the chaff, to facilitate deeper understanding of the selected theoretical lenses.

One of the main problems students face at this stage is their limited comprehension of what theory is and what it is not. The role of theory and how it should be linked to the practical problem they study are also common challenges at this stage.

Some also struggle to understand the difference between theory and a general literature review on a selected topic. Students often tend to be very normative in their thinking – that is, seeing only one way of doing things or providing an explanation without placing it in a wider context. It might also be that they use easily accessible and understandable reports by, for example, Deloitte and McKinsey (and try to sell these companies' ideas as theory in their master theses). Anecdotic situations often occur when students, for example, say that they will use the “Theory of COVID-19” as the main theoretical lens in their thesis.

When it comes to research methods, the opposite situation may be the case. Students often underestimate the importance of the method section. They address this section rather as an (unnecessary) formality, using very common words, quite often copy-pasted from other works, without recognising the consequences of doing the same as others. Often, simple statistics or the dynamics of an indicator are “sold” as a quantitative method or mixed method. Our role as supervisors often goes back to the basics and involves explaining again the differences between the research methods and how differently they can serve a research idea at stake. In line with this, the role of the supervisor can be to make students remember/address more details behind their planned or completed data collection processes. In this respect, giving the student an opportunity to present their methodological and theoretical considerations to a broader audience may invite more questions and, therefore, provoke a student to address methodological peculiarities more seriously.

Apply and analyse

When a student and a supervisor agree on what is theory and what is not, the next task is to deal with each and every one of the theories, one by one. Namely, the student has to see how a theory under consideration can be applied to study the research question and how it can bring value to research results and cover the research gap. Along with this, it is important to identify and analyse its pros and cons in answering the research question, as compared to other theoretical perspectives. Last but not least, the supervisor can invite the student to discuss common features of different theories and their potential contradictions in terms of how they can help (or not) to study the research problem. Such analytical work with theories is often perceived as very challenging for the candidates. They often get lost and frustrated with how to apply “all these theories” in one project. We found that many students either do not clearly understand theories per se (e.g., assume that New Public Management or COVID-19 can be used as a theory) or have a very broad understanding of what theory is and confuse it with the research field (e.g., sustainability or management control). The students then try to fill the section with everything they remember or read recently, creating further challenges for themselves, and they are usually not ready to cut the text and rewrite it. Therefore, students can often become stuck in this section and do not plan their time well enough to make a coherent theoretical section as the real understanding of theoretical lenses value is missed. From our experience, the distinction between different roles of theories – domain and method theories⁴ (Lukka & Vinnari, 2014) – can be very

helpful at this stage, as can sharing papers or master theses with good examples of theory and method sections.

As with theoretical decisions, methodological decisions are the student's own choice. Students have to carefully work with them – apply and analyse – in order for these important elements of research design to really work for them, and not vice versa. In this respect, when it comes to methodology, while being able to list and summarise the most popular textbooks on the methodology, students usually think that this, in the end, should constitute a satisfactory methodological section. First drafts of an interview guide or a survey at this stage usually come out consisting of very general questions. Hence, it may be helpful to discuss other options that could help to better realise the strengths and weaknesses of the chosen one, and either be used as a supplement or as plan B in case of emergency (as was the case with all interview-based data collection during the COVID-19 pandemic). Overall, the theoretical and methodological choices must be aligned, in order to be able to produce the promised answer to the research question.

Evaluate and create

When all theoretical and methodological solutions have been critically addressed and analysed in relation to the research question, there is an opportunity to consider theories and methods in combination. Instead of looking at the research problem from several independent theoretical lenses individually, acknowledging their scope and potential value, all these different lenses can be used simultaneously as a kaleidoscope or a theoretical puzzle – different combinations of pieces provide a more complex view of the research problem. Students may use this creative setting to come up with a more nuanced research design and may even be willing to revise their research question, making it more original.

In line with this, this theoretical advancement should give impulse to the methodology. In particular, the supervisor may assist students in integrating theory into the data collection process by informing the interview guide or questionnaires with more nuances. However, this does not necessarily mean an extending of the interview guide questions. The number of questions is not that crucial and often can be reduced. What is important, though, is that the student becomes more equipped for the twists and surprises that can occur during the interviews, for example, and can play with their questions on the way, as with the different pieces in the kaleidoscope.

So what?

The “So what” question answers what the major findings from the study are, what contribution(s) to the literature and practice it produces and what conclusions can be drawn from the research work.

Remember and understand

When it comes to the final parts of the thesis – empirical findings, discussion/analytical chapter and conclusion – students seem to struggle with similar things,

but sometimes in different ways. Many feel relief when the data is collected and tend to believe that the hard part is over. This may explain why most students allow very little time for this last but extremely important part of the thesis.

As a rule, all of them manage to present the first draft of the empirical part based on their completed interviews. The very first draft of the empirical part is usually presented either as raw data in a question-answer form or, alternatively, as a short summary of all the interviews without quotes and with no proper structure or message. The role of the supervisor is to get the student back on the overall master thesis track. Students must remind themselves about what they intended to do prior to the data collection. Surprisingly, not many do remember what their research question was and have to search back and understand how it is reflected (or not) in the collected data. Hence, the student must present and explain key patterns/results from the data and how they are aligning with the research question(s). The role of the supervisor is to help the student to see at least potential findings behind the raw data that they often present at this stage.

Overall, most students manage to succeed with the “remember and understand” task of their data collection. However, depending on the amount of data collected, some students may feel very inspired that they managed to find out “something” (at least). For them, carrying out an interview itself becomes an achievement, the data from which they do not understand what to do with, however, and they often want the supervisor to explain their own data. There might be some exceptions, when some proactive students mistakenly think that the mission is now completed and often quickly jump to conclusions by writing down the discussion and conclusion parts, without a clear understanding of what these parts should represent. As a result, the discussion and conclusion almost unexceptionally do not provide more than just a summarised description/repetition of the empirical part with a lot of text and no reflections. In this respect, students rarely search for new clues themselves, while the presentation of the findings-theory link is limited. The role of the supervisor, in this respect, is in helping students to see the value and meaning in their data, which will become findings only at the next stage. Formal compliance (e.g., structure, referencing and argumentation) is also a challenge for some students, but that must be fixed, depending on the time available before submission.

Apply and analyse

When a kind of a red thread between the collected data and the intended research question is concerned, it is time to search for links between the previously selected theoretical background and the data, to formulate findings. The student should apply every theoretical perspective to analyse the data. At this stage, some labelling and categorisation of data may be helpful, exploring relationships, patterns and anomalies in the data and connecting them to their theoretical lens and previous studies. Hence, students have to apply their theoretical lenses to look at the data, in order to see the findings, as well as having to analyse how different methods (if multiple) may provide different findings. It is also at this stage that it often becomes evident that a certain theory is not being used and can be removed from the theory chapter. It may be painful to cut the pages, but every theory must be

there for a purpose – either to describe or to explain data. Similarly, every piece of data included in the thesis must help answer the research question. As a result, the student usually ends up with several relevant and potentially interesting points. The supervisor's role is then to facilitate the further discussion of the processed data.

To reveal the most interesting things from their data, candidates often need to seriously study again and re-consider their theoretical stands. To facilitate the development of raw unstructured data into findings, students are often asked to use some terms from the theory part (concepts, verbs, etc.), so that they better see the connection (if any) themselves. Often, asking students to structure their analysis around, for example three main points, is enough to help students to get off the ground and see the light at the end of the tunnel. Usually, many end up confirming the theory, instead of finding surprises, but then it becomes easier to explain the point about a missing contribution. Sometimes, this analysis ends up in a shortening of the theoretical part, as some theories turn out to be of no use to either describe or explain the data. This mandatory analytical part turns out to be especially demanding for those students whose educational background did not require working on a bachelor thesis with an analytical chapter.

Evaluate and create

When the main interesting material is selected, it is time to present it in a persuasive and (preferably) creative way, with clear links/references to the literature/theoretical points and an easily followed common thread. All students (international and local) have similar challenges at this stage and often find it “so hard” to do. Not all get there early enough and have enough time to get back to the upper level. Many suddenly “hate” their theses at this stage and do not seem that motivated to continue the fight for the contribution. As most of them do not plan for this, in their opinion “extra work” when “research is finished”, they tend to, rather, concentrate on overall finishing and polishing formal requirements and writing a summary section. Instead, the role of the supervisor is to make the student answer the “so what” multiple times, i.e., what is new that we have learned from your findings that we did not know before, and what does this mean in relation to the literature? This process of finding the links between theory, data and the formulation of main findings' points, as well as the potential contribution, often requires several rounds of meetings, if time allows. But it is necessary to make students themselves evaluate what they find surprising regarding the existing literature. A typical question from a student at this stage is, “What is interesting here?” That should be followed by a typical answer from a supervisor, “No, you tell me! What is the most surprising thing for you about the completed research work?”

With the theoretical framework in mind, the supervisor has to make students critically evaluate their data – not just in terms of new things but searching for surprises and even shocks. The so-called aha moment(s) should come from the data and should make the findings speak back to the literature with solid arguments, inspiring further research. The role of the supervisor is to help students create the link between the findings and the intended contribution discussed at the “what and

why” stage. This may be done by sharing good examples of previous master theses (maybe even on a similar topic) or inspiring papers as best practices that demonstrate how this work can be done and presented differently.

This very last but not least step is extremely time-consuming. Therefore, this respect, time management and the ability to be abstract may not often favour some students. At the same time, others do better when it comes to the discussion of practical implications based on their work experience and/or closer access to informants. Overall, all students benefit from a deeper discussion of the last chapters. Often, searching for metaphors to explain the difficult stuff in an easier way, as well as finding “a sexy title” for their thesis, may help to bring the main contribution points to the forefront for the reader. This helps to demonstrate the candidate’s ability to be creative and reflexive, which significantly increases the chances of a better grade, even if some parts still need extra work and streamlining.

Concluding discussion

This book chapter has explored the role of supervisors in supporting the personal academic growth of A&A students during their master thesis writing as a crucial component of analytical and critical skills’ formation to face future challenges of the A&A profession (Chabrak & Craig, 2013; Dragomir & Dumitru, 2023; Hopwood & Unerman, 2010; Satava et al., 2006). This topic gained increasing attention in accounting and education literature via discussions of formal guidelines, rules and the formation of institutional arrangements (e.g., Anderman et al., 2015; Christiansen et al., 2015; Filippou et al., 2017; Glatthorn & Joyner, 2005; Jusslin & Widlund, 2021; Mauch & Park, 2003; Macfadyen et al., 2019). Nevertheless, few attempts have been made to explore how A&A students’ analytical and critical skills are developed in practice as a part of academic growth in master’s thesis writing and the related challenges they face in action. In this regard, through the notion of theory development (Whetten, 1989) and revised Bloom’s taxonomy on learning (Anderson & Krathwohl, 2001; Bloom & Krathwohl, 1956), we have summarised our reflections, based on years of supervisory work in one business school in Norway. Those reflections included our shared and jointly discussed “memories” (Johnson et al., 2018; Katila et al., 2020) regarding the obstacles for A&A students’ master thesis writing, as well as how we, as supervisors, handled those obstacles in action.

Our findings demonstrate that master students, regardless of their background, need guidance and support from the supervisor in defining answers to the three major questions “What and why? How? So what?” (Whetten, 1989), from the start of the master thesis (Figure 8.1). As we illustrated, each question becomes challenging for the A&A students when transitioning from the level of remembering and understanding to the levels of application and analysis, and evaluation and creation (Anderson & Krathwohl, 2001; Bloom & Krathwohl, 1956). It should be noted that the challenges presented are not exhaustive and are based on our own experiences. Yet, we claim that they become essential components to address when thinking of fostering analytical and critical skills’ formation via writing among

A&A students. In this regard, we suggest several ways to address the presented challenges at each stage as important “tips” for the personal academic growth of A&A students (see gray arrows and descriptions in Figure 8.1) and, therefore, their non-technical skills’ development and potentially “seeing and doing A&A differently” (Chabrak & Craig, 2013).

The presented findings and Figure 8.1, in particular, have several implications for the supervision of A&A students during master thesis writing. We demonstrate that it is the supervisor’s responsibility to be aware of where the student is in the learning taxonomy at the time of supervision. In this regard, the presented Figure 8.1

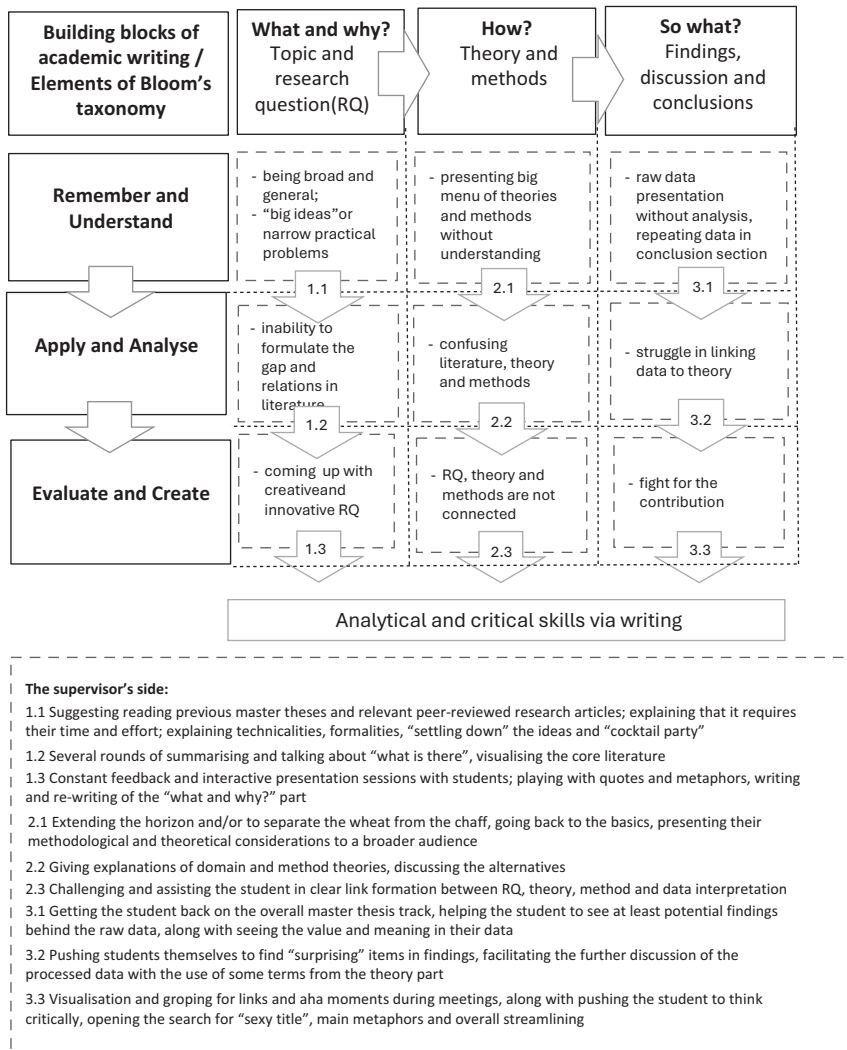


Figure 8.1 Accounting and auditing students’ academic growth during master thesis writing.

can become a good point of departure for the supervisor's self-reflexivity regarding the status of each A&A student and the related supervisory actions to move forward (Lawrence, 2014). This is important because we, as supervisors, often take for granted that a master's student has passed some first stages and is ready for analysis and creativity, even though it is not necessarily the case in practice. So, our story is a reminder to ourselves of the need to be more reflexive and careful in how we approach supervision. Our own reflection summary (Figure 8.1), in that sense, is a kind of roadmap for realising a student's current status and way forward. The creation of such a map is crucial if we take personal academic growth seriously.

Thus, looking at Figure 8.1 as a roadmap brings important implications for how we look at the feedback process during supervisory work in practice (Neupane Bastola & Hu, 2021; Dragomir & Dumitru, 2023). We see that there is a need to nuance how much feedback students need, as well as how to organise such feedback for students, depending on their current stage of progression. We see that students face almost similar challenges in writing blocks' development and Bloom's taxonomy perspectives, though some obstacles can vary. In particular, depending on the current status and making sure that we are on the same page with the student within Figure 8.1, we, as supervisors, have to decide how much supervision is needed, instead of prescribed institutional norms and standards (de Kleijn et al., 2016; Dragomir & Dumitru, 2023; McKinley, 2019; Iermolenko et al., 2021). This, in turn, would suggest that students and supervisors should discuss the differences in expectations early in the process (Filippou et al., 2017; McKinley, 2019), where Figure 8.1 can be used as a road map and alignment point. The greater the gap between expectations within Figure 8.1, the more time it might take to align those, as it can be very difficult to form the right expectations (Filippou et al., 2019) during the first month of work dedicated only to the master thesis. Thus, students and supervisors would benefit from thinking earlier about and experimenting with the topics of their potential theses, choice of theories and methods.

By these means, this book chapter contributes to the literature and practice in several ways. First, we contribute to the growing literature on the role of supervisors in the formation of academic growth in the practice of A&A students' master thesis writing (e.g., Anderman et al., 2015; Christiansen et al., 2015; Filippou et al., 2017; Glatthorn & Joyner, 2005; Jusslin & Widlund, 2021; Mauch & Park, 2003; Macfadyen et al., 2019; Dragomir & Dumitru, 2023). Second, looking at academic growth as an essential component of developing such skills as critical and analytical thinking among A&A students, our book chapter brings important insights into the discussion of non-technical skills' formation to face future challenges of the A&A profession (Chabrak & Craig, 2013; Dragomir & Dumitru, 2023; Hopwood & Unerman, 2010; Satava et al., 2006).

This chapter has several limitations that open new avenues for research. First, we base our research on our own experience as supervisors with relatively similar backgrounds (Eastern European countries of origin) and disciplines (PhD degrees in business administration, obtained in Norway). There might be many potential differences in how supervisors with other educational and ethnic backgrounds handle the issues of the personal academic growth of their master's students, and this

is a potentially fruitful area for further research. Furthermore, we conceptualise the personal growth of master students, not fully taking into account the perspective of master students, especially those that have low motivation or other struggles. The way master students with different academic backgrounds and motivations perceive their personal growth, and how they think their supervisors can foster this progress, is also an essential perspective for further research. In a similar way, our findings reveal some differences in the academic growth of international and Norwegian students, but these were not elaborated in detail. Further studies can follow up on this limitation and explore how different backgrounds of students will influence the supervision process for A&A students, as well as their academic growth. Last but not least, the aspect of time for a master thesis was not explored in the current book chapter, therefore opening interesting questions on further research, including such questions as the time needed for analytical and critical skills' formation and how it is possible to leverage the time aspect for faster progression of A&A students.

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Notes

- 1 One ECTS is equal to between 25 and 30 study hours.
- 2 We do not include bachelor and PhD students' supervision in this analysis.
- 3 The metaphor of a "cocktail party" is used to describe the complex and often overwhelming nature of academic research. Just like a cocktail party where there are many conversations happening simultaneously, academic research involves a multitude of ideas, theories and discussions on a particular topic. It can be challenging for students to navigate through these discussions and identify the main ones they want to focus on and join.
- 4 According to Lukka and Vinnari (2014), domain theory refers to a specific body of knowledge on a particular topic area within a field or domain, such as accounting and auditing (including the implementation, use and design of specific techniques). Method theory refers to a meta-level conceptual system used to study the substantive issues of the domain theory at hand. It often originates from other fields, such as organisation studies or sociology. Also called a "theoretical lens", it provides a new perspective and vocabulary, leading to specific insights and broader conclusions.

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9 **Accounting firms as business advisors**

SME's expectations and accounting firms' capabilities¹

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Introduction

Small and medium-sized firms (SMEs), including entrepreneurs, have significant need for information and advice. Bennett and Robson (1999) highlight that accountants are a dominant source of business advice in the UK. However, research on the impact and satisfaction derived from such advice shows variability, depending on the type and the nature of the advice offered (Bennett & Robson, 2005). Previous studies have primarily focused on revealing who is giving advice to whom, with less emphasis on the content of the advice (Viljamaa, 2011; Ali & Mustafa, 2023). In addition to that, Blackburn and Jarvis (2010) argue that previous research has often merely counted the number of occasions where accountants provide business advice, without offering insight into the motivation, content and type of these interactions. Mole and Keogh (2009) contend that advice must be tailored to the specific firm to provide a strategic advantage.

Accountants are in a good position to provide tailor-made advice, due to their in-depth knowledge about the internal affairs of their customers (Marriott & Marriott, 2000). This unique insight allows them to offer both more relevant and specific guidance and opportunities to broaden the scope of the advice beyond traditional financial matters towards more strategic business guidance (Døving & Gooderham, 2008; Ali & Mustafa, 2023). There is a growing demand for accountants to move beyond compliance and take on more proactive roles, particularly for SMEs that may lack in-house expertise (Jarvis & Rigby, 2012; Geneste & Galvin, 2015).

Access to information is an important resource (Barney, 1991) and knowledge-based resources are particularly vital, as they are difficult to imitate, socially complex and capable of building sustainable advantages (Geneste & Galvin, 2015; Hammami et al., 2021). According to the resource-based view (RBV), business advice is one such resource that builds capabilities within a firm (Bennett & Robson, 2003). To fully understand these resources and interactions that accountants encounter in their operations, it has been suggested that researchers should consider both the supply and the demand sides of the interactions (Bennett & Smith, 2002). Following this guidance, this chapter discusses the potential for small accounting

practices to offer adequate business advice to their SME customers, by following this research question:

How do accountants assist their SME customers with valuable business advice?

This chapter contributes theoretically by exploring how communication content in relationships between accountants and their clients influences their relationships and by identifying the sets of business intelligence needed by different categories of firms. For this purpose, the study applies the perspectives of the RBV and service-dominant logic (SDL) to (1) identify and classify the strategic resources and capabilities that accounting firms need to gain competitive advantages, and (2) emphasise the role of accountants in co-creating value with clients through interactive and personalised service delivery, thus shifting the view of accounting services from transactional to strategic. The practical implications are derived from these theoretical advances and include guidance on how SMEs and their accountants should seek and provide business intelligence.

The chapter continues by presenting the theoretical framework that guides our understanding of how entrepreneurs and businesspersons utilise and demand business intelligence and how their accounting service provider can assist them with such information. It then presents findings from a purposefully selected case study of Norwegian accounting firms and their interactions with SME clients. Specifically, the study involved two data collection periods (2013 and 2021–2022) involving 18 accounting firms in the first phase and 7 accounting firms in the second, allowing us to track the development of these interactions over time. The analysis enabled the categorisation of accounting firms by their advisory capabilities and SME clients by their needs for business intelligence, offering practical conclusions for both accounting firms and SMEs. These findings show the increasing importance of strategic partnerships and proactive involvement in co-creating value with SME clients.

Theoretical framework

In exploring the evolving role of accountants as strategic advisors, it is important to distinguish between the contextual dynamics of the accounting profession (Domain Theory) and the broader theoretical concepts that underpin this evolution (Method Theory). The interplay between supply-side factors – such as the capacity of accounting firms to deliver tailored business advice – and demand-side considerations – such as the specific needs of SMEs – forms the foundation of the domain-specific challenges addressed in this study (Blackburn & Jarvis, 2010; Døving & Gooderham, 2008). These contextual factors are critical for understanding how accounting services can be aligned with the strategic objectives of SMEs, particularly in an increasingly complex and competitive business environment (Ma et al., 2021).

To interpret these domain-specific challenges, the study draws on established theoretical frameworks, particularly the RBV and SDL. The RBV offers a lens through which to examine how accounting firms leverage their unique resources – such as technical expertise, relational ties and financial knowledge – to create competitive advantages for both themselves and their clients (Barney, 1991). Meanwhile, SDL emphasises the co-creation of value, wherein accountants and SMEs engage in collaborative processes that integrate their respective resources to produce tailored, strategic advice (Vargo & Lusch, 2004). This dual theoretical approach provides a comprehensive understanding of the mechanisms through which accountants can transition from traditional compliance roles to those of proactive, strategic partners that contribute significantly to the value-creation process within SMEs (Carey & Tanewski, 2016; Ali & Mustafa, 2023).

Domain theory: the accounting problem

Supply side: the role of accountants in providing business advice

One way the SME firm can access valuable business intelligence is through external advisors, with accountants being among the most preferred by small-firm owners (Bennett & Smith, 2002; Bennett & Robson, 2004; Carter & Mason, 2006; Lewis et al., 2007; Gooderham et al., 2004). The potential for accountants to expand beyond traditional compliance services into strategic advisory roles is significant (Marriott & Marriott, 2000). This shift towards offering business advice reflects evolving client expectations, where SMEs increasingly view their advisors as co-producers of value (Sarapaivanich & Patterson, 2015). Accounting can function as a learning machine, where accountants extract and generalise information from various sources to fit the specific context of their clients, contributing to the strategy-building process of the customer's firm (Mouritsen & Kreiner, 2016; Skærbæk & Tryggestad, 2010). By leveraging their deep understanding of clients' financial operations, accountants can offer proactive guidance that addresses the complex challenges SMEs face today. However, the ability of small accounting firms to provide a full range of advisory services is often constrained by their resources, necessitating a focus on particular strengths such as financial expertise and relational ties (Blackburn & Jarvis, 2010).

Demand side: SMEs' need for tailored business advice

SMEs face diverse challenges that require specialised, context-specific advice. The demand side highlights the critical need for accounting firms to understand and respond to these challenges – challenges which vary significantly, depending on the firm's stage of development, industry and size (Johnson et al., 2007; Carey, 2015). Trust, which is often developed through prolonged interactions and proximity, is essential in the accountant-SME relationship. This trust not only facilitates the exchange of information but also enhances the effectiveness of the advice provided (McGrath et al., 2003; Bennett & Smith, 2003; Chou et al., 2023). As trust is built,

accountants can more effectively extract and generalise information from various sources to apply it to the specific context of the client, contributing to strategic decision-making (Skærbæk & Tryggestad, 2010). Despite its strategic importance, the relationship between SMEs and their accountants can be complex, with challenges such as poor communication and misalignment of expectations potentially reducing the perceived value of accounting services (Carey, 2015; Marriott & Marriott, 2000; Riahi-Belkaoui, 2004). Overcoming these barriers through clearer communication and more accessible and relevant advice is critical for effective value co-creation (Vargo & Lusch, 2010).

The nature of advice offered: from compliance to strategic guidance

As accountants move beyond their traditional compliance roles, the nature of the advice they offer increasingly involves strategic guidance. This shift reflects a broader trend, where accountants are seen not just as service providers but as integral parts of their clients' strategic planning processes (Ali & Mustafa, 2023). Effective advisory services require accountants to invest in understanding the businesses of their clients, enabling them to provide advice that is both practical and strategically aligned with the goals of the client. This transition in understanding the roles of accounting – from merely influencing decisions to actively facilitating them – highlights the co-creative value role envisioned by SDL (Vargo & Lusch, 2010; Grönroos, 2011). Research to date has primarily focused on how large and resourceful accounting firms offer business advice to large corporations (Blackburn et al., 2018). However, the diversity in the type of business advice offered by smaller accounting firms underscores the need to understand how these firms serve their SME clients, particularly in contributing to the strategy-building process (Døving & Gooderham, 2008; Blackburn & Jarvis, 2010; Skærbæk & Tryggestad, 2010).

Method theory: theoretical and conceptual underpinnings

Resource-based view

The RBV provides a framework for understanding how accounting firms can gain and sustain competitive advantage by leveraging their unique resources. In the context of accounting, these resources include, for example, technical knowledge, financial expertise and the relational ties built with clients (Barney, 1991). Within the RBV framework, accountants not only leverage their technical expertise but also initiate strategic conversations, by benchmarking the performance of their clients against industry standards and broader trends. This proactive engagement is important to identify emerging issues and advise on strategic responses, thereby enhancing the competitive positioning of the client (Renton & Richard, 2019). Such proactive engagement, where accountants utilise their unique resources to identify trends and developments in a firm's finances, aligns perfectly with the notion of accountants as strategic partners who contribute significantly to the value-creation process of the client (Gooderham et al., 2004).

SDL and co-creation

SDL complements RBV by focusing on the co-creation of value through interactions between service providers and clients. As such, SDL posits that value is not delivered unilaterally by the service provider but is co-created through a collaborative process, in which both the accountant and the client contribute their resources (Vargo & Lusch, 2004). In the accounting context, this means that the effectiveness of the advice provided depends on the dynamic interaction between the accountant's expertise and the client's needs. Trust and close cooperation are essential in this process, as they enable accountants to adapt their services to the specific challenges and opportunities faced by SMEs (Welter, 2012). This co-creation of value is particularly important in helping SMEs navigate complex and rapidly changing business environments, where tailored, strategic advice can make a significant difference in business outcomes. As accountants increasingly transition from a reactive compliance role to a proactive, strategic partnership, SDL highlights the importance of building trust and ensuring that the advice offered is truly collaborative and tailored to the specific context of the client's business (Vargo & Lusch, 2010; Grönroos, 2011).

Method

The empirical setting in this study is accounting firms in Norway and their SME customers, focusing on two main types of service production: bookkeeping-related services and bookkeeping-related advisory services. Data collection involved a combination of document studies, including firm-specific financial statements, and a series of interviews and informal conversations. In spring 2013, we performed 33 formal, semi-structured interviews, each lasting for about one hour. These interviews were tape-recorded, transcribed verbatim and sent to the interviewees – who were all Chief Executive Officers (CEOs) of their respective firms – for feedback. To capture the evolution of advisory practices over time, a second round of interviews was conducted in 2021–2022, adding eight more interviews to the dataset, resulting in a total of 41 interviews.

The primary purpose of conducting interviews across these two periods was to gain a longitudinal perspective on the evolving roles of accounting firms as business advisors. While the second round of interviews coincided with the Coronavirus pandemic, the study's focus extends beyond pandemic-specific changes, aiming to understand broader trends in how accounting firms have adapted to shifting client needs and business environments over time. The findings thus reflect broader transitions from traditional compliance-based services to more strategic advisory roles, which is consistent with the industry changes observed between 2013 and 2022.

In all the interviews, we focused on CEOs as our respondents. This choice ensured a consistent and comparable dataset, especially since many of the firms analysed had few or no employees beyond the owner. The CEOs, often the sole owners, were likely to have the most comprehensive understanding of their firm's strategic direction and advisory needs. However, this approach also introduced a limitation, as relying solely on the perspectives of individual CEOs may have excluded valuable insights from other employees within these firms (Campbell et al., 2016).

The analysis followed the process advocated by Miles and Huberman (1994), with the interviews inductively organised according to our theoretical framework (Malterud, 2001). Using Giorgi's (1985) four-step procedure – building a total impression, identifying meaningful units, abstracting content and summarising their importance – we identified key activities and advisory offerings. These findings are presented in the Results section of this chapter.

Results

In this section, we present the findings from our interviews with accounting firms and their SME clients, focusing on the evolution of the advisory roles of accounting firms. These findings provide insights into how accounting firms have adapted their services to meet the changing needs of SMEs, particularly in response to broader shifts within the business environment. The results are structured to highlight key themes that emerged from the data, including the types of advice offered, the role of trust in client relationships and the strategic integration of these advisory services into SME operations. These findings directly address the study's objective of understanding the dynamic interaction between accounting firms and their SME clients over time.

The supply side

All the accounting firms informed us that they offer their customers business advice in addition to their normal activities. Which activities they labelled as business advice and which they categorised as normal accounting-related ones differed between the investigated accounting firms. Some call it an advisory service when they calculate tax at year-end; others regard year-end reporting as within their normal accounting duties. The accounting firms perform a wide array of duties: "We do payroll, billing, posting transactions, tax returns, paying bills for customers, statutory requirements like reporting, tax duties, budget, equity adjustments but also discuss with our customer how he could reduce his costs and increase his income" (Accountant #9).

We see that the small low-end accounting firms focus mostly on more basic accounting tasks, as they post transactions, calculate Value-Added Tax (VAT) and fulfil some governmental statutory requirements within their ordinary accounting services, while they label other governmental statutory requirements, such as year-end and preparation of tax returns, as advisory services. Moreover, small accounting practices often enhance their advisory capabilities by strategically utilising personal and professional networks within their internal structure. This approach not only helps manage the firm more effectively but also directly impacts the level of service offered to clients. An illustrative case involves an accountant who leverages familial relationships to address specific client needs. The accountant explains:

I have my sister on the board; she works at NAV [Norway's social benefit provider], so I can consult her about how the NAV system works... She's great at employee dialogue... She's a strength to have on the board. For instance, I had an office in [small town in Norway] where I had employees who were partially disabled or chronically ill, so I needed more advice there

on how to accommodate this. And if there's a divorce or a partner dies, I refer to lawyers for cohabitation agreements or wills, so she advises me on these aspects as well.

(Accountant #24)

This example highlights how internal resources are utilised not only for operational management but also to provide clients with specialised advice that extends beyond traditional accounting services. By tapping into the diverse expertise of board members, small firms can offer tailored advice that addresses the personal and legal aspects of their clients' business needs, thereby enhancing client trust and service satisfaction.

Larger, more experienced accounting firms regard year-end, as well as billing and doing the payroll, as normal accounting duties. Their advisory services then also include more advanced tasks, such as firm closure, board assistance, applications for grants and loans, bidding for insurance, as well as advising on the customer's daily operations. The accounting firms claiming to assist their customers to increase their income and reduce their costs usually did so when calling their customer to their office in order to discuss the periodical reports. Then they could point at deviations from last year and give advice on costs that could be reduced. Practical assistance includes budgeting and calculating of potential projects at the customer's site or handling problems a foreign owner might have with managing a Norwegian daughter company. We see that the more advanced accounting practices present their customers with alternatives to choose among, and by such they facilitate customer learning-processes.

In recent years, there has been a significant shift towards IT-oriented services among SME accounting firms. Nearly all these firms are now facilitating their clients' accounting processes through online platforms, which simplifies data entry and financial monitoring. Additionally, new market entrants are developing proprietary platforms that offer innovative ways to interact with clients, enhancing client engagement and service delivery. This evolution in the supply side of accounting extends well beyond traditional bookkeeping services, encompassing more advanced functions such as outsourcing the controlling function or even assuming key roles like that of a Chief Financial Officer (CFO) for client firms. As mentioned by one of the interviewees:

We deliver this to you, we deliver teams so that when you have CFO tasks two days a month, you get a CFO. The CFO should not sit and reconcile the VAT because they do not like it, and it is not acceptable either. And if you need a controller four times a week, then you get that.

(Accountant #20)

A pattern emerged when sorting the different advisory services offered by the different accounting firms. All firms offered advice regarding how to claim travel expenses, how to report worked hours and how to report taxes and other technical accounting issues. We label this "Accounting technical solutions". Most of the

accounting practices offered advice regarding establishing a corporate entity, firm closure, ownership changes and other issues linked to how to relate to the juridical business framework. This ability we label “Juridical framework”. Some firms expanded their services to improve internal business processes, significantly influenced by digital advancements. This “Internal Organization and Basic Management Control” now incorporates digital transformation strategies such as cloud-based system integration, electronic invoicing (EHF) and digital control parameters, which are tailored to enhance the operations and strategic business functions of the client. These advancements allow accountants to transition from traditional bookkeepers to strategic partners who facilitate online accounting, budget management and project control, thus spending less time on routine tasks and more on value-added activities like financial consulting and strategic planning.

In addition, a few advanced accounting firms, categorised as “External Controllers”, address diverse customer needs, ranging from screening potential suppliers or aiding in subsidiary liquidation to tackling varied and complex demands that often involve sophisticated IT solutions. These firms excel not only in traditional accounting but also in the evaluation and implementation of software and hardware tailored specifically to the needs of their clients. For instance, some firms specialise in setting up and managing IT systems that not only streamline client operations but also address strict security and compliance requirements. They offer strategic IT advice, helping clients navigate the complexities of digital transformation in areas such as automated invoicing, secure electronic payments and system compatibility. These services are important in situations in which firms integrate different systems where standard solutions are not sufficient and thus demonstrate a role that goes beyond traditional accounting. This strategic advisory role is not just about ensuring financial correctness but also about enhancing business efficiency and safeguarding data integrity, which is becoming more important in the current digital landscape. Hence, Figure 9.1 displays the order in which accounting firms evolve the capability to offer advisory services to their customers.

The demand side and the business intelligence services that are needed

Not all accountants act upon this perceived need. Many of the customers we interviewed were quite disappointed with their accountants as business advisors: “They [their accountant] do what they have to do [for the tax authority] and deliver high quality on their accounting, but they do not add any value beyond that to us” (Customer #12). This is so, even where customers feel that their accountant has a profound knowledge regarding their business and their operations: “Our accountant has been in business for a while and knows our needs” (Customer #6) and “Our accountant knows our firm very well, and we know him equally well” (Customer #5). Even where customers were satisfied with the quality of the advice they actually received from their accountant, they clearly wanted more. Many wished that their accountant should provide them with suggestions on how to improve their business: “They [their accountant] could be more outreaching regarding what they could

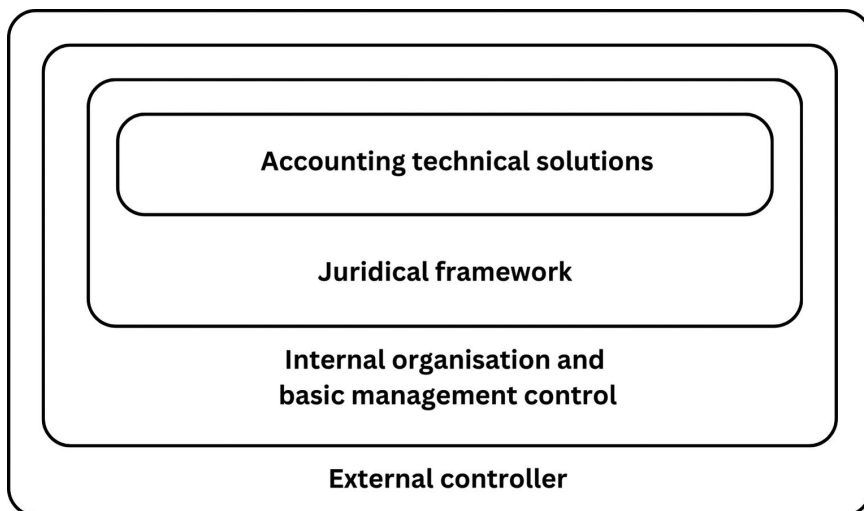


Figure 9.1 The order in which accounting firms evolve the capability to offer advisory services to their customers.

do for us, maybe they possess some competence we could utilise” (Customer #5) and “It would be nice if they could make contact and tell us what we could do differently in order to be more profitable” (Customer #7).

The transition to digital platforms has opened new avenues for accountants to enhance their advisory roles. As one interviewee noted, digitalisation has made it easier to access real-time data, enabling the firms to offer timely advice and strategic insights that go beyond traditional accounting duties: “This means that you get timely information, and you get information that implies you can make a decision based on facts and a correct decision faster than you otherwise could have done” (Accountant #20). This shift is not without challenges, however. Another accountant highlighted that, while digital tools streamline processes, they also introduce risks such as data errors and security concerns, necessitating a more cautious approach to managing client information:

It has become a much bigger focus in internal control for risk management for data security. And it’s kind of frustrating because I have outsourced the management of servers and data systems to a professional firm, and I have all these agreements, but, still, I’m the one responsible, and I must check on that company, which is really outside my area of expertise. I work with accounting and my field, not with data security.

(Accountant #21)

These perspectives underscore the dual role of modern accountants: navigating the complexities of digital transformation while enriching their advisory services to meet the evolving needs of their clients.

When we coded and categorised the type of customers and the advice they asked from their accountant, another pattern emerged. Young and inexperienced firms were in great need of advice. They needed advice on how to register their firm, how to claim travel expenses, how to report hours worked, how to report and pay taxes, how to make contracts with customers and suppliers, how to prepare a budget, how to measure whether they were profitable and how to become more profitable: “We experienced great losses by the fact that we did not know well enough what to do, and there was no one to ask” (Customer #11). Similarly, reflecting on the varying needs of clients, one interviewee noted: “The services I offer my clients range from consulting to billing to payroll to accounting and annual accounts. Accounting from A-Z, quite simply” (Accountant #24). Older and more experienced firms usually were up and running and did not need much business advice; they felt they knew what they needed to know: “We know our firm and our business very well” (Customer #5). Some of these old firms were in the position of transferring ownership from one generation to the next, and some were in need of pension plans and required help with that.

Professional and growth-oriented firms were in need of advanced advice and useful assistance. They largely wanted alternatives, critical insights and input for learning. They needed advice on sophisticated tax issues, how to use regulations to their advantage and how to build owner structures; they required insights and discussions regarding different business scenarios, as well as a helping hand when growth exceeds the current staffing capacity.

This framework typology is then depicted in Table 9.1, in which the need from these three types of customers is set out with the four levels of advisory capabilities among the accounting practices. Table 9.1 describes who is in need of what type of service and who is capable of serving these needs. The three categories of firms are “small and unexperienced”, “experienced and well managed” and “professional and growth-oriented”. The four levels of advisory capabilities found are “accounting technical solutions”, “juridical framework”, “internal organisation and basic management control” and “external controller”.

Discussion

There are some noteworthy theoretical insights derived from the reported research. The RBV theory suggests that the accountant’s human and social capital – such as their expertise, relationships and trustworthiness – make them a valuable partner for the customer firm. The lasting interaction between the accounting firm and their customer builds trust that enables the accounting firm to set the agenda for their consultations. This finding also aligns with the SDL framework, which emphasises value co-creation through collaborative interactions. Here, accountants not only respond to clients’ needs but also proactively engage in their strategic decision-making processes, marking a significant shift from traditional compliance roles to strategic advisory positions, as highlighted by Ma et al. (2021).

In accordance with the RBV, our research confirms that accounting firms, equipped with strategic resources such as technological tools, financial expertise

Table 9.1 The different types of advisory service demanded by different categories of customers

<i>Type of advisory service</i>	<i>Type of customer</i>		
	<i>Small and inexperienced</i>	<i>Experienced and well managed</i>	<i>Professional and growth oriented</i>
Accounting technical solutions	Training in basic accounting issues	Corrections in basic accounting issues	Subtleties and studies of important details tailored to sophisticated needs
Juridical framework	Basic legal arrangements	Assistance with significant transactions, such as ownership changes	Advanced arrangement of ownership structures to optimise tax and legal standings
Internal organisation and basic management control	Setting up basic budgets and control parameters	Regular updates on new rules and regulations of interest	Complex analyses of different business scenarios to support strategic decisions
External controller	Communicate the potential for improvements	No need	Active facilitation of growth through practical arrangements, external oversight and strategic input

and relational ties, are important for enhancing competitive advantages for SMEs. This supports previous findings by Gooderham et al. (2004) and Barney (1991, 2001), indicating that these specialised resources are essential for firms to compete effectively. Our study illustrates that these resources enable accounting firms not only to provide routine compliance services, but also to deliver strategic insights that enhance the business operations and competitive positioning of their clients. As such, this facilitates a more integrative approach to client services.

The supply side

Our research indicates that customer firms highly value the accountant's competence network. Accountants frequently interact with other firms facing similar challenges to those of their clients, enabling them to learn how these firms navigate their difficulties. Through these interactions, accountants acquire valuable external tacit knowledge, which they can then introduce to their clients. The trust developed through sustained collaboration allows accountants to set the agenda for their consultations, facilitating the transfer of this knowledge. As a result, customer firms can benefit from a broader range of perspectives and solutions, tapping into cognitive diversity that enhances their problem-solving capabilities. In fact, the accountant can suggest alternative solutions to problems the focal customer might not even be

aware existed. This finding supports the argument of Sarapaivanich and Patterson (2015) that clients often lack the expertise to diagnose their own needs as well as to develop and evaluate new business opportunities. This finding aligns with the RBV, emphasising how accountants manage and deploy firm-specific capabilities – like networks and knowledge – that are critical for achieving competitive advantages (Barney, 1991, 2001). Furthermore, SDL underscores this interaction as a form of value co-creation, where the accountant and client collaboratively engage to enhance the strategic capabilities of the client (Vargo & Lusch, 2004).

In line with the call from Welter (2012) for deeper insights into the facets of trust, and consistent with findings from He et al. (2016), this study demonstrates that the type of trust observed in the relationship between accountants and their customers is primarily rooted in predictability and fulfilled expectations. Within the SDL framework, this trust facilitates the co-creation of value, by enabling more effective collaboration and communication, ensuring that accountants can anticipate and meet client needs. This trust, while central to SDL, also enhances the relational ties that are critical within the RBV, further strengthening the strategic partnership between accountants and SMEs. As mentioned in the interviews, this relationship can become so strong that they perceive it as a “marriage” (Accountant #9). This trust is both goodwill trust and competence trust. Goodwill trust relates to relational risk and refers to the expectation that a partner intends to fulfil their role in the partnership. Competence trust relates to performance risk and refers to the expectation that the partner has the ability to fulfil their role (Lui & Ngo, 2004). As suggested by Masiello et al. (2015) and Geneste and Galvin (2015), our research indicates that it is the accountant’s stock of human and social capital that allows this influence over the customer firm. A proved competence in serving the customer with accounting services allows the accountant to build social capital in the form of trust upon which business advice could be offered.

As suggested by Welter (2012), our findings contribute to the understanding of the various facets of trust in these relationships, which are important for effective strategic advisory and knowledge transfer. According to Skærbæk and Tryggestad (2010), accountants feed into the strategic process, with actors outside the firm contributing to learning and strategising. By fulfilling the expectations of their services and managing relationships effectively (Eiriz & Wilson, 2006), accounting firms can strengthen this trust, thereby enhancing their value proposition and transforming their role in line with the evolving business landscape.

The demand side

Seen from the customer perspective, ties grow stronger when the competence on the side of the accountant materialises as solved problems and cleared issues according to or exceeding expectations. When the customer gains confidence in the accounting firm’s capacity and perceives that the accounting firm is committed, ties grow stronger. Identification and benevolence have been found to build stronger ties between advisors and their customers (Kautonen et al., 2010). These competence-fuelled strong ties allow goodwill trust to develop social capital, consistent

with the RBV, which emphasises the strategic importance of unique resources such as trust and knowledge in creating competitive advantages (Barney, 1991, 2001). These resources are important, as the onboarding and getting to know each other phases of the relationship with the accounting firm comes with costs for the client, as expressed in one of the interviews: “It was expensive to educate the new accountant in all the particularities of our trade” (Customer #7).

The mix of competence and goodwill trust positions the accountant as one of Denzin’s (2005) “significant others”. Significant others can influence someone through agenda setting. This implies that customers are receptive to the accounting firm’s cognitive diversity regarding solutions to emerging business problems. From the SDL perspective, the accountant is seen not just as a service provider but as a co-creator of value, actively engaging in the problem-solving process of the client and facilitating learning. This role transformation suggests that the involvement of the accountant varies, depending on the firm’s life cycle. This is in line with Vargo and Lusch’s (2004) argumentation that value is co-created through interactions that leverage the resources and capabilities of both parties.

The advice offered

The research has provided practical insights into the types of advice offered by accountants. The findings show that there is a clear progression in how accounting firms develop their capabilities to offer advisory services. Initially, firms offer basic advisory services related to technical aspects of accounting – such as bookkeeping, VAT calculation and other government reporting. As they evolve, many accounting firms extend their services to include business advice on legal frameworks like company registration or ownership transfers and internal organisational and management controls. Only a few advances to act as external controllers, providing on-site services that address complex business dilemmas and help in strategic decision-making. Most of the customers were happy with the assistance they received related to the simplest form of advice; advice related to technical aspects of accounting. The customers are satisfied with the quality of these advice they receive, but they need business advice in other areas as well. Such needs are not equally well served by their accountants. The customer usually has to ask for business advice, but the problem is that they really do not know what to ask for. This is worsened by the fact that most of the accountants have a reactive approach to offering business advice to their customers. When they offer business advice, it is usually when they discuss the periodic report with the customers. Some of the accountant firms were reluctant in offering business advice as it is time consuming and they are unfamiliar with the consulting situation, while others embraced it as an opportunity to expand their income opportunities.

Conclusion

Our study offers significant theoretical contributions that directly address the research question: How do accountants assist their SME customers with valuable

business advice? By situating our findings within the frameworks of the RBV and SDL, we illuminate the evolving role of accountants as strategic partners in the business landscape.

In the context of RBV, our findings underscore the importance of accountants' human and social capital as key resources that SMEs can leverage to gain competitive advantage. The expertise and relational ties that accountants bring to the table are not merely supportive; they are transformative, enabling SMEs to navigate complex business environments with enhanced strategic acumen. This reaffirms the critical role of accountants as more than just financial advisors – they are integral to the strategic fabric of their clients' businesses.

Within the SDL framework, our study emphasises the role of trust in the co-creation of value. The trust that develops through consistent, reliable collaboration allows accountants to transcend traditional compliance roles and become proactive contributors to their clients' strategic decision-making processes. This marks a significant shift in the accountant-client dynamic, where accountants are no longer passive service providers but active partners in crafting business strategy. This shift is particularly noticeable in the context of digitalisation, which has both expanded service capabilities and introduced new risks that accountants must navigate alongside their clients.

Furthermore, our research challenges traditional views of business advising, which often treat interactions as mere transactions. Instead, our findings reveal that the true value of accounting advice lies in its content and context – factors that are deeply influenced by the accountant's ability to integrate external knowledge and tailor it to the client's specific needs. This insight leads us to propose a new framework for understanding the business intelligence process, in which the interplay between the supply and demand of advice is more fluid, dynamic and contextually grounded.

While our findings are specific to the Norwegian context, the implications extend beyond this setting. The coherence and transparency of the Norwegian business environment allowed us to capture these dynamics with clarity, offering insights that are likely to be relevant in other contexts as well. Our study not only contributes to the academic discourse on strategic business advising but also provides practical guidance for accountants aiming to elevate their role in SME management.

Looking forward, future research should explore these dynamics across different industries and geographical contexts, examining how varying business environments influence the integration and effectiveness of accounting advice. Such studies will deepen our understanding of the evolving accountant-client relationship and further inform the practice of strategic business advising.

Limitations of the study

This study primarily relied on interviews with CEOs, operating on the premise that they hold the most comprehensive understanding of their firm's strategic direction and the value of accounting advice. While this focus provided valuable insights, it also introduced limitations, by potentially excluding perspectives from other key employees, such as those in operational or financial roles, who may offer different views on the day-to-day interactions with accounting firms.

However, concentrating on CEOs ensured a high level of comparability across firms, particularly in SMEs where the CEO often plays a central role in decision-making. To build on these findings, future research could adopt a more inclusive approach, incorporating multiple perspectives within firms to capture a broader range of insights and further enrich our understanding of the strategic role of accountants in business advising.

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10 Intentions of bachelor students to study accounting and auditing at the master level¹

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Introduction

The audit profession has been continuously evolving for many years. Over the last few years, the focus on sustainability and digital transformation has brought more opportunities and disruptions to the profession. For instance, Frey and Osborne (2017) investigated how professions will be exposed to digitalisation in the near future. For accountants and auditors, they found that there is a 94% possibility of repetitive tasks being replaced by digital tools. However, this does not necessarily mean that the jobs of accountants and auditors will vanish. Instead, as digital tools are used to perform these repetitive tasks, accountants and auditors can then perform other difficult tasks that require more subjective judgements. In addition, as audit firms adopt more complicated digital tools, they require auditors with relevant skills to effectively use these tools in the audit process. Therefore, managers hiring within the audit functions have expressed their desire to hire junior auditors with relevant digital analytical skills (Dagilienė & Klovienė, 2019; Earley, 2015; Huerta & Jensen, 2017).

Furthermore, auditors are playing a crucial role in sustainability transformation (Kristiansen, 2019). As companies undergo green transition, auditors play a vital role in ensuring that they effectively manage and report their sustainability efforts. Auditors will do this by assessing companies' compliance with environmental, social and governance regulations and providing independent assessment of the sustainable reports produced, thereby enhancing trust between the users of financial statements and the preparers of these reports. Moreover, as audit clients put so much trust in their auditors, auditors can influence and provide recommendations for their non-assurance clients on good sustainable practices by offering advisory services on the implementation of best sustainability practices (Kristiansen, 2019). Therefore, the transition towards good sustainable practices is creating more opportunities for auditors.

Due to these new opportunities in the audit profession, audit firms need to employ more staff. In 2022, the big five audit firms alone in Norway were in need of about 5,000 auditors over the next five years (Revisorforeningen, 2022). The big five audit firms have stated several reasons for this demand, including both the need to build strong sustainability departments and high staff turnover, as

auditors are moving to new job opportunities after completing their training. These developments suggest that there will be more employment opportunities for students with relevant audit qualifications in the near future. This has prompted the big five audit firms and The Norwegian Institute of Public Accountants (Revisorforeningen) to embark on a campaign to promote auditing as a profession.

To meet these growing needs for auditors, business schools in Norway must provide more students with the relevant qualifications to enable them to work as auditors. In Norway, to be qualified to perform statutory audits, auditors must be authorised by the Financial Supervisory Authority of Norway (Finanstilsynet). State-authorised auditors must have completed a master's degree in accounting and auditing (MRR²) with grade C or above (on a grading scale from A to F where F is "fail") in all courses on the master programme and have at least three years of varied practical training in the auditing of financial statements or equivalent financial reporting, as well as having passed a practical exam. Therefore, obtaining a master's degree in accounting and auditing is of paramount importance for one to be an authorised auditor in Norway and to qualify to sign off financial statements.

Business schools in Norway have struggled with vacant seats on the MRR programmes, as not enough students are enrolled in these programmes after their bachelor's studies. Therefore, business schools in Norway and the audit profession as a whole are faced with two fundamental challenges: (1) how to attract students to study MRR and (2) how to attract skilled personnel to join audit firms. To address the disparity between supply and demand, in addition to recruiting those holding a master's degree in accounting and auditing, audit firms are recruiting junior auditors with diverse master's qualifications (such as in finance, economics and business administration) alongside those holding only bachelor's degrees. The challenge with this group of auditors is that they can work as auditors (gather audit evidence, verify financial statements, etc.), but they cannot sign the audit report or receive the title of State Authorised Auditor until they have completed the MRR programme. Against this background, the purpose of this chapter is to shed more light on the factors that influence bachelor students' intention to study MRR.

Neither the shortage of accountants and auditors nor the decline in number of accounting students is unique to Norway. For instance, The International Federation of Accountants addressed this challenge at a global level in an article on 20 March 2024, stating that "Post pandemic, evidence is indicating a real issue with the supply and retention of talent in the accounting profession. The issue can vary by jurisdiction; however the shortage of accountants is a real issue when viewed globally" (IFAC, 2024). Furthermore, Tidningen Balans (2022) reported that Sweden is experiencing a growing shortage of authorised auditors, with a 25% decline over a ten-year period from 2012, and the Institute of Chartered Accountants in England and Wales (ICAEW, 2022) reported a 36% drop in applicants to the accounting sector year on year from June 2021 to June 2022 and a 33% decline in candidates from May 2022 to June 2022. In the United States, similar issues have been reported, with respect to both the shortage of accountants and the decline in the number of students choosing accounting as a major (Burke & Polimeni, 2023). Reports from the American Institute of Certified Public Accountants (AICPA, 2023) confirm a

sharp decline in the number of US accounting students, with a 7.8% decline from the 2020–2021 to the 2021–2022 academic year.

This chapter uses the Theory of Planned Behaviour (TPB) to predict students' intention to study the MRR programme. TPB is a psychological theory positing that human behavioural intentions are influenced by three factors: attitude (the decision maker's personal evaluation – both positive and negative – of the behaviour), subjective norms (the perceived social pressure from those close to the decision maker to perform or not perform the behaviour) and perceived behavioural control (the decision maker's perceived ease or difficulty of performing the behaviour) (Ajzen, 1991). The theory posits that, when these three factors interact and combine, they influence an individual's intention. Intention is a robust predictor of a decision maker's behaviour (Ajzen, 1991; Van der Linden, 2011). Thus, the TPB suggests that these three factors have an indirect effect on behaviour, through their effect on intention. Therefore, this chapter uses the TPB to predict the bachelor students' intention to study MRR, by answering the following research question:

1 What is the association between attitudes, subjective norms and perceived behavioural control and the intention to study the MRR programme?

In addition, the chapter performed a further analysis of whether the association between the three factors, attitude, subjective norms and perceived behavioural control, and the intention to study MRR varies with the student's bachelor year. Understanding how the association of these factors with intention differs across academic years can help business schools and MRR programme managers to design course materials and intervention strategies that are more appealing and effective for students at various stages of their education. For instance, suppose subjective norms have more influence on students in their first year of bachelor's studies than in their third year, intervention strategies such as workshops or seminars aimed at increasing interest in MRR among students and their close associates could be scheduled during the early years of the bachelor's studies. Thus, examining whether the association of attitude, subjective norms and perceived behavioural control with intention to study MRR varies with the student's progression through their bachelor's years may assist business schools and MRR programme managers to make informed decisions that might influence students' intention to study MRR. Therefore, the chapter intends to answer the following second research question:

2 Does the association between attitude, subjective norms and perceived behavioural control and the intention to study MRR vary with the student's bachelor year?

Our findings hold implications for both theory and practice. They indicate a positive association between attitude regarding students' belief in the promising work opportunities offered by an MRR degree and their intention to study an MRR programme. Therefore, business schools and MRR programme managers should develop initiatives and communication strategies that highlight the inherent value

of the MRR programme. These initiatives should underscore the programme's significance in career advancement and aim to foster a more favourable attitude among students towards enrolling in the MRR programme. Furthermore, our study underscores the influence exerted by parents and close friends on students' intention to pursue an MRR degree. Therefore, the initiatives by business schools and MRR programme managers should go beyond students and include their social influencers, providing them with information and resources that emphasise the benefits of MRR.

The TPB as a predictor of students' intention to study MRR

The TPB is a psychological theory that can be used to understand and predict human behaviour. The theory posits that behavioural intention is influenced by three factors: attitudes, subjective norms and perceived behavioural control (Ajzen, 1991).

Attitude refers to the individual's beliefs and evaluations of the negative and positive consequences of performing a particular behaviour (Park, 2000). Attitude represents the decision maker's overall perception of the behaviour in question after taking into consideration both the benefits and drawbacks of performing a particular behaviour (Chen & Tung, 2014). Attitude has a direct effect on the intention to carry out a certain action (Bredahl, 2001). Suppose a student is considering enrolling in MRR, their decision-making process would encompass evaluating the advantages and disadvantages of pursuing this academic programme and the resulting career trajectory. Positive aspects that the students might consider include opportunities for career advancement, while negative aspects might encompass concerns about the overall heavy workload and perceiving auditing as a boring career. The more favourable the attitude towards a behaviour, the more likely the individual is to intend to perform it (Bredahl, 2001; Chen & Tung, 2014). That is, if the student perceives the benefits of the programme to outweigh the drawbacks, then their attitude towards enrolling will likely be favourable, increasing their intention to study MRR. On the other hand, if drawbacks outweigh benefits, then the student's attitude may be less favourable, leading to a lower intention to study MRR.

Subjective norms include the evaluations of the reactions of and social pressures from those close to the decision maker, such as family, friends, colleagues or society at large (Ajzen, 1991). Suppose a student is considering studying MRR, subjective norms will include the student's assessment of the views and opinions which their social influencers place on this decision. That is, the more their social influencers express positive views about MRR, the more likely the student is to study MRR. On the other hand, the more they encounter negative views about MRR, the more likely they are to choose other master's studies than MRR. Thus, the stronger the perceived social pressure, the more likely the individual is to act according to these societal expectations (Chen & Tung, 2014).

Perceived behavioural control captures the decision maker's assessment of the ease or difficulty of performing the behaviour (Ajzen, 1991). It encompasses an individual's subjective assessment of their ability to perform a certain behaviour

(Han et al., 2010). Suppose a student is considering studying MRR, perceived behavioural control would include their belief in their own ability to navigate through the challenges and requirements of the tasks on the various courses offered in the MRR programme. From this assessment, if students perceive that they possess the necessary skills and resources to navigate through the requirements of the MRR programme, then they are more likely to have a high intention to study the programme. If students anticipate some challenges in the tasks associated with the MRR programme, then they are more likely to study other master's programmes or opt to not pursue a master's degree altogether.

Thus, combined together, these three factors collectively indirectly influence an individual's behaviour through intention (Chen & Tung, 2014; Han et al., 2010). That is, the stronger someone's intention is towards a certain behaviour, the more likely they are to engage in that particular behaviour (Ajzen, 1991). Figure 10.1 shows the conceptual framework used in this chapter.

While other conceptual models explaining intention and behaviour have been developed, the TPB is considered to be a particularly robust and useful theoretical framework. In relation to this, Elliot et al. (2003) argued that the TPB has been subject to considerable empirical work, giving the model support in various behavioural domains. Moreover, Armitage and Conner (2001) performed a meta-analysis of the TPB. Using a database of 161 papers, including 185 independent empirical tests, they found support for the TPB predicting both intention and behaviour. Regarding intention, they found that attitude, subjective norm and perceived behavioural control together predicted 39% of the variance in intention. Moreover, they reported that the average correlation of intention and perceived behavioural control with behaviour was 0.52 (explaining 27% of the variance in behaviour). Hence, while there is a substantial portion of variance not accounted for, this finding indicates that intention and perceived behavioural control are robust predictors of behaviour.

Previous empirical studies of the intention to major in accounting

The use of TPB to predict factors that influence students' choice of MRR is in line with prior research which investigates students' intention to choose accounting as a major at university (Cohen & Hanno, 1993; Tan & Laswad, 2006). Cohen and Hanno (1993) investigated the factors that influence students' choice of accounting as a major at five business schools in the United States. In their study, both accounting and non-accounting students completed the survey. All three factors in the TPB were highly correlated with intention to major in accounting (Cohen & Hanno, 1993). The result of their survey showed that both accounting and non-accounting majors believed that choosing accounting as a major might give them more work opportunities, compared to other majors. Students who chose accounting as a major strongly felt that not choosing accounting would lead to fewer job opportunities. Moreover, students who chose non-accounting majors perceived accounting as too number-oriented and boring. This called for a need to revisit the introductory courses to the accounting programme and endeavour to make them more appealing

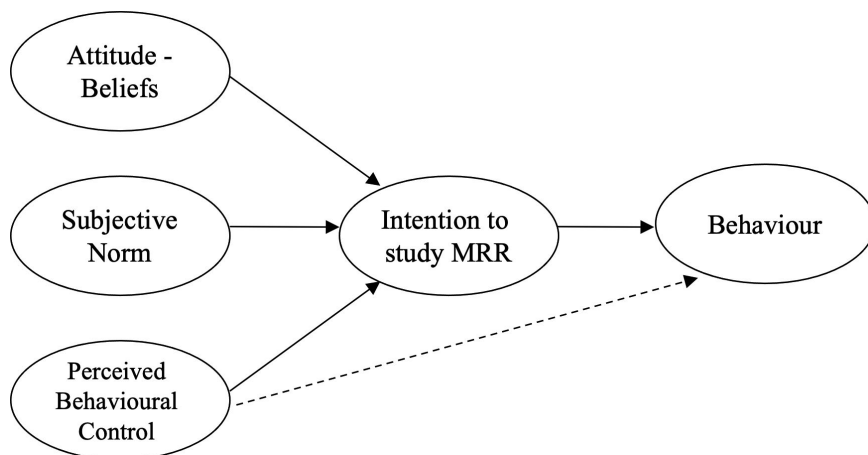


Figure 10.1 Conceptual framework, the Theory of Planned Behaviour model adapted from Ajzen (1991).

to other students. For subjective norms, students were influenced by their parents, fellow students, professors, friends and businesspeople to choose a certain major. This called for efforts to educate society as a whole about the importance and benefits of choosing accounting as a major. These efforts must go beyond the classroom and students themselves to the broader society.

Tan and Laswad (2006) conducted similar research using students enrolled in an introductory accounting course at a large multicampus university in New Zealand. They received 1,009 responses from first-year students (with roughly half of these students coming from China) enrolled on a business degree, who were taking an introductory course in accounting. From their sample, they found that 21% of these students intended to major in accounting while the rest intended to choose other business-related majors (Tan & Laswad, 2006). All three factors contributed significantly to the predictions of the intention to major in accounting. In their study, they distinguished between accounting and non-accounting students to further examine whether there were differences in intention. The mean responses were higher for each construct for the accounting majors than the non-accounting majors (Tan & Laswad, 2006). For subjective norms, they found that accounting majors believed that their source of social influence encouraged them to take accounting, while non-accounting majors thought that their source of social influence preferred them to take other majors. In addition, both the accounting and non-accounting students perceived accounting as a major that would result in working with numbers. Moreover, both accounting and non-accounting majors perceived that majoring in accounting would result in higher salaries with heavy workloads (Tan & Laswad, 2006). Therefore, those who majored in accounting were not discouraged by heavy workloads, possibly since these workloads were compensated for by the good salaries, while non-accounting majors might have been deterred by heavy workloads and working with numbers.

In another study, Karlsson and Noela (2022) did not use TPB but, rather, the Theory of Reasoned Action (TRA). Similar to the TPB, the TRA is a psychological theory that posits that the behaviour of a decision maker is predicted by their intention, which is influenced by their attitudes towards the behaviour and the subjective norms regarding the behaviour (Fishbein & Ajzen, 1977; Law, 2010). That is, a decision maker will engage in a behaviour if they have subjective social approval of it and a favourable attitude towards engaging in it (Law, 2010). Karlsson and Noela (2022) used this theory to investigate the factors that influenced Swedish students to avoid accounting as a major. Their sample included 228 students from five different Swedish universities. The results suggest that factors such as no interest in accounting, as they consider it a boring profession, as well as availability of higher salaries in other professions, were some of the reasons students were snubbing accounting (Karlsson & Noela, 2022). Moreover, the study found that teachers and fellow students also influence the choice of non-accounting majors. The paper then suggests that there is a need for business schools to invite professional auditors, who will offer career guidance and speak about the audit profession to the students.

The above-mentioned studies highlight the importance of attitudes, social norms and perceived behaviour as predictors of intention to engage in a certain behaviour. Specifically, the above studies show the importance of those three factors in predicting the intention among bachelor's students to study the accounting major. These studies show that the social influence of parents, friends, fellow students and teachers has a positive effect on the intention to study the accounting major. Moreover, the studies show that students perceive accounting as a major that creates job opportunities, has the possibility of higher salaries but tends to involve heavy workloads, working with numbers and is boring. Some of these factors might hinder students from choosing accounting as a major.

Methods

Sample

To investigate the intention to choose MRR, data was collected from a sample of Norwegian business administration bachelor students, during spring 2023. To recruit respondents, the nine business schools in Norway that offer MRR programmes were contacted (Larsen & Husebø, 2023). In addition, five universities that offer a bachelor's degree in business administration but do not offer an MRR programme were approached. Programme managers or other persons responsible for the courses were asked to share the web-based questionnaire with their students. Students from 13 different universities and business schools provided data, and the final sample consists of 827 valid respondents. This is an appropriate sample since these students are in a situation where they need to select their future studies relatively soon. The age of the respondents ranged from 19 to 50 years, with an average age of 24.09 years, and 49.3% were females. Regarding bachelor study level, 22.7% were first-year bachelor students, 41.1% second-year students and 36.2% third-year students.

Measures

The items in the questionnaire measuring the key concepts in this study are developed based on the Tan and Laswad (2006) and Cohen and Hanno (1993) studies. However, in contrast to these two studies, the present study utilised a Likert scale format. That is, the respondents were asked to report disagreement versus agreement with statements using seven-point scales. Moreover, the items were translated and adjusted to Norwegian (Larsen & Husebø, 2023).

Intention to choose MRR is measured using a single item: “I plan to apply for the MRR programme”. Respondents were asked to use a seven-point scale where 1 = strongly disagree and 7 = strongly agree. Other studies, including that of Tan and Laswad (2006), have also used single item measures. To investigate convergent validity, the intention measure was correlated with an alternative measure of intention. In this regard, the students were asked the following question: after you have graduated from the bachelor’s degree, which of these do you plan to choose: (1) Master of Science in Business, (2) MRR, (3) I do not wish to take a master’s and (4) others. The variable was coded as a dummy variable, where 1 = MRR and 0 = the three other alternatives. Sixteen percent of the bachelor students reported that they planned to choose MRR. A Spearman correlation coefficient of 0.56 indicates satisfactory consistency between the two measures.

To measure attitude towards MRR, several items developed by Tan and Laswad (2006) were included. The respondents were asked in seven-point scales to report disagreement or agreement with ten statements referring to their beliefs. Examples of statements include “By studying MRR I will choose a major that is exciting” and “By studying MRR I will choose a career with a high initial salary”. To investigate the component structure, principal component analyses (PCAs) with varimax rotation were carried out. As shown in Table 10.1, six items were retained and the beliefs items loaded on two different components; the first was named “beliefs regarding work opportunities” (four items) and the second named “beliefs regarding salary” (two items). Cronbach’s alpha values of, respectively, 0.77 and 0.72 indicate good internal consistency.

The measurement of subjective norms was also inspired by Tan and Laswad’s (2006) study. As shown in Table 10.1, four beliefs items relating to parents, friends, lecturers and fellow students were included. In addition, an item relating to motivation to comply was used: “I believe I will be influenced by other persons to study MRR”. The seven-point scales relating to the four belief responses were recoded to bi-polar scales (1 = -3, 7 = 3) and multiplied with the motivation to comply item. As shown in Table 10.1, the four items load on one component and Cronbach’s alpha value of 0.76 indicates good internal consistency reliability.

With respect to the perceived behavioural control measure, PCAs and conceptual considerations indicated that three out of seven items that had initially been included should be retained. Table 10.1 displays that the three items load on one component with low side loading. Moreover, Cronbach’s alpha value of 0.78 indicates good internal consistency reliability.

The final PCA presented in Table 10.1 shows that the items load most highly on the component they belong to with loading of more than 0.58. Moreover, the

Table 10.1 Principal component analysis with varimax rotation ($n = 827$)

	Varimax rotated components				Communality
	1	2	3	4	
Attitude – beliefs regarding work opportunities					
Academic major that is exciting	0.59	0.14	0.20	0.33	0.52
Career with advancement potential	0.64	0.08	0.04	0.39	0.57
Education with many work opportunities	0.87	0.09	0.04	0.07	0.77
Education with similar or better work opportunities compared with other master programmes	0.83	0.12	-0.05	0.01	0.71
Subjective norms					
My parents recommend that I study MRR	0.04	0.71	0.02	0.08	0.52
My friends recommend that I study MRR	0.10	0.80	0.04	-0.01	0.66
My lecturers recommend that I study MRR	0.08	0.70	0.05	0.06	0.50
My fellow students recommend that I study MRR	0.14	0.81	0.01	0.02	0.68
Perceived behavioural control					
MRR will be easy for me	0.03	0.01	0.79	-0.14	0.64
I have the skills necessary for MRR	0.08	0.03	0.88	0.05	0.78
My performance in accounting courses is fitting for MRR	0.02	0.06	0.82	0.16	0.70
Attitude – beliefs regarding salary					
Career with a high initial salary	0.08	0.04	0.01	0.88	0.78
Career where you can achieve a high salary	0.35	0.07	0.03	0.79	0.76
Eigenvalue	2.39	2.36	2.11	1.71	
Percent variance explained	18.35	18.16	16.24	13.16	
Cumulative percent of variance	18.35	36.51	52.75	65.91	
Cronbach's alpha	0.77	0.76	0.78	0.72	

Note: The percent variance explained is after varimax rotation. Kaiser–Meyer–Olkin measure of sampling adequacy = 0.744. Bartlett's test of sphericity approx. Chi Square = 3369; d.f. 78; $p < 0.001$. Abbreviation: MRR, Master's Degree in Accounting and Auditing.

side-loadings values are generally low, and all are below 0.4. Hence, this analysis indicates that the four constructs are empirically distinct. With respect to subsequent correlation and regression analyses, summated scales were calculated, taking the average of the items in each construct.

Four control variables were included in this study: (1) Gender, (2) Age, (3) Bachelor level and (4) Educational institution (business school) at which the respondent is a student. Gender was measured as a dummy variable where 1 = male and 0 = female, and age was measured using number of years. In the regression analyses, dummy variables were included for the three bachelor study years and for each of the 13 universities.

Results

Research Question 1 deals with the effect of attitude, subjective norms and perceived behavioural control on intention to study MRR. In Table 10.2, descriptive statistics, variance inflation factor (VIF) values and correlation coefficients are shown. This preliminary analysis indicates that the two dimensions of attitude, subjective norms and perceived behavioural control are positively associated with MRR intention at the 0.01 level of statistical significance. The reported low VIF-values indicate that multicollinearity should not distort the subsequent regression analysis.

To formally address Research Question 1, ordinary least square regression analysis is performed. The results are presented in Table 10.3. Model 1, which included the control variables, is statistically significant at the 0.001 level and has an R^2 of 0.061. The variables relating to the TPB were then added and the results are shown in Model 2. This model is statistically significant at the 0.001 level and has an R^2 of 0.295. A significant improvement in R^2 of 0.234 is reported ($p < 0.001$). In support of TPB, attitude – beliefs regarding work opportunity, subjective norms and perceived behavioural control are significantly and positively associated with the dependent variable, intention ($p < 0.001$). However, contrary to expectations, attitude – beliefs regarding salary – does not have a statistically significant association with intention to study MRR.

Table 10.2 Descriptive statistics, VIF-values and correlation coefficients

	Mean	SD	VIF	1.	2.	3.	4.	5.	6.
1. Gender (1 = male)	0.51		1.10	1.00					
2. Age	24.09	5.21	1.23	-0.06	1.00				
3. Attitude – beliefs regarding work opportunities	4.61	1.12	1.45	-0.03	0.10**	1.00			
4. Attitude – beliefs regarding salary	5.08	1.05	1.33	-0.05	-.02	0.46**	1.00		
5. Subjective norms	-0.96	3.63	1.13	-0.02	-0.06	0.26**	0.14**	1.00	
6. Perceived behavioural control	4.22	1.22	1.12	0.14**	0.08*	0.13**	0.08*	0.08*	1.00
7. MRR intention	3.22	1.86		-0.08*	0.09*	0.42**	0.21**	0.34**	0.22**

Notes: Level of significance: * $p < 0.05$; ** $p < 0.01$ (two-tailed tests). $n = 827$.

Abbreviation: VIF, variance inflation factor.

Table 10.3 Results of regression analysis on MRR intention

	<i>Model 1</i>	<i>Model 2</i>
	<i>Base model</i>	
Control variables		
Gender (male = 1)	-0.07*	-0.08**
Age	0.08*	0.06
Attitude – beliefs regarding work opportunities		0.33***
Attitude – beliefs regarding salary		0.01
Subjective norms		0.22***
Perceived behavioural control		0.16***
F value	3.27***	16.90***
R ²	0.061	0.295
Adjusted R ²	0.042	0.278
ΔR ²		0.234***
Controlled for year of study and business school	Yes	Yes

Notes: Standardised coefficients are reported. Level of statistical significance: * indicates $p < 0.05$; ** indicates $p < 0.01$; *** indicates $p < 0.001$ (two tailed). $n = 827$.

With reference to Research Question 2, this chapter investigated differences regarding bachelor study year. Hence, additional regression analyses were performed for each of the three years. The results are shown in Table 10.4. The regression models relating to all three years are statistically significant at the 0.001 level. Moreover, attitude – beliefs regarding work opportunities, subjective norms and perceived behavioural control are all statistically significant ($p < 0.05$) and positively associated with intention for each of the three years. Hence, these findings indicate that the results are robust when investigating different study years. However, when inspecting the R-squared statistics, it is interesting to note that the samples of students in the second and third years seem to predict intention slightly better than the first-year sample. Regarding the TPB variables, attitude – beliefs regarding work opportunities – and perceived behavioural control seem to have the strongest effect in years 2 and 3. Subjective norms, on the other hand, seem to have the strongest effect in years 1 and 2.

Similar to those of Tan and Laswad (2006) and Cohen and Hanno (1993), a more detailed investigation is performed of each individual item, contrasting those planning to choose MRR and those reporting other options (Master of Science in Business, do not wish to take a master's degree or others). The results are presented in Table 10.5. Overall, the results confirm that relevant items are utilised. That is, with one exception, respondents who report they are planning to choose MRR score significantly higher mean values ($p < 0.05$) on the items, compared with the other group. The exception is the perceived behavioural control item "MRR will be easy for me". This may be due to the fact that this item is a general type of statement.

Table 10.4 Results of regression analysis on MRR intention split per bachelor year

	<i>First year</i>	<i>Second year</i>	<i>Third year</i>
Control variables			
Gender (male = 1)	-0.18**	-0.17***	0.00
Age	0.08	0.12*	-0.01
Attitude – beliefs regarding work opportunities	0.21*	0.26***	0.38***
Attitude – beliefs regarding salary	-0.04	0.12*	-0.04
Subjective norms	0.30***	0.27***	0.13*
Perceived behavioural control	0.15*	0.17***	0.17**
F value	4.37***	10.40***	8.20***
R ²	0.290	0.354	0.345
Adjusted R ²	0.224	0.320	0.303
Controlled for business school	Yes	Yes	Yes
n	188	340	299

Notes: Standardised coefficients are reported. Level of statistical significance: * indicates $p < 0.05$; ** indicates $p < 0.01$; *** indicates $p < 0.001$ (two tailed).

Discussion of results

The results showed a positive association between attitude – beliefs regarding work opportunities – and intention to study MRR. This result implies that students who associate good career opportunities with pursuing MRR have a greater intention to study MRR. This result is similar to Cohen and Hanno (1993), who find that both accounting and non-accounting majors agree that choosing an accounting major would most likely lead to a career with more job opportunities than would be the case with a non-accounting major. Moreover, our results indicate that attitude – beliefs regarding work opportunities – has the highest standardised beta coefficient, which implies that students' perceptions of career opportunities significantly influence their intention to study MRR. Although we used the same dataset, this result is slightly different from that of Larsen and Husebø (2023), who found that subjective norms have the highest beta coefficient³ and hence is the most influential predictor. Therefore, our results underscore the importance of highlighting career opportunities when promoting MRR programmes to students.

For attitude – beliefs regarding salary, this chapter found no statistically significant association with intention to study MRR. This result does not support the claim that factors such as high salaries influence students to study MRR. This result differs from prior research (Karlsson & Noela, 2022; Tan & Laswad, 2006). Tan and Laswad (2006) found that students perceive high initial salaries favourably when making decisions about the study they will major in, while Karlsson and Noela (2022) found that students choose other majors because of better salary opportunities than is the case with an accounting major. These studies suggest that

Table 10.5 Mean and t-test attitude – beliefs, subjective norms and perceived behavioural control

	<i>MRR major</i> (<i>n</i> = 135)	<i>Others</i> (<i>n</i> = 695)	<i>t-Value</i>
Attitude – beliefs regarding work opportunities	5.43	4.45	9.71**
Academic major that is exciting	5.64	4.15	10.24**
Career with advancement potential	5.49	4.93	4.95**
Career with many work opportunities	5.75	4.79	7.40**
Career with better or similar work opportunities compared with Master of Science in Business	4.83	3.93	6.34**
Attitude – beliefs regarding salary	5.49	5.00	5.05**
Career with a high initial salary	5.06	4.80	2.37*
Career where you can achieve a high salary	5.92	5.19	6.47**
Subjective norms	4.15	3.29	7.82**
My parents recommend that I study MRR	3.99	3.17	5.63**
My friends recommend that I study MRR	3.86	2.92	7.13**
My lecturers recommend that I study MRR	4.52	3.79	5.43**
My fellow students recommend that I study MRR	4.25	3.27	7.47**
Perceived behavioural control	4.57	4.16	3.56**
MRR will be easy for me	3.40	3.29	0.85
I have the skills necessary for MRR	5.17	4.60	4.30**
My performance in accounting courses is fitting for MRR	5.13	4.58	3.59**

Notes: Measured on seven-point scales where 1 = completely disagree and 7 = completely agree. Level of statistical significance: * indicates $p < 0.05$; ** indicates $p < 0.001$ (two tailed).

salary influences intention to study MRR. There are several possible reasons why high salary might not influence students to study MRR, one being that Norway generally has a high salary baseline across professions, and this might reduce the influence on students of salary differences between professions. Secondly, Norway has a strong social welfare system in healthcare, education and unemployment benefits, which reduces the pressure on students to choose a career based on salary prospects.

The findings showed that the TPB is a robust framework, even if we look at each of the three years of the bachelor programme. A closer look at the attitude – beliefs regarding work opportunities – factor indicates that its effect increases as the student moves from the first to the third year. In other words, this result suggests that the further along students are in their studies, the more their perception of potential career opportunities influences their decision to pursue MRR. One explanation for this result might be that, as students are going through their academic journey, their understanding of possible career opportunities and what MRR offers

increases. Therefore, business schools and MRR programme managers can tailor their campaign strategies to increase awareness of the career opportunities which come with enrolling in the MRR programme early in the student's academic journey and intensify these campaign strategies as students progress in their bachelor's studies. The campaign strategies should strongly highlight career prospects and job opportunities associated with studying MRR. This can be achieved by embarking on strong industry collaboration, such as internships, career-related seminars and mentoring – especially using junior employees/freshly hired employees in the industry who can easily relate to the students' concerns – to provide real-world experiences, especially to students in their later years of study.

When analysing subjective norms, the results show that they have a positive influence on the intention to study MRR. This result is in line with prior research (Cohen & Hanno, 1993; Karlsson & Noela, 2022; Tan & Laswad, 2006), which found that subjective norms are positively associated with intention to major in accounting. A closer look at the subjective norms factor shows that there are indications that as students progress in their studies, social influence lessens. This might mean that as students progress through their bachelor's programme, they gain more knowledge about their studies and possible careers, and this increases independency and individuality in their decision-making, reducing reliance on social influence. Therefore, business schools, MRR programme managers and society at large should focus their awareness campaign strategies early on in the student's career, when they still have influence. These campaigns should focus not only on students but also on their social influencers such as family and friends. The influence of parents in career choices is also emphasised in an article on the website for The Confederation of Norwegian Enterprises (Næringslivets Hovedorganisasjon), which states that parents are the ones who influence children's choice of school the most (NHO, 2015). Thus, among other things, awareness and promotional strategies can focus on what auditing is all about as a career. Larsen and Husebø (2023) found that most students perceived MRR as very number-focused, with 83.8% of bachelor students answering in the upper part of the scale, with an average score of 5.48. This perception might lead to most people who are not good at mathematics avoiding studying MRR. During promotional campaigns, the focus must also be on what auditing is really about. This will help to debunk the myth that auditing is boring and number-oriented, and raise awareness that, in addition to working with numbers and being closely linked to laws and regulations, audit work is about working with people, and hence communication and teamwork are important aspects of an auditor's work. Awareness should be raised that there are other economics- and finance-related careers which might be more quantitatively oriented than auditing. In addition, another possible reason why students may not be embracing auditing as a profession is the fear of being redundant and having to change careers in the future, as some tasks are being digitalised (Frey & Osborne, 2017). There is a need for awareness on how, rather than replacing work, technology can be used to improve and streamline it. The opportunities of technology must be clearly communicated to society and remove the fear of future unemployment. Furthermore, the industry can work on improving its reputation and show how the

work contributes to society and business. Finally, it may also be appropriate to investigate whether it is possible to change or adjust the study programme to attract more students, e.g. through the introduction of new and interesting topics.

The results also show a significant positive association between perceived behavioural control and the intention to study MRR. This means that students who feel more confident in their ability to succeed in MRR are more likely to intend to study it. Our results are consistent with prior research (Cohen & Hanno, 1993; Tan & Laswad, 2006), which found that the stronger the perceived behavioural control, the more likely students are to intend to choose MRR. Therefore, business schools and MRR programme managers should focus on building students' confidence in their ability to succeed in MRR through intervention strategies, such as skill-building workshops, providing extra tutorial classes in MRR-related difficult subjects and providing resources that help students to feel more comfortable and in control of their academic abilities. In addition, workshops with former students who have successfully completed and thrived in MRR studies can help to build a sense of control among current and future students, as the former students act as role models.

This chapter performed further testing of this variable, separating the students by year. Results show very slight variations across the bachelor's students in the three years. Therefore, the intervention strategies should be used throughout students' bachelors' studies.

This chapter has some limitations. It used bachelor's students in Norway as respondents. Differences in educational systems and cultural backgrounds might limit its generalisability to contexts which have different educational systems and cultural backgrounds from those of Norway. In addition, in as much as intention is a strong predictor of behaviour, intention does not always translate to behaviour. Therefore, the chapter's results should be interpreted with this limitation in mind. Moreover, even though this chapter has utilised a large sample of bachelor students, there might be some uncertainties with respect to the representativeness of the sample.

This chapter has investigated bachelor students' intention to study MRR. Since intention does not always translate to behaviour, there is a need for future longitudinal studies to link intention to study MRR with actual behaviour. Such longitudinal studies can provide insights into the factors that facilitate or hinder the translation of intention into actual behaviour. This helps in identifying the barriers students face in pursuing their intentions and the supports needed to overcome these barriers. In addition, prior studies found that beliefs regarding higher salary are a predictor of intention to study MRR. These prior results differ from the result in this chapter. Therefore, although the chapter provided some possible reasons for this finding, future studies might investigate unique contextual characteristics of Norway which make this predictor different from those of other countries.

Conclusion

There is a need to encourage competent individuals to choose a career in the audit industry. One effective way to do that is to recruit bachelor students to enrol in MRR

programmes. In this book chapter, the TPB is used to investigate bachelor students' intention to study MRR. The present research finds that attitude, subjective norms and perceived behavioural control are important predictors of intention. Specifically, there is a strong positive association between students' attitude – beliefs regarding work opportunities – and their intention to study MRR. This finding highlights the importance of career prospects in shaping students' academic choices. Therefore, MRR programme managers must focus on promotional strategies that educate students about the career prospects ahead of them once they enrol in MRR. In addition, contrary to prior studies, attitude – beliefs regarding salary – was not significant. This might be due to the factors unique to the Norwegian context, such as a high salary base across professions and a strong social welfare system for health, education and unemployment benefits. Moreover, perceived behavioural control is significantly associated with intentions to study MRR. This suggests that enhancing students' confidence in their abilities can encourage them to study MRR. Students' confidence can be enhanced through intervention strategies such as workshops and extra tutorial classes on subjects perceived as difficult and the use of former students as mentors. In addition, results in this chapter show that subjective norms positively influence students' intentions to study MRR, especially in the early years of their education. This suggests that the influence of social factors, such as family and friends, positively impacts students' intentions to study MRR, especially early in their studies when their decisions are not yet more independent. Therefore, business schools and MRR programme managers should implement early intervention strategies targeted at these social influencers early in their studies.

Notes

- 1 This book chapter is based on the research conducted for a Master's thesis authored by Johan Kosmo Larsen and Sander Husebø (Larsen & Husebø, 2023) in collaboration with the TRANSACT project at Nord University. The data used was collected by the two authors as part of their Master's thesis.
- 2 "Master i Regnskap og Revisjon" (MRR) in Norwegian.
- 3 This might be because this chapter used one item to measure intention, whereas Larsen and Husebø (2023) use a summated index of two questions. Secondly, this chapter measured subjective norms slightly differently, as it used the motivation to comply item. Thirdly, this chapter has included two additional control variables: bachelor level and business school.

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11 Neither detecting nor preventing

Analysis of the auditors' role in the outcome of financial crime cases in Norway and Sweden¹

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Introduction

Financial crime is a growing problem (Lokanan, 2017). Research nationally and internationally (e.g., Gottschalk, 2012, 2018; Imeny et al., 2021; Mitchell et al., 1998; Sikka et al., 2009; Bigus, 2015; Kang et al., 2019) is problematising the ability of auditors to address this problem by actually detecting and preventing financial crime. In their latest biennial report, the Association of Certified Fraud Examiners (ACFE, 2024, p. 24) states that only 3% of occupational fraud is detected by external auditors. In the *Financial Times*, Stephen Foley, US Accounting Editor, makes the following point (Foley, 2024, n.a.):

Regulators fear auditors are failing in their role as a last line of defence for investors against corporate shenanigans. Audit firms argue that company executives are responsible for the accuracy of financial statements and that the role of an auditor is only to provide reasonable assurance — not a guarantee — that a financial statement is free from material misstatement. It is an argument that has prompted the US Securities and Exchange Commission's chief accountant, Paul Munter, to exclaim to me on more than one occasion that he is fed up hearing from auditors what they do not do.

The role of the auditor working in the public interest is a recurring theme throughout the brief history of the modern audit profession. It has typically been accounting scandals and audit failures that have constituted the milestones of the audit profession's development. Notably, the very first authoritative auditing standard Statement on Auditing Procedure (SAP) 1 was issued in response to the McKesson and Robbins audit scandal (Levy, 2020), which resulted from the auditor's failure to verify the client's inventory over many years and thus to detect the fraudulently inflated value of the inventory. Similar developments have taken place in subsequent years both in the United States and internationally.

Auditors' failure to prevent and/or detect fraud has dire consequences. A common denominator of many accounting scandals is financial losses which management try to cover up. Auditors' failure to fulfil their obligation to detect and/or

prevent management's fraudulent financial reporting is damaging to the public's trust in the capital markets and the audit profession. Further, as noted by the Norwegian Institute of Public Accountants (Revisorforeningen, 2019), companies without an auditor are overrepresented among those who commit financial crime. Such companies are not covered by our study.

This chapter examines the auditor's role in financial crime cases that end up in court. The goal is to explore whether the increase in financial crime as a societal problem is reflected in the roles auditors have played in financial crime cases. Since the turn of the century, the European Union has strengthened regulation when it comes to the auditor's responsibility to prevent and detect financial crime. Those regulatory changes were adopted by all European Economic Area (EEA) member states, including Sweden and Norway. New legislation related to auditing and anti-money laundering has clarified that the general public expects auditors to be aware of their responsibility to detect and prevent financial crime of importance to the annual accounts. However, the extent to which an auditor directly or indirectly prevents or detects financial crime is still unclear. This chapter therefore addresses the following issue: "What is the auditor's role in financial crime court cases, and how has it changed in the period 2017–2021?"

This is a comparative study, using data from Norway and Sweden. The period 2017–2021 was chosen due to the availability of data but also because of raised expectations that auditors should discover crime, following the increasing number of court cases where auditors are involved. In both countries, the political influence over the development of auditor duties/regulation is stronger, compared to countries in an Anglo-American context, where regulation tends to respond more to major fraud and corporate scandals (Larsson, 2005; Eilifsen, 1998). Another important context is that, according to Choi et al. (2008), the litigation risk in Sweden, as an example of one Scandinavian country, is lower than in the United States, and the risk is lower for audits of private companies than public companies (Hope & Langli, 2010). In the case that the changing political regulation/laws (*de jure*) should have a positive effect on the practice of auditors (*de facto*), the expectation is that auditors should report more crime that ends up in court.

This chapter is structured as follows. First, we review previous literature that discusses the role that auditors have in preventing and detecting financial crime. We then present the theory of institutional logic and briefly describe our data collection strategy. This chapter proceeds with a presentation of our findings, followed by a discussion of these findings in light of previous literature and institutional logic. This chapter ends with conclusions and implications.

Literature review: auditors' role in financial crime cases as an expectation gap

Auditors are increasingly expected to detect financial crime because auditing is considered a tool to protect against financial fraud (Jeppesen, 2019). There are various types of financial crime, with fraud, theft, manipulation and corruption being among the most common forms (Gottschalk, 2018). Society has a perception

and expectation that auditors represent the front line against financial crime (Imeny et al., 2021; Jeppesen, 2019; Standing & Van Vuuren, 2003; Mitchell et al., 1998). Further, the most commonly used definition of audit quality comes from DeAngelo (1981), who defines it as “the market-assessed joint probability that a given auditor will both (a) discover a breach in the client’s accounting system and (b) report the breach”.

However, research shows that this is not necessarily the case. Auditors are supposed to be independent “watchdogs” and “gatekeepers” of the public interests, but, in reality, they have low incentives to detect and report fraud (Admati, 2017, p. 136; Coffee, 2001). Thus, there is an expectation gap in relation to the auditor’s work, whereby society’s perception of the auditor’s duties differs from that of the auditors themselves; thus, auditors can handle those duties in a different way (Imeny et al., 2021; Jeppesen, 2019; Esplin & Sunder, 2018; Jennings et al., 1993; Liggio, 1974). In the case of financial crime, an expectation gap may arise between the auditor and the legal system because the latter expects the auditor to detect and prevent financial crime, while auditors believe that they are not in a good position to do this (Imeny et al., 2021; Lowe, 1994; Anderson et al., 1998). The auditor is intended to play an important role in detecting and reporting financial crime and therefore can be used by the prosecution in financial crime cases (Imeny et al., 2021).

The public prosecutor’s office and the auditor have historically disagreed on how the responsibility for reporting financial crime should be distributed (Lowe, 1994). Prosecutors expect the auditor to detect and prevent fraud, for example false accounts (Wiesen, 1978). A recent example of an audit failure related to false accounts is EY’s failure to detect Wirecard’s fraudulent reporting of nearly EUR 2 billion in fictitious cash (Chen, 2022). During an audit assignment, the auditor has access to the client’s transactions and documents, which implies that auditors are in a good position to detect suspicious transactions to and from their clients’ accounts (Amara et al., 2020). Whether the auditor chooses to report suspicious transactions depends on country-specific laws and regulations.

For their part, auditors have traditionally believed that they have limited opportunities to detect financial crime, and they argue that it is difficult to identify criminal acts simply by looking at the accounts (Imeny et al., 2021; Mitchell et al., 1998; Sikka et al., 2009; Bigus, 2015; Kang et al., 2019). This argument is in line with a report by James (2003), who claims that detecting financial crime in a company can be difficult for an auditor because they lack knowledge about the company and are rarely physically present in it. However, lack of knowledge about the company represents a fundamental deficiency in an audit in relation to good auditing practice and relevant auditing standards, particularly International Standard on Auditing (ISA) 315 Identifying and Assessing the Risks of Material Misstatement (IFAC & IAASB, 2023). Carmichael (2004) states that the auditor cannot be expected to detect all financial crime in a company, because the auditor does not function as a guarantor. Jeppesen (2019) also points out that an audit alone cannot stop financial crime but is one of several important elements in combating it.

Theoretical framework: is the expectation gap due to different institutional logics?

The preceding discussion highlights a disagreement in international literature about whether auditors can effectively fight financial crime. Different perspectives on the auditor's role in financial crime cases in the legal system can, for example, be explained using the theory of institutional logic (Varmedal et al., 2022; Varmedal, 2022). Thornton and Ocasio (1999) present institutional logic as socially constructed assumptions, values and rules for how individuals allocate their time to create meaning in their own social reality. Actors in various institutions operate based on their own institutional logics. The legal system and the auditing profession can operate based on two different logics, which can basically explain the gap in expectations. Research shows that the pressure from different institutional logics can create internal conflicts in professional organisations (Schäffer et al., 2015).

The fight against financial crime requires auditors to take the requirements of audit legislation and the legal system into account in their professional practice. When it comes to the legal system, the court's assessments, laws and rules determine the actions of an actor. How the legal system assesses an offence and brings charges against suspects, including interpreting the law and society's expectations, constitutes the institutional logic of criminal punishment (McPherson & Sauder, 2013). This logic is a default logic of a judicial response to economic crimes, representing the logic of the state. The logic of the auditing profession centres on how the auditor behaves towards clients and employers. If the auditor is to assist in the fight against financial crime, then both the logic of criminal punishment and the professional logic must be viewed together as part of a common practice and assumptions that exist in society (Alford & Friedland, 1985).

Previous research clearly shows that the auditing profession is conflicted between the logic of the profession and the notions of profit maximisation, that is, the logic of the market (Whittle et al., 2016). Consequently, auditors can prioritise acting as private providers of auditing services, and it can be challenging for them to combat financial crime, that is, to follow the logic of criminal punishment. It is mostly private actors who work with the prevention of financial offences and, for auditors in privately owned companies, conflicts can therefore arise between their different obligations (Helgesson & Mörtz, 2018; Tsingou, 2010). In addition, the private actors do not necessarily follow the law, even if their profession requires them to do so, and the actors can be expected to preferentially promote their own interests and protect their customers' interests (Helgesson & Mörtz, 2018).

As a result, cases may occur in which the auditor prioritises the client's interests over the logic of criminal punishment. In such cases, an auditor faces competing logics (Besharov & Smith, 2014; Lounsbury, 2007) that can undermine the job of combating financial crime. Norton (2017) shares this opinion and claims that the auditor can have a participatory or preventive role. It can be participatory, in the sense that the auditor has the opportunity to initiate complex transactions that may be difficult to identify and thus difficult to trace back to the perpetrators; in this way, the auditor can contribute to financial crime. Institutional logic applied to the

relationship between the auditor and the client can thus reveal challenges that can have a negative effect on the fight against financial crime. The relationship between the auditor and the client can be very close, with the auditor potentially acting as an adviser to the client (Myers et al., 2003). Therefore, the auditor may be reluctant to report a client's suspected financial offences, for fear of losing that client.

Previous literature demonstrates that competitive logics faced by organisations can be managed by different responses, leading to spatial variation of practices (Mzenzi & Gaspar, 2022; Besharov & Smith, 2014; Lounsbury, 2007). In this sense, it is interesting to examine the auditors' roles in economic criminal cases in courts in the context of two different countries and whether and how those roles have changed over the period 2017–2021. With the increasing number of reported financial offences, raised expectations from authorities, an increased need for the involvement of the courts and society at large, as well as possibly more awareness of the audit industry's responsibility to combat financial crime, can we see that auditors are becoming more visible in court cases dealing with financial crime? Do auditors detect offences more often, and have audit practices changed in line with the increasing number of reviews over time? In the next part, we briefly present how we have undertaken data collection and analysis.

Method

The advantage of carrying out economic crime research in Norway and Sweden is that a lot of data is accessible in digital format in public databases with convenient search functions. Researchers therefore gained access and searched in the crime databases, Lovdata Pro (Norway) and InfoTorg (Sweden), which allowed search and analysis of the decisions made by district courts in Norway and Sweden. All court decisions are well documented and provide comprehensive information on the crime and how it was handled. The Norwegian data was collected and reported by Varmedal (2022) and Varmedal et al. (2022). The Swedish data was collected in late 2023 and matched the coding done in the Norwegian study. Data was accessed and analysed over five years (2017–2022) to see the possible dynamics, for example whether changes have occurred in the mentioning of auditors in financial crime cases. Such changes could serve as an indirect indicator of how active auditors have been over time in combating financial crime.

The cases were selected where text analysis indicated that the company was audited. Other cases were excluded from our study. A fair presumption is that, to the extent fraud is not detected in companies that are audited, we should not expect fraud to be detected in companies that are not audited.

The search function was used to search for the term “auditor”, to determine cases in which the auditor was mentioned. We have categorised all the cases around three sorts of crime: fraud, tax evasion and money laundering/corruption. We have excluded other crimes because these three were the most common. For the period 2017–2021, we have identified and analysed 37 cases in Norway and 40 cases in Sweden.

Further, we have coded the findings. First, we coded the type of criminal offence where an auditor had some role, that is, the auditor was mentioned in one or another

role. One court case could have several types of crimes – for example, fraud was typically also associated with tax evasion or money laundering – or roles. Then, the identified cases were analysed and coded based on four possible roles the auditor could have. The first role involves the auditor being the person who detects the offence and reports it to the authorities, contributing to a conviction or an acquittal of the accused. In the second role, the auditor issued an unqualified auditor's report. In such cases, an auditor has performed a statutory audit, but the company and the person(s) are reported (and later charged or acquitted) because others detected and reported the offence. In the third role, the auditor serves as an expert or witness, which signals how often an auditor testifies or is called in as an expert in crime cases. Finally, in the fourth role, the auditor is indicted, which provides an indication that auditors are themselves prosecuted for conducting financial crimes. The auditor may be prosecuted for financial offences, such as corruption or fraud, or for breaching, for example, the Auditors or Accounting Acts.

This method has a selectivity weakness. For instance, those cases where the auditor had potentially played other roles or unclear roles, except for those four identified, were excluded from the analysis. Potential crimes other than fraud, tax evasion and money laundering/corruption were also excluded. Those crimes could have potentially shown another picture of the auditor. However, ethical considerations limit researchers' opportunity to follow up cases with interviews and to explore in greater detail why and how auditors acted in a particular role.

Economic crimes and changing international auditing regulations

The EU regulation on auditing is implemented through the Accounting Act, the Auditors Act and the Company Act. Furthermore, these regulations are extended by the ISAs issued by the International Auditing and Assurance Standards Board (IAASB) and the Code of Ethics issued by the International Ethics Standards Board for Accountants. Since the turn of the millennium, there have been extensive changes in the auditing profession. Several major accounting scandals have triggered this development. In 2002, following the accounting scandals of Enron and WorldCom, the Sarbanes Oxley Act (United States Government, 2002) was passed in the United States, and the Public Company Accounting Oversight Board was established. Similarly, Europe experienced a number of large accounting scandals, including Parmalat and Ahold, and, in May 2006, the DIRECTIVE 2006/46/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL was passed, requiring the establishment of independent auditor oversight in all EEA member states.

Since the introduction of the new audit directive and audit regulation, effective from 17 June 2016, Europe has continued to experience high-profile accounting scandals, such as the collapse of the UK's second largest construction company, Carillion, in 2018 (Kelly & Larres, 2023) and of Germany's leading fintech company, Wirecard, in 2020 (Chen, 2022). Despite changes in regulation, large corporations are still issuing fraudulent financial statements, which are nevertheless given unqualified auditor's reports. The fact that the

appointed auditors have once again failed to spot massive financial losses, covered up through fraudulent financial reporting, certainly affects the European public's trust in auditors. Further, the concerns over European audit quality raise serious questions about the adequacy of audit regulation and auditor oversight in Europe.

Regulators, auditors, rating agencies and financial watchdogs again came under scrutiny. In response, in November 2021, the EC launched another initiative for a proposal for a new directive of the European Parliament and of the Council, with a planned adoption date in Q4, 2022, to amend earlier legislation, including Regulation (EU) 537/2014 on specific requirements regarding statutory audit of public-interest entities. The initiative addresses corporate governance, audit quality and supervision and is titled "Corporate reporting – improving its quality and enforcement" (European Commission, 2021). However, no subsequent activities related to this initiative have been posted by the EC since the consultation period ended on 18 February 2022. Similarly, the UK Government commissioned three independent reviews in 2018, and, in March 2021, the Department for Business, Energy and Industrial Strategy issued its consultation paper, titled "Restoring trust in audit and corporate governance" (United Kingdom Government. Department for Business, 2021). However, just like the EC initiative, the outcome of this initiative was rather insignificant. In late 2023, it was reported that "UK ditches much of corporate governance revamp to focus on being competitive" (Jones, 2023).

The ISA 200 (IFAC & IAASB, 2023) states that: "As the basis for the auditor's opinion, ISAs require the auditor to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error". This indicates an expectation that the auditor detects both intentional and unintentional errors that are material to the financial statements, and that the work of the auditor thus should contribute to preventing and detecting financial crime. Moreover, in February 2024, the IAASB (2024) published an exposure draft for a revised ISA 240 The Auditor's Responsibilities Relating to Fraud in an Audit of Financial Statements. Among the drivers for the project, the IAASB notes the following (IAASB, 2024, p. 5):

High quality audits contribute to the efficiency of capital markets and financial stability. The public interest is best served when participants in the financial reporting system have confidence in audits of financial statements. However, corporate failures and scandals across the globe in recent years have brought the topic of fraud to the forefront and led to questions from stakeholders about the role and responsibilities of the auditor relating to fraud in an audit of financial statements.

It should be noted that the first authoritative auditing standard, SAP 1, issued in October 1939, came in response to the US Securities and Exchange Commission hearings earlier in the same year related to the highly publicised McKesson & Robbins fraud case and audit scandal (Foster & Strauch, 2009). Considering this fact,

it may be telling that the IAASB, when describing their deliberations behind the changes to ISA 240, is careful to clarify that the IAASB is

not seeking to expand the role and responsibilities of the auditor relating to fraud in an audit of financial statements. The descriptions of the inherent limitations of the audit and the auditor's responsibilities relating to fraud in audits are consistent with how those concepts are described in extant ISA 240.

(IAASB, 2024, p. 8)

The auditor's role in Norway and Sweden: expectations

Norway

Norway, like the United States and Europe, has experienced several significant financial scandals, like Finance Credit and Sponsor Service. However, while these scandals are well-known among the public, financial crimes are taking place continuously. The Central Bureau of Statistics in Norway shows that, on average, 28,000 financial criminal offences were reported per year in the period from 2010 to 2021 (Central Bureau of Statistics, 2021). At the same time, the proportion of financial crimes for which investigations were launched during 2017–2021 was only around 30% (Directorate of Police, 2022). It implies that the large majority of reported offences are simply dismissed. In addition, financial crime cases often end with the defendant being acquitted (Amundsen, 2021). Dismissals and acquittals lead to potentially large losses of tax revenue and thus also pose a threat to socio-economic sustainability (Økokrim, 2022). Financial crime is estimated to cost the Norwegian society at least around EURO 15 billion each year (Mortvedt, 2020). Norwegian society could use this money to improve welfare services and other benefits; instead, the money ends up in the pockets of criminals.

Over the last few years, the threshold for the statutory audit requirement has been raised from revenues of EURO 0.5 million to EURO 0.7 million.² Interestingly, the Norwegian Institute of Public Accountants (Revisorforeningen, 2019) notes that abolishing the comprehensive statutory audit requirement and exempting small, limited liability companies represents a “setback in the fight against economic crime”, citing The Swedish Economic Crime Authority, which issued a report in 2016 summarising the experiences after the abolition of the audit requirement for small companies in Sweden in 2010. They concluded that “the absence of control is deliberately exploited by criminals” and that “Companies without an auditor are overrepresented among those who commit financial crime”.

Prior to 2021, the work of the auditor in Norway was regulated by the Act on Auditing and Auditors (Auditors Act, 1999). This act did not have any explicit wording that auditors “should contribute to preventing and detecting financial crime”. The law specified that “The auditor shall, through the audit, contribute to preventing and detecting fraud and errors”, and the auditor has always had responsibility for “assessing the risk that there may be incorrect information in the annual accounts as a result of fraud and errors” (Auditors Act, 1999, § 5-1). However, the

Norwegian terms for fraud and financial crime can both be translated as “fraud” in English. Financial crime can also be translated as “white collar crime”, a term introduced in 1939 by the sociologist Edwin Sutherland (Braithwaite, 1985). This English term does not describe anything other than fraud, but it provides additional information about who has committed fraud or a financial crime.

On 1 January 2021, the new Auditors Act (2020) came into force. In it, the term “financial crime” was explicitly introduced for the first time to emphasise the auditor’s responsibility to prevent and detect financial crime. Changes in the Auditors Act in Norway have taken place in line with the regulation of auditing and auditors in the European Union. In their preparatory work for introducing changes, the Norwegian Ministry of Finance emphasised that “The proposal is not intended to change the applicable law” and points out that “‘Financial crime’ is a more modern term than ‘fraud’” (Prop. 37 LS, 2019–2020, chapter 13.1). Thus, the new legislation for external auditing makes it clearer that the general public expects auditors to be aware of their responsibility with regard to detecting and preventing financial crime of importance to the annual accounts – consequently, also in the period covered by our study (2017–2021).

The Auditors Act (2020) incorporates the responsibility of auditors to perform an audit in accordance with the legal standard “good auditing practice” and thus “instil confidence that annual financial statements comply with legal requirements and do not contain material misstatements, and thereby inter alia contribute to the identification and prevention of economic and financial crime” (Section 9-1). In addition, auditors are obliged to report suspicious transactions to the National Authority for Investigation and Prosecution of Economic and Environmental Crime (Økokrim), in accordance with the Norwegian Act relating to Measures to Combat Money Laundering and Terrorist Financing (Anti-Money Laundering Act), which is intended “to prevent and detect money laundering and terrorist financing” (cf. the Anti-Money Laundering Act 2018, Section 1).

Sweden

According to a recent government investigation (Swedish Government Official Reports [SOU], 2023, p. 34), financial crimes have increased over the last decade. During 2023 alone, the inflow of cases to the Swedish Authority Crime Office (EBM) increased by 21%.³ At the same time, economic crime is becoming an increasingly common feature of serious organised crime. It is claimed that an auditor plays a role in detecting and preventing unlawful acts. However, the investigation shows that, today, reported accounting violations are most often discovered in connection with the Swedish Tax Agency’s controls and in connection with bankruptcies.

In Sweden, the Auditors Act (Revisorslag, 2001) stipulates that the auditor’s primary task is to perform an audit in accordance with the legal standard “good auditing practice”. However, unlike in Norway, where the Auditors Act stipulates the role of auditors in preventing and detecting illegal acts, in Sweden, it is the Company Act (Aktiebolagslag, 2005) that stipulates this role. This role is clarified

by EBM who produced guidance regarding the auditor's obligations in the event of suspected crime. The Sweden Company Act (Aktiebolagslag, 2005, p. 551) stipulates that the appointment of an auditor is mandatory if, for two consecutive years, a company exceeds two of the following conditions: three employees, approximately EURO 0.15 million in total assets and approximately EURO 0.3 million in annual turnover. This policy, that small private limited companies falling under these conditions were allowed to choose whether the company should have an auditor or not, was released in 2010 (a new version of The Sweden Company Act). The reform of the voluntary audit aimed to reduce companies' reporting burden and increase comparability across the European Union for very small "micro entities" (Beuselinck et al., 2023). Today, a minority of small private firms choose to appoint an auditor (SOU, 2023, p. 34).

Auditing standards in Sweden are based on International Auditing Standards, including some additions and changes to make them consistent with Swedish law. The Swedish Inspectorate of Auditors (SIA) (n.d.) is a governmental expert authority under the Ministry of Justice. The SIA is responsible in matters relating to auditors and auditing and for ensuring the appropriate development of generally accepted auditing standards and professional ethics. It works to help maintain a high quality of auditing and professional ethical requirements. For example, the SIA provides an examination regime for auditors, as well as approving and authorising auditors and registering auditing firms. Further, the SIA issues disciplinary sanctions against auditors when audits fail in certain cases.

Swedish companies must register with the Swedish Companies Registration Office (SCRO) and supply this government body with annual reports, including the auditor's report. These reports are available for the public, in accordance with the Accounting Act. The auditor is appointed by the shareholders' annual meeting but should withdraw from the engagement under certain situations, for example if the company has not prepared any financial statements. This resignation must also be reported to SCRO. Other negligence by the companies must be reported as a modified opinion in the audit report.

The Swedish Company Act contains regulations on which actions the auditor must take if there is suspicion of crime in the company to be audited. The auditor has an obligation to intervene in the event of suspicion of financial irregularities and must report to the board of directors when there is a suspicion of crime. Thereafter, the auditor is obliged to report to the prosecutor. Type of crime is defined in the Company Act and relates to crime, tax and money laundering. The law on money laundering was stipulated in the Company Act in 2014 and developed in 2017 (e.g., the Act on Penalties for Money Laundering Crimes [Lag 2014:307] and the Act on Measures against Money Laundering and Terrorist Financing, or the AML/CFT Act [Lag 2017:630]).

In summary, internationally, as well as in Norway and Sweden, there is an increasing expectation and requirements that an auditor not only detects but also reports different types of fraud. Especially in recent years, both international scandals and changes in laws in Norway and Sweden have solidified this expectation. Norway and Sweden have adjusted their laws to make auditors more responsible for detecting and reporting crime.

The auditor's role in Norway and Sweden: analysis of court cases

This section presents findings from the analysis of financial crime court cases in two countries. Figure 11.1 summarises the distribution of the most common types of crime in which auditors are involved in Norway. The court findings show a small majority of judgements dealing with fraud, which are the matters in which the auditor is most often mentioned. Next come cases dealing with tax evasion.

Figure 11.2 summarises the distribution of the most common types of crime in which auditors are involved in Sweden. There is a striking similarity with Norway, with fraud having a majority of judgements, followed by tax evasion. In both countries, money laundering shares the third largest percentage.

Figure 11.3 summarises the proportion of times each role has been mentioned, compared to the total number of financial crime cases, handled by the district courts in Norway and Sweden during 2017–2021, in which the auditor has a role.

As we can see, the most common roles in both countries relate to the auditor having issued an audit report without detecting the financial offences or being an expert/witness. The percentages of auditors being in one of those two categories are surprisingly similar (65% vs 30%, respectively).

The analysis of crime cases confirms findings from previous research (e.g., Gottschalk, 2012, 2018), showing that auditors rarely detect and prevent financial crime. Analysis of the text in crime cases shows surprisingly few mentions of the auditor in the judgements. In several of the court decisions, the auditor is only mentioned in a sentence or two. Considering how little the auditor seems to be emphasised in court decisions, the auditor generally does not appear to be a decisive factor in detecting crimes and thus getting criminals convicted.

Nor is the auditor good at prevention. This is particularly reflected in a few cases in which the auditor alerted the defendant about the questionable actions, but the defendant apparently disregarded the auditor's statements and carried out the offence, which was later detected and reported by other actors.

This is somewhat contrary to the fact that most prosecutions end in conviction for the accused, in the form of imprisonment, fines or other forms of punishment. Analyses show that the majority of cases end with the accused being convicted for the financial crime they committed. This means that the evidence in financial crime cases in which the auditor is involved as an expert or witness is very good. Consequently, individuals charged with a financial offence in which the auditor plays some role in the evidence cannot expect to be acquitted. When auditors take on such a role, they are also obliged to explain themselves truthfully to the court. This means that their statements in court must be correct, and the court can thus form a picture of how the accused acted and what assessments were made in advance of the crime. There are several cases among those analysed in which the auditor had informed the defendant that their intended actions were contrary to both the law and good business practice. Furthermore, the auditor explained that the defendant disregarded this information, which suggests that the defendant acted with intent and was aware of wrongdoing. Information such as this helps to clarify the actual course of events in a case, which exemplifies why the auditor's involvement can be very important in some cases.

TYPES OF CRIME IN A COURT INVOLVING AUDITORS - NORWAY

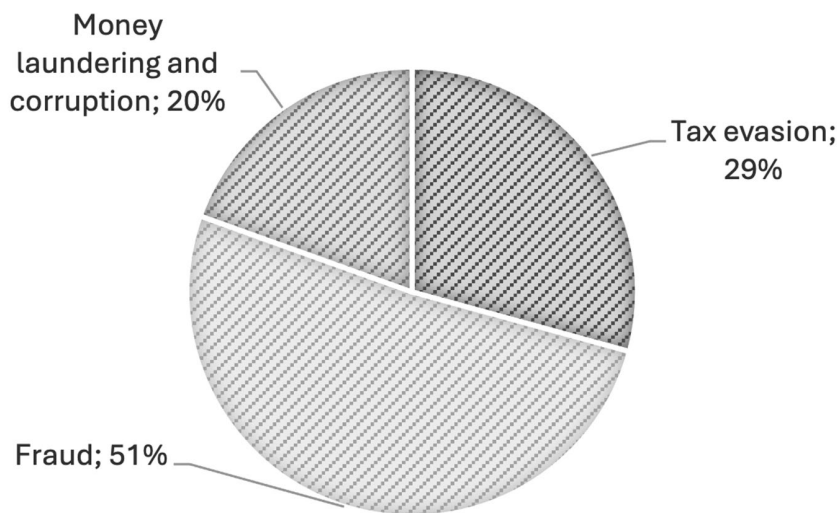


Figure 11.1 Types of crime in the Norwegian courts involving auditors.

TYPES OF CRIME IN A COURT INVOLVING AUDITORS - SWEDEN

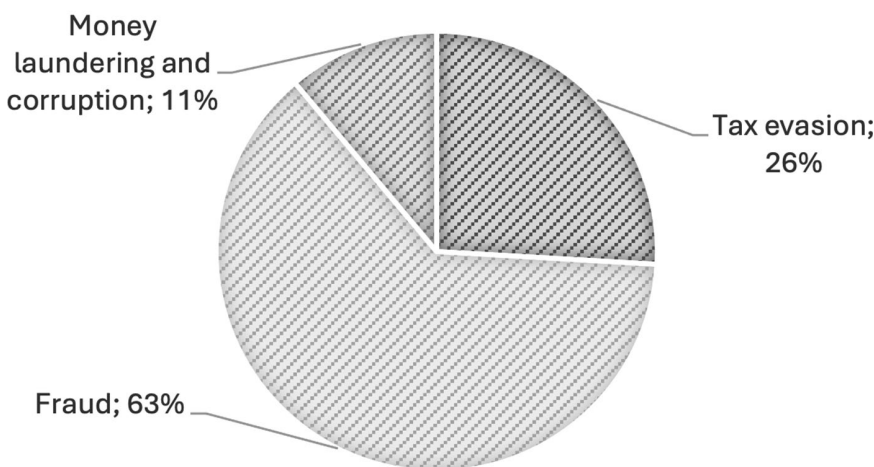


Figure 11.2 Types of crime in the Swedish courts involving auditors.

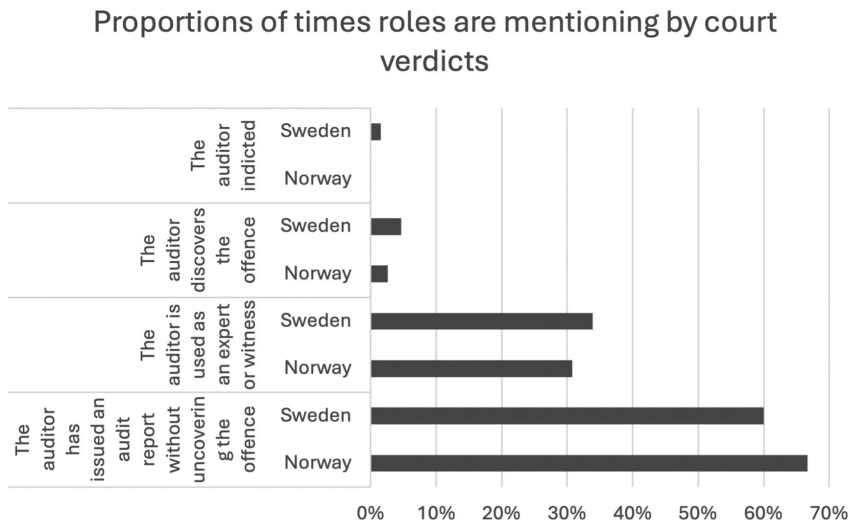


Figure 11.3 Overview from the district courts 2017–2021 in Norway and Sweden, showing the relative number of times the respective roles have been mentioned.

Findings in Figures 11.4 and 11.5 show how the auditor's roles have changed during the same period.

Figures show that, in the period of five years (2017–2021), there were only three cases in Sweden (out of 40 in total) and one case in Norway (out of 37 in total), in which the auditor detected (and reported) the offence that ended up in court. This finding is somewhat surprising, given the expectation that the auditor has responsibility for combating and detecting financial crime. It gives the impression that auditors are no more important than other actors, such as the tax authority or accountants, in detecting financial crime. However, a witness role is related to the fact that, when the crime is discovered, the auditor tends to be invited as an expert/witness.

As the graphs show, the roles have relatively similar patterns, increasing at some times and decreasing at others. This means that there is not a clear upward trend of auditor involvement in criminal cases. Despite the large number of financial crimes each year, it is surprising that the auditors in both countries have not detected more offences over time in the period 2017–2021.

Discussion

Auditors and financial crime: neither preventing nor detecting?

Previous research shows that auditors rarely detect financial crime (Gottschalk, 2012, 2018; Varmedal et al., 2022). Comparing Norway and Sweden for a five-year period (2017–2021) shows that there has been no improvement, despite more reporting of financial crime in both countries. This finding accords with James' (2003) claim that it seems to be difficult for auditors to detect financial crime. It

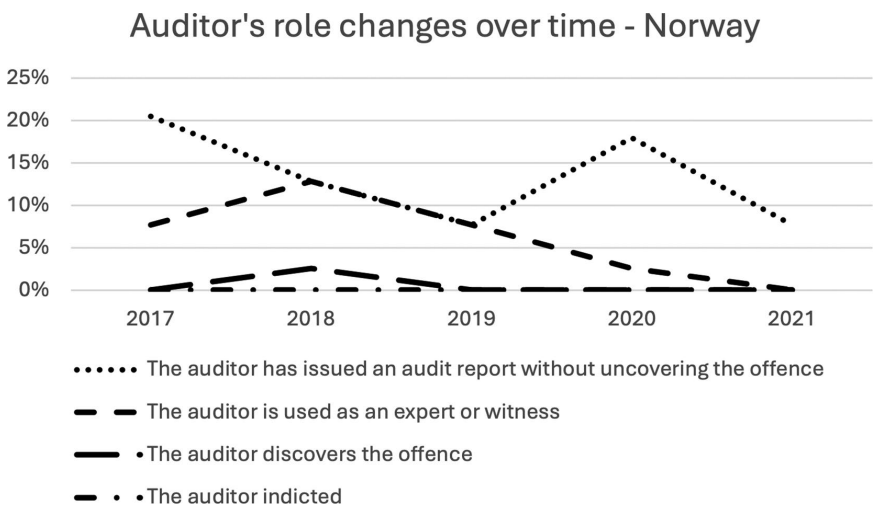


Figure 11.4 Changes in the auditor’s role over time 2017–2021 in Norway, in proportion to total number of times mentioned.

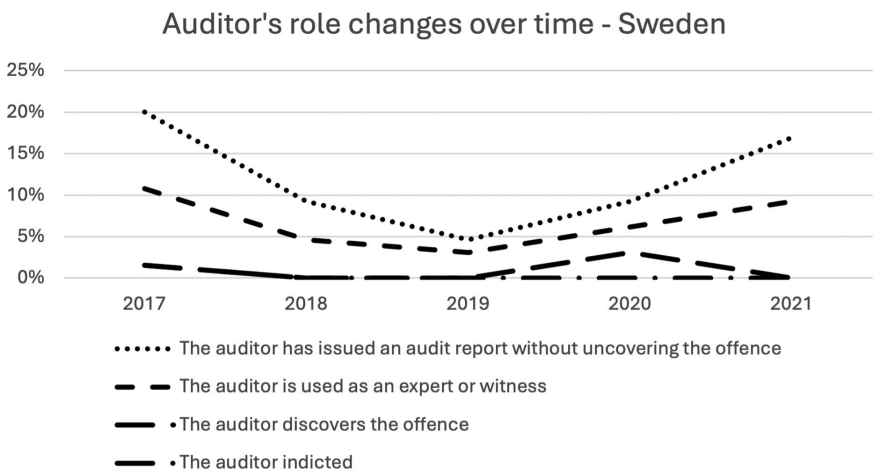


Figure 11.5 Changes in the auditor’s role over time 2017–2021 in Sweden, relative to total number of cases in which the auditor was mentioned.

appears that auditors are not fulfilling their statutory responsibility to detect financial fraud, but it can be questioned whether too much is expected of an auditor, since there are other actors who can detect the offences when the auditor does not. Why have auditors had great difficulty in detecting financial offences?

In this context, it is also interesting to point out that Bamle and Bruu (2019) argue that the auditor’s main task is not to detect financial crime but, rather, to

prevent it. The data findings in this article show that, in most court case judgments, the auditor has carried out an audit and submitted an unqualified auditor's report. This makes it difficult to claim that these same auditors have contributed to the prevention of financial crime. One could point to the general finding, as the Norwegian Institute of Public Accountants Revisorforeningen (2019) has done, that companies without an auditor are overrepresented among those who commit financial crime. This is to be expected because it is the "absence of control" that is a problem. Having any kind of control in place will require that those committing financial crime must put more effort into perpetrating the crime.

Thus, the finding does not confirm that it is the actual auditor who prevents financial crime. It is also important to highlight the auditor's role as a witness or expert, which is the second largest role. The analysis of data shows that a particularly high percentage of prosecutions end in conviction for the defendant when the auditor is involved, which in turn means that the quality of evidence in these financial crime cases is so good that the defendant is convicted in the majority of cases. This is extremely positive and shows that, while auditors often fail to detect financial crimes, they nevertheless have an important role as experts in getting the offender(s) convicted for the perpetrated financial crime. Auditors thus have an important role in identifying and describing financial crime after it has been detected. The problem is that, in several of the reviewed crime cases, the auditor has not detected the financial crime in connection with the statutory audit.

***Auditor's responsibility gap: increasing distance
between audit and legal logic?***

The fact that auditors have detected few offences in the last five years in Norway and Sweden can be analysed using the theory of institutional logic (Thornton & Ocasio, 1999). An auditor has obligations towards the profession, their own employer and their clients. However, following raised expectations that the auditor will detect and prevent financial crime, it seems that the auditors are unable to live up to their obligations to the public as trusted persons who detect and prevent financial crime. This is problematic because the auditing profession is conflicted not only between the logic of the profession and the logic of the market (Whittle et al., 2016) but, increasingly, also in relation to the logic of criminal punishment. It seems to be the case that the auditors' professional logic is not easily reconciled with the logic of criminal punishment because the two originate from two different institutions with different expectations of ways of working and different prerequisites for how they create their social reality. Previous research clearly shows that auditors have problems combating financial crime (Tsingou, 2010; Helgesson & Mörth, 2018) because the professional logic, which places greater weight on engagement risk than on audit risk, is dominated by the logic of the market and is not seen in the context of the logic of criminal punishment, during audit practice (Alford & Friedland, 1985). The data in this study shows that this difference may provide an explanation as to why the auditor detects few offences. It seems as if auditors find it difficult to adapt to expectations by

incorporating the logic of criminal punishment into their audit practices, even though those expectations are codified in law.

The inability of the audit profession to incorporate the logic of criminal punishment in practice can be termed a “responsibility gap”. The responsibility gap is relatively similar to the “expectation gap” discussed in Imeny et al. (2021), Anderson et al. (1998) and Lowe (1994), but there is an important difference. The “expectation gap” represents a conflict between the expectations that the court and the auditor have regarding the prerequisites for detecting financial crime (Imeny et al., 2021; Anderson et al., 1998; Lowe, 1994), while the focus of this discussion is about a “statutory responsibility” to detect financial crime. Auditors can no longer explain away their limited opportunities to detect financial crime with excuses such as “We are too little present in the company” (James, 2003) or “We are only looking at the accounts” (Imeny et al., 2021; Mitchell et al., 1998; Sikka et al., 2009; Bigus, 2015; Kang et al., 2019). There is a gap between the auditor’s statutory professional responsibility to detect financial crime, constituting the logic of criminal punishment, and how the auditor appears to handle this responsibility, guided mostly by the logic of the market.

Carmichael (2004) argues that auditors cannot be expected to detect all financial crime, and that auditors alone cannot stop financial crime (Jeppesen, 2019). But there is a significant difference between detecting all financial offences and detecting only three financial offences over a five-year period in Sweden and one – in the case of Norway. During the execution of the audit, auditors have access to their clients’ documentation of executed transactions (Amara et al., 2020). Jeppesen (2019) claims that auditors tend to overlook errors in the annual accounts. The question that arises in this context is whether a fundamental role conflict is occurring, whereby the auditor has difficulty separating their clients’ interests, guided by the logic of the market, from the responsibility they have towards the court and the legal system, guided by the logic of criminal punishment. The findings from the data show few cases in which the auditor conspired with the accused, but there are many cases in which the auditor has carried out the statutory audit and submitted an unqualified auditor’s report, neither detecting nor reporting the financial crime. Is it because it is more important for the auditor in these cases to nurture the relationship with their clients to avoid losing clients, as Myers et al. (2003) claim? A distance exists between the logic of criminal punishment and the logic of the market, which leads to the responsibility gap. This responsibility gap is the auditor’s inability to detect and prevent financial crime, despite society’s and the legal system’s expectation of it. As it appears, auditors have not been able to close the responsibility gap over the years, and their role has thus not adapted to the changes in financial crime in the last decade.

Conclusion

The purpose of this study was to explore whether financial crime as a societal problem can be reflected in the roles auditors have had in financial crime cases. Previous research on the role of auditors in financial crime cases shows that auditors have basically had a limited role in detecting financial crime (Gottschalk, 2012, 2018; Imeny et al., 2021; Mitchell et al., 1998; Sikka et al., 2009; Bigus, 2015; Kang et al., 2019). This study shows that only minor changes have occurred in this regard

over the period 2017–2021 in Norway and Sweden, despite the strengthening of the legal expectation that auditors should prevent and detect financial crimes. The “responsibility gap” therefore persists between the auditor’s statutory professional responsibility for detecting financial crime and how the auditor appears to handle this responsibility. The clarification of the auditor’s responsibility for preventing and detecting financial crime in the audit and money laundering regulations over recent years has not led to auditors preventing or detecting more financial offences. This indicates that the scope of the offences has not decreased, which in turn means that the auditor has neither detected nor acted in a sufficiently preventive way in the fight against financial crime. The findings from the data show no positive change over recent years.

This finding has several implications. For research purposes, it would be interesting to examine the auditor-client relationship more closely, to investigate how the competing logics guide the behaviour of the auditor when the suspicion of financial offences arises, and how the auditor handles those competing logics in practice. How does the auditing profession, in general, and each individual audit firm respond to this multiplicity of logics (Besharov & Smith, 2014)? It is also important to study how more training and education about financial crime could affect the auditors’ behaviour and the way in which they carry out their assignment, that is, whether increased knowledge leads to the auditor detecting and reporting more fraud or prioritising the use of resources differently. It would be very interesting to discuss how increased expectations regarding the prevention and detection of financial crime affect the involvement of different types of investigative experts (Stenvold, 2018). It would also be interesting to study whether digitalisation and the use of artificial intelligence and modern audit methods could help auditors detect financial crime. We see it as important that educational institutions sharpen the spotlight on financial crime in their study programmes. An interesting question is how auditing students/future auditors can acquire the statutory professional scepticism that they need to be able to detect financial crime (Øvergård & Olsen, 2024). We also assume that audit firms are striving to increase competence, in the form of courses or more education for their employees. This can lead to the auditor having greater knowledge of how they should deal with and identify different kinds of financial crime.

Notes

- 1 Part of this chapter is based on findings of Varmedal et al. (2022).
- 2 <https://www.regjeringen.no/no/aktuelt/hever-grensen-for-revisjonsplikt-for-sma-aksjeselskaper/id2965568/>
- 3 Swedish Authority Crime Office (EBM). Annual Report 2023. <https://www.ekobrottsmyndigheten.se/wp-content/uploads/2023/04/ebm-arsredovisning-2023.pdf>

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12 The effect of the new ISA 315 on perceived audit quality in SMPs – does it support or undermine auditors as knowledge workers?

Brynjar Gilberg and Thomas Johansen Sortland

Introduction

Since its foundation in 1978, the International Auditing and Assurance Standards Board (IAASB) has issued more than 40 auditing and assurance standards that are now widely adopted across the world.

Risk assessment audit procedures are fundamental to the financial statement audit. In accordance with International Standard on Auditing (ISA) 315 (IFAC & IAASB, 2023), these procedures are carried out during the planning phase of an audit to map where the risk of material misstatement lies with the audit client and to determine the audit approach. The auditor's risk assessment in the planning phase as set out in the standard is largely reflective of the COSO framework.

The new ISA 315 is extensive in both size and complexity compared to the extant standard. The IAASB revised the standard to improve global audit quality through improved risk assessment procedures (IAASB, 2019). An important question is how small and medium-sized practices (SMPs) incorporate the extensive changes into their methodology, and whether they can keep up with the larger audit firms in delivering audit quality as required by laws, regulations and standards.

The International Federation of Accountants (IFAC) conducted several surveys of SMPs and asked questions about the issues they face. These surveys show that, in Europe, one of the biggest challenges is keeping up with changes in regulation, and the problem is greatest for SMPs with less than 20 employees (IFAC, 2016a). In Norway, the profession must comply with the Auditors Act (2020) and accompanying regulations, as well as the international auditing standards issued by the IAASB (Kjelløkken et al., 2021). SMPs in the accounting and auditing professions often face the issue of whether they have sufficient financial and organisational resources to comply with the regulations (Guo et al., 2021).

Research shows that several small audit firms left the market after the introduction of independent supervisory authorities following the accounting scandals. This was a consequence of increased costs because of stricter regulation (DeFond & Lennox, 2011). Another survey shows that, between 2005 and 2018, 150 small audit firms were sanctioned by the Public Company Accounting Oversight Board (PCAOB), due to non-compliance with the regulations applicable to US listed

companies, and only 12 firms remain in the market (Guo et al., 2021). In addition, several companies experience problems recruiting and retaining qualified personnel (IFAC, 2016a). Small audit firms experience strong competition for talents (Hlakudi, 2022).

In 2019, the IAASB introduced the revised ISA 315. The standard explains how the auditor can identify and assess risks of material misstatement through understanding the business, internal and external factors affecting the business, as well as the internal control of the audit client (IAASB, 2022). Comment letters on the draft-revised standard describe it as long, complex and with extensive changes to the risk assessment procedures (IAASB, 2019). Questions have been raised about how these major changes affect the audit quality of SMPs, as several surveys show problems following regulatory changes and lack of access to qualified personnel.

According to Statistics Norway (SSB), small and medium-sized entities (SMEs) make up 99% of all active businesses in Norway (SSB, 2023). SMEs that are subject to statutory audit are often clients of audit firms categorised as SMPs (IFAC, 2016b). The new standard is intended to be scalable to the complexity of companies. Further, following the introduction of the new ISA 315, the IAASB has also introduced a new Standard for Audits of Less Complex Entities (ISA for LCE), which should be highly relevant to SMPs (IAASB, 2024). The Norwegian Institute of Public Accountants describes the announcement as a milestone for the Nordic auditor associations, which have initiated the development of this standard (IAASB, 2023).

Nevertheless, it is the complexity and nature of the company that determines whether ISA for LCE can be used. If an SME is considered somewhat complex, then the auditor will have to follow the applicable ISAs, including the new ISA 315 (IAASB, 2024). Thus, SMPs will have to spend time implementing the new ISA 315 into their methodology, even though most of their clients are SMEs.

To analyse how the new ISA 315 has changed the audit quality as perceived by SMPs through supposedly improved risk assessment procedures, we perform a document review of comments following the publication of the proposed new standard, the IAASB responses and the final standard. Further, we perform a survey among SMPs, accompanied by interviews of SMP auditors to address the following research question:

How has the new ISA 315 changed the perceived audit quality in SMPs?

The chapter is structured as follows. First, we present a literature review indicating how auditing standards and the new ISA 315 are becoming increasingly elaborate; this is followed by our theoretical and methodological perspective for this study. Next, we describe important comments to the ISA 315 proposal and the IAASB's responses, paying special attention to discussions concerning the design and elaborateness of the standard. Further, we present our findings from our survey among SMPs, corroborated by interviews of SMP employees. Finally, in our discussion and conclusion section, we explicate the contribution and implications of our research.

Literature review: standards requiring intellectual effort or rote procedures***Auditors' assessments of auditing risks: importance of professional judgement and professional scepticism***

The fundamental model underlying audit is the audit risk model, where audit risk is a product of risks of material misstatement and detection risk. Risks of material misstatement are comprised of inherent risk and control risk. The model is expressed as the following equation:

$$\text{Audit risk} = \text{inherent risk} \times \text{control risk} \times \text{detection risk}$$

According to the IAASB (2022) glossary of terms, the different factors are defined as follows:

Audit risk = The risk that the auditor expresses an inappropriate audit opinion when the financial statements are materially misstated.

Inherent risk = The susceptibility of an assertion about a class of transaction, account balance or disclosure to a misstatement that could be material, either individually or when aggregated with other misstatements, before consideration of any related controls.

Control risk = The risk that a misstatement that could occur in an assertion about a class of transaction, account balance or disclosure, and that could be material, either individually or when aggregated with other misstatements, will not be prevented or detected and corrected on a timely basis by the entity's controls.

Detection risk = The risk that the procedures performed by the auditor to reduce audit risk to an acceptably low level will not detect a misstatement that exists and that could be material, either individually or when aggregated with other misstatements.

The audit risk assessment is largely based on the auditor's professional judgement, which the IAASB defines as "The application of relevant training, knowledge and experience, within the context provided by auditing, accounting and ethical standards, in making informed decisions about the courses of action that are appropriate in the circumstances of the audit engagement" (IAASB, 2022, p. 23). Further, in assessing risk, the auditor must exercise professional scepticism, defined by the IAASB as "An attitude that includes a questioning mind, being alert to conditions which may indicate possible misstatement due to error or fraud, and a critical assessment of audit evidence" (IAASB, 2022, p. 24).

Nolder and Kadous (2018) point to the fact that the concept of professional scepticism is pervasive throughout auditing standards, while inspectors around the globe often identify a lack of scepticism as a root cause of audit deficiencies. They view auditors' professional scepticism as comprising two components, a sceptical mindset and a sceptical attitude.

The mindset component captures the idea that professional scepticism is reflected in particular ways of thinking or processing information; i.e., a sceptical mindset is reflected in open, objective and critical thinking about audit evidence and related matters. The attitude component of professional scepticism captures the idea that scepticism is reflected in auditors' evaluations, both cognitive and affective, of the evidence and of managements' assertions; i.e., auditors' feelings, as well as their beliefs, about management's assertions and the evidence influence their intentions and behaviours (Nolder & Kadous, 2018). "We expect that our skeptical mindset and skeptical attitude theoretical approach will move the literature forward, especially in terms of framing standards, developing interventions to improve audit quality, and performing **root cause analyses**" (Nolder & Kadous, 2018, p. 1).

Figure 12.1 attempts to illustrate the relationship between the two important qualities of an auditor and their components. The IAASB definitions do not include the sceptical mindset component specifically discussed by Nolder and Kadous (2018). In this model, we have included a sceptical mindset as a component of both the auditor's professional judgement and professional scepticism, to emphasise that critical thinking is fundamental to both.

Auditor as "a knowledge worker"

The auditor can best be described as a knowledge worker. Knowledge work is defined by Irgens and Wennes (2011) as work that is to a small extent routine-based, which is difficult to standardise, and where the answers to how tasks should be performed are primarily found in the knowledge the worker has access to and develops through practice. Knowledge workers have high competence that they have acquired through concentration, hard work, education and practice, and they appreciate autonomy.

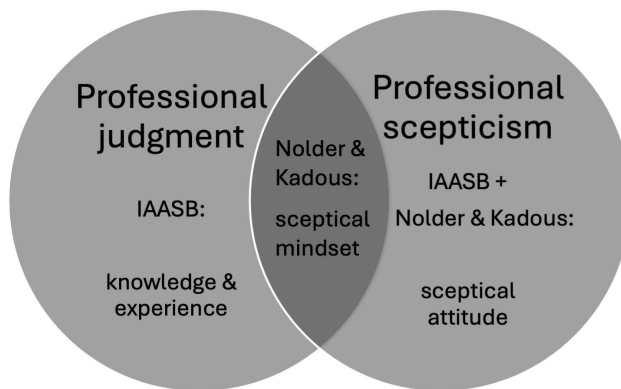


Figure 12.1 The auditor's professional judgement and professional scepticism (based on Nolder and Kadous, 2018).

Mautz and Sharaf (1961) illuminate the specific characteristics of auditing by comparing it to accounting. Whereas the task of accounting is to reduce a tremendous mass of detailed information to manageable and understandable proportions, auditing does none of these things. Its task is to review the measurements and communications of accounting for propriety.

Auditing is analytical, not constructive; it is critical, investigative, concerned with the basis for accounting measurements and assertions. Auditing emphasises proof, the support for financial statements and data. Thus, auditing has its principal roots, not in accounting which it reviews, but in logic on which it leans heavily for ideas and methods (Mautz & Sharaf, 1961, p. 14).

The conclusion is that auditing is a specialised field of knowledge, as it deals with abstract ideas; it has its foundations in the most basic types of learning; and it has a rational structure of postulates, concepts, techniques and precepts. Mautz and Sharaf (1961) assert that auditing demands strenuous intellectual effort and warn that:

If we forget the theoretical foundation of auditing and let it dwindle to a mere collection of rote procedures and practices reminiscent of its early history, it will not only lose stature in the eyes of the world but will forfeit the best method of solving its most perplexing problems.
(Mautz & Sharaf, 1961, p. 16)

Bloom’s taxonomy (Bloom & Krathwohl, 1956) provides a useful model to illustrate the different levels of learning (Figure 12.2). This model can be used to identify the placement of auditors as knowledge workers. We propose that auditors must be at the highest level. ISA 200 (IFAC & IAASB, 2023, p. 101) states that: “As the basis for the auditor’s opinion, ISAs require the auditor to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error”. Fraud is commonly considered to be a “creative business”. Consequently, auditors must be creative knowledge workers that are able to properly assess audit risk and perform an audit

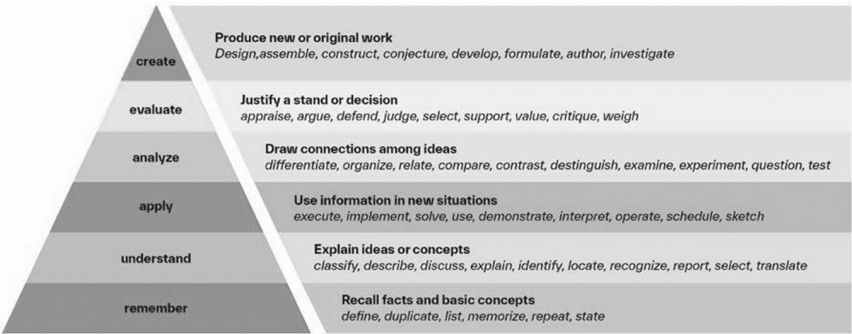


Figure 12.2 Bloom’s taxonomy (Bloom & Krathwohl, 1956).

that establishes sufficient appropriate audit evidence that the financial statements audited are without material misstatement. This requires a sceptical mindset and sceptical attitude, as discussed by Nolder and Kadous (2018).

Audit quality

The fact that auditing demands strenuous intellectual effort is strikingly relevant, considering that the first authoritative auditing standard, Statement on Auditing Procedure (SAP) 1, was issued in October 1939, only 22 years before Mautz and Sharaf's famous monograph. SAP 1 was issued in response to the Securities and Exchange Commission hearings earlier in the same year, related to the highly publicised McKesson and Robbins audit scandal (Levy, 2020), which resulted from the auditor's failure to verify the client's inventory over many years. The current standard-setter, the IAASB, founded as recently as March 1978, was initially known as the International Auditing Practices Committee (IAPC). In other words, until 1978, quality auditing was not supposed to be based on "rote procedures and practices" but, rather, on knowledge work, "solving its most perplexing problems" (Mautz & Sharaf, 1961). Consequently, auditing standards should not be a codification of "rote procedures and practices" but, rather, provide clear concepts and principles that support auditors as knowledge workers.

The IAPC's initial work focused on three areas: object and scope of audits of financial statements, engagement letters and general auditing guidelines. In 1991, the IAPC's guidelines were recodified as ISAs. At the time that the EU passed the Audit Directive in 2006, the ISAs were not yet adopted in many European countries. In other words, the modern auditing profession is a young profession, authoritative auditing standards are a recent development and the drafting of auditing standards was often a result of accounting scandals and audit failures, which have taken place throughout the history of modern financial auditing.

Audit quality is a recurring theme throughout the brief history of the modern audit profession. It has typically been accounting scandals and audit failures that have constituted the milestones of the audit profession's development over the last 100 years. In 1934, the Securities Exchange Act¹ introduced audit requirements for public companies, in response to the US stock market crash of 1929. And, as already noted, in 1939, the first authoritative auditing standard was issued, following the McKesson and Robbins audit scandal. Similar developments have taken place in subsequent years, both in the US and internationally.

Audit quality has thus remained a topic on the agenda of regulators, standard-setters and audit firms. Several attempts have been made to find a way to define, measure and evaluate audit quality (Christensen et al., 2016). The literature often distinguishes between the auditor's and the financial statement users' views on audit quality, and the question of whether the audit quality is weak or good is assessed based on whose perspective it is seen from (Knechel, 2016). From the auditor's perspective, audit quality is defined based on an audit performed in accordance with audit standards, and from the perspective of the financial statement users, it is often the auditor's characteristics that have the greatest influence over audit quality

(Christensen et al., 2016). DeFond and Zhang (2014) have developed a framework discussing three factors affecting audit quality: financial statement users’ demand, auditors’ supply and regulatory intervention.

According to Knechel (2016), the most commonly used definition of audit quality comes from DeAngelo (1981), who defines it as follows: “Audit quality is the market-assessed joint probability that a given auditor will *both* (a) discover a breach in the client’s accounting system and (b) report the breach” (DeAngelo, 1981, p. 186).

The introduction of independent auditor oversight bodies affects how the profession adapts to the demand for audit quality. Dowling et al.’s (2018) study on the effect of public oversight of audit firms shows that many introduce checklists and other procedures to ensure compliance with the regulations, including auditing standards. The effects of a checklist-based audit approach will naturally lead to more standardisation among audit firms and less knowledge work among practising auditors.

There is a perception that the introduction of more elaborate auditing standards will lead to greater problems for SMP auditors, as there is less access to financial and organisational resources to handle the change (Guo et al., 2021). It is a fair assumption that the introduction of auditor oversight on top of increasingly elaborate auditing standards will put particular pressure on SMPs to focus on compliance and consequently adopt a more checklist-based approach.

As discussed, auditing standards are more or less principles-based, reflecting the audit risk model, and are revised from time to time. This reflects the fact that not all facts and circumstances an auditor may face can be envisioned by the auditing standards. In Norway, “good auditing practice” is the legal standard (Auditors Act, 2020), which meets the purpose of an audit; i.e., sufficient appropriate audit evidence has been obtained to detect material misstatement. The ISAs are considered to largely fulfil the requirements following from the legal standard but are not equal to the legal standard, as illustrated below. Thus, if the audit oversight body in Norway (The Financial Supervisory Authority) finds that an audit has not been performed in accordance with “good auditing practice”, then the auditor cannot claim compliance with ISAs or “inherent limitations” of an audit mentioned in ISA 200.

In Norway, the legal standard “good auditing practice” was introduced in 1976 and remains the legal standard in the new Auditors Act (Figure 12.3).

The new PCAOB standard issued in 2024, AS 1000: General Responsibilities of the Auditor in Conducting an Audit, may achieve something similar to the

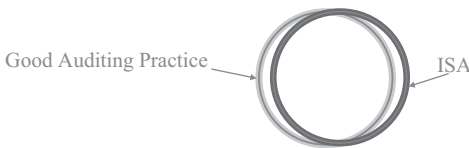


Figure 12.3 The legal standard “good auditing practice” vs. the ISAs.

Norwegian “good auditing practice”, by properly emphasising the public interest in the introductory paragraph of the standard (PCAOB, 2024):

.01 The auditor has a fundamental obligation to protect investors through the preparation and issuance of informative, accurate, and independent auditor’s reports. This responsibility transcends an auditor’s relationship with management and the audit committee of the company under audit, providing the foundation for an objective and independent audit. A properly conducted audit and the related auditor’s report enhance the confidence of investors and other financial statement users¹ in the company’s financial statements and, if applicable, internal control over financial reporting.

Further, the PCAOB (2024) emphasises that “The auditor’s obligation to protect investors provides important context to the auditor’s work when applying the requirements of this and other Public Company Accounting Oversight Board (‘PCAOB’) standards and rules”. This clearly states the overarching purpose of an audit, which supersedes rote compliance with the auditing standards.

Research context

The developments in auditing standard-setting have accelerated over the last few decades, with an increasing volume of audit and accounting regulation, including an increase in the number of auditing standards and the extensiveness of each auditing standard.

Figure 12.4 illustrates this fact. The *Norwegian Auditor’s Handbook* increased from less than 200 pages in 1974, when the “Higher Audit Programme” education was introduced in Norway, to around 2,000 pages 40 years later, in 2014. Several auditing standards have been revised and expanded by the IAASB during the following decade, including the new ISA 315, effective after 15 December 2021.

A pertinent question to ask is whether the increase in the number and volume of auditing standards has led to a corresponding increase in audit quality over the past 50 years.

In this study, our focus is on SMPs in Norway – because they are auditing most of the SMEs, which constitute 99% of all active businesses in Norway, and because they are at a disadvantage in terms of resources, compared to the larger audit firms that have both international and national departments of professional practice to update their audit methodology and audit tools, etc.

Method

To understand the specific challenges and opportunities of SMPs, we performed a document review, a survey and interviews. This method triangulation was used to answer questions posed to the data from the survey. The design allows the data to be presented along with statistics and graphs from the survey, which generalises



Figure 12.4 The Norwegian Auditor's Handbook 1974 and 2014.

the data, and quotes or explanations from the interviews that can explain observed data (Easterby-Smith et al., 2018).

Our document analysis forms the basis for the questionnaire and interview guide (see Annex 1). We reviewed the working papers of the IAASB, which capture the most important changes in the new ISA 315. Our questionnaire was constructed and tested in collaboration with the TRANSACT project and sent to the Norwegian Institute of Public Accountants to reach out to practising auditors in SMPs. The questionnaire was semi-structured, with the quality of the standard being covered by one question (Q01) and the quality of the audit and risk assessment covered by nine questions (Q02–Q10) (Table 12.1):

The interview guide for the semi-structured interviews was constructed based on the themes set in the questionnaire and allowed us to focus more specifically on the changes aimed at SMPs discussed in the working papers of the IAASB. The population and sample for the study were set to practising auditors in small and medium-sized audit firms who do not belong to the five large audit firms in Norway: KPMG, EY, PwC, Deloitte and BDO. The selection of respondents for the interviews was aligned with the characteristics of the respondents in the survey.

Empirical findings

Document analysis

In the document analysis, we examined the following papers from the IAASB: the post-implementation report from the earlier ISA 315, the work papers related

Table 12.1 Questionnaire and variables in the study

Type	Title	Explanation
Perceived quality of the standard	How auditors in SMPs view the quality of the new ISA 315	Q01: New ISA 315 is clearer and easier to use
Type	Title	Explanation
Perceived quality of the risk assessment	How auditors in SMPs view the quality of the risk assessment using the new ISA 315	Q02: New requirements in ISA 315 contribute to a more effective audit Q03: New requirements contribute to a more efficient audit Q04: New requirements contribute to improving the auditor's understanding of the company Q05: New requirements to assess inherent risks rather than significant risks contribute to improving the auditor's risk assessments Q06: New concepts, such as "relevant assertions", "significant class of transactions, account balance or disclosure", help the auditor develop better auditing procedures Q07: New requirements for IT systems contribute to improving the auditor's assessment of risks associated with the client's information systems Q08: New requirements help the auditor to be more conscious about his duties related to fraud risk assessment Q09: New requirements contribute to improving the auditor's capability to prevent and detect financial crime Q10: The new ISA 315 contributes to an overall improved audit quality
Type	Title	Explanation
Personal characteristics	Age Education Position	C01: Your year of birth? C02: Your highest completed education? C03: Your position in the company?
Company characteristics	Enterprise model Number of employees Number of clients	C04: What is the enterprise model of your company? C05: How many employees does your company have? C06: How many clients does your company have?

Abbreviations: ISA, International Standard on Auditing; SMPs, small and medium-sized practices.

to the new ISA 315 and the feedback/comment letters the IAASB received on the proposed new ISA 315.

In March 2009, the IAASB completed its Clarity project, which involved making the standards more understandable with clearer descriptions, including a move from suggestions (should) of audit procedures to requirements (shall), i.e., making the standards descriptive, moving some of the text to application material. At this point, the IAASB also started a project to revise the ISAs (IAASB, 2013). After completion, feedback was collected from audit firms. The results indicated that the audit firms were positive about the new standards, and introduction into the firms' respective audit methodology went without major problems, but problems were identified in relation to audits of both small companies and group companies (IAASB, 2013). Some respondents suggested that more training and help with the introduction of the new ISAs were needed, especially within the small and medium-sized audit firms, and that the goal of making the standards clearer had resulted in overly detailed descriptions of audit procedures and the standards becoming generally too long (IAASB, 2013).

ISA 315 was one of the standards that were revised under the Clarity project of the IAASB. The surveys conducted during the post-implementation phase indicated that there were problems in identifying significant risks in practice, understanding the internal controls in the revised ISA 315 was difficult to perform based on the requirements set in the standard and risks related to the use of IT were not equally addressed in the standard as other risks (IAASB, 2013). Within audits of small and medium-sized companies, the surveys indicated that the planning phase and identification of risks, as well as general audit quality, had increased because of the change, but several were concerned about the amount of audit documentation and the scalability (IAASB, 2013).

Work on the new ISA 315 (revised 2019) began early in 2016, because of the findings in the surveys (IAASB, 2019a). The goal of the work was to address the problems of inconsistency in assessing significant risks, understanding the internal controls, risk assessment of IT systems and making the standard more applicable to audits of small and medium-sized companies. In 2018, the IAASB published the first draft of the standard, to obtain feedback from regulatory authorities, supervisory authorities, audit firms, IFAC, academics and other interested parties (IAASB, 2019a). The draft introduced a significantly longer standard, with detailed descriptions of the actions to be performed and new concepts and terms, which aroused both positivity and concern among users of the standard. In summary, the draft met strong criticism, due to the length and complexity of the new standard, and several comment letters expressed concern over the clarity and understanding of the standard.

Important feedback that the IAASB received on the draft was that the complexity and length of descriptions in the draft indicated less use of professional scepticism but, rather, a more descriptive routine on how risk assessment actions should be performed. Respondents were positive about proposed changes in understanding the internal control, the idea behind scaling risk assessment actions based on the size of the company, new concepts such as separate assessment of risk for

significant misinformation and assessment of the degree of inherent risk factors instead of significant risks. The IAASB took the feedback into consideration and made changes to the draft based on the concerns of the respondents, but the standard retained the length and the descriptive actions presented in the draft and, rather, changed the language and expressed the importance of using professional scepticism during risk assessment (IAASB, 2019).

The new ISA 315 was completed in December 2019 after being approved by the Public Interest Oversight Board (PIOB). The IAASB proposed that the standard should come into effect 18 months after completion, but users felt that if the standard was still as complicated and long as the draft, then the date would have to be extended. It was then agreed that 15 December 2021 was a more realistic date by which to implement the new standard into the methodology and has it translated into everyone's respective languages (IAASB, 2019). In the period between completion and the implementation date, the IAASB developed additional papers to support audit firms for the introduction of the standard (IAASB, 2019).

The goal of the new standard was to raise audit quality globally through a more robust risk assessment. The IAASB wanted to facilitate more audits of small and medium-sized companies through a more scalable standard that explains what actions should be carried out based on the complexity of the company. New requirements are aimed at changing the risk assessment with a split assessment of inherent risk and control risk; new requirements aimed at understanding the IT environment and how it affects the company's internal control. The draft was perceived as long, complex and with less room to exercise discretion due to more descriptive procedures.

In Norwegian SMPs, the new ISA 315 led to changes in methodology, and the auditing tool Descartes, which is used by most SMPs in Norway, was reworked accordingly.

Survey

A sample of 50 participated in the survey, of which 43 respondents met the criteria set for the selection. The data from the survey is presented according to the degree of the perceived quality of the standard and quality of the risk assessment.

The table indicates that the findings will be impacted by the characteristics of the auditors rather than the characteristics of the audit firm (Table 12.2).

The results show a normal distribution among the respondents and significant disagreement about whether the standard is clearer and easier to use than the previous standard (Figure 12.5).

The distribution of opinions shows a normal distribution among the employees and owners, whereas the lead auditors only disagree, and managers only agree (Table 12.3). Our overall question about the perceived quality of the standard thus shows an inconclusive result.

Our subsequent questions about the specific changes to the auditing standard generated similar results, with a slightly higher number of respondents agreeing

Table 12.2 Characteristics of the auditor and audit firm

Characteristics of the auditor			
Education	Number	Position	Number
Bachelor (accounting)	1	Staff	8
Bachelor (auditing)	14	Manager	6
Master (business administration)	2	Lead auditor	3
Master (accounting and auditing)	26	Owner	26
Sum:	43	Sum:	43
Characteristics of the audit firm			
Employees	Number	Clients	Number
From 1 to 10	26	From 1 to 50	3
From 11 to 20	10	From 51 to 100	6
From 21 to 50	6	From 101 to 500	20
From 51 to 100	1	From 501 to 1,000	12
		From 1,001 to 2,000	1
		From 2,001 to 5,000	1
Sum:	43	Sum:	43

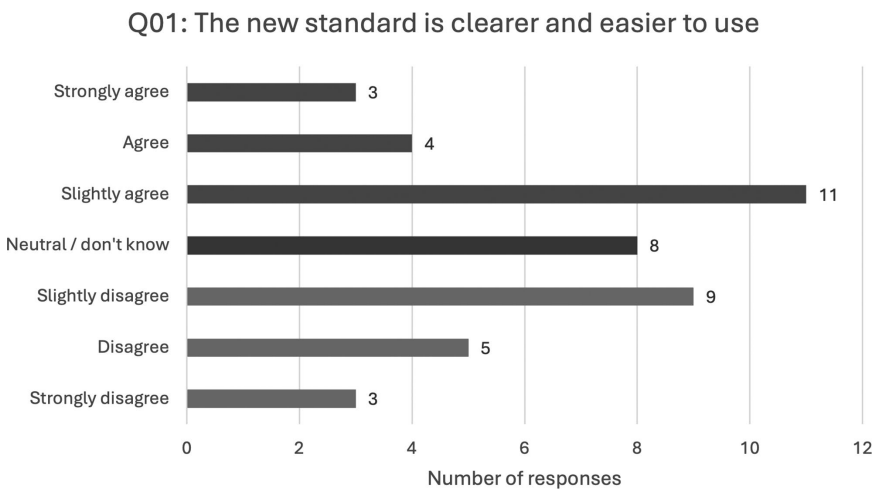


Figure 12.5 Respondents' opinions on the new standard's clarity and ease of use.

that the changes have improved perceived audit quality. However, if the number of respondents agreeing is compared to the number of respondents that are neutral or disagree, then it is fair to say that the survey gives no clear indication that the standard has improved perceived audit quality.

Table 12.3 Number of responses according to position

<i>Position</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>
Staff	3	3	2
Manager	0	2	4
Lead auditor	3	0	0
Owner	11	3	12

The variations were visualised in a scatter plot, in which the x-axis showed perceived quality of the standard from 1-strongly disagree to 7-strongly agree through the formula:

$$X = Q01$$

The y-axis showed perceived quality of the risk assessment procedures and the audit as a whole resulting from the new requirements from 1-strongly disagree to 7-strongly agree through the formula:

$$Y = \frac{(Q02 + Q03 + Q04 + Q05 + Q06 + Q07 + Q08 + Q09 + Q10)}{9}$$

The scatter plot shows a positive relation between the perceived quality of the standard and the perceived quality of the risk assessment and the audit between the two extremes (low and high). This indicates that the higher the auditor's perceived quality of the standard is, the higher the auditor's perceived quality of the risk assessment and audit is (Figure 12.6).

In order to further analyse this positive relation, we tried to find out whether there are commonalities between those who agree and those who disagree with the statements posed in the survey. As suggested by Everitt et al. (2010), we have performed a cluster analysis of the characteristics identified in the survey (Figure 12.7).

Explanation:

<i>Average opinions – y</i>	<i>Clusters – x</i>			
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
Q1	1.75	3.857142857	4.083333333	6.111111111
Q2	2	3.714285714	5.083333333	6.222222222
Q3	1.875	3.928571429	4.75	5.555555556
Q4	2.375	4.214285714	5.25	5.888888889
Q5	3.25	4.357142857	5	6.333333333
Q6	2.5	4.142857143	4.666666667	5.777777778
Q7	2	4.142857143	5.166666667	5.777777778
Q8	2.125	4.071428571	5.25	5.555555556
Q9	1.625	3.428571429	5.333333333	5.111111111
Q10	1.875	4.071428571	5.5	6.111111111

Perceived quality of the risk assessment and the audit
resulting from the quality of the standard

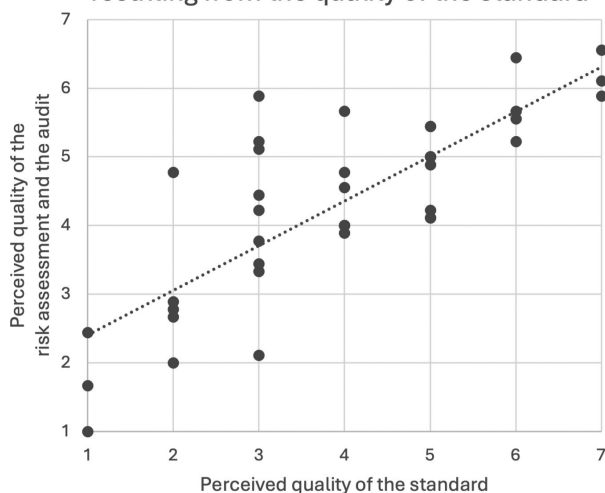


Figure 12.6 Scatter plot with quality of standard on the x-axis and quality of risk assessment and audit on the y-axis, where 1 = strongly disagree and 7 = strongly agree with the posed statements.

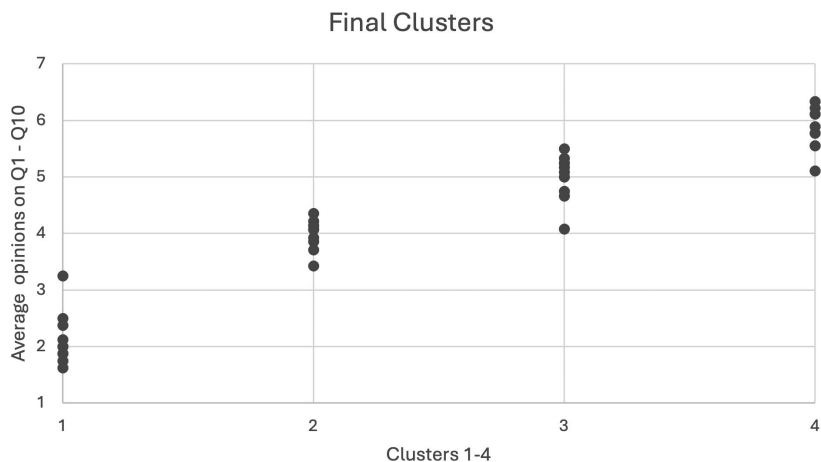


Figure 12.7 SPSS cluster analysis.

The first cluster of eight respondents in Figure 12.7 is constituted of six owners of small firms and two staff. Of the audit firms represented, six have one to ten employees and two have 11–20. They clearly perceive that the new auditing standard creates more work, reducing the ratio of chargeable hours and thus reducing profitability.

The second cluster of 14 respondents is constituted of seven owners, two lead auditors, two managers and three staff. Of the audit firms represented, nine have one to ten employees and three have 11–20, while two have more than 20 employees. They are of the opinion that the new ISA 315 provides an improved understanding of risk assessment procedures. This cluster also explains much of the spread in the middle of the diagram (Figure 12.6), where most people think the standard is better than before but experience a different quality of risk assessment actions.

The third cluster of 12 respondents is constituted of seven owners, one lead auditor, one manager and three staff. Of the audit firms represented, seven have one to ten employees and three have 11–20, while two have more than 20 employees. They are neutral or slightly agree that the new auditing standard is improved, in part because of an improved and more specific assessment of inherent and control risk.

The fourth cluster of nine respondents is constituted of six owners and three managers. Of the audit firms represented, four have one to ten employees and two have 11–20, while three have more than 20 employees. They agree that the new auditing standard is improved, in part because of an improved and more specific assessment of inherent and control risk.

In summary, the survey does not clearly indicate that the perceived audit quality has improved as a result of the application of the new ISA 315. It seems that the negative views on the new standard are more prominent among auditors in the smallest audit firms, where resources are most limited.

Interviews

To gain a deeper understanding of how auditors perceive the quality of the standard, the risk assessment procedures and the audit at large, we interviewed eight auditors with similar characteristics to those participating in the survey. Three were state-authorised auditors, of whom two have a bachelor's degree and one has a master's degree; in addition were five other auditors with different levels of experience, three with a bachelor's degree and two with a master's degree. The interviewed candidates worked in audit firms with between 1–20 employees and 100–500 customers. All the respondents were familiar with the new standard and were able to articulate their views on it.

The interviews confirm that the new standard is generally perceived as very extensive, resulting in more work, more documentation and less profitability. One response provides an interesting insight into how this may also affect the auditor's professional judgement and professional scepticism:

The IAASB wanted more consistent use of professional scepticism and risk assessment through the new standard, but I don't know if the standard contributes much to more consistent use of professional scepticism. It becomes more of a checklist audit than thinking for yourself, since the standard is so detailed on what procedures should be carried out.

The separate assessment of inherent risk and control risk is perceived as a positive change, whereas the new requirement directed at understanding the IT environment and related risk is perceived as most relevant to larger clients:

Our clients are often small with less complex IT systems; I think the new requirements are more suited to bigger clients, where the IT systems tend to be more complex.

Another observation is that the new standard has led to excessive repetition for small clients, especially concerning audit requirements for the IT environment. One respondent raises the issue that there are too many repeated requirements that need to be documented in the auditing tool, Descartes, reflecting the repetitive structure of the requirements in the auditing standard:

I find that there are too many repetitive requirements in Descartes, and in small companies the systems are generally simple. Often you only see an accounting system, e-mail or telephone that is used, so sometimes unnecessary time is spent filling out forms.

One important observation was that the timing of the introduction of the standard during the pandemic was unfortunate, when many businesses experienced financial distress, which needed additional attention from the auditors.

The COVID-19 pandemic had significant impact on the auditors' workload, with follow-up of clients struggling after the pandemic in connection with refinancing and restructuring, etc. And in the midst of this, a completely new risk assessment standard was introduced, making it feel like there aren't enough hours in the day to handle everything. Since we are a small audit firm, we don't have an office that only handles the methodology following changes in laws or standards. We have to do everything simultaneously.

In summary, our survey and interviews indicate a normal distribution in perceived increase in audit quality resulting from the new standard. Slightly more respondents agreed than disagreed that the risk assessment procedures and the audit quality were better than before. Analysed in cluster analysis, we find two smaller groups that either strongly agree or strongly disagree with the statements, but a majority of respondents are either neutral or on the verge of somewhat agreeing with the statements.

The results from the survey do not appear to clearly confirm or deny that perceived quality of the standard affects perceived quality of the risk assessment and the audit. The respondents seem to disagree about the quality of the standard in relation to the risk assessment and the audit. However, the respondents interviewed helped clarify that the repetitive structure of the standards has generated a lot of extra work for many of the SMP clients without increasing the quality of the audit.

Concluding discussion

Auditing standard-setting: a compliance exercise rather than knowledge work?

What our document review, our survey and our interviews all confirm is that the standard is perceived as long and complex. The more experienced respondents perceive it as suppressing the exercise of discretion because of the level of detail and the length of the new ISA 315. This clearly indicates that the elaborateness of the standards undermines rather than supports the role of the auditor as a knowledge worker “solving [auditing’s] most perplexing problems” (Mautz & Sharaf, 1961) and where the answers to how tasks should be performed are primarily found in the knowledge that the worker has access to and develops through practice (Irgens & Wennes, 2011).

The risk assessment procedures and the audit are perceived as an improvement, compared to the earlier standard. Among the respondents interviewed, more emphasis is placed on improvements in methodology following the implementation of the new standard, rather than improvements in the standard itself. Thus, a positive outcome appears to be that the implementation process, while costly, has led to learning and improvements in the SMPs, due to the strenuous intellectual effort made by the auditors, as Mautz and Sharaf (1961) assert.

Following criticism levelled at the Clarity standards in 2013, things have not improved but, rather, gone in the opposite direction with even longer standards and more requirements that must be performed during the audit. The results of our study confirm earlier observations and comments and the fact that there is no overwhelmingly positive response to the changes in ISA 315.

When the IAASB published its proposed new auditing standard (ISA 610 Using the work of internal auditors),² the standard did not reflect the audit risk model. A regulator wrote a comment letter that was supported by 14 European audit regulators.³ In a meeting with the IAASB, it took real effort for the author to persuade the IAASB to rewrite the standard to reflect the audit risk model, as discussed in the comment letter. The IAASB was really reluctant not to codify a supposedly “best practice” in the audit profession, although the comment letter clearly demonstrated the audit approach set forth in the proposed standard was inconsistent with the conceptual thinking behind the audit risk model.

We view auditing as a “people’s business”, where the auditors are knowledge workers, and where the answers to how tasks should be performed are primarily found in the knowledge that the auditor has access to and develops through practice. Auditors should be knowledge workers with a high level of competence that they have acquired through concentration, hard work, education and practice, and they appreciate autonomy. Considering the vast amount of knowledge today’s auditors need to possess, we believe that the continuing work to build the right mindset and attitude into the IAASB standards is imperative.

The introduction of independent auditor oversight bodies affects how the profession adapts to the demand for audit quality. Dowling et al.’s (2018) study on the

effect of the public oversight of audit firms shows that many introduce checklists and other procedures to ensure compliance with the regulations, including auditing standards. The effects of a checklist-based audit approach will naturally lead to more standardisation among audit firms and less knowledge work among practising auditors.

We conclude that, while the IAASB's auditing standard revisions provide timely improvements, over time, the standards have become increasingly elaborate and descriptive to the point where the role of the auditor as knowledge worker is undermined. In our view, the elaborate and descriptive nature of the standards encourages a compliance approach to auditing and does little to support the development of fundamentally important auditor capabilities such as professional judgement and professional scepticism.

We propose that robust auditing standard-setting can both prevent a checklist approach to auditing and reduce the "inherent limitations" mentioned in ISA 200 to something rather insignificant, and that the famous expectation gap can be practically closed. This should be pursued by the IAASB as the only international auditing standard-setter. We believe that standard-setting should be conceptual, principles-based and allow for discretion by the auditor as a knowledge worker with a robust professional judgement and professional scepticism, as illustrated in Bloom's taxonomy (Bloom & Krathwohl, 1956) and discussed by Nolder and Kadous (2018).

The goal must be to make auditors the creative knowledge workers that are able to properly assess audit risk and perform an audit that establishes sufficient appropriate audit evidence that the financial statements audited are without material misstatement. Auditors' competence must exceed the ability to simply comply with auditing standards, so that auditors applying their professional judgement and professional scepticism are able to perform an audit in accordance with "good auditing practice".

Fundamentally, auditors must always be conscious that: "An auditor is the trusted representative of the general public in the performance of statutory audits" (Auditors Act, 2020). Similarly, the new AS 1000 requires that: "The auditor's obligation to protect investors provides important context to the auditor's work when applying the requirements of this and other Public Company Accounting Oversight Board ('PCAOB') standards and rules" (PCAOB, 2024).

Mautz and Sharaf's warning more than 60 years ago still rings true, that:

If we forget the theoretical foundation of auditing and let it dwindle to a mere collection of rote procedures and practices reminiscent of its early history, it will not only lose stature in the eyes of the world but will forfeit the best method of solving its most perplexing problems.

(Mautz & Sharaf, 1961, p. 16)

Consequently, based on our study, we find it pertinent to remind auditors about the importance of developing robust professional judgement and professional scepticism, always being conscious of the fact that it is the public interest that ultimately defines what good auditing quality is.

Suggestions for future research

Our document review, our survey and our interviews all confirm that the standard is perceived as long and complex, undermining the role of the auditor as a knowledge worker solving auditing's most perplexing problems. This naturally raises the question why ISA 315 and other ISAs issued by the IAASB have become increasingly long and complex?

Zeffer (2010) discusses political lobbying on accounting standards in the US, the UK and internationally. Zeffer concludes that, once the standard-setter is of high quality and the regulator is also of high quality, not only will the standards potentially improve the quality of company reporting but also the increased incidence of insistent political lobbying from the preparer community could lead to diluted or compromised standards. At the least, they are likely to lead to more detailed standards, with extra paragraphs specifying provisos, exemptions, exceptions and clarifications in order to accommodate special interests pressed upon the standard-setter.

Similar dynamics arising from the development of auditing standard-setting and audit regulation could possibly explain the increasingly detailed auditing standards. In the US, the Sarbanes-Oxley Act gave the PCAOB the responsibility to set regulations and standards for the auditing profession.⁴ No longer would the profession control its own operations, or even its own destiny. In Europe, however, the 2006 and 2014 directives concluded that statutory auditors and audit firms should carry out statutory audits in compliance with the international auditing standards, and that the European Commission should continue to be involved in the monitoring of the content of international auditing standards and the process for their adoption by the IFAC.⁵

During 2003, possibly in a pre-emptive response to the possibility of radical changes in Europe comparable to those in the US, IFAC reviewed its governance activities and regulatory responsibilities. IFAC launched a series of reform proposals⁶ to strengthen the accountability of the international profession and build investor confidence in financial reporting, in the work of auditors and in financial securities markets worldwide. The proposals included the establishment of the PIOB to oversee IFAC standard-setting activities in the areas of audit performance standards, independence and other ethical standards for auditors, audit quality control and assurance standards. Another initiative was the establishment of the Monitoring Group that should comprise international regulators and related organisations, including representatives of the international organisations of securities commissions, the Basel Committee on Banking Supervision, the European Commission, the International Association of Insurance Supervisors and the World Bank.

These proposals came into effect in 2005, when the Monitoring Group⁷ was founded with the view of enhancing international audit quality, in order to strengthen confidence in the audit of financial statements, particularly those of public companies. The PIOB⁸ was created as part of the reform, to ensure that public interest was properly taken into account.

Except for the establishment of the Monitoring Group and the PIOB in 2005 to ensure that the IAASB follows due process and that the standards are in the public interest, the audit profession still has substantial influence over IFAC

standard-setting. Thus, in contrast to the PCAOB auditing standards, the ISAs are still substantially a product of self-regulation.

On this background it would be interesting to analyse the development of the standard-setting and institutional arrangements. Etzioni (2009) focuses the debate about regulation by examining the theory of regulatory capture. The key point is whether audit regulation successfully serves the public interest, which in our case is about reliable financial reporting free from material misstatements, which in turn ensures well-functioning capital markets. Like Zeff (2010), Etzioni (2009) concludes that regulations may end up serving the interests of those who are supposed to be subject to them, instead of the public interest.

A study of how comment letters from those representing the public interest are reflected in new and revised auditing standards would help answer this research question.

Annex 1. Interview guide

Introduction:

- 1 Presentation of the interviewer and the master thesis.
- 2 Thank the informant for giving time to the project.
- 3 Inform that the interview will be recorded and after transcription it will be deleted.
- 4 Inform about anonymity.
- 5 Inform that the informant has the right to interrupt the interview whenever they want to.
- 6 Inform that the interview is planned to last between 30 and 60 min.

Questions:

- 1 What is your position in the company and what is your highest completed education?
- 2 Have you read the new standard?
 - a If yes:
 - i Is the new ISA 315 clearer and easier to use than the earlier standard?
 - ii Are the requirements clearer than earlier standard?
 - iii Do you have an opinion about the length and complexity of the standard?
 - b If no:
 - i Do you think that methodology and courses give enough information about the changes in the standard?
 - ii Can you give more information about why you have not read the new standard?

- 3 Are there factors that make the new standard better than the earlier standard?
 - a Risk assessment?
 - b Risk of fraud and financial crime?
 - c Audit quality?
- 4 Are there factors that make the new standard worse than the earlier standard?
 - a Risk assessment?
 - b Risk of fraud and financial crime?
 - c Audit quality?
- 5 What are your opinions on the following:
 - a Target effectiveness and resource efficiency of the audit by using the new standard?
 - b Understanding the enterprise?
 - c Separated assessment of inherent risk and control risk?
 - d New concepts such as relevant assertions, significant class of transactions, account balance or disclosure?
 - e New requirements for IT systems?
 - f Assessing the risk of fraud and uncover financial crime?

End of the interview:

- 6 Comments or questions?
- 7 Give thanks to the informant for giving time to the interview.

Notes

- 1 <https://www.nyse.com/publicdocs/nyse/regulation/nyse/sea34.pdf>
- 2 https://www.iaasb.org/_flysystem/azure-private/meetings/files/20100614-IAASB-Agenda%20Item_4-G_ISA%20610_Revised%20ISA%20610_Clean-V1.pdf
- 3 https://www.ifac.org/_flysystem/azure-private/publications/exposure-drafts/comments/4663-isa-610-ed-comment-lett.pdf
- 4 <https://www.congress.gov/bill/107th-congress/house-bill/3763>
- 5 <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32014L0056>
- 6 https://www.iosco.org/v2/about/?subSection=monitoring_group&subSection1=ifac_reforms
- 7 https://www.iosco.org/about/monitoring_group/pdf/monitoring_group_charter.pdf
- 8 <https://ipioib.org>

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Part IV

Integrating chapter



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13 Understanding proactivity and strategic duality of small and medium-sized accounting and auditing practices – a summary

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Introduction

This chapter summarises this book by addressing the proactivity and strategic duality of accounting and auditing small and medium-sized practices (AASMPs) in both the private and public sectors. It is important to note that private and public sector AASMPs are dealt with here from a generic framework because they often share the same opportunities and challenges. In doing so, the authors of this chapter reflect upon the findings and analyses presented in the 12 thematic chapters of this book.

The point of departure for the analysis is an observation that AASMPs show various responses to changes in the institutional environment induced by, for example, digitalisation, new regulations, climate change and the need for improved sustainability. There appears to be a heterogeneity in AASMPs' responses to changes in their institutional environment, with two extremes. While some AASMPs show transformative, anticipatory and proactive change, others maintain the status quo or demonstrate reactive change. This chapter aims to provide explanations for this observation by bringing together dynamic capability and institutional (work) theories under one umbrella. Because the role of AASMPs is crucial in assisting other small- and medium-sized enterprises (SMEs) in building their own competitive advantages by maintaining customer relationships (e.g., Ali & Mustafa, 2023; Blackburn et al., 2018; Skærbæk & Tryggestad, 2010; Døving & Godderham, 2008), understanding what factors trigger and impede the dynamic transformation of AASMPs is important to ensure a more sustainable future for SMEs.

From a strategic management perspective, AASMPs – being a particular case of SMEs that provide accounting and auditing services to other SMEs – are obviously constrained in proactivity and implementing strategic change by their size and, therefore, lack necessary resources, e.g., human and financial. In general, SMEs have limited access to different types of resources (Marcelino-Sádaba et al., 2014), which can deprive them of adequate strategising (Barton, 1993). SMEs' managers simply do not have enough time or resources to be preoccupied with long-term considerations, prioritising everyday concerns instead (Spillan & Hough, 2003;

Caponigro, 2000). SMEs can also lack resources to carry out the necessary division of labour, achieve knowledge specialisation and invest in technology, market development and human resources improvements, compared to what is possible in larger firms (see, e.g., Chapter 5). This can limit the proactive strategic management.

Field responses of AASMPs to changing institutional environments: “a strategic duality”

Almost all chapters of this book demonstrate that the strategic responses of AASMPs can be characterised as “a strategic duality” (or “a strategic response split”). On the one hand, some AASMPs take part in the emerging transformation by adapting previous or creating new accounting and auditing practices. On the other hand, some AASMPs are subject to a process that reinforces existing practices, preventing dynamic transformation.

There are concrete examples of transformation taking place in the field of accounting and auditing practices. In some cases, the potential for transformation is so great that it is possible to speculate about the emergence of a new accounting/auditing profession (e.g., Chapters 3, 5 and 9). For instance, in accounting, there seems to be a strategic shift from performing bookkeeping for customers towards using digital technology to allow customers to do their own bookkeeping. The role of the accountant, as a bookkeeper, changes towards becoming a quality assurer (e.g., validation) of the bookkeeping produced by the customer. Evidently, an increasing level of bookkeeping automation would require more extensive quality assurance activities from the accountant. Thus, this changes the nature of services provided, shifting the balance from bookkeeping towards allowing more time to be used on financial, advisory and strategic services. This is also reflected in the struggle of some AASMPs to introduce new types of pricing for the (digital) services they provide. The idea is to move away from previously used hourly rates that reflected the cost of manual work towards new pricing models that should also help to recover increasing indirect costs of investments in digital technologies.

In the field of auditing, AASMPs explore the opportunities of digital technologies to improve the efficiency of repetitive auditing tasks, especially in financial compliance audits and system-to-system data connectivity (e.g., Chapter 4). The use of digital technology is more challenging in public sector performance audits where auditors face some non-repetitive tasks. However, even performance audits can benefit from the use of data analytics tools such as text mining and web-scraping. The use of AI in general will allow for more efficient audits and even go beyond traditional sample-based auditing.

However, this book's chapters also provide convincing evidence that not all AASMPs are engaged in strategic change and transforming their practices to align with changes in the institutional environment. Chapters 2–5 and 9 report “the expectation gap” or “the supply and demand gap” between what is expected of services and what is provided by AASMPs. This is not only about expectations regarding new types of services but also about some unmet social expectations regarding the role of the professional actors, e.g., detecting and preventing the increasing number of

economic crimes (Chapter 11). There is a reactive approach to service innovations, with some innovations and service enrichments becoming episodic rather than continuous (Chapters 5 and 9). Some AASMPs seem to fear digitalisation due to the risk of cyberattacks (Chapters 6 and 7). This leads to a large variation in the scope of services provided by AASMPs. Some AASMPs show inflexibility and even resistance towards adapting to changes in the institutional environment, preferring to leave the business/industry rather than to adapt (Chapter 3).

The relevant question is why AASMPs are subject to this “strategic duality”? What factors within the organisations and factors outside the organisations in their institutional environment can explain such an outcome? Before the chapter continues with presenting possible explanations related to dynamic capabilities and institutional theories, the next section presents some of the paradoxes/tensions that seem to shape this “strategic duality”.

Paradoxes and tensions that shape strategic dualities of AASMPs

Analysis of this book’s chapters leads the authors to formulate five paradoxes or tensions that seem to lie at the heart of both the pace and scope of AASMPs’ transformation.

Digitalisation paradox

Reliance on increased use of digital technology improves online services but, at the same time, leads to higher risks of cyberattacks and other misuse, which stimulates reduced or more cautious use of digital technologies.

Client marriage paradox

Given limited internal resources, the reliance of AASMPs on earning money by delivering existing services to existing SME clients reduces their capability to search for and introduce new services and find new clients.

Cognitive capability tension

Discovering new opportunities and threats in accounting and auditing services requires new knowledge that actors in the industry should acquire. However, actors seem to be unaware of what knowledge is needed to discover new opportunities or prevent threats, given their limited internal resources, including cognitive capabilities.

Professional scepticism paradox

New technologies provide many new ways of delivering accounting and auditing services that can accelerate industrial transformation. However, the need to adhere to professional standards puts pressure on what is considered acceptable

to adopt within practices, resulting in slower transformation and sometimes even professional resistance.

Regulator paradox

Accounting and auditing practices are inherently based on professional judgement by practitioners, enhanced by the use of professional standards. Uncertainties introduced by new technologies and other socio-economic and societal trends are met by professional standard-setters with more detailed regulatory standards. However, the more detailed regulations and standards become, the less room there is for professional judgement by practitioners, consequently stimulating “box-ticking” activities and professional deskilling.

These paradoxes and tensions indicate that AASMPs are in a unique situation compared to other SMEs when it comes to strategic transformation because of their high degree of embeddedness in different types of institutions. The next section provides an analysis of how combining dynamic capability and institutional theory can explain both the “strategic duality” and these “paradoxes/tensions” faced by AASMPs.

Conceptual framework: AASMPs’ problems of proactivity and solutions as dualities of strategy

Figure 13.1 summarises a conceptual framework developed by bringing the insights from dynamic capability theory and institutional work theory to explain the strategic duality. This framework explains how actors at AASMPs can struggle to be proactive because they need to develop abilities to (1) *sense* opportunities and threats in the organisational environment, (2) *seize* opportunities and avoid threats via high-quality problem-solving and investment decisions and (3) *reconfigure* assets and structures controlled by the AASMP through coordination efforts (Teece, 2007). However, institutional work theory explains that those decisions are not necessarily straightforward and can be limited by the embeddedness of the accounting profession in several (conflicting) institutions and in different forms of actors’ reflexivity (Lawrence et al., 2011; Modell, 2015; Aleksandrov et al., 2018), creating paradoxes and tensions. Furthermore, the model shows how these paradoxes and tensions are handled in two extreme cases of reflexivity, leading to two different outcomes for the configuration of dynamic capabilities and the “strategic duality”.

To start with, the chapters in this book give a solid indication that actors working at AASMPs are embedded in at least three different types of institutional environment, leading to the need for actors to relate themselves to several conflicting logics. First, AASMPs are embedded in close relationships with their clients and users of their services. This embeddedness affects sensing and seizing. In some cases, customers’ own lack of willingness to change and adapt to emerging trends acts as a barrier to AASMPs’ anticipation of the future. Some AASMPs experience a “periodic” notion of “sensing”, meaning that scanning for new opportunities is

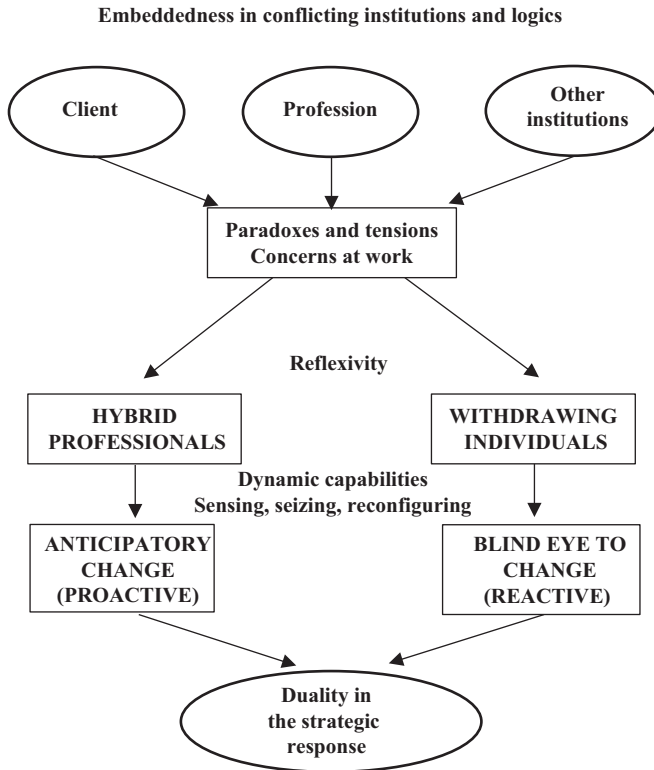


Figure 13.1 A conceptual framework.

Source: Developed by the authors.

initiated periodically but is constrained by the existing processes of “seizing” past services, rather than scanning for future opportunities. This strong dependence is like a “marriage”, involving building and maintaining goodwill (relational) and competence (performance) trust (Chapters 3 and 9).

Second, there is also strong embeddedness of AASMPs’ managers and employees in the accounting/auditing profession, with its hard (laws and standards) and soft (norms and beliefs) regulations. This embeddedness can explain professional scepticism towards the use of new technologies (e.g., AI) and adaptation to new trends in the institutional environment, because the purpose of the accounting profession is to maintain stakeholders’ trust and faith in the quality of accounting and auditing reports. Thus, embeddedness in the accounting profession puts pressure on finding new ways to validate and prove the conditions under which new technology functions as expected when adopted. At the same time, growing uncertainty among regulators about how to deal with increasingly complicated issues such as the use of AI, climate change and societal crises often results in regulators developing more detailed and complicated standards, rules and routines. This can make

it more difficult for professional actors to use their own professional judgement, as they become more rule-followers rather than knowledge workers who exercise judgement and professional scepticism (Chapter 12).

Finally, there are other institutions that are not necessarily part of the two mentioned above but which are becoming more important to be part of. Especially with the emergence of new digital technology and societal trends, embeddedness in new types of networks and, e.g., certification societies (related to digital technology, digital literacy, etc.) is becoming an additional necessity for accounting professionals. In some cases, AASMPs become reliant on subcontractors when outsourcing some of their activities, e.g., outsourcing risk handling to third parties (Chapter 7).

Embeddedness in these different and sometimes conflicting institutions leads to paradoxes and tensions. It makes it more difficult for actors in AASMPs to act in a straightforward way, as articulated by dynamic capability theory. Processes of “sensing” and “seizing” new opportunities and threats are framed by conflicting concerns, due to embeddedness in different institutions. This brings us to the question of how those conflicting concerns are dealt with by different forms of actors’ reflexivity.

Traditionally, there are two extremes represented by either reflexive or non-reflexive (habitual) actions of individuals and institutions (Cardinale, 2018). Chapters in this book demonstrate that duality in strategic response of AASMPs (proactive vs reactive) can be attributed to two different reflexivity styles: the difference between “chameleons” (more adaptive to change entities) and “bulls” (rigid entities, fighting changes in the environment) (Chapter 5; Ali, 2023).

The anticipatory/proactive change can be attributed to reflexivity of being a “hybrid professional”. Previous studies have demonstrated that actors in accounting and auditing have abilities to handle dilemmas and tensions when facing embeddedness in different institutional environments by hybridising professional expertise (e.g., Kurunmäki, 2004; João & Ribeiro, 2022). In terms of Tuominen (2024), “hybrid professional” are characterised by a broad scope of reflexive deliberation, which is open to incorporating various ideas that often go beyond established professional norms and values. This is supported by diversity, where individual sense-making is combined with listening to others, facilitated by diverse governance structures (see, e.g., Chapter 5). As an outcome, hybrid professionals can maintain processes of continuous sensing and are able to seize new opportunities by actively participating in new projects and reconfiguring existing resources by exploring what those projects can do for their own work.

The reactive change can be attributed to non-reflexive (habitual) actions of individuals and institutions (Cardinale, 2018). For these individuals, the main concern at work is just to perform important professional activities despite changes happening in the institutional environment. In terms of the entity, such reflexivity can be facilitated by AASMPs having concentrated ownership (see, e.g., Chapter 5, “locked-on” structure). Such actors can also have unfounded confidence in existing practices facilitated by “unawareness about their own unawareness”, e.g., the Dunning-Kruger effect (see Chapter 6). This form of reflexivity can be facilitated by uncritical thinking and a lack of in-house competence, due to outsourcing

(Chapter 7). In terms of Tuominen (2024) these individuals are characterised by a narrow scope of reflexive deliberation that is also bounded because the actors do not want to consider alternative perspectives, demonstrating lack of willingness to detach from internalised institutional norms and beliefs and allow others to influence their own thinking.

As an outcome, their institutional work can be characterised by a limited ability to “sense” and “seize” new opportunities by staying out of new projects, as well as a lack of incentives to engage in reconfiguring existing resources to support change. The institutional work of these actors therefore becomes maintenance-oriented and business-as-usual, turning a blind eye to changes in favour of established benefits because they cannot anticipate any benefits from the change. For instance, one reason that these actors’ maintenance-oriented approach prevails is that they have not yet felt (sensed) the effects of their loss of competitiveness, i.e., by way of a substantial number of clients migrating to other AASMPs.

Size of AASMPs: a curse or a blessing?

Previous research has demonstrated that, when discussing proactivity and the ability for anticipatory change, the unit size is usually a disadvantage. Indeed, AASMPs can suffer from financial constraints, a shortage of necessary (digital) technical expertise and skills, resistance to change (both from employees and clients), etc. (see Chapters 2, 3, 5 and 9). However, given the embeddedness of AASMPs in the institutional environment, can the size of AASMPs become a competitive advantage?

Chapter 1 provides three scenarios for how AASMPs can develop in the future; two of the scenarios embrace proactive strategic change towards AASMPs filling the need for climate reporting (*Climeauditors*) or advancing digital governance (*Digiauditors*). The third scenario is more negative for the future of AASMPs, as they become extinct due to *BigTech’s takeover*. This is a scenario where being small is assumed to be a disadvantage, especially in a potential future where regulation and standardisation increase beyond what is known today. However, AASMPs have the potential to be more agile than the big firms. Proactive AASMPs may be able to adapt quicker to the needs of SMEs simply because of their smaller, less bureaucratic organisation. As opposed to the big firms which tend to create an additional layer of institutional order, e.g., internal procedures that harmonise practices between different national and international offices, AASMPs are not required to have extensive firmware policies and procedures necessary to serve Public Interest Entities. Another advantage is that they are geographically and relationally closer to their clients. This is often appreciated by the client SMEs, who may not feel that they obtain the desired attention from the larger firms.

Thus, because size in itself is not a predictor of the ability to be proactive and forward-looking in terms of sensing/seizing new opportunities and threats (Chapters 5–7), more attention should be given to how entities create dynamic capabilities by navigating around the paradoxes and tensions created by their embeddedness in conflicting institutions and mobilising the reflexivity of their

members. The next section, therefore, discusses implications for the AASMPs, as well as professional organisations and higher education institutions (HEIs), especially regarding how they all can work together to assure the transformative capabilities of AASMPs.

Implications

This chapter argues that building dynamic capabilities is difficult without addressing the reflexivity of individuals working at AASMPs. Addressing reflexivity will improve dynamic capabilities and the ability of actors/stakeholders in the accounting and auditing professions to adapt to a changing regulatory and institutional environment, as well as proactively influence the path of change. This is not an easy task because transformation in the industry and building relevant dynamic capabilities at AASMPs would require closer cooperation between the accounting and auditing profession and HEIs. For many decades, accounting and auditing education globally has been criticised for being unable to produce graduates with the skills required by practitioners (e.g., Bromwich & Scapens, 2016; McGuigan & Kern, 2016). Previous research has demonstrated that a tighter dialogue between researchers and users of research and education in the accounting profession is required (Guthrie & Parker, 2016) to change the education and training of accounting and auditing specialists. Successful transformation would require improved proactivity of AASMPs and, in turn, an increased number of hybrid professionals and fewer withdrawing individuals. The following section discusses the implications of successful transformation for different actors.

Current managers and employees at AASMPs: the unit level

As discussed above, individual concerns at work affect the scope of reflexivity mobilised. The more individuals are concerned with collective and societal issues, the more they think about the implications of societal change and engage more actively in institutional change. Similarly, individuals with a flexible mindset usually play a key role in initiating processes of “sensing” and “seizing” to adopt emerging trends in the workplace. Proactive change means engaging employees who can reflect differently and be involved in dialogue to understand different interpretations of change. Reconfiguring also means exploring how key concerns resonate with proposed changes and gaining acceptance for these within the organisation. Thus, managers of AASMPs need to understand and address their unit’s identity and their contribution to solving global issues, establish dialogic arenas within units and improve recruitment policies. It is important to avoid situations where employees are concerned only with their own work, ignoring the causal relations between the change process and its effects on the entity, thus failing to anticipate how change can affect their own workplace.

Findings from chapters in this book provide additional ideas for how to improve proactivity. For instance, changes in governance structures can be considered by illuminating the advantages of dispersed compared to concentrated organisational

structures (Chapter 5). AASMPs can focus on serving fewer customers with a high level of (market, product) differentiation, using their capabilities to provide valuable solutions to SMEs by tapping into their cognitive diversity (Chapter 9). It can also be advantageous to introduce new types of management and risk control systems that are better fitted to the dynamic nature of organisation-environment interaction, allowing employees to move from “comfort” to “stretch” zones and change their focus to embrace rather than resist change (see, e.g., Bourmistrov & Kaarbøe, 2013; Bourmistrov & Kaarbøe, 2017).

Finally, introducing a longer planning horizon and the use of scenario planning can help organisations become more proactive (Chapters 5 and 6). By offering a glimpse of plausible futures, regular foresight workshops can provide current and future organisational members with the necessary analytical tools for proactively shaping their future – as individuals, as organisational members and as industrial players (see, e.g., Bourmistrov & Åmo, 2022).

Future and potential employees at AASMPs: the field level

Organisations in the public and private sectors globally are increasingly competing for talent. To win this competition, the accounting and auditing profession needs to attract and retain the younger generation in the accounting and auditing industries. However, as Chapters 2, 4 and 10 demonstrate, it is important to address societal misconceptions about what accounting and auditing are, because these misconceptions not only harm the recruitment of new employees but also the accounting and auditing programmes at HEIs. There is a need to reverse the image of accountants and auditors as boring “bean counters”. With the rise of new trends, e.g., digital technology, climate change and sustainability policies, the profession should engage society to dismantle the myths, e.g. that automation would reduce the need for accounting and auditing. The public needs to be convinced that accounting and auditing are an important part of the global transformation towards a more sustainable future.

The role of HEIs: educating reflexive thinkers not only doers

Successful transformation would mean that HEIs need to update existing degree programmes by revising the content of the curriculum and introducing new programmes focusing on competence improvement and lifelong learning. First, this concerns updating the existing curriculum. Current programmes and courses need to address the requirement for a better balance of students gaining a combination of different competences and skills during their education. When it comes to accounting and auditing, this includes professional skills, technological skills (e.g., digital literacy), problem-solving, critical thinking, efficient communication skills, etc. In addition, it is important to address grand global challenges and issues in education – and the role of accountants and auditors in solving those, e.g., by fighting financial crimes, providing innovative services and promoting sustainability. When revising the curriculum, the perspective of improving reflexivity can

be taken into account by better developing the “cognitive capabilities” of current and future professionals. As Helfat and Peteraf (2015) suggest, improved sensing requires the development of better perception and attention skills, improved seizing needs better problem-solving and reasoning skills and improved reconfiguring requires better language, communication and social cognition skills.

Second, socialisation during encounters between academics and practitioners is also crucial. It is important to educate accountants and auditors as critical thinkers and knowledge workers, not bean counters or standard-followers (Chapter 12). Becoming a knowledge worker means that future practitioners shall be trained with having “academic DNA” in mind, i.e., the academisation of practitioners. Here, larger research projects (e.g., master’s theses) can serve as an important interaction between current and future professionals and existing academics (Chapter 8).

Finally, academia can help practice by introducing shorter competence improvement programmes and courses based on micro-credentials, which can be carried out in collaboration between HEIs and professional associations (Bourmistrov et al., 2024). Without proper input from academia, competence improvement programmes risk being technical rather than reflexive and judgemental exercises. The introduction of micro-credentials has a good potential to rethink how academia can cooperate with practitioners, e.g., making course offerings asynchronous, more flexible and easily accessible on digital learning platforms. Micro-credentials can stimulate creative and critical thinking and train practising accountants, making them potential change agents (Bourmistrov et al., 2024).

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