

Financial inclusion



Basic theories and empirical evidence from African countries

Munacinga C. Simatele (ed.)

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empirical evidence
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Research Justification

Financial inclusion has been noted as a key driver of poverty alleviation and growth. Yet most of the scholarly work that exists lacks a comprehensive discussion on how the poor interact with financial services and the channels through which such services can affect their livelihoods. This book addresses this gap in scholarship. This is important in creating a substantive understanding of how useful financial inclusion is as a concept and practice. The number of articles written on the determinants and effects of financial inclusion at a broad cross-country level is growing. Yet almost all of this literature assumes the impacts of financial inclusion without paying attention to how these effects are transmitted. An understanding of the transmission mechanisms is fundamental to effective application. Moreover, a rapidly developing discourse in financial inclusion literature is digital finance. Much has been written and is being written about the benefits of digital finance with hardly any discussion of the channels through which such benefits are transmitted. This book discusses the various transmission mechanisms through which not only traditional finance can affect the poor but also how digital finance is transmitted to poverty. Most significantly, the chapter on digital finance provides cross-country evidence for African countries.

Moreover, the often-macro perspective in the financial inclusion literature implies that country-specific nuances that can provide critical learning points are often overlooked. This book provides six original empirical case studies of financial inclusion in six African countries. The case studies cover a broad area of topics most important to African countries and highlight the unique African setting. The role of cooperative financial institutions and social entrepreneurship presented in this volume, for example, is hardly researched in Africa and yet is an important vehicle to circumvent the restrictive and exclusive bank-based financial markets unique to Africa. The chapters employ various methodologies depending on the topic being addressed in the chapter. Most of these use quantitative methods. Five chapters are empirical in nature and use inferential statistics, whilst the other two use mixed methods with qualitative data as well as descriptive statistics. This scholarly book offers researchers who focus on financial inclusion and African economies a one-stop resource for understanding the channels of transmission for financial inclusion as well as an application of these channels through original country-specific empirical papers.

This book offers original material that has not been plagiarised or published elsewhere. Chapter 10 of the book contains some material from the author's PhD thesis but represents more than 50% reworking of elements from the thesis.

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Abbreviations, Figures and Tables Appearing in the Text and Notes

List of Abbreviations

ACR	Access to Credit
AKIS	Agricultural Knowledge Information Systems
AsgiSA	Accelerated and Shared Growth Initiative for South Africa
ASPEF	Agricultural Special Productivity Enhancement Facility
ATM	Automated Teller Machine
AU	African Union
AVE	Average Variance Extracted
BBBEE	Broad-Based Black Economic Empowerment
BoP	Bottom of the Pyramid
BoU	Bank of Uganda
BP	Business Performance
CAADP	Comprehensive African Agricultural Development Program
CARE	Cooperative for Assistance and Relief Everywhere
CBDA	Co-operative Banks Development Agency
CFI	Cooperative Financial Institution
CoF	Cost of Funds
CpB	Cost per Borrower
CR	Composite Reliability
CRS	Credit Reference System
CSBP	Centre for Small Business Promotion
DBSA	Development Bank of Southern Africa
DeR	Debt-to-Equity Ratio
DFI	Development Finance Institutions
DFS	Digital Financial Services
EHC	Employees' Human Capital
FC	Financial Capital
FDI	Foreign Direct Investment
FINCA	Fighting Poverty with Microfinance and Social Enterprise
FINCORP	Financial Corporation
FSD	Financial Sector Deepening
FSP	Financial Service Provider

Abbreviations, Figures and Tables Appearing in the Text and Notes

FTLRP	Fast-Track Land Reform Programme
GDP	Gross Domestic Product
GEAR	Growth, Employment and Redistribution
GMB	Grain Marketing Board
GNI	Gross National Income
GPF	Gauteng Partnership Fund
GPFI	Global Partnership for Financial Inclusion
GSMA	Global System Mobile Association
HC	Human Capital
ICT	Information Communication Technology
IFAD	International Fund for Agricultural Development
IMF	International Monetary Fund
ITU	International Telecommunication Union
JSE	Johannesburg Stock Exchange
JHUCRC	Johns Hopkins University Coronavirus Resource Center
KYC	Know Your Customer
LMC	Local Membership Committees
LMO	Local Monitoring Officers
MAFISA	Micro Agricultural Finance Scheme of South Africa
MFI	Microfinance Institution
MFS	Mobile Financial Services
ML	Maximum Likelihood
MM	Mobile Money
MMSP	Mobile Money Service Providers
MNO	Mobile Network Operator
MSME	Micro, Small and Medium Enterprises
MVS	Maximum Variation Sampling
NGO	Non-governmental Organisation
NIRA	National Identification Registration Authority
NSB	National Small Business
ODA	Official Development Assistance
ODI	Overseas Development Institute
OER	Operating Expense Ratio
OHC	Owner Human Capital
OSS	Operational Self-Sustainability
OTT	Over the Top
P2B	Person to Business
PIN	Personal Identification Number

PSP	Private Service Providers
RBV	Resource-based View
RII	Relative Importance Index
ROA	Return on Assets
ROE	Return on Equity
ROSCA	Rotating Savings and Credit Associations
RPN	Risk Priority Number
SAMAF	South African Micro-Finance Apex Fund
SC	Social Capital
SCA	Savings and Credit Association
SCT	Social Capital Theory
SDG	Sustainable Development Goal
SE	Standard Error
SEM	Structural Equation Model
SG	Savings Groups
SHG	Self-help Group
SIDC	Swaziland Industrial Development Company
SILC	Savings and Internal Lending Communities
SIM	Subscriber Identity Module
SME	Small and Medium Enterprises
SMME	Small, Micro and Medium Enterprises
SMS	Short Messaging Service
SWFT	Swaziland Women's Finance Trust
TBMFI	Traditional Brick and Mortar Financial Institutions
TEA	Total Early-stage Entrepreneurial Activity
UCC	Uganda Communications Commission
UIBFS	Uganda Institute of Banking and Financial Services
UN	United Nations
USSD	Unstructured Supplementary Service Data
VAT	Value-added Tax
VPN	Virtual Private Networks
VSLA	Village Savings and Loan Association
WCCU	World Council of Credit Unions
WHO	World Health Organization
WHOROFA	World Health Organisation Regional Office for Africa
ZICTA	Zambia Information, Communication and Telecommunication Authority
ZIPAR	Zambia Institute of Policy Analysis and Research

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Financial inclusion and the poor

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■ Introduction

Evidence shows that large portions of the world's population, especially those living in developing countries, fall outside the formal financial sector. Different kinds of barriers such as high associated transaction costs and the nature of formal financial systems that rely on informational transparency exist and result in the exclusion of large populations from the financial sector. This exclusion has resulted in the existence of parallel financial institutions that lie outside the formal sector. Regardless of the nature of the financial infrastructure, it is accepted that finance is a key conduit to development and poverty alleviation. The chapters in this book discuss the channels through which finance is transmitted to poverty-stricken areas and provide in-depth discussion of these aspects through empirical case studies involving African countries. This introductory chapter provides an overview of financial inclusion and how the various chapters in the volume relate to one another.

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■ Financial inclusion in the literature

In the last two decades, there have been increased calls to expand the reach of financial services being provided to the poor. Several developing and emerging countries have signed treaties committing to the achievement of specific goals regarding the inclusion of the poor in financial services. Many researchers have suggested that the achievement of key Sustainable Development Goals (SDGs) related to poverty depends upon successful financial inclusion efforts (Klapper, El-Zoghbi & Hess 2016). For example, eliminating extreme poverty as articulated in SDG1 can be facilitated by providing the poor with better access to finance to enable investment in human capital as well as productive investments. This would result in the elimination of hunger and the empowerment of women to find decent work, thus generating inclusive growth.

At the macro level, since the seminal work of King and Levine (1993) and Levine (1997), evidence has established that there exists a positive relationship between financial sector development and growth. Similarly, the literature also shows that economic growth benefits poverty through increased job creation and government transfers. At the micro-level, both theoretical and empirical arguments posit the possible benefits of access to finance for poverty reduction. Broadly, micro-level studies focus on specific welfare gains showing that access to credit can, for example, improve access to gainful employment and increase the purchase of farm implements or that the use of cheaper payment methods can increase household consumption through improved remittances (Maimbo & Ratha 2005; World Bank 2014).

Many efforts have been made to expand inclusion, yet large populations in Africa remain outside the reach of formal financial services. Even when access efforts have been successful, the use of available services is still very low (Dupas & Robinson 2013; Prina 2015). Innovations in technology have changed the financial sector landscape and expanded access to digital financial services (DFS) to large segments of the poor. Nevertheless, such access is still very limited to remittances and payments, mainly because of the underdevelopment or absence of complementary markets. Although there have been some developments in digital savings and credit, the lack of related regulations around digital credit has resulted in increased vulnerability for the poor.

Many people remain outside the formal sector, constrained by inadequate infrastructure, and sometimes lack knowledge about the availability of services that could help them. Furthermore, the exclusion of the poor from financial markets is exacerbated by a mismatch between the services provided by financial institutions and the financial needs of the poor.

Most of the undertaking of financial inclusion for the eradication of poverty relies on the promise of microfinance. Microfinance programs have reported

significant gains where previous efforts through bank-led and interventionist approaches failed (Morduch 1999). Whilst microfinance, in principle, is a holistic approach that seeks to include the provision of all types of financial services to the poor, a large proportion of the literature is dedicated to examining the impact of microcredit. Based on models such as the Yunus Muhammad Grameen Bank, various models have been developed to provide credit for the poor. There is evidence that suggests that the uptake of microcredit substantially increases micro-investments (Copestake, Bhalotra & Johnson 2001; Crépon et al. 2015; Morduch 2020).

Nevertheless, there is recently growing evidence suggesting that whilst this might be true, there are side effects of microcredit that may have a negative effect on the fight against poverty and that the social mission may have been lost in the competitive rush by microfinance institutions (MFIs) (Gosh 2013). Moreover, there is substantial literature that shows, for example, that microcredit is being used for consumption rather than for productive investment, resulting in over-indebtedness in many households.

Financial diaries have shown that contrary to popular belief, the poor are more diligent about their finances (Collins et al. 2009). There is evidence that emphasis on credit may be misplaced, and that the poor prefer financial services that help them safeguard their assets more than those that give them access to borrowing. Moreover, there is also increasing evidence that shows that payment instruments play a key role in reducing poverty and promoting inclusion and growth (Beck et al. 2015). There has been growing research attention and increased efforts on savings although not at the same intensity as those promoting microcredit. The bulk of this research focuses on informal savings models mainly through self-help groups; attempts to increase formal savings have not been successful (Dupas & Robinson 2013; Prina 2015).

Similarly, the large volume of empirical research investigating the effects of finance on the livelihoods of the poor has often been accompanied by the same effort in developing theoretical frameworks that could explain why the poor choose to remain outside formal financial services even when they are available. The extant explanations are mainly in the spirit of neoclassical models, and most of the work still leans on departures from perfect market conditions to adapt to market failures. The purpose of this book is not to propose new theories but rather to provide a perspective.

■ Part 1: Channels of transmission and financial services for the poor

This book is divided into two parts. The first part provides a review of the theoretical foundations for financial inclusion and characterises the services used by the poor. Chapter 2 reviews the main channels through which finance

affects poverty. The theoretical underpinnings of the finance–growth nexus are outlined in light of the extant literature. This is followed by a discussion of the theoretical perspectives on how gains in growth can be appropriated to address poverty. The second part of the chapter examines the direct channel of financial development on poverty through the lens of the McKinnon–Shaw Hypothesis. The critiques levelled against the hypothesis are presented, especially as they relate to the existence of market frictions in financial markets that lead to exclusion. The chapter concludes with a review of financial inclusion as a policy response, highlighting how financial inclusion can be used to address poverty.

Chapter 3 presents a characterisation of how the poor use financial services. The chapter focuses on services used by the poor rather than services that are available to them to offer the reader a glimpse of the alternative uses of finance that the poor opt into. The importance of account ownership is highlighted, followed by a discussion of the various ways in which the poor save, use credit, make payments and use insurance. The discussion shows that although formal services are sometimes available, the poor predominantly use informal services, particularly through self-help groups. Similarly, most of the credit services used are informal. Some of the innovations in informal credit markets that have been used by MFIs, including group lending and the use of social capital as collateral, are highlighted. The chapter concludes by documenting the great strides that have been made in expanding financial inclusion whilst also noting the need to consider models that are a hybrid between formal and informal financial services to adequately address the financial needs of the poor. Moreover, the potential of technology to expedite increased financial inclusion was noted.

■ Part 2: Empirical evidence from African countries

The second part of the book presents empirical studies from various African countries. The cases presented are selected to illustrate the salient features of financial inclusion that emerged from the review of services in Chapter 3. These include:

1. Digital finance is an opportunity to remodel the provision of financial services for those who have previously been excluded. These services are covered in Chapters 4 and 5, which investigate the transmission mechanism of digital finance and its role during the COVID-19 pandemic.
2. Informal finance is an inevitable part of the African development process. Chapters 6 and 7 discuss self-help groups in Zambia and how the social economy can tackle market failures in the financial sector.
3. Financial inclusion is not necessarily a problem of lack of funding but could arise because of other barriers that may need to be tackled before financial

inclusion can increase. These barriers are discussed in Chapters 8 and 9, which look at small and medium enterprises (SMEs) in Zimbabwe and Cameroon.

4. Standard models of providing finance may not be effective and mainstreaming informal finance or linking it to formal finance may be an innovative way to tackle financial inclusion in the African context. This is covered in Chapter 10 and Chapter 11, which investigate the performance of corporative financial institutions and the assessment of loan applications by development finance institutions and commercial banks in South Africa.

Chapter 4 examines the transmission mechanism of digital finance to poverty. Whilst the literature recognises the importance of digital finance, the channels through which it affects poverty are not clearly known. Using a cross-country data set, the transmission mechanism was estimated using a structural equation model (SEM). The results show that the cost of remittances, ease of doing business, financial depth and the real interest rate are the strongest predictors of poverty reduction through digital finance.

Chapter 5 illustrates how technological innovation can facilitate the access and usage of financial services during economic disruptions. This chapter investigates the impact of the COVID-19 pandemic on the use of mobile money (MM) in Uganda. Many traditional financial services were constrained by the resultant lockdown and related curfews. In response, MM service providers have reduced the cost of services. The authors show that the pricing changes introduced by mobile money service providers (MMSPs) resulted in increased uptake of MM services and related value-added services. Moreover, the authors explain how factors such as over-the-top taxes, infrastructure and regulation provide an environment for these effects. They show that in the Ugandan context, the effect of the COVID-19 pandemic to some extent mimics the effects of other disruptors observed within the country. The unique response by industry and government in introducing deliberate flexibilities and adjustments to the financial services sector in response to the pandemic suggests that, if inherent, such flexibilities can help to meet the needs of consumers, especially those with lower income, whose access to traditional services or related digital services may be limited as a result.

Chapter 6 looks at the case of self-help groups in Zambia. This illustrates the fact that self-help groups are an important vehicle for asset accumulation, especially by women. The author investigates the participation of men in self-help groups in Zambia and finds that labour market participation and mobility of men are some of the important factors explaining nonparticipation. The promotion of self-help groups by non-governmental organisations, whose focus is on women empowerment, also has an effect. However, the data also show that a significant proportion of women in the savings groups are proxies for their husbands. Participation is therefore on behalf of the family, rather than on an individual basis.

Chapter 7 uses data from the work of Eswathini,¹ illustrating how innovative mechanisms in informal and semi-formal providers can circumvent some of the challenges in formal markets which lead to financial exclusion. It focuses on how financial social enterprises can be used to mitigate market failure problems, such as adverse selection and moral hazard, which are ubiquitous in financial markets. The authors show that social enterprises are innovative and use local community structures and social bonds to screen applications and keep default rates down. The collateral requirements are adjusted to meet the needs and abilities of the borrowers.

Chapter 8 highlights that sometimes financial exclusion arises not necessarily because of a lack of access to finance but rather as a result of underlying inadequacies in complementary markets and poor business and management skills. This chapter focuses on agricultural SMEs, which are an integral part of tackling poverty in many African countries. The authors investigate how owners of agricultural SMEs in Zimbabwe appropriate funding to the business at different stages of the life-cycle of their businesses. The results show that contrary to theoretical predictions, there is a dominance and persistence of funding across the different life cycle stages. External funding increased during the setup and expansion stages. Nevertheless, most businesses are rationed out of credit markets at stages where they need external funding the most, resulting in high levels of attrition. High transaction costs in a hyperinflationary environment are an added burden.

Social capital is a complementary capital that has been shown to positively affect business performance. Chapter 9 proposes that the role of social capital and associated networks also impacts a small firm's ability to access finance. Using data from Cameroon, this study argues that this effect is mediated or enhanced by the social capital of both owners and their employees. Using a Structural Equation Model, the authors show that government-initiated efforts to create funding programs may be misplaced if they do not pay attention to the role played by social capital. The most critical aspects of social capital include experience, training skills and networking through family and friends. Therefore, governments should enhance efforts to provide funding by providing skill-based programs so that owners of SMEs are better connected and thus better able to leverage their social capital to access financial capital.

A common approach in dealing with the financial exclusion of small businesses is to provide direct funding through either non-governmental organisations (NGOs) or the creation of special-purpose institutions in the form of development finance institutions (DFIs). The setup of DFIs is premised on the assumption that they will pay greater attention to the characteristics of small businesses and, therefore, increase the level of funding accessible to same businesses. This is important because DFIs are specifically set up to

1. Formerly Swaziland.

increase funding for financially excluded firms. Therefore, it is expected that their assessment procedures should take cognisance of the characteristics of SMEs, such as the lack of collateral and owner equity. Chapter 10 investigates this assertion by comparing the assessment criteria used by the DFIs and those used by commercial banks when assessing loan applications of small businesses. The study finds that the criteria used by both types of institutions are very similar, and there is little substantive difference in the way they assess loan applications by small businesses. This could explain the large number of loan applications that were rejected. Consequently, using DFIs is unlikely to lead to significant reductions in financial exclusion. A recommendation is made that DFIs should consider adopting some of the methods used by MFIs. Group lending, the use of movable capital and guarantee schemes are cautiously recommended.

An alternative to special-purpose vehicles is the mainstreaming of informal and semi-formal financial institutions. Chapter 11 illustrates how this can be done in the form of cooperative financial institutions (CFIs). It explores the social performance of CFIs in South Africa. Corporative financial institutions must meet the double bottom line. They need to achieve the financial goals of sound performance and operational sustainability, as well as the social goals of poverty reduction, increased education and other social needs of the members. The authors used data from all registered CFIs in South Africa to measure social performance and investigate its determinants. They measure social performance using outreach and find that membership is inclined towards more marginalised populations such as women and youth, suggesting that they are focusing on their social mission. Moreover, social performance is mainly determined by each CFI's financial performance, size and portfolio yield. This is in line with some of the emerging debates in the literature that indicate that for such social financial institutions to promote social inclusivity and development they need to be financially sustainable. The study notes the regulatory burden of CFIs who need to comply with four different governing Acts in South Africa, compared to similar institutions in comparative countries. A final chapter discusses the lessons learnt from the various case studies and what this implies for financial inclusion in Africa.

■ Conclusion

This chapter provides an overview of the contributions of this volume and how the various chapters relate to one another. Two critical contributions are made. Firstly, there is a discussion of the various channels through which finance affects poverty. This is complemented by a discussion of the various financial services that are used by the poor. Secondly, six country case studies provide evidence of financial inclusion at different levels in the African context. Lessons are gathered, which point to practical implications and gaps for further research.

Financial inclusion and poverty: The transmission mechanisms

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■ Introduction

The question of financial inclusion for the poor has taken centre stage in the policy agendas of many governments. A rapidly burgeoning literature has responded by investigating what financial inclusion can do for the poor. This growing literature is founded on long-held theories of the effect of finance on growth going back to ideas generated by Smith (1776) and Schumpeter (1911), amongst others. Seminal empirical work at the macroeconomic level such as that of King and Levine (1993), Beck, Demirguc-Kunt and Levine (2004) and Levine (2005) has shown that finance has a positive effect on growth. Increased economic growth, however, does not necessarily get passed on to the poor. Both theory and empirical results show that the non-linearities in the relationship between financial development and growth can result in increased poverty and inequalities especially in the early stages of development. Deliberate interventions may be required by governments to ensure that the resulting gains in growth are evenly distributed.

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Studies at the microeconomic level highlight other benefits of finance unrelated to economic growth. These include the benefits of savings, credit, payments and insurance services that can help the poor directly by allowing them to make productive investments, ensuring smooth consumption and manage risk. McKinnon (1973) and Shaw (1973) proposed that such access can be enhanced through market-led financial policies if the incentives for saving and lending are created through free interest rates. Theories that account for the nuances obtaining in developing countries have developed as a foundation for understanding regarding whether finance does affect poverty. Notable amongst these is the seminal work of Stiglitz and Weiss (1981), which shows that informational asymmetries particularly ration poor people out of credit markets. Consequently, the benefits of finance may not necessarily be felt by them.

This chapter discusses the various transmission mechanisms from finance to poverty. The scope is limited to looking at how financial sector development, as well as access to financial services by the poor at different levels, can address the problem of poverty. The chapter starts with a brief review of the definition of poverty to emphasise the fact that finance is extremely important in the fight against poverty. The rest of the chapter makes the case that money matters for the poor, whether by enhancing growth or directly by allowing, savings, intertemporal consumption and risk management. The review is presented in two main parts. The first part looks at the indirect channels of transmission between finance and poverty. Finance drives increased economic growth through the provision of information for effective capital allocation, risk pooling, monitoring and the facilitation of trade resulting in increased growth. The increased growth then provides improved opportunities for the poor to participate more effectively in the economy thereby reducing poverty.

The second part looks at more direct channels of transmission. The McKinnon–Shaw Hypothesis is presented to show how financial market repression can be a source of exclusion from financial markets. Departures from the basic framework are discussed based on the literature to account for developing country nuances and the resultant failures of this basic model to explain financial exclusion in the developing country context. This is followed by a discussion of how financial inclusion efforts form the central policy response to the importance of finance for poverty reduction as well as the lack of effectiveness of these identified mechanisms in the developing country context. The chapter concludes with a discussion of the various ways in which financial inclusion can address key aspects of poverty.

■ Defining poverty

The intention of this section is not to provide an exhaustive discussion on the definition of poverty but rather an introduction and to set the context for which we adopt the perspective that money is important to the poor. Ravallion (2015) and Haughton and Khandker (2009) give an exhaustive exposition of not only

the definitions of poverty but the history and progression of the debate in this area as well as the policy responses. One can refer to these texts for a deeper understanding of poverty, its measurement, drivers and policy implications.²

The literature defines poverty in various ways. Nevertheless, all the definitions refer to some kind of measured welfare or wellbeing. Haughton and Khandker (2009) proposed that wellbeing can be thought of as the command over commodities, which can help in the welfare of people. The command of these resources can be defined from an absolute or relative position.

Absolute poverty is defined by using some frugal absolute reference point based on which an individual or household can be said to be poor. Relative poverty, however, defines an individual's welfare compared to that which is generally prevalent. Take, for example, the definition of poverty by Adam Smith in the *Wealth of Nations*. He defines poverty as the 'inability to purchase necessities required by nature or by custom'. In referring to nature, he refers to 'commodities that are indispensably necessary for the support of life'. Similarly, Rowntree (1902) proposed the concept of 'primary' poverty, which he defined as 'earnings insufficient to obtain the minimum necessities for the maintenance of merely physical efficiency'. Both definitions refer to some level of income required to access basic commodities and services. These financial resources can be sourced from one's income as suggested by Adam Smith and Rowntree or could be provided by the state as proposed by Townsend (1979).

Relative poverty, however, determines an individual's poverty not with reference to some absolute measure but rather to some 'custom' measure. Smith referred to this as 'Whatever the custom of the country renders indecent for credible people, even of the lowest order, to be without'. Rowntree refers to this as secondary poverty by which he means a standard of living where the earnings would be sufficient for the maintenance of 'merely physical efficiency were it not that some portion of it is absorbed by other expenditure either useful or wasteful' (Rowntree 1902:x). Townsend (1979) argues that poverty can only be defined in terms of relative deprivation. Accordingly, he adds that poverty is a situation in which an individual's resource is way below that required by the average individual or family, such that they are in effect prevented from following ordinary living patterns, customs, activities and diets as approved or defined by their societies.

Another dimension of poverty is provided by Amartya Sen (1983, 1999). He argues that poverty must be understood from an absolute and relative perspective. A person's poverty is absolute if a minimum threshold of capability that allows a person to function within society is not reached. It is a relative term in that capabilities are not fixed. The means required to develop these capabilities may change over time. The changes in these capabilities depend on the economic environment within which the individuals find themselves.

2. Davis and Sanchez-Martinez (2014) provide a concise review of the theories of poverty.

Therefore, the need for absolute levels of capabilities such as freedom may translate into relative needs vis-à-vis material commodities, resources and incomes. In Sen's view, therefore, poverty is the result of insufficient capabilities or entitlements that allow individuals to develop their capabilities so that they can pass that threshold that allows them to fully function in society.

Given these multidimensional aspects of poverty, this study takes an eclectic approach to defining poverty. Poverty is defined here both in its absolute sense as the lack of resources for individuals and also in its relative sense by realising that poverty arises and is sustained largely because of the comparative lack of access to financial services. These services afford individuals the opportunity to not only reach a sustainable threshold of consumption but also develop their capabilities through investment in human capital. Our view, therefore, is that the path out of poverty is built largely on financial resources at least in the African context, whether through its effect on economic growth or at the microeconomic level by allowing households to accumulate wealth through savings and investments and to mitigate risk. This allows individuals and households to not only access basic goods and services but also develop their capabilities, which will enhance their transition out of poverty.³

■ Theoretical foundations for the finance-poverty nexus

Broadly speaking, finance can affect poverty through two channels. Firstly, it can affect poverty through growth, which is an indirect channel. The main conduit of this effect is financial intermediaries, which through pooling savings and providing lending for entrepreneurship can increase firm output and ultimately economic growth. As the financial sector develops, more mature products that expand on basic intermediation, such as those provided by stock markets can provide efficient services of monitoring and risk amelioration to ensure that firms operate efficiently. The benefits of resultant economic growth should trickle down to poor households in the form of increased jobs and improved redistribution of resources. This is the indirect channel of influence, which is discussed first.

The second channel is a more direct channel that works by increasing access to finance for the poor. Through access to savings, credit and efficient

3. Wolff (2020) argues that defining poverty from a monetary perspective is limited because it is not necessary to have financial resources to meet a set of needs. However, this argument does not consider the particular characteristics of African and developing countries. The bulk of these countries do not have sufficient public provision and individuals and households have to privately provide even the very basic of needs such as school, housing and shelter. We acknowledge as noted in the discussion that other aspects of development contribute to understanding poverty, financial resources are necessary to address poverty in the African context and therefore must constitute a major part of defining poverty in that context.

payment systems, the poor can increase their consumption, make productive investments, invest in human capital and manage risk. This in turn reduces their vulnerability and gives them access to better opportunities in the labour market. This channel is discussed in the Chapter 3 section titled 'Account ownership'. Figure 2.1 provides a diagrammatic representation of how finance can affect poverty as discussed in this chapter.

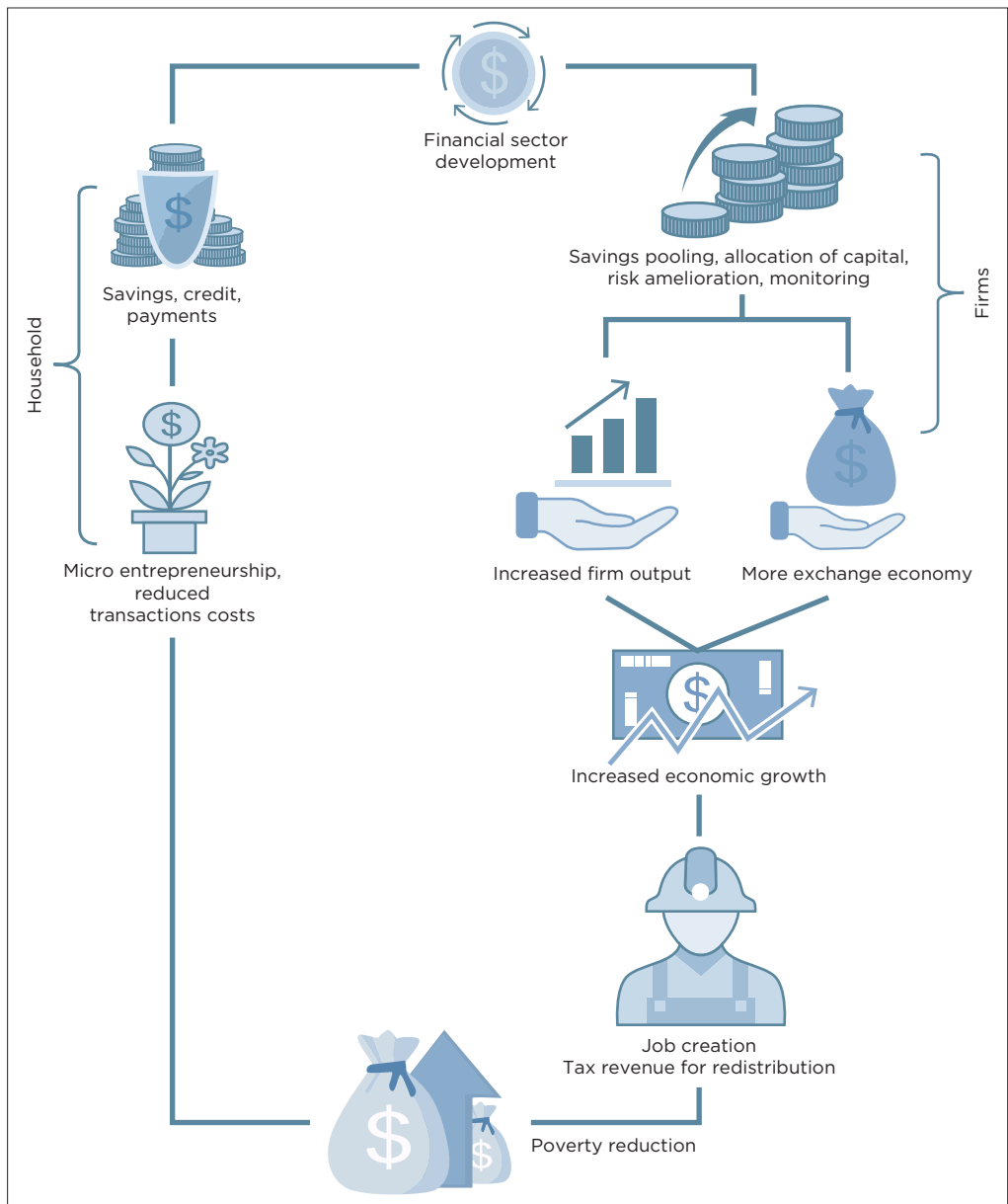


FIGURE 2.1: Channels of transmission summarised from the discussion.

■ Indirect channels of finance to poverty

The effect of finance on poverty through the growth channel can be considered as a two-tiered process. In the first tier, finance affects growth through various sub-channels. In the second tier, economic growth affects poverty. The literature typically refers to this as the finance-growth nexus. We use Levine's (2005) classification to further discuss the various channels through which financial development can affect growth.

■ From finance to growth

□ Production of information and allocation of capital

Economic theory proposes that the efficient allocation of capital occurs when capital flows to the most productive investment opportunities. However, this correlation presupposes that investors have the relevant information to make decisions. Financial markets, however, are beset with various information asymmetries that require significant cost outlays to resolve. However, the cost of getting this information can be significantly high to a point where it can discourage savers from investing (Levine 2005). Financial intermediaries can provide information about firms, potential returns and market conditions, thereby reducing the cost of acquiring and processing information. This leads to reduced transaction costs of productivity-enhancing investments that stimulate growth.

An economy that has financial markets that can better provide information is highly likely to have better capital allocation and resultant growth. In their model, King and Levine (1993) show that developed financial systems provide information about prospective entrepreneurs and use this information to sort out the most promising ones and allocate capital to them. Moreover, Tobin and Brainard (1963) argue that financial intermediation can help in expansion by lowering the cost of borrowing and allowing investors to borrow on easy terms.

The information advantage that financial markets have allows them to identify innovative entrepreneurs with new goods and processes, which in turn increases economic growth. In their models, Galetovic (1996), Blackburn and Hung (1998), Morales (2003) and Aghion, Howitt and Mayer-Foulkes (2005) demonstrate that financial development affects innovation through information provision and the mitigation of agency problems. For example, risk aversion and information asymmetries result in moral hazard problems. Addressing these problems in financial markets is very costly. Financial intermediaries can significantly lower these costs by providing insurance and improved monitoring. This in turn spurs innovative activities and economic growth (Aghion et al. 2005; De La Fuente & Marín 1996; Laeven, Levine & Michalopoulos 2015). Laeven et al. (2015) take it further and suggest that not only does financial development positively affect growth, but that continuing

financial development is also necessary for sustaining economic growth. They argue that 'technological innovation and economic growth will eventually stop unless financiers innovate' (Laeven et al. 2015:22).

□ Risk amelioration

The presence of information asymmetries and transaction costs increases uncertainties and the level of risk in investment. Financial intermediaries provide hedging and risk pooling, enabling investors to invest in high-return ventures even though this may be risky. Financial markets can provide investors with three ways of addressing risk. Firstly, financial markets offer investors opportunities to diversify their portfolios. This enables investors to spread their investments. Economic theory suggests that investors are typically risk averse (Díaz & Esparcia 2019; Javanmardi & Lawryshyn 2016). At the same time, higher return investments tend to be riskier. By providing investors with opportunities to diversify their investments across projects, regions and countries, financial markets can induce a portfolio shift towards higher yielding investments (Gurley & Shaw 1955). Acemoglu and Zilibotti (1997) demonstrate that financial systems offer opportunities for diversification of risky projects that promote the reallocation of resources towards high-return ventures and are likely to result in the increased economic growth.

Secondly, financial markets offer opportunities for investors to hedge against risk resulting from macroeconomic shocks. Such shocks are likely to affect projects and regions equally. A good example is the global financial crisis of 2007/2008. In such instances, financial markets especially intermediaries can offer opportunities for intertemporal smoothing of risk. They provide hedging by facilitating investments with a long-run perspective, affecting returns that respond to economic cycles. In this way, financial intermediaries can eliminate non-diversifiable risks (Allen & Gale 1997).

Thirdly, financial markets can increase economic growth by reducing liquidity risk. Liquidity risk arises when there is uncertainty about an investor's ability to convert assets into liquid resources such as cash and its equivalents at economically viable prices. It arises because of the mismatch between savers and investor preferences. On the one hand, savers prefer a high degree of liquidity and therefore make short-term deposits. On the other hand, higher return investments take long to pay off requiring long-term financing. Financial markets minimise liquidity risk by providing maturity transformation, especially through intermediaries.⁴

In the absence of financial market intermediation, households would tend to shy away from investing in high-yielding illiquid investments because of the

4. Diamond and Dybvig (1983) demonstrate how this process of borrowing short and lending long makes banks vulnerable to sudden demand for liquidity, which can lead to bank runs.

fear of idiosyncratic liquidity shocks. By pooling short-term deposits and making long-term loans, banks can bridge the maturity mismatch resulting in increased productivity of capital and economic growth. Diamond and Dybvig (1983) explain how this role is fulfilled by banks and Levine (1991) extends this to the role of stock markets.⁵

Furthermore, well-developed financial markets can reduce the possibility of inefficient use of quasi-rents extracted by the financial markets. To sustainably provide intermediation and risk pooling services, financial markets will absorb a fraction of the resources from households and firms by charging a lending interest above the deposit rate. When financial markets are not well developed, the resulting quasi-rents can be used on private consumption resulting in inefficient investments and depressed growth. When financial markets are developed enough to provide opportunities to convert illiquid assets into liquid ones at low costs, savers are incentivised to invest their money in illiquid assets with higher returns and greater positive effects on economic growth.

□ Pooling of savings

Increased growth requires the availability of large amounts of capital because of the indivisibility of illiquid investments. Financial development allows intermediaries to accumulate investment capital by pooling savings from several sources. This process reduces transactions costs especially because intermediaries have informational and scale advantages. The Schumpeterian growth model is one of the earliest to ever posit financial intermediaries as essential drivers of innovation, growth and development. Schumpeter (1911) argued that intermediaries facilitate transactions, promote the mobilisation of savings and better position risk and entrepreneurs' management. That means financial intermediaries allow for the collection of deposits from households that in turn are pooled together to fund entrepreneurial initiatives whilst enhancing processes of monitoring them.

Capital accumulation and the supply of loanable funds mostly rely on a saver's willingness to part with their money. For this to happen, savers must feel comfortable to place their savings in the hands of reputable borrowers as well as being sufficiently compensated for forgoing immediate use of their savings. The search for such borrowers is expensive and can discourage saving. Financial intermediaries can address this by paying a positive deposit rate. This will reduce the need for precautionary demand for money encouraging households to increase their savings rates.

5. The financial crisis, however, exposed the problem of excessive maturity transformation. The literature indicates that the severity of the refinancing problems amplified the subprime crisis (Gorton & Pennacchi 1990; Brunnermeier 2009).

The effect of a higher savings rate on economic growth, however, is ambiguous and depends on the nature of risk aversion as well as the strength of the income effect vis-à-vis that of the substitution. Higher deposit rates result in higher interest income that can encourage greater spending and therefore an increase in economic growth. This is the income effect. At the same time, increased savings rates mean that savers are reducing their consumption rate opting to deposit their money in a financial intermediary. This withdrawal of funds from the circulation into savings would dampen the economic growth rate. This is the substitution effect. The net effect on growth, therefore, depends on whether the substitution or the income effect is stronger.⁶

□ Easing trade and exchange

One of the basic functions of money is to act as a medium of exchange. Money, which is fundamental to financial development, enables and eases trade and exchange. In the absence of money, trade relies on barter which is costly because of costs associated with evaluating the attributes of goods. Developed financial markets facilitate the existence of a medium of exchange, which can lead to increased trade and exchange. Moreover, because developed financial markets reduce the cost of trade, they can encourage greater specialisation. Levine (2005) argues that the drop in transactions cost resulting from financial development is not a one-time event. Accordingly, continual financial development can further translate specialisation into increased exchange of technology and creative production.⁷

□ Monitoring

Financial institutions can also increase economic growth by improving cooperative governance through market-monitoring mechanisms. This is because when providers of capital can monitor the way that firms allocate and use capital, they will be willing to save or invest in the first place. Firm monitoring can be done directly through voting mechanisms or indirectly through boards of directors. However, because managers have significant discretion over information, they can undertake activities that do not necessarily align with those of the owners and in ways that cannot be effectively monitored by boards.

6. Shaw (1973) who is one of the key proponents of market-led financial markets in developing countries and the positive effect of savings on investment recognised the potentially substitution effects. However, he argued that due to low incomes in developing countries, consumers are more likely to change their consumption savings patterns in favour of savings as interest rates go above 10% so that the income effect will overcome the substitution effects.

7. Consider, for example, the development of MM, which has significantly reduced the cost of exchange in many developing countries. This has improved the productivity of the poor and introduced innovation of new products in these countries. See Manyika et al. (2016) for a survey on the extent to which digital finance has enhanced exchange.

For instance, boards of directors do not necessarily represent the interests of minority shareholders (Fox & Lorsch 2012; Fuzi, Halim & Julizaerma 2016). In cases where large shareholders may exist, the literature shows that they often act in their own interest rather than the interest of the shareholders (Yang 2016).

Theory suggests that financial mechanisms may ameliorate corporate governance problems and thereby accelerate growth. Stock markets have been shown to provide sufficient information that can exert pressure on managers to align their decisions with the interests of the owners and thereby reduce and eliminate waste. For instance, owners can use stock prices as an indicator and link the performance of the stocks to the managers' compensation resulting in better governance (Diamond & Verrecchia 1982).⁸ Moreover, stock prices can be a good indicator of underperforming firms.⁹ When such firms are identified, it makes takeovers much easier. If a takeover implies the loss of a job for a manager, the threat of such a takeover will incentivise the manager to align their activities and eliminate waste with a subsequent positive impact on the economy (Cannon et al. 2020; Sul 2017).

An additional mechanism that can improve monitoring in the financial markets is the use of debt contracts particularly in the presence of asymmetric information. Aghion, Dewatripont and Rey (1999) have linked debt contracts to improvements in economic growth. Debt contracts work by controlling managerial agency costs. It forces managers to allocate internal funds to profitable investments. If the debt is not paid, it could lead to bankruptcy and a loss of jobs. Furthermore, the stigma of having presided over a collapsed firm minimises the chance of the manager getting jobs elsewhere. Therefore, the threat of job loss resulting from failure to make debt repayments works as a discipline mechanism and helps to monitor the performance of the managers (Aziz & Abbas 2019; Czarnitzki & Kraft 2009). Moreover, by using debt financing, the firms open themselves up to monitoring by the financing institutions providing additional influence on corporate governance. Diamond (1984), Jensen (1986) and Aghion and Bolton (1992) provide early models that demonstrate how debt affects corporate governance.

The literature also indicates that the financial sector can provide monitoring through intermediation. This role of monitoring goes back to Schumpeter's (1939) assertion that:

[7]he banker must not only know what the transaction is which he is asked to finance and how it is likely to turn out, but he must also know the customer, his business and even his private habits, and get, by frequently 'talking things over with him', a dear picture of the situation. (p. 116)

8. The work of Holmstrom and Milgrom (1987) and extensions by others such as Baker, Gibbs and Holmstrom (1994) and Palley (1997) show that compensation, which is completely linked to firm performance, will not work for risk averse managers.

9. The assumption here is that markets are efficient, and prices reflect all the information about the shares.

Implied in this sentence by Schumpeter (1939) is the fact that intermediaries such as banks must gather as much information as they can about their customers. We have already alluded to the fact that by pooling savings and identifying the most profitable and more secure projects to fund, intermediaries reduce the cost of investment. In addition to these services, financial intermediaries have been delegated the function of monitoring the loan contracts between themselves and the firms who borrow from it as suggested by Schumpeter (1939). Theoretical models have identified channels through which the monitoring channel can affect growth. For instance, Bacivenga and Smith (1993) show that monitoring by intermediaries can reduce credit rationing. Others such as Sussman (1993) and Harrison, Sussman and Zeira (1999) have shown that the reduction of information asymmetries and monitoring of innovative activities can boost economic growth. In addition to the effect on domestic capital allocation and monitoring, effective intermediaries can be a catalyst for increased foreign capital inflows. Foreign capital provides an important complement to domestic capital.

■ From growth to poverty

Growth can affect poverty by increasing employment opportunities as well as increasing real wages. Moreover, increased economic growth results in capital accumulation. This can increase investible funds available to the poor that in turn could increase their incomes and reduce poverty. An additional channel comes through higher tax revenue, resulting in increased government capacity to increase social spending.

□ Increased jobs and wage differentials

Early literature relied heavily on the trickle-down effect, arguing that any increases in output will eventually trickle down to the poor. Aghion and Bolton (1997) show that the trickle-down effect is not sufficient to achieve an efficient distribution of resources that benefit the poor. Redistribution of the gains from economic growth should be enhanced by redistributive processes. They show that in the presence of redistribution, capital markets are less distorted allowing the poor less distorted opportunities for productive investment.

Economic growth also reduces inequalities and poverty by increasing job opportunities. This can result in reduced wage differentials between skilled and unskilled labour. Evidence, however, shows that growth alone is not enough for the creation of jobs that benefit the poor. The pattern and nature of the growth matter. The International Labour Office (2015) suggests that the impact of economic growth on job creation depends on both the rate of growth and the efficiency by which growth translates into

productive jobs. The efficiency of growth depends on factors such as the sector composition of growth and the capital/labour intensity. Because the poor often have very low levels of skills, growth that is biased towards sectors that are labour intensive will tend to have a significant impact on poverty.

Later efforts, therefore, recognised the limitations of the trickle-down theory, and terms like *pro-poor growth* and more recently *inclusive growth* are more dominant in the literature. Although both terms are very similar in their focus, there are critical differences that show the progression of the understanding of how growth affects poverty. On the one hand, pro-poor growth focuses almost entirely on the poor and encourages growth that disproportionately benefits them. Whilst this growth may not entirely benefit relevant sectors, it can increase government revenue through taxes and other means. This can in turn be redistributed through transfers and increased government spending. On the other hand, inclusive growth seeks to benefit larger proportions of the population by focusing on the creation of productive employment and entrepreneurship (see Ianchovichina & Lundstrom 2009; Klasen 2010; Ranieri & Ramos 2013). Labour productivity tends to increase with improvements in skills and socio-economic indicators. It follows that increased access to finance, which can improve investment in skills, will not only improve the conditions of the poor but can also contribute to sustainable economic growth.

□ Human capital and government spending

Growth can also affect poverty through increased government revenue and spending. One strand of literature focuses on investment in human capital as a source of development. According to this argument, human capital is a by-product of investment. However, as argued by McKinnon (1973), such investment is indivisible. Access to the credit market, which would make such investment possible, is unequal because of financial market distortions. As a result, the poor are credit constrained and cannot borrow to invest in education (Galor & Zeira 1989; Greiner, Semmler & Gong 2016). Governments can redistribute the gains from increased economic growth by taxing wealthier individuals and investing in education for instance. Such redistribution will always spill over to the poor to some extent, and if the spill over is substantial, it will cause the poor to qualitatively change the pattern of their investment in education (Galor & Tsiddon 1996; Perotti 1993). This in turn will result in accelerated reduction of inequalities and poverty over time. Investment in skills, as well as early childhood education, tends to have a significant impact on economic growth (Delalibera & Ferreira 2019; Hanushek 2016; Hanushek & Woessmann 2020).

■ The direct effect of finance on poverty

□ The basic McKinnon–Shaw Hypothesis

The direct effects of finance on poverty are underpinned by the *McKinnon–Shaw Hypothesis*.¹⁰ The main thrust of the hypothesis is that when financial markets are well developed, and real interest rates are positive, financial markets will function in a manner that enables the poor to have access to more efficient and relevant services. McKinnon (1973) proposed a complementarity hypothesis, which predicts that financial and physical assets are complementary. The hypothesis rests on two assumptions. The first is that economic agents are limited to self-financing, and secondly, those productive investments have considerable indivisibilities. The model makes no distinction between savers and investors. The indivisibilities in investments require that a potential investor must accumulate funds until such funds are sufficient to undertake the desired investment. This results in an intertemporal complementarity between financial and physical capital. Financial services can benefit the poor by offering profitable opportunities for saving and hence accumulating. In that way, financial services can affect poverty through the savings channel or ‘conduit’ effect. For this to happen, interest rates must be liberalised and allowed to be market-determined so that the savers can be attracted to save based on the prospect of interest income.¹¹ Because McKinnon’s Hypothesis is based on self-financing, it is sometimes referred to as an outside money model.

Like McKinnon, Shaw argues in favour of financial market liberalisation and indicates that higher interest rates will increase the incomes of savers and increase opportunities for diversifying portfolios of domestic assets. In contrast to McKinnon, Shaw’s (1973) hypothesis does not require investors to be self-financing. In his *debt-intermediation view*, savers and investors are linked by a ‘collection of financial markets’, which serve as intermediaries (Shaw 1973:51). For that reason, it is an inside money model. These intermediaries attract savings, which in turn increase the supply of

10. McKinnon’s (1973) and Shaw’s (1973) hypotheses were proposed in the context of financial repression in developing countries. McKinnon defined financial repression as a ‘phenomenon where bank credit remains an appendage of certain enclaves, where ordinary government deficit on current account frequently pre-empts the limited lending resources of the deposit bank, and financing of the rest of the economy must be met from the meagre resources of moneylenders, pawn brokers, and cooperatives’ (McKinnon 1973:69).

11. In simple terms, outside money can be defined as money that is created outside the private sector. It is unbacked or is backed by some asset that is not in zero net supply within the private sector. Examples include cash and bank reserves. In contrast, inside money is created inside the private sector. It is backed by private credit. Examples of inside money include deposits that individuals deposit in the bank. These become the basis for bank loans. You can read Gurley and Shaw (1960) for a background on inside and outside money.

loanable funds. Therefore, in addition to the emphasis on savings, Shaw's debt intermediation view introduces a credit channel of finance to poverty.

Shaw also argues that financial intermediaries improve the efficiency of the financial system and reduce allocative waste by providing savers who, according to Shaw, are working under a handicap of ignorance' with information about returns to their deposits (Shaw 1973:49). Information is seen to be expensive and incomplete resulting in fragmented financial markets.¹² Similarly, such markets exhibit a high degree of credit rationing. Financial development minimises this fragmentation, reduces the cost of borrowing and thus increases access to both savings facilities and credit for the poor.

Shaw (1973) posits that money is a debt of the monetary system whose primary purpose is to serve as a means of payment. He argues that the amount of money demanded is closely linked to money as a means of payment. This introduces the payments channel through which finance can affect the poor in addition to the savings and credit channels suggested by both McKinnon and Shaw's hypotheses. By providing reliable and affordable payment services for daily transactions and remittances, the financial sector can help alleviate poverty. An accommodative payment channel bridges a key exclusionary gap for the poor who in most cases are at the periphery. This allows them to participate in the financial mainstream conveniently and affordably. It becomes easier for them to transact as they make and receive payments at an affordable price, which directly impacts their everyday life experiences.

□ Critiques of the basic McKinnon-Shaw Hypothesis

In summary, the McKinnon-Shaw Hypothesis points to three channels through which finance may directly affect poverty. These include savings, credit and payment systems. In general, these channels are well-recognised and accepted. However, several critiques have been levelled against the basic McKinnon-Shaw Hypothesis. The critiques that most pointedly affect the impact of finance on poverty include critiques about information asymmetries including the role of interest rates, institutional arrangements around collateral and the effect of loan size. Related to that is the literature around the effect of finance on inequalities and the effect of financial crises.

□ *The role of interest rates*

The reliance of the McKinnon-Shaw Hypothesis on interest rates is derived from the intertemporal consumption of the household. Intertemporal substitution suggests that an increase in interest rates will make current

12. The hypothesis does not explore the role of information extensively. However, Shaw (1973) notes that this information asymmetry and opacity increases the cost of financial service and results in resource misallocation.

consumption expensive relative to future consumption. Accordingly, households will postpone current consumption and save. However, some theoretical models have proposed that aggregate levels of consumption and savings do not necessarily respond to interest rates (Hviid & Kuchler 2017; Werning 2015; Williamson 2004). These models are in resonance with studies that have demonstrated a weak interest rate elasticity of savings and in some extremes a negative effect (Boskin 1978; Giovannini 1983). For instance, Khan (2010) demonstrates, in a study of over 100 developing countries, that interest rates have a significant negative effect on the savings rate. Rather, the savings rate seems to be more sensitive to personal income level, availability and accessibility to financial institutions, dependency rate and foreign savings rate and inflation (Gupta 1987).

□ **Information asymmetries**

Financial markets are characterised by market imperfections and resultant credit rationing. The earliest references to credit rationing are alluded to by Keynes when he refers to 'a fringe of borrowers whose desire to borrow is not satisfied' (Keynes 1930:364). Various models considered the drivers of such rationing. These include Hodgman (1960) who focused on the role of default as well as Freimer and Gordon (1965) and Jaffee and Modigliani (1969) who focus on quantity rationing, amongst others.¹³

Of importance to the finance-poverty relationship is the literature on information asymmetries. This literature pioneered by Stiglitz and Weiss (1981) indicates that the main reason for credit rationing is the presence of adverse selection and moral hazard. Adverse selection arises because higher risk borrowers are more likely to increase their demand for loans than lower risk borrowers as the interest rate rises. In the presence of information asymmetries, lenders cannot easily distinguish between the two classes of borrowers. Moreover, the moral hazard arises because once the borrowers have received the loan, the higher interest rates can induce them to make riskier investments that have a potential for higher returns. Because of high costs of monitoring, lenders resort to embedding control mechanisms within lending contracts. One of the mechanisms used is to raise the interest rate to compensate for the risk of a payment default. This tends to crowd out safer borrowers.¹⁴ Moreover, Jaffee and Stiglitz (1990) argue that credit rationing always impacts the marginal groups more disproportionately.

13. Jaffee and Stiglitz (1990) provide a useful summary of the literature

14. In his (1993) paper, McKinnon responded to the information asymmetry concern by modifying his hypothesis. He advocated for restrained financial liberalisation with an upper limit of real interest rates of between 5% and 9%. This is in contrast to Shaw (1973) who argued for positive interest rates of about 10%.

□ ***Extensions of the Stiglitz–Weiss model***

Important to the focus of this chapter are the extensions related to the role of institutions, collateral and non-pricing rationing. The first extension incorporates the role of institutional factors, especially legal enforcement. When a lender has a high possibility of taking legal action and recovering the loan, it is likely that credit rationing will be reduced (Jin & Zhang 2019). Legal enforcement tends to be very weak in most African countries (Acemoglu et al. 2014). This would exacerbate credit rationing. Moreover, sometimes legal recourse may be either absent or costly for the lender. In such a case, the lender can design a contract that makes the cost of default higher than the benefit of default. For instance, Eaton and Gertsovits (1981) and Allen (1983) show that defaulting can cost the borrower by further limiting access to the loan market. One way this has been operationalised in modern credit markets is in the use of credit histories. By looking at a potential borrower's past payment history, a lender can determine the potential of default. If the borrower knows that the record of defaulting will be retained and visible to other lenders, it can constrain their behaviour and encourage them to meet the repayment obligation.¹⁵

Credit histories are not typically available for the poor. This is because they normally use informal sources of credit such as moneylenders, family and friends. It is worth noting, however, as discussed later in Chapter 2 that developments in financial markets that have increased the use of digital finance are reducing the information opacity in financial markets for the poor thereby improving the chances of having usable credit histories. We discuss this and the associated benefits and challenges in Chapter 2.

□ ***Collateral***

Theoretical models show that the use of collateral can be used to address credit rationing. Nevertheless, as demonstrated by Stiglitz and Weiss (1981, 1986, 1987), increasing collateral requirements have a negative selection effect giving wealthier individuals a higher chance of accessing credit. Moreover, groups of wealthier individuals are more likely to include individuals who are risk-takers. This would make collateral an undesirable instrument for the complete elimination of credit rationing. In practice, the poor are also unlikely to have the required types and amounts of collateral (Fafchamps 2013).¹⁶

15. In their relationship lending model, Boot and Thakor (2000) show that state failure to get credit because of previous default is a strong incentive for not defaulting.

16. Fafchamps (2013), Geleta (2014), Hadi and Kamaluddin (2015), and Simatele and Dlamini (2020) show that social capital is used as collateral in many Rotating Credit and Savings groups in Eswatini, which have higher levels of repayments amongst the poor than in formal credit markets.

□ **Loan size**

The literature suggests that credit rationing can be addressed by reducing the loan sizes. This forces the borrowers to increase their own equity in the investment and forces them to behave in a way that will maximise the return and minimise the risk of failure (Jaffee & Stiglitz 1990; Stiglitz & Weiss 1981). However, the poor often do not have funds to provide additional equity. The small size of the loans means that borrowers would have to frequently go back to the lender for additional funding, which increases the risk exposure for the lender. The lender is forced to continue lending to protect the original loan. The frequent loans require additional screening and monitoring making lending to the poor quite expensive. Consequently, they get rationed out even with small loans.

□ **Over-indebtedness**

Another strand of literature that challenges the simple McKinnon–Shaw Hypothesis is a growing literature on over-indebtedness of the poor.¹⁷ Whilst access to credit is a key part of increasing finance for the poor, this literature warns that excessive accumulation of debt for liquidity constrained individuals can lead to increased poverty (D’Alessio & Iezzi 2013). Sherraden and McBride (2008), for example, argue that the push towards increasing access to credit markets for the poor has pressured them to take additional credit resulting in an increased risk of indebtedness and debt delinquency. Barba and Pivetti (2009) and Kim, Wilmarth and Henager (2017) further argue that increased debt is being allocated to increased household consumption rather than investment thus effectively reducing savings.¹⁸

Moreover, by nature of their social exclusion, the poor are more likely to exhibit negative credit behaviour such as failing to keep up with their loan repayments (Kim et al. 2017; O’Neil & Xiao 2014). For instance, Van Zandt and Rohe (2011) show that low-income households in the United States were not able to sustain mortgage payments beyond two years. Over-indebtedness compounds the poor’s access to formal financial markets given the reliance on credit histories in modern credit markets.

17. Barbier, López and Hochard (2016), in their model, show that higher levels of household debt lead to steady-state growth amongst rural households. However, this conclusion relies on the existence of lending constraints, which limit the amount of debt that low productivity households can access. Where markets are very liquid and the constraints to lending are not binding, over-indebtedness can lead to increased levels of poverty as households’ resort to higher-cost lenders such as informal lenders to repay existing debt (see Chakrabarti et al. 2008; Hurd & Rohwedder 2010).

18. Kim Intel indicate that this behaviour can change in times of crisis such as observed during the global recession of 2007–2009. It is important to note, however, that a large part of this decline in debt accumulation during this time resulted from supply side constraints and worsening labour market conditions.

□ **Finance and inequality**

An added critique of a simple interpretation of the McKinnon–Shaw Hypothesis focuses on the distributional effects of financial development, especially access to credit. Greenwood and Jovanovic (1990) hypothesise that as the economy passes from a primitive stage to development and the financial structure starts to develop, growth and savings both increase. The supply of loanable funds also increases. For intermediaries to effectively allow capital to flow to its most profitable investments, screening and risk pooling are necessary. This process is costly. The poor generally do not have the initial outlay required for this screening. As a result, the rich have greater access whilst the poor are rationed out of credit markets. This results in an increased gap between the rich and the poor.¹⁹ The resulting lack of access to credit can also exacerbate inequalities by limiting investment in human capital and access to economic opportunities even in the presence of well-developed financial markets (Atkinson 1983; Beck, Demirguc-Kunt & Levine 2009; Johansson & Wang 2014; Rajan & Zingales 2003).

The increase in inequality is expected to be transitory and should give way to more mature markets and greater access for the poor. The institutional weakness and financial market gaps characteristic of underdeveloped financial markets that initially open access on the intensive margin give way to financial deepening. Financial deepening works on the extensive margin increasing access for the poor and eventually reducing income gaps. Therefore, whilst this literature cautions about the possible negative effect of financial development, it also points to the fact that increasing financial sector development benefits the poor.²⁰

□ **Financial crises and poverty**

The McKinnon–Shaw Hypothesis is also criticised for not accounting for the impact of financial crisis and instability. Where information asymmetry is pervasive, adverse selection and moral hazard can lead to widespread financial distress and fragility. This was particularly pronounced in many African countries as most financial liberalisation was accompanied by capital account liberalisation with little attention paid to sequencing.²¹ Financial crises affect both the living standards of the poor as well as their ability to get out

19. Greenwood and Jovanovic (1990) agree with the McKinnon–Shaw link of economic growth and financial development. However, they suggest that the nature of financial growth leads to non-linearities, which result in a development cycle reminiscent of the Kuznets hypothesis.

20. Nikoloski (2013) and Baiardi and Morana (2016, 2018) provide recent evidence.

21. Arestis and Sawyer (2005) argue that sequencing does not really solve the problem. They give examples of Chile and Uruguay where sequencing was incorporated but liberalisation resulted in financial distress and fragility.

of poverty. The standard of living is affected through reduced access to jobs and lowered food security. Contrary to neoclassical predictions, labour demand tends to be procyclical in practice. In a crisis, firms tend to absorb higher unit costs and retain their skilled workers so that those with low incomes and low skills lose their jobs first.

Moreover, crises negatively affect government budgets and compromise their social service provision. At the same time, banks tend to hoard liquidity resulting in a credit crunch. Those on low incomes are more likely to be rationed out of the credit market as a result. Furthermore, as supply declines, food prices increase. Because they have very poorly diversified asset portfolios, the standards of living for the poor will deteriorate further. In highly globalised economies, relative prices change in favour of tradeable goods resulting in the decline of earnings for those who are in non-tradeable sectors. Most African economies are import-dependent and commodity-dependent for exports. Crises therefore often result in rapid depreciation of domestic currencies further increasing the cost of necessities.

■ Financial inclusion – The policy response

In a broad sense, policy responses with an understanding that finance has a positive effect on poverty can be termed as financial inclusion policies. Early policy responses to the importance of access to finance for development and poverty are mainly composed of top-down state-led approaches. Many developing country governments especially in Africa embarked on the establishment of state-owned development banks, the nationalisation of commercial banks and the control of interest rates and reserves. These measures were designed to increase economic growth by allowing firms to access credit at low interest rates. Moreover, other administrative controls in the financial sector helped governments to direct credit towards sectors that were deemed to especially benefit growth and poverty. This approach was motivated by literature that suggested that money and capital are substitutes in the portfolio of private wealth. Tobin and Brainard (1963), for instance, argue that interest rate ceilings and minimum reserve requirements can be expansionary by increasing investment. Similarly, Solow's (1956) model asserts that growth is independent of capital formation in the long run and therefore savings are irrelevant for growth in the long run. This idea is amplified in Solow (1988).²²

By the 1980s, the tide of policy was radically changing in most African countries. Under the pressure of structural adjustment programs, most countries were required to liberalise their financial markets. The reasoning

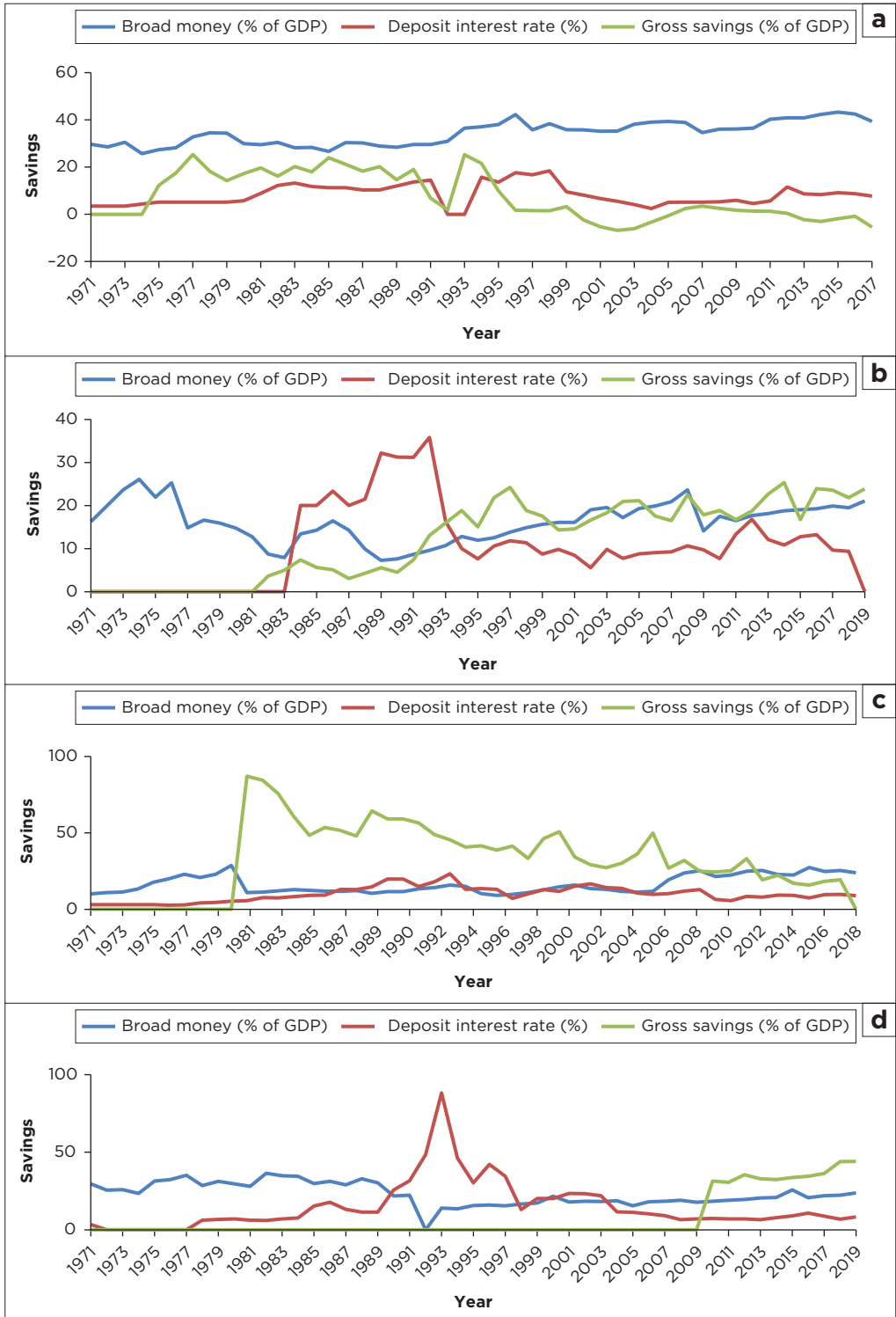
22. Solow's contention is that long run rate of economic growth depends entirely on the rate of technological progress.

behind these reforms is based on McKinnon (1973) and Shaw's (1973) hypotheses discussed earlier. We discussed that the McKinnon–Shaw Hypothesis relies on neoclassical market clearing assumptions. Markets must work to equilibrate the demand and supply of loanable funds. In such a setting, when interest rates are repressed by interest rate ceilings, for example, savers have no incentives and therefore the supply of capital is reduced, consequently limiting investment. The removal of these controls that lead to positive deposit rates is expected to attract savers. The higher savings should then result in increased investment capital and ultimately growth in output. The policy emphasis, therefore, was on market-led financial policies to stimulate efficiency in financial markets. Consequently, many countries liberalised their financial markets.

Prominent amongst the new policy approaches was the removal of interest rate ceilings, capital controls and directed lending. Many countries also privatised state-owned financial institutions. Figure 2.2 shows a panel of data for four selected Africa countries. Apart from Uganda, the data show little improvements in financial depth and savings. Some mild improvement in financial depth can be seen in Kenya. There is very little evidence of improvements in savings across these countries. For instance, Kenya liberalised its financial sector in 1991. Only a mild increase in financial depth is observed. Gross savings increased but only for a short period. Similarly, Zambia liberalised its financial sector in 1991. The liberalisation is followed by a dramatic increase in deposit rates with little corresponding increase from financial deepening. In the same vein, liberalisation in Nigeria is followed by a moderate increase in interest rates but no accompanying increase in financial deepening and national savings.

Interest rates rapidly increased, in most cases to well beyond 20%. Many governments were forced to intervene to save the financial markets. The literature supports the trends suggested by the data in Figure 2.2. For instance, Mosley (1999) investigated the effect of financial liberalisation in four African countries. He found that liberalisation, though affecting interest rates, did not filter through to the savings rate except in Uganda. Other researchers support this for other countries, including Khan (2010) for over 100 developing countries and Motelle and Masenyetse (2012) for the Case of Lesotho; Orji, Ogbuabor and Anthony-Orji (2015) for Nigeria and Fowowe (2013) for 23 sub-Saharan African countries.

Some of the reasons the data may not support the McKinnon–Shaw Hypothesis relate to the critiques discussed earlier. Primarily, developing country financial markets exhibit high levels of information asymmetries. At the time of reform in most of these countries, information asymmetry was ubiquitous, making it difficult for both savers and lenders to effectively assess the market. Many private sector lenders scaled back on lending. For example, Barclays Bank in Zambia did not give out any credit for several years until 2006 (De Luna Martínez 2006).



Source: World Bank (2020).

FIGURE 2.2: Savings and intermediation in selected African countries: (a) Kenya, (b) Uganda, (c) Nigeria and (d) Zambia.

The rapid increases in interest rates resulted in increased financial sector instability as low-risk investors dropped out and the loan applicant pool remained with high-risk borrowers. Many countries experienced instability in financial markets with a high rate of bank failures following financial liberalisation.²³ Many had to implement significant financial restructuring to restore the financial sector. In Nigeria between 1989 and 1996, the number of distressed banks increased from 8 to 52. In addition to many bank closures, the Central Bank of Nigeria closed an additional 26 banks in 1998 and had to put a recapitalisation program that reduced the number of banks from 89 to 25 in 2004 (Babalola Adeyemi 2011; Marshal 2017). Similarly, Zambia experienced volatility in the financial markets with nine of the 18 banks being closed between 1995 and 2001 (De Luna Martínez 2006; Maimbo 2002).²⁴

Empirical evidence also supports the financial crisis hypothesis. The literature shows that financial crises over the last three decades have resulted in negative impacts of as much as 3% per capita income difference for the poor than for other population groups (Vilar-Compte et al. 2014). Similarly, Rewilak (2018)'s cross-country study shows that financial crises can reduce the income of the poor by more than 10%. Moreover, financial crises have a negative effect on social service provision. The poor lose some of the benefits as government budget contracts (see Vilar-Compte et al. 2014; Habib et al. 2010; Gerry, Mickiewicz & Nikoloski 2014; Rewilak 2018)²⁵. Similarly, research that suggests that the existence of poverty and high inequalities in countries can lead to excessive debt accumulation and over-indebtedness is emerging.

■ What is financial inclusion?

Taking the caveats discussed in the previous section, researchers and policy makers are almost overwhelmingly in agreement that access to financial services is important for the poor. Accordingly, many countries have committed to expanding financial access to their citizens. The Maya declaration is one such commitment. As of 2018, 92 developing and emerging countries had signed the declaration, committing to 80 measurable targets to increase financial inclusion.²⁶ Furthermore, financial inclusion is a target in 8 of the 17 SDGs of the United Nations. It is positioned as an enabler for poverty eradication, alleviation of hunger, gender equality and economic empowerment

23. Recall that in contrast, Shaw (1973), suggests that poor quality of bank portfolios is due to repressed financial markets.

24. Similar experiences are cited for other countries (see Waweru & Kalani 2009) for Kenya and (Hauner & Peiris 2005) for Uganda.

25. Amongst other empirical studies.

26. See <https://www.afi-global.org/maya-declaration>.

of women, promoting economic growth and jobs, reduction of inequality as well as industry, innovation and infrastructure.

Financial inclusion has been defined in various ways. Firstly, some literature refers to financial inclusion as the availability and equality of opportunities to access financial services (Paramasivan & Ganeshkumar 2013; Svitlana, Svitlana & Dmytro 2019). In such cases, measures such as the number of bank branches per given population are used as measures. Also, the number of ATMs and the number of microcredit institutions in a specific area are considered. This definition is sometimes expanded to include the quality, appropriateness, timeliness and affordability of financial services (Demirguc-Kunt & Klapper 2013; Ongo Nkoa & Song 2020). Measuring quality is a recent but important dimension of measuring financial inclusion. AFI (2016) has developed eight indicators to measure quality and include affordability, transparency, convenience, fair treatment, consumer protection, financial education, indebtedness and choice. These measures address most of the exclusionary factors that face populations that are on the margins and are excluded from financial markets mainly because of some form of social exclusion.

More recently, the definition of financial inclusion has started to also significantly focus on usage. Evidence seems to suggest that even where services are available, the uptake of the services is sometimes poor. For example, about 6 million bank accounts were opened in South Africa under the Mzansi initiative. By 2011, only 3.7 million of these were active (World Bank 2014). Additional measures are therefore being increasingly used to capture the levels of financial inclusion. One such key development is the inclusion of the use of MM accounts in measuring financial inclusion. The data measure the number of individuals who use a given service in a 12-month period. The World Bank Findex database shows that up to 40% of adults in developing economies use only MM accounts that are not linked to bank accounts.²⁷ Excluding such a significant dimension in the measurements would severely skew the financial inclusion measures. MM has especially been hailed as a key player in increasing financial inclusion in Africa where other forms of financial access are severely limited. The literature also suggests that the emergence of MM services has catalysed the creation of a new type of entrepreneurship resulting in increased job creation (see Suri & Jack 2016; Koblanck 2018).

When individuals are financially excluded as discussed above, it does not mean that they do not use any financial services. Modern economies are anchored on the use of money as a medium of exchange, store of value, unit of account and a standard for credit. As a result, when the poor and other groups on the margin cannot access formally defined financial services, they will use informal finance. These include finance from family and friends,

27. See <https://globalfindex.worldbank.org/> and Demirguc-Kunt et al. (2018).

informal savings clubs, barter, saving in kind and informal money lenders. These forms of finance often disadvantage users. For instance, informal savings clubs do not normally pay interest. Therefore, the savers lose out on income from interest. Similarly, saving in kind exposes the saver to risk, especially because insurance markets are absent amongst these population groups. Money lenders charge very high interest rates and have often been said to charge up to 100% interest within very short periods. It is therefore important that financial inclusion efforts are intensified to place emphasis not only on the availability of formal financial services but also on their usability, quality, appropriateness and cost.

■ Dealing with poverty through financial inclusion

□ Access to savings services

Increasing access to savings services can help the poor to smooth consumption, manage and mitigate risk and invest in human capital development. It can also allow them to accumulate for productive investment. Savings services can be improved by increasing access to bank accounts as well as the provision of alternative delivery methods such as digital finance and linking informal savings groups to formal financial services.

□ Increasing access to credit

In addition to savings, credit can increase the potential of the poor to engage in income-generating opportunities. The literature shows that higher levels of access to credit for the poor are positively associated with increased entrepreneurial activities. The low incomes of the poor mean that they cannot exploit economic opportunities because they are likely to have very low savings. Similarly, as we will discuss in Chapter 2, the poor also tend to save in kind because of market frictions. Access to credit market can help to mitigate against these frictions and allow the poor to invest in micro and small business, a factor that could result in reduced poverty levels. The most widely adopted method has been to increase microcredit, mostly modelled after the Grameen Bank Model.²⁸

□ Facilitating payments

Payment systems are important for financial inclusion and can affect poverty in various ways. For instance, efficient payment services can improve financial

28. The literature is contradictory on the efficacy of microfinance on poverty but not on the impact of access to credit. The main arguments advanced against microfinance include that microcredit is often used for consumption and not investment, that it leads to over indebtedness, is expensive and exploitative. We explore these arguments further in Chapter 2.

inclusion by reducing the cost of transacting, managing cash as well as making money transmissions. Most notably, digital payments have reduced the cost of providing financial services to the poor. Many households have cut travel distances to points of service as well as avoided high bank charges as a result. Despite the increasing use of digital payments, the poor are still largely dependent on cash for day-to-day transactions. This is mostly because of the low acceptance of digital payments instruments in informal markets where most of the poor transact. When the payments system is unstable, the cost of transactions can increase tremendously.²⁹ Moreover, payment systems can impact poverty by providing competitive markets for money transmission. Available literature demonstrates that the use of digital payments has also significantly reduced the cost of transmitting money (Manyika et al. 2016; Suri & Jack 2016). It has resulted in an increase of both the volume and value of remittances received by the poor with a consequent increase in their disposable income as well as mitigating and managing shocks. Finally, the use of e-payments for government welfare benefits has also reduced the cost for the poor. For instance, Muralidharan, Niehaus and Sandip Sukhtankar (2016) show that the shift to digital payments in India reduced the bribe demands on cash payments by 47%. Finally, in addition to enabling efficient trade and exchange in day-to-day transactions, retail payment systems act as a gateway by facilitating access to other financial services such as savings, insurance and credit.

□ Increasing access to insurance services

Insurance allows consumers to manage their expenses as well as protect against and mitigate unforeseen circumstances. In many developing countries, insurance services suitable for the needs of low-income consumers are either missing or very limited. As a result, they are very vulnerable and susceptible to shocks. The provision of inclusive insurance services can help to address poverty by allowing low-income households to protect their lives, health and assets. Whilst savings can sometimes be used to address such uncertainty, the level of savings for the poor is so low that they cannot adequately address high-impact shocks. Providing insurance services to low-income households, however, is costly because of the small premiums. Most of the premiums often go to administration expenses, distribution costs and prudential margins. Developments in technology can help reduce these costs leaving sufficient funds for disbursements. Therefore, to address poverty through insurance services, governments should design policies that create an enabling environment to harness new technologies that support the provision of

29. For example, Zimbabwe has had a very unstable payment system since 2008. Despite moving to largely to digital payments, the cost of making payments is still very high, and the demand for cash in informal markets is still high.

insurance services at a low cost. This can sometimes mean the enacting of supporting regulation and sometimes investing in supporting technology. These policies would most be effective if they are integrated in national financial strategies.³⁰

Overall, the presence of the high costs of providing financial services and the related low-profit margins continue to challenge improvements in financial inclusion. Furthermore, the opacity of the poor means that many service providers do not understand their needs, which results in the provision of poorly matched services. Transactions costs, lack of trust and regulatory barriers hinder the supply of financial services. Although developments in digital finance are expected to reduce the cost of providing these services, inadequate infrastructure and other market frictions continue to make it expensive to provide financial services to the poor. For instance, Mazer and Rowan (2016) demonstrate that multi-firm interoperability agreement in Tanzania significantly increased competition and reduced costs whilst the absence of such an agreement of provision in Kenya amplified the impact of Safaricom's dominance in the market and resulted in higher costs to consumers. Similarly, Simatele (2020) shows that Econet's dominance in Zimbabwe resulted in very congested markets and frequent service failures.

■ Conclusion

Access to finance has become a very important tool in the fight against poverty. Many governments have incorporated financial inclusion as a key tenet in their national financial policies. The empirical evidence on the efficacy of finance for poverty reduction, however, does not provide consensus. Whilst the evidence clearly supports the fact that finance positively impacts growth, support for the finance poverty at the macroeconomic level nexus is weak. Nevertheless, the theories provide evidence of the need for access to finance as a tool for expanding command over various resources to make productive investments, invest in human capital as well as to manage risk.

Within the limited scope of this chapter, the basic theoretical underpinnings of the argument for financial development and expanding access of financial services to the poor have been presented. The channels of transmission from finance to poverty are discussed. Nevertheless, the unique characteristics of developing countries including high levels of information opacity, low incomes and high levels of income inequality have minimised the effectiveness of these channels. Nevertheless, these mechanisms lay the foundation for understanding the importance of financial poverty alleviation and provide a basis for engaging both researchers and policymakers in conversations that make meaningful and real contributions to poverty reduction debates.

30. See De Martinez et al. (2018), Rhyne and Kelly (2018) and MAPRE (2020) for additional reading.

Characterisation of financial services amongst the poor

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■ Introduction

The discussion in Chapter 1 confirmed that there is a strong and positive relationship between financial sector development and poverty, either by directly allowing the poor more control of their finances or by indirect means through the benefits of increased economic growth. Accordingly, many initiatives have been put in place to expand access to financial services and increase financial inclusion. Many governments, particularly those from third-world countries, have embraced the concept as a policy objective to reduce poverty, to improve livelihoods and to promote inclusive economic growth (Ozili 2020a; Park & Mercado 2016; Sahay et al. 2015).

As countries race to meet SDGs, financial inclusion is becoming an important ally. Research has shown that increased access to various financial services can accelerate the achievement of SDGs. Savings services allow households to accumulate financial resources for unforeseen circumstances and therefore smooth consumption in response to income shocks. Access to credit can help them to make productive investments both in physical and human capital resulting in increased access to decent jobs. Insurance services contribute

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to the mitigation of risk and reduction of vulnerability amongst the poor. Literature has also shown that access to finance empowers women allowing them to make more independent decisions. Moreover, efficient payment systems have resulted in significant savings for households and increased remittances, which help as a risk mitigation measure. All of these can reduce food insecurity and contribute to more equitable societies.³¹

This chapter will focus on reviewing the main financial services used by low-income households. The review uses both macro and micro-level data. All the data presented exclude high-income countries unless otherwise stated. The World Bank has argued that ownership of a bank account is the cornerstone of inclusion for electronic payments also (Bank for International Settlements 2016; World Bank Group 2018). For this reason, the first section starts by discussing the importance and prevalence of account ownership. This is followed by a discussion of the four fundamental financial services that can benefit the poor. These include savings, credits, payments and risk management services. These services help the poor to build assets, manage cash flows, make productive investments, trade, manage risk including health emergencies and crop failures, as well as smooth consumption. These are discussed with reference to literature from around the world but with some focus on sub-Saharan Africa.

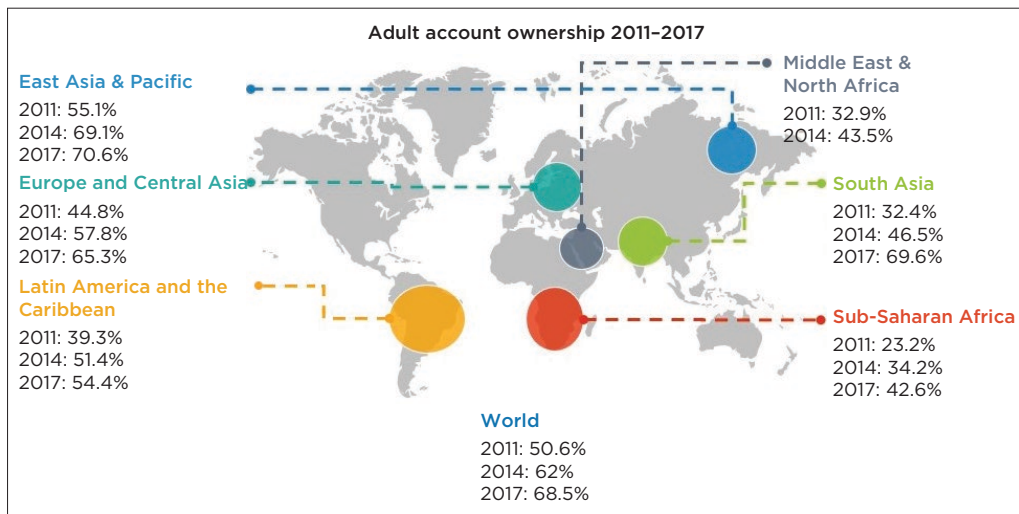
■ Account ownership

Account ownership is important because of the additional facilities that it comes with. For instance, a bank account comes with many products and services such as savings, loans and credit accounts, non-cash payment services and retirement plans (Dilley 2008). In such a case, consumers must enter a contractual arrangement with a bank either directly or through an agent. However, developments in technology have also made non-bank methods that do not require clients to have a direct contractual relationship with the bank popular. Here, clients make use of a ‘virtual account’ to conduct transactions through a retail agent. The account is directly linked to a server belonging to a non-bank institution. A key advantage of non-bank methods is that consumers can transact without having to follow strict procedures of forming contractual relations with financial institutions.³² This is very helpful for the poor who are socially excluded on many fronts and struggle to effectively interact with financial institutions. The literature supports the idea that non-bank financial activities such as informal savings groups can boost saving in formal institutions (Jack & Suri 2011; Ouma, Odongo & Were 2017).

Figure 3.1 shows that there has been a significant increase in account ownership with an increase with a global average of nearly 19% between 2014

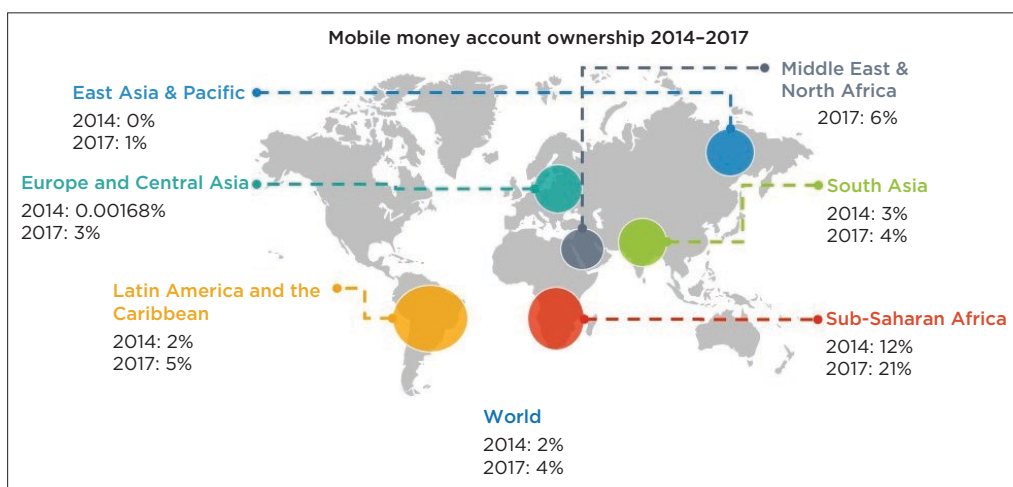
31. Klapper, El-Zoghbi and Hess (2016) and Ozili (2020b) provide very useful reading.

32. Sarker, Bank and Mahmood (2015) provide a literature review on agent banking that offers helpful additional reading.



Source: Data drawn from Demircug-Kunt et al. (2018).

FIGURE 3.1: Proportion of adults with accounts ownership.

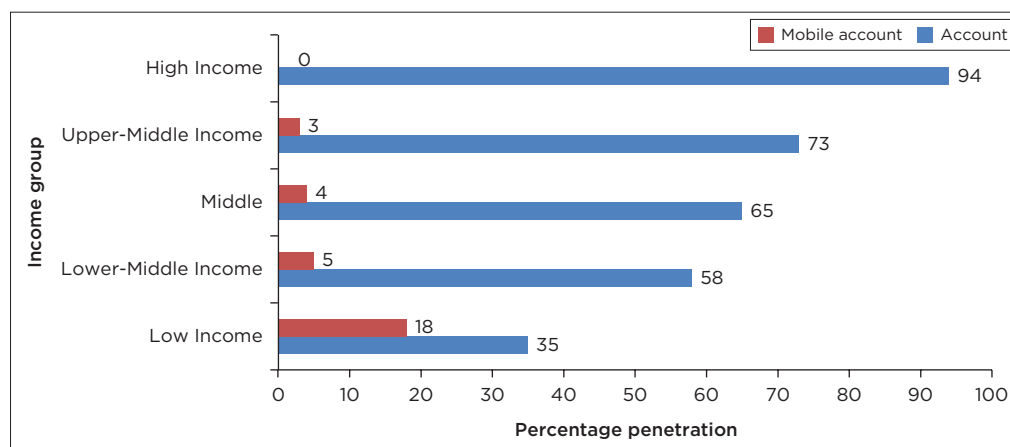


Source: Data drawn from Demircug-Kunt et al. (2018).
MM, Mobile money

FIGURE 3.2: MM accounts by region.

and 2017. South Asia recorded the most significant growth of 37.2% in 6 years. A significant growth has also been observed in sub-Saharan Africa. However, the region remains the one with the lowest level of account ownership in the world.

The bulk of the growth in account ownership in sub-Saharan Africa is because of the growth in MM accounts. Ownership of MM accounts have



Source: Data from Demirguc-Kunt et al. (2018).

FIGURE 3.3: 2017 Account penetration by country income category.

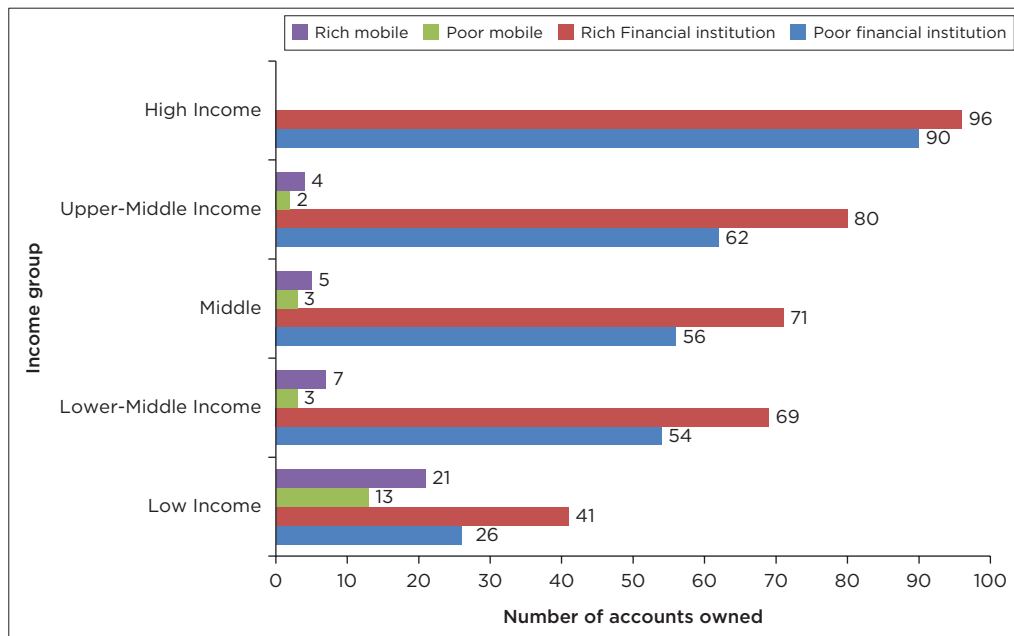
almost doubled between 2011 and 2017 in the region increasing from 12% to 21%. In countries like Kenya and Tanzania, the growth has been even more spectacular. By 2017, 73% of all adults in Kenya owned a MM account (Demirguc-Kunt et al. 2018). This is in comparison to a world average of just 6%. Ownership of mobile accounts was also considerably high in Zimbabwe at 49%.³³

Account ownership and income

The correlation between poverty and account ownership can be seen by looking at the level of account ownership by country income level. Figure 3.4 shows that account ownership at a financial institution is higher than mobile accounts across income groups. Mobile accounts are higher in less developed economies and highest in the low-income countries. Figure 3.5 throws some interesting light. Even though mobile accounts are higher in low-income countries, the very poor are still marginalised. Within the income groups, the poor have significantly lower access for both mobile and financial institution-based accounts.

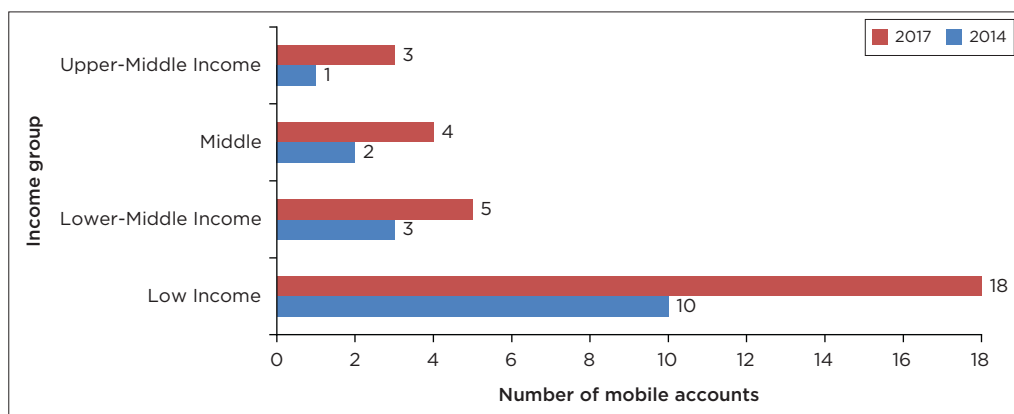
In the same period, mobile account ownership has almost doubled in both low- and middle-income countries. However, the penetration of mobile accounts in low-income countries is significantly higher than both the world average and that in middle-income countries.

33. The Zimbabwean government indicated that in volume terms, more than 99% of payments were done electronically in 2018. Mobile banking mobile account ownership is expected to be much higher, which is driven by the shortage of cash and other problems within the national payment system.



Source: Demirguc-Kunt et al. (2018).

FIGURE 3.4: Account ownership rich versus poor.



Source: Demirguc-Kunt et al. (2018).

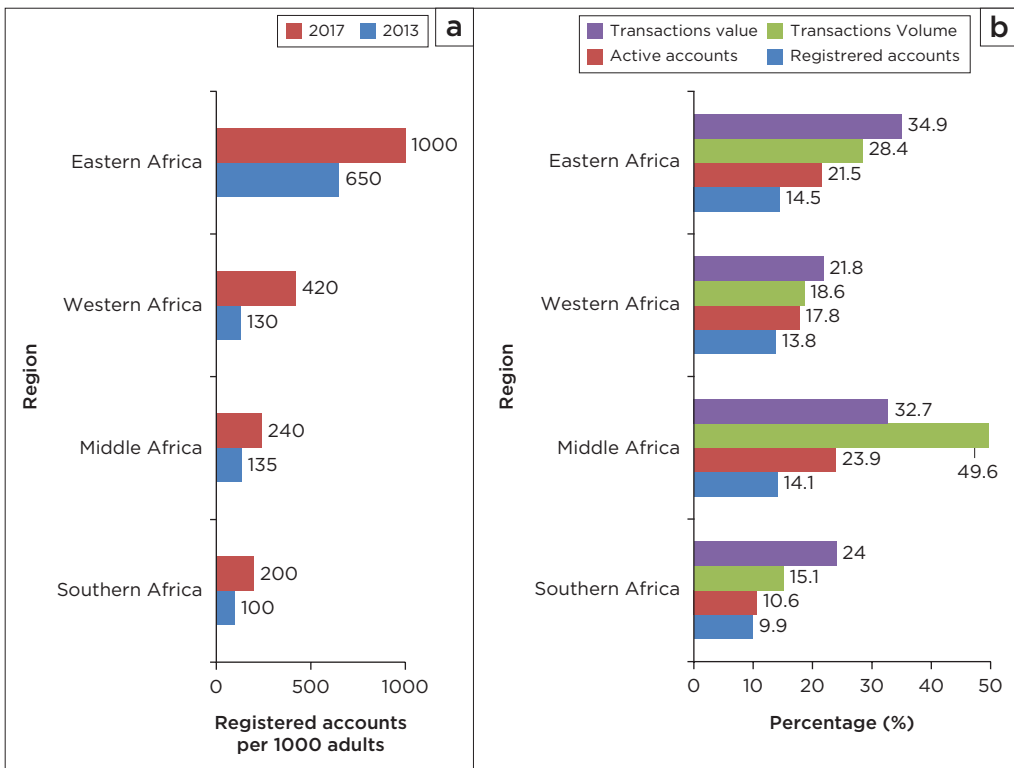
FIGURE 3.5: Growth in mobile accounts.

Many advantages of MM have been highlighted, which make it a key tool in increasing financial inclusion. As we discuss further, MM has had an impact on virtually all the services used by low-income households and increased access to financial services. Nevertheless, MM penetration in sub-Saharan Africa is highly concentrated in East Africa with more than double the number of accounts compared to Western Africa, which has the next highest number

of accounts. Nevertheless, the increase in accounts for all the regions has been quite large, even in Southern Africa, which has the lowest penetration.

The panel b of Figure 3.6 shows how the volume and value of mobile account transactions have changed between 2018 and 2019. The transactions value is relatively similar between East and Central Africa. Nevertheless, the growth in volumes is fastest in Central Africa where the growth in transactions volume has grown by almost 50% within a year. The literature suggests that the rapid adoption of MM accounts in low-income countries is a response to the lack of accessible formal financial services and the lack of related infrastructure (Hoernig & Bourreau 2017).

In discussing the various instruments used by the poor to access financial services, we will focus on the type of service rather than the instruments. This helps to contextualise the use of the different instruments. For that reason, some instruments will be repeated under the various services with a focus on how that instrument is used to provide the service.



Source: IMF (2019); GSMA (2019).
 IMF, International Monetary Fund; GSMA, Global System Mobile Association; MM, Mobile money.

FIGURE 3.6: MM accounts in Africa: (a) number of registered accounts and (b) the percentage change in mobile services during the 2018–2019 period.

■ Savings

A basic definition of savings is the portion of one's income that is not spent on current expenditures or in economic terms, the difference between income and consumption. This definition suggests that if an individual or household has only enough income to meet current expenses, they would not be able to save. Accordingly, one may assume that referring to the poor as savers is a misnomer. The literature has noted the widespread misconception that the poor cannot and do not save (Matin, Hulme & Rutherford 2002; Rutherford 2000). Literature, however, is replete with evidence that the poor save although the methods that they use for saving are not necessarily in the form of financial markets discussed in Chapter 1, as we shall see in subsequent sections. There is, however, evidence that the two markets are colliding as financial intermediaries have started to realise that the market at the bottom of the pyramid can be profitable.³⁴

Savings amongst the poor are driven by necessity rather than by the existence of excess income over expenditure. One reason is the existence of uncertainty. This is akin to precautionary demand for money in the Keynesian view. In the absence of insurance markets, insurance can take the form of precautionary savings. Moreover, as the discussion of the McKinnon hypothesis suggested, individuals may save to accumulate for bulky, indivisible purchases. Modern financial markets offer various consumer credit products that enable individuals to buy indivisible goods and make investments. However, these products are often not available to the poor.³⁵ In Chapter 1, we discussed the fact that this may happen because of very high interest rates, the existence of institutional weaknesses or high transactions costs associated with providing these services at quantities required by the poor. Moreover, savings are a less costly and risky source of finance than credit. Similarly, the literature suggests that the poor react more powerfully to financial services that build and protect assets than those that rely on debt (Adams 2009; Allen 2006). Surveys also indicate that more low-income households cite savings as their greatest need relative to those who cite credit (see Financial Sector Deepening [FSD] Uganda 2018). Table 3.1 shows that savings rates amongst the poor are very low even when savings at savings clubs are included. Moreover, informal savings are higher in sub-Saharan Africa, which also has the lowest rate of savings at financial institutions.

34. See Caserta, Monteleone and Reito (2018), Chikalipah (2019) and Lam et al. (2019) for recent evidence.

35. Plattteau and Abraham (1984), Fafchamps (1992) and Matin et al. (2002) show that the poor use savings and credit as substitutes. Therefore, although the discussion here separates these services, this is done for brevity. Note is taken that for the poor, these services cannot realistically be treated as separate services.

TABLE 3.1: Savings type by income level.

Countries	Saved financial institution		Saved savings club	
	Adult poor	Adult rich	Adult poor	Adult rich
East Asia and Pacific ^a	21	44	5	11
Europe and Central Asia ^a	25	41	4	6
Latin America and Caribbean	5	17	6	9
Middle East and North Africa ^a	7	16	-	-
South Asia	10	22	7	13
Sub-Saharan Africa ^a	9	19	23	27

Source: Demirguc-Kunt et al. (2018).

^a, Excludes high-income countries.

■ Savings SHG³⁶

Savings self-help groups (SHGs) stem from local communities amongst groups of people with common socio-economic characteristics. They are reciprocity groups in that the functioning of the group depends on the commitment of the members (Kay et al. 2005). Savings SHGs can be grouped into three broad categories, namely savings accumulating groups, rotating savings groups and hybrids of the two. Most of these start without external funding and include savings clubs, mutual aid groups, rotating savings and credit associations (ROSCAs) and village banks. Local names for these groups do not distinguish between the different categories.³⁷

The literature suggests that SHGs are a very important tool in fighting poverty. For example, they have allowed the poor to cope with rainfall shocks and therefore lead to an improvement in food security. Moreover, by increasing savings, SHGs have allowed poor households to smooth consumption in response to income shocks. In some cases, the accumulated savings have been used to make productive investments and have improved household business outcomes especially for women (Beaman, Karlan & Thuysbaert 2014; Karlan et al. 2017; Kast et al. 2014; Ksoll et al. 2016). Savings groups are also a catalyst for enhanced social capital as well as improved gender relations and local economic development. For 100 countries, Postelnicu and Hermes (2018) show that social capital is a strong determinant of access to microloans. Similarly, Okello et al. (2018) find that social capital is a conduit for increased financial intermediation in rural Uganda.

36. Gugerty, Biscaye and Leigh Anderson (2019) provide a fairly comprehensive discussion of how self-help groups contribute to overall development. The chapter also provides a good summary of the theory and evidence on self-help groups.

37. For instance, all three types are referred to as *totines* in Cameroon and Senegal, *susu* in Ghana, *esusu* in Nigeria, *chilimba* in Zambia and Malawi, *stockvels* in South Africa.

A *basic savings club* is formed when people come together for the purpose of accumulating a given amount of savings over a specifically given horizon. Typically, savings clubs do not have a credit component. The savings of the group may be deposited at a financial institution for either safety or to accumulate interest, or they may be kept by one of the members. Most of the groups accumulate savings towards bulk buying often for things as basic as everyday household goods. Where these groups are not externally funded, they tend to attract people who have a steady source of income.³⁸ This leaves those with no income still unable to save. In response, several NGOs have adapted the group savings model in various countries and developed externally funded savings groups for individuals with very little or no income.³⁹ Table 3.2 shows that by 2011, various NGOs had established nearly 200 000 groups with an average membership of 20 people per group.

A variation of the basic savings club is the *rotating savings group* where individuals come together to make periodic contributions similar to a savings club. Instead of just accumulating for the purposes of saving as a group or buying a bulky item, members access the funds saved at each saving meeting on a rotational basis. Rotation turns are determined through a mutual agreement amongst members. In some cases when a member has an emergency, their turn can be changed. In this way, the savings groups also act as a form of insurance. Rotating savings groups can sometimes take the form of ROSCAs. In this case, the accumulated savings serve as a source of loanable funds.⁴⁰

TABLE 3.2: NGO based SHGs 2011.

Groups	AFK	CARE	CRS	OXFAM	PACT	PLAN	WV	Total
Average group	19	20	19	22	21	19	NA	20
Women (%)	65	77	70	100	99	73	77	80
Average balance/member	14.05	19.66	11.32	14.34	10.49	24.11	1.29	13.61
Average loan size	29.35	29.71	108.2	2	11.87	60	NA	40.19
Groups formed by non-paid project worker (%)	0	64	8	60	NA	40	NA	43
Total numbers of group members	5341	237 6914	434 124	383 089	42745	286 258	310 156	383 8627
Total number of groups	284	119 409	?	1755	1989	6867	3299	172 105

Source: CARE (2011).

AFK, Aga Khan Foundataion; CARE, Cooperative for Assistance and Relief Everywhere; CRS, Catholic Relief Services; NGO, Non-governmental Organization; WV, World Vision, self-help groups (SHGs)

38. Several studies show that in cases of randomised treated studies, the wealthiest members of the communities tend to self-select into the savings groups (see Ksoll et al. 2016; Karlan et al. 2017).

39. International NGOs such as Oxford, Freedom From Hunger, Plan, Catholic relief services and Aga Khan Foundation have adapted this model and used it to fund women savings groups in particular. Allen and Panetta (2010) indicate that such groups had reached about 2.3 million people by 2010.

40. See the text on credit in the following sections.

Cumulative savings and credit associations are another hybrid savings model. In this model, members contribute equal amounts of money and must all withdraw that money at an agreed date. The purpose of this accumulation is not to rotate but to provide a pool of loanable funds, which are lent out to either members or non-members at an interest. Cumulative savings and credit associations have often ultimately developed into formalised credit unions and cooperatives.

Another form of group savings is the *Mutual Aid Groups*. In this case, groups form schemes to provide aid in the case of emergencies. These groups are basically a hybrid between savings and insurance. In the very basic cases, a quota system is used where the amount of money that a member can access is dependent on their contributions. Bouman (1995) suggests that mutual aid groups are particularly popular in Africa.

Village banks have also emerged as a different kind of savings group. The idea of village banks is borrowed from the model introduced through the Grameen Bank pioneered by Dr Muhammad Yunus.⁴¹ As with other variants, membership of the village bank is through self-selection and is limited in number. In some cases, members can contribute the initial capital for the bank, whilst in others the capital is provided externally, normally through an NGO. Regardless of the source of funding, the bank is run by members, who also define their own by-laws, elect officers as well as distribute loans and collect payments and savings. Unlike formal banks, village banks do not normally require physical collateral. The model relies on social capital through peer pressure as well as group cohesion.

■ Mobile savings

MM is growing as an instrument for savings. It allows users to easily transfer money as well as to store value through cash-in and cash-out transactions. The use of mobile accounts also allows users to organise their savings much better as well as keep track of their cash flow. Although deposits in a mobile account are tax free and do not earn interest,⁴² they attract transfer and withdrawal fees. These fees can work as a savings commitment mechanism. Strong commitment mechanisms have been shown to increase the level of savings (Ashraf, Karlan & Yin 2010; Dupas & Robinson 2013). The advantage of mobile savings is that they are highly liquid and can therefore be easily accessed in case of emergencies. Ky, Rugemintwari and Sauviat (2018) show that MM users in Burkina Faso mainly saved for health emergencies.

41. Grameen directly translated from Bengali means *of the village*.

42. Van Hove and Dubus (2018) argue that the low level of savings amongst M-PESA users is due to the lack of interest paid. In support, Batista and Vicente (2020) conducted an experimental study amongst farmers in Mozambique and found that interest paid on M-Kesha balances increases the savings rate.

Evidence suggests that mobile savings are preferred for precautionary savings rather than for accumulation to make bulk purchases or for productive investment (Ky et al. 2018; Morawczynski 2009). Moreover, mobile savings are used as a complementary rather than substitute savings mechanism. For instance, Morawczynski (2009) found that M-PESA users in Kenya complemented mobile savings with bank, home bank and ROSCA savings. Similarly, Simatele and Dlamini (2020) found that ROSCAs in Eswatini used mobile savings to store and disburse their group funds.

■ Other forms of saving

In addition to the above, the literature shows that the poor save at home by resorting to methods including hiding money under pillows, buying livestock and hiding money in the 'last resort wallet'. However, it has been shown that these forms of savings are risky, unreliable and illiquid. For instance, Collins et al. (2009) show that in 1 year, households in rural India lost up to 38% of their crop and livestock because of untimely rains, sickness amongst the livestock as well as theft. They also found that many individuals invested their wealth in jewellery. Apart from theft, such savings are difficult to liquidate because the poor are already excluded from formal financial markets.

■ Credit

Scholars have written extensively about the importance of credit in addressing poverty and in improving standards of living for the poor (Mbat & Eyo 2014; Samer et al. 2015). There is evidence that access to credit can help set up and expand micro businesses. Some studies have also shown remarkable gains in incomes, consumption, education and health (Rosenberg 2010). In Bangladesh, the provision of microcredit in April 2009 resulted in a decrease of low-income groups from 63.3% to 40.0% and at the same time increased the medium-income group from 26.7% to 45.6% within a year (Shofi, Mazumder & Wencong 2013). Similarly, evidence from Nigeria indicates that access to credit from formal financial institutions boosted poor farmer's outputs (Abraham 2018).

The role of credit, however, goes beyond that of micro-enterprise. The literature shows that access to credit can both increase current consumption and enable consumption smoothing amongst the poor (Phan et al. 2019; Schroeder 2020). Moreover, increases in household educational investment and reduction of the gender gap in education have been attributed to increased access to credit (Garikipati et al. 2016; Kandulu et al. 2020; Zulfiqar 2016).

Both theoretical and empirical literatures show that poor households find it difficult to access credit from formal financial institutions (Biyase & Fisher 2017; Mukherjee 2014; Yuan & Xu 2015). The difficulties in accessing these services were discussed in Chapter 1. They mainly stem from market failures in

credit markets, especially information asymmetries. In most instances, the poor cannot guarantee their credit worth either in terms of physical collateral or with a steady income from their enterprises or from a formal job. This is worsened by the fact that the cost of credit is often too high for them. As a result, low-income households use informal credit that includes family and friends, SHGs as well as loan sharks (Viet Nguyen & Van den Berg 2014; Yuan & Xu 2015).

A growing number of studies have questioned the impact of microcredit on poverty reduction. Several studies, especially those using randomised trials of microcredit, have shown that microcredit does not necessarily reduce poverty, especially on the margin. A lot of the literature that questions the impacts on poverty relates to the fact that unlike the theoretical underpinnings and the Grameen Bank Model foundations, not all microcredit is used for microentrepreneurship. Further, evidence also shows that microcredit is not necessarily cheaper than mainstream credit. In fact, some like Bylander (2015) have argued that microcredit has increased vulnerabilities as borrowers resort to the informal market for loans to pay back their microloans.⁴³ Nevertheless, even the studies that criticise microcredit note the importance of microcredit and its positive effects on the livelihoods of the poor (e.g. Angelucci et al. 2014; Tarozzi, Desai & Johnson 2015).

■ Microcredit through MFIs

To mitigate the financial inclusion gaps bedevilling the poor through formal and informal credit platforms, governments, donor agencies and some private business players have pioneered different microcredit initiatives for the poor. The formal design of cheap credit lines for the poor was first conceptualised and implemented in Bangladesh by Professor Muhammad Yunus as the Grameen Bank initiative discussed earlier. The success of the Grameen Bank Model was underpinned by the idea that the poor possess vast productive capacities but are often constrained from using these capacities because of lack of capital. Access to credit in the case of the Grameen Bank and in the ensuing microcredit model could allow the poor to use these capacities to generate self-employment through microentrepreneurship.

Table 3.3 shows total credit volumes and beneficiaries from MFIs. Eastern Europe and Latin America and the Caribbean have the largest per capita volumes of microloans. Although the data for Africa are not fully available, the low amount of 6.3 million is a very small amount given the levels of poverty and underdevelopment of most financial markets on the continent.

43. Banerjee, Karlan and Zinman (2015) and Morduch (2020) provide a critique in the context of randomised credit trial studies.

TABLE 3.3: Microfinance values 2018.

Region	Credit amount (billion US\$)	Beneficiaries (million US\$)	Per capita loan amounts (US\$)
Latin America and Caribbean	48.3	22.2	2175.7
South Asia	36.8	85.6	429.9
Eastern Europe and Central Asia	5.7	2.5	2280.0
Middle East and North Africa	15.0	25.0	600.0
East Asia and Pacific	21.5	20.8	1033.7
Africa	-	6.3	-

Source: Microfinance Barometer (2019).

One of the key innovations in microcredit is the use of group lending. Group lending is designed to address credit market failures by mitigating adverse selection and moral hazard problems. When group lending is used, borrowers in a group screen each other, and in many cases, the ability of the members in the group to get any further lending is reliant on the repayment rate of other members. Essentially, repayment enforcement relies largely on peer pressure. On the assumption that members of the lending group have significant information about each other, group lending overcomes information and symmetries that are typical of credit markets.⁴⁴ Recent studies such as that of Ahlin (2020) provide useful empirical evidence. Feigenberg, Field and Pande (2013) argue that the success of this model can be attributed to the value of repeated interaction. Repeated interaction increases social ties and enhances social capital resulting in the accumulation of economically useful information about members in a very short period.

■ Credit unions

Credit unions are a type of formalised SHG. As with other SHGs, credit unions are governed by the members and characterised by a pre-existing social connection such as occupation, industry or geographic location. The shared bond mitigates the information asymmetries inherent in credit markets as discussed. They serve as a key source of credit for micro and small businesses. Unlike the SHGs that we have discussed, credit unions can be very large and have been subject to significant consolidation, especially in developed countries. Nevertheless, they have provided financial services for businesses and households that have been excluded. In fact, World Council of Credit Unions (WCCU) (2007) argues that credit unions have provided entry into the financial markets for the marginalised. They show that nearly half of all the

44. Negative peer pressure on members resulting from member default has led to changes in the way this model is implemented. In some cases, group liability portfolios have been converted into individual liability portfolios that allow individual defaulters to renegotiate the terms of their loans while still maintaining the essence of group lending by continuing group meetings. However, this seems to be typical of large microfinanciers (see Giné & Karlan 2014).

TABLE 3.4: Global impact of credit unions.^a

Region	Credit unions	Savings and shares (US\$ million)	Loans (US\$ million)	Penetration (%)
Africa	39 447	9595.8	8132.7	13.80
Asia	33 004	147 233.1	138 186.9	4.34
Caribbean	374	6273.1	4996.3	65.21
Europe	3491	24 095.3	11 647.8	9.16
Latin America	2891	59 840.1	54 212	14.57
North America	6010	1 485 177.5	1 326 185.3	48.88
Oceania	183	70 025.7	66 763.8	1.25

Source: WCCU (2018).

^a, Data include all income levels.

WCCU, World Council of Credit Unions.

members of credit unions in Kenya, Rwanda and Colombia live below the poverty line and are first-time users of financial services.

As can be seen from Table 3.4, Africa and Asia have the largest number of credit unions. This is no surprise given that these regions are characterised by a large proportion of poor households who need credit assistance. However, the rate of penetration is only 13.80% in Africa and only 4.34% in Asia. The rates almost mirror the levels of per capita microloans in Table 3.3 showing consistently low levels of financial access in Asia and Africa.

■ Village banks

Village banks are member-based credit organisations. Members self-select into these groups and as with most other SHGs, they are based on neighbourhood communities. Members are typically required to save a certain proportion of their loans from the group. These savings contribute towards group liability in case of member default. This is important because as noted earlier, in many of these types of microcredit institutions, group liability entails that members cannot access further borrowing until all the members of the group are up to date with their repayments. In many cases, the capital is provided externally through NGOs or multilateral organisations.⁴⁵

■ Informal credit

Informal credit can be defined as credit that is extended without the involvement of a formal financial intermediary between savers and borrowers. The most common forms of informal credit are family and friends, SHGs and

45. Organisations like Fighting Poverty with Microfinance and Social Enterprise (FINCA) and the International Fund for Agricultural Development (IFAD) as with most other external funders also provide some monitoring mechanism to supervise repayment. Beyond that these groups are self-governing.

TABLE 3.5: Proportion of adult population taking credit by type.

Region	Formal credit poor	Formal credit rich	Family and friends poor	Family and friends rich	Savings club poor	Savings club rich
East Asia and Pacific	17	31	33	23	2	4
Europe and Central Asia	30	41	21	16	2	2
Latin America and Caribbean	12	27	15	16	2	3
Middle East and North Africa	8	11	34	29	3	4
South Asia	6	9	33	30	3	6
Sub-Saharan Africa	6	10	30	32	9	10
World	16	27	29	24	-	-

Source: Deminguc-Kunt et al. (2018).

loan sharks.⁴⁶ Table 3.5 compares the percentage of adults who report having borrowed from formal and informal sources in 2017. Although in general the poor have lower access to credit, the percentage of those borrowing from informal sources is higher amongst the poorest 40% of the population family and friends

At the centre of informal credit is the power of networks and relationships in which the bulk of informal credit is usually sourced from family members and friends. Borrowing from family and friends, for example, has the advantage of normally being free of interest charges with few or no stringent conditions such as collateral and timebound repayments.⁴⁷ This provides the borrower the flexibility to pay back at their convenience. However, because of the nature of this informal credit source, a major shortcoming is that it is highly unreliable. It is difficult to ascertain whether one will secure a credit line at the right time and the exact amount required. Nevertheless, the usage of informal credit remains high in various parts of the world.

One of the main sources of informal credit for the poor is SHGs. We have discussed how these groups facilitate savings. However, we also noted that variants of these groups also serve as sources of credit for both members and non-members. Examples include ROSCAs and Cumulative Savings and Credit associations. The main source of capital for these groups is the savings that are deposited by members. Members are given turns to access the generated pool of credit. They borrow in accordance with their capacity to pay back on a specific date usually after a month. In some variants, lending is based on a quota system, which is linked to the amount a member would have contributed to the group. Interest rates are determined at a level that helps to capitalise the groups and encourage members to save more. Some rotating clubs do not charge interest and the amount of money that a member receives is a simple

46. Allen et al. (2018) distinguish between constructive informal financing and underground financing. They include trade credit and pawn houses in their definition.

47. There is evidence that loans from family and friends sometimes attract interest rates, which can be as higher or even higher than moneylenders (see Maitra et al. 2017).

sum of what all the members would have contributed. In some cases, members are required to invest the money that they borrow on behalf of the group and to earn interest on it. The interest is then shared amongst the members. For instance, in a study of SHGs in Eswatini, Simatele and Dlamini (2020) find that some groups require members to invest money on behalf of the group and to make a minimum of 10% interest, which is then shared equally amongst members.

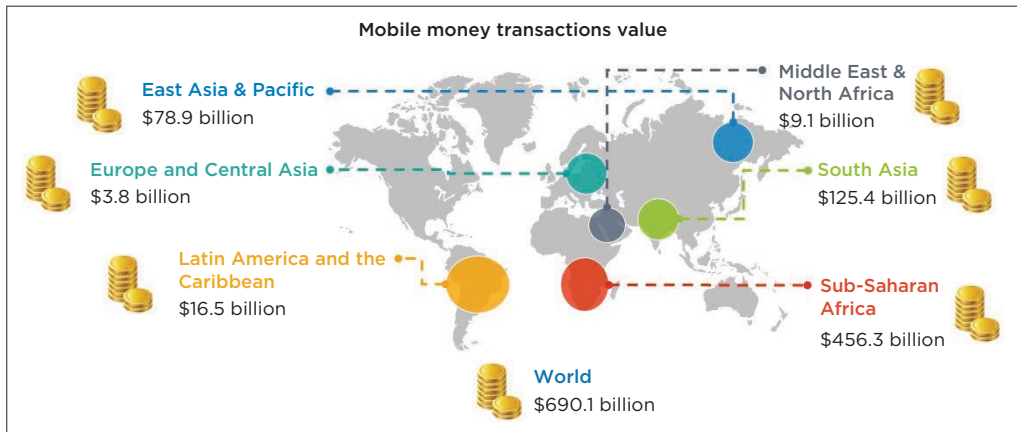
Informal financing, however, also includes what Allen, Meijun and Jing (2018) call ‘underground financing’. Such underground financing includes loan sharks, has very high interest rates and may resort to violence to enforce repayments. Loan sharks are unlicensed money lenders who often operate within community neighbourhoods.⁴⁸ Loan sharks typically provide credit to those who have been marginalised by the formal sector either because of lack of collateral, poor credit history or other market frictions. The Zulu word for money lenders, *mashonisa*, is very insightful. It is a compound of two words: *shona*, which means to sink, become poor or die, and *shonisa*, which relates to impoverish or cause to become poor (James 2014).

Moneylenders obtain information on their borrowers through social interactions, interviews and local gossip. This information is shared amongst lenders within the same neighbourhood and is used as a form of non-asset collateral. In some cases, money lenders require collateral. For example, Khanna and Majumdar (2020) show that collateral or personal guarantee is a prerequisite to getting a loan from moneylenders in India. Social pressure restrains the number of moneylenders exercising their power. Although the general literature posits informal moneylenders as exploitative, some literature that shows that they are a necessary source of credit for the poor, especially in the face of emergencies is emerging. For instance, the poor in South Africa’s townships indicate that access to a *mashonisa* is important and the inability to access them could result in social death (Krige 2019; Wonga 2018). This perspective is confirmed by Kislak (2015) for Thailand.

■ Payments

Payment services are recognised as an essential part of financial inclusion. Access to an efficient payment system function as a gateway to inclusion in other financial services such as savings, credits and insurance. Moreover, an efficient payment system is a precondition for fostering trade. A large proportion of the poor use cash to make and receive payments. However, it is well-known that cash is expensive. Cash incurs high charges in the form of withdrawal fees, cost of travel to points of access for those who are geographically excluded, as well as increased risk of loss and theft.

48. They have various local names, including *mashonisa* in South Africa and Riba in Egypt.



Source: O'Dea 2020.
MM, Mobile money.

FIGURE 3.7: MM transactions value.

Innovation in mobile technology has led to the development of a variety of electronic payment instruments that circumvent many of the costs associated with using cash for payments. Unfortunately, most of the methods such as G-PAY™, PayPal and even debit and credit cards, which are common especially in developed economies are out of reach for the poor. MM has grown rapidly as a viable alternative payment means that is easily accessible. Figure 3.7 shows mobile transaction values by region for 2019. Sub-Saharan Africa accounts for more than 66% of the total value. A total of 84% of the total value is accounted for by sub-Saharan Africa and South Asia. This indicates how important mobile payments are in countries with underdeveloped financial markets.

MM has a significant uptake in countries whose financial markets are not very developed. Partly, this is because of the unavailability of alternative products and also because existing products do not necessarily meet the needs of the end users. These regions house some of the world's poorest populations, and thus their geographical and social exclusion underpins their financial exclusion. The fact that MM requires very basic infrastructure, devices and operation makes it a very attractive option for the poor. One of the most developed MM systems is Safaricom's M-PESA, which started in Kenya in 2007. It has spread to seven countries in Africa with 41.5 million active accounts and 12 billion transactions in 2019.⁴⁹ The literature shows that M-PESA has increased employment, the speed and value of remittances, improved consumption smoothing and overall welfare (Jack & Suri 2014; Munyegera & Matsumoto 2016; Mwiti Gikunda, Odilla & Gitonga Njeru 2014; Suri & Jack 2016).

49. See <https://www.vodafone.com/what-we-do/services/m-pesa>.

Mobile payments are associated with low cost and high levels of security, and it is almost as liquid as cash. The rapid uptake of mobile payments has been attributed to the basic technology associated with its use. A mobile phone with unstructured supplementary service data (USSD) facilities can allow a consumer to pay utility bills, transfer and receive money and make day-to-day transactions. Moreover, users of mobile payments do not need to have a bank account to conduct the transactions. Manyika et al. (2016) showed that the use of digital payments could increase the gross domestic product (GDP) of emerging economies by 6% resulting in the creation of up to 95 million jobs. They show that the gains are higher for poorer countries like Nigeria, Ethiopia and India where the increase in GDP could be as high as 12%. Furthermore, they demonstrate that using mobile payments could also reduce the cost of providing financial services by up to 90%, which would have significant gains for financial inclusion.

Related to this is the fact that electronic payments have the potential to reduce information opacity for the poor thereby lifting a significant barrier to participation in formal finance especially credit markets. By using electronic payments, a user can leave a digital footprint, which can be used by lenders to get information on the applicant's credit history. The fact that MM accounts typically function as pre-paid instruments means that there is very little due diligence required on the part of the payment service provider. This reduces credit rationing and increases access to credit markets. Furthermore, access to MM accounts can serve as entry-level services allowing consumers to access more sophisticated financial services.

■ Retail payments

Retail payments are very important for conducting day-to-day transactions. They link buyers and sellers and thus enable trade. We have noted earlier that poor households traditionally rely on cash to carry out daily transactions. However, we also note that cash is expensive. Consider, for example, an individual from a rural household who is geographically excluded from financial services. If the individual wishes to make payments for school fees or buy school supplies, such an individual must travel to a point where they can access cash. Not only is the travel costly but the individual will also have to incur withdrawal fees and is also at risk of losing the money or getting robbed. These are problems that are not common amongst individuals with high incomes. Bank accounts held by such individuals offer more sophisticated financial facilities and payment options. At a fixed rate, they can make unlimited withdrawals and remote payments. The most viable and cheapest alternative payment instrument available to poor households is mobile payments.

TABLE 3.6: Percent of adults paying bills by phone.

Region	Years	
	2014 (%)	2017 (%)
Europe and Central Asia	1	10
Latin America and Caribbean	1	5
Middle East and North Africa	-	13
North America	18	35
South Asia	1	4
Sub-Saharan Africa	10	23
World	4	15

Source: Demircuc-Kunt et al. (2018).

Although mobile payments have been shown to significantly reduce transactions costs, their usage for retail payments is still low in most economies. The two-sided networked nature of digital markets is partly responsible for this.⁵⁰ Both the end-user and the retailer must be willing to use and accept MM as a medium of exchange and the costs associated with accepting digital payments must be lower than those of cash for the retailer. The data show that retail payments in many African countries are still very limited because of poor acceptance at the point of sale.⁵¹ For instance, as shown in Table 3.6, the percentage of households using MM to pay for utilities and transactions is very low compared to the number of active mobile accounts.⁵²

■ Government payments

One of the critical services for the poor is the payment of government social transfers, wage and pension payments as well as other government payments such as disaster relief payments. Reliance on cash payments particularly hurts the poor and vulnerable who must often travel long distances to collect their welfare benefits. Receiving government payments electronically requires the establishment of an ‘account’ where the money will be received. As a result, it lays a foundation for the poor to access a transaction account. For example, the Zambian government launched an electronic multi-provider payment system to support women’s livelihoods in 2016. This significantly reduced reliance on cash from face-to-face payment agents and resulted in an increase in the number of people who were financially included. Aker et al. (2016, 2013) demonstrate very significant time savings from using electronic payments for

50. See Freixas and Rochet (2008) and Zinman (2008) for a discussion on two-sided networked markets.

51. The government of Zimbabwe indicated that 99% of all official payments had been made electronically in 2019. This would make Zimbabwe the world’s most cashless society. Nevertheless, this does not include informal transactions, which is a significant part of economic activity in the country.

52. Other supporting reasons such as high interoperability costs, lack of competition and poor infrastructure have been advanced (see Global System Mobile Association [GSMA] 2019, 2020; Koblanck 2018).

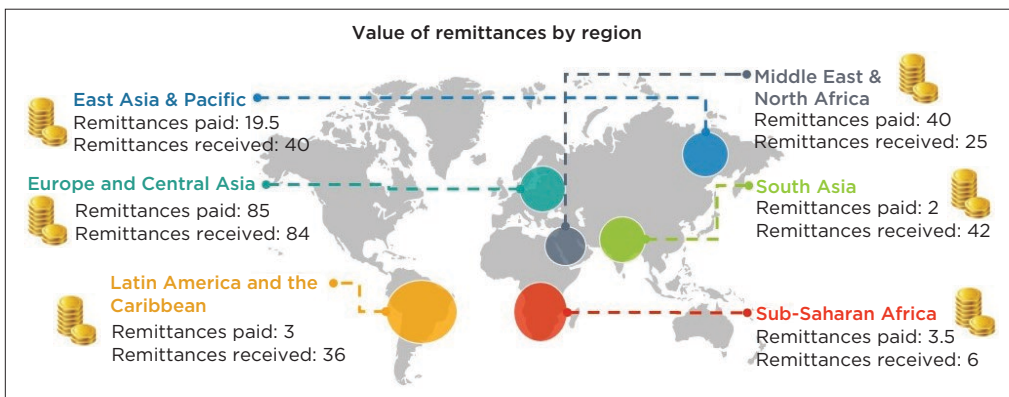
government transfers. They show that the savings on time in a case of rural transfers in Niger were equivalent to a saving of money enough to feed a family of five for five days.

■ Remittances

Remittances can be defined as funds or earnings sent by migrant workers back to their families and friends. The bulk of the literature focuses on international migrant remittances. Domestic remittances, however, also play a very important role in augmenting the incomes of the poor. This discussion refers to both international and domestic remittances. Sub-Saharan Africa received the lowest level of remittances over the 15 years between 1990 and 2015. Europe and Central Asia received the highest level.

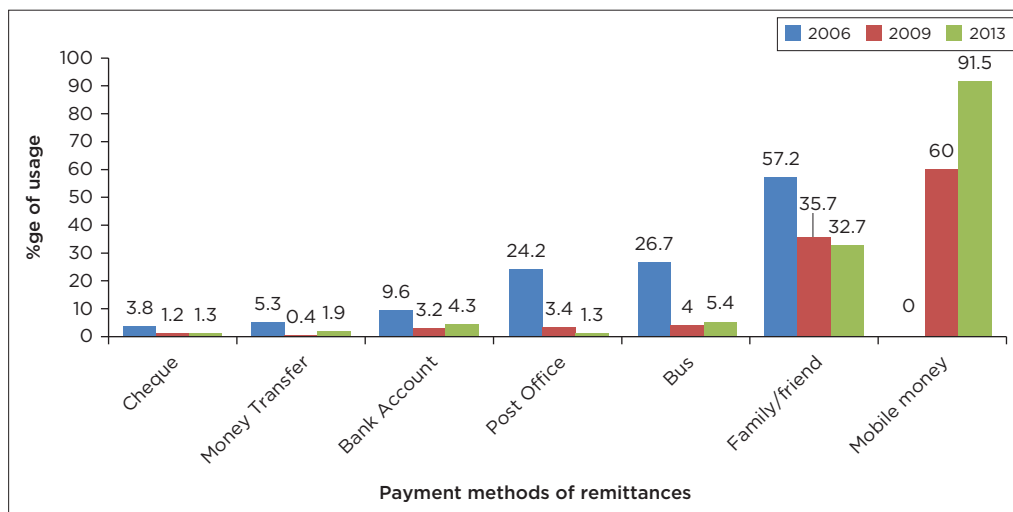
Tumbe (2011) shows that domestic remittances in India make up about 25% of international remittances and 80% of that was targeted to support families in rural areas. Given that the bulk of domestic remittances go unrecorded, it can be assumed that the level of domestic remittances is much higher than stated. The literature has established the benefits of remittances including increased investment in education, health, entrepreneurship, increased schooling and a reduction in child labour (Binci & Giannelli 2018; Ratha 2013; World Bank Group 2016).

One of the challenges associated with both sending and receiving remittances has been the high transaction costs. As a result, a large amount of remittances is sent by cash through personal contact. Remittances that are sent by cash are subject to loss and theft. Furthermore, the transfer period can be long. Even bank money transfers can take up to three days within the same country, which results in increased vulnerability. Moreover, rural recipients



Source: World Bank (2017).

FIGURE 3.8: Average value of remittances between 1990 and 2015 by region.



Source: Denyes (2014).

FIGURE 3.9: Payment method for remittances 2006–2013.

are far from financial institutions through which they can receive their remittances. Developments in digital finance have significantly influenced both international and domestic remittances. As of 2014, the cost of sending remittances was estimated at between 9% and 12.4% of the transaction value with Africa being the costliest. By 2016, there had been a marginal reduction in the cost to between 8% and 12%.⁵³ Figure 3.9 shows how payment methods for remittances changed in favour of MM between 2006 and 2013.⁵⁴

■ Insurance

Insurance services are increasingly being recognised as a necessary financial service for building resilience amongst the poor. Households face two main types of risks: common or aggregate risks that affect everyone in the community and individual or idiosyncratic risks that affect an individual or a household. The bulk of variation in income, however, is because of idiosyncratic shocks. Murdoch (2004) and Udry (1991) show that up to 96 of all variations in rural income in Indian and Nigerian villages are because of idiosyncratic shocks. Therefore, the risk mitigation instruments discussed here are largely related to individual idiosyncratic shocks.

The poor do not have a strong or diversified asset portfolio that can help them cope with shocks. As a result, they are more vulnerable to uncertainty

53. See Clemens and Ogden (2014), Ratha (2013), Sirkeci and Přívara (2017) and World Bank Group (2016) for more detail.

54. Infrastructural challenges can negatively affect the effectiveness of mobile remittances as in the case of Zimbabwe (see Simatele 2020).

and shocks than higher income households. Moreover, most poor households are economically active in the informal sector or in agriculture, both of which are highly vulnerable to shocks. For that reason, poor households require to both insure themselves against uncertain adverse events as well as to have access to mitigation services that can minimise the impact when these events and shocks occur.

The challenge for poor households is that they are often excluded from formal financial markets. As with other financial products, information asymmetries and associated high transactions costs make the poor an unattractive market for insurance service providers. Moreover, in developing countries, many of the publicly available support services such as social welfare and health insurance, which are available in more advanced economies, are absent. As a result, they rely on informal means of risk pooling that are less secure, stable and limited in scale and scope.⁵⁵

Various financial instruments that have already been discussed earlier can also be used as coping mechanisms for managing risk. Households can respond to shocks through the accumulation and liquidation of assets. Similarly, credit can be used as a mechanism to cope and mitigate risk. Savings SHGs whether for savings or credit can provide needed resources to mitigate risk at least in the short run. However, in practice, the accumulation of wealth in substantial amounts may not be possible for low-income households. Moreover, such mechanisms are only effective in the short run. In fact, as the size and impact of the shock increases, these mechanisms become less effective and more long-term options that cover greater risk and provide more long-term compensation are required. For instance, whilst savings can be used as an income buffer for a weather-related shock, it cannot adequately address the impact of a sudden disability or death of the breadwinner in a family.

As a result, formal insurance mechanisms that address risk management amongst the poor are a critical part of financial inclusion. Microinsurance services have emerged to provide services that, for a small amount of regular payments, the poor can receive a requisite level of insurance. Examples include several types of *indexed insurance* in the agricultural sector such as indexed livestock insurance contracts that exist to protect livestock mortality because of droughts. Janzen and Carter (2018) and Karlan et al. (2014) demonstrate that these schemes have a significant impact on consumption smoothing and the mitigation against the loss of productive assets. Nevertheless, the literature suggests that the uptake of such schemes is quite low compared to informal insurance mechanisms. Chantarat et al. (2017), Haile, Ololo and Megersa (2014) and Chemin (2018) find that the reception of

55. World Bank (2013) provides a detailed discussion on how risk can be managed for development.

agricultural-related insurance is very price sensitive, and the willingness to pay for such services is very low relative to participation in community-based insurance associations. Furthermore, Taylor (2016) argues that if not well designed, such programs especially index-based livestock insurance can alienate the very vulnerable who are less affluent and less resourced.

Another type of insurance that is common is the *funeral cover*. Funeral associations are often community-based and run on the SHG-type model. Dercon et al. (2004) show that these associations function very well and can be used as the basis for expanding insurance services amongst the poor. Coverage of such organisations tends to be popular amongst migrants who often seek to repatriate the dead to their home countries. A similar provision has emerged in urban areas and amongst Zimbabwe diaspora (Garikai Machoko 2020).

Community-based health insurance is a growing insurance service that can either be informal or formal but designed around the informal group model.⁵⁶ These are normally run by the community but in some cases are run with the support of government or NGOs. Moreover, the poor also use remittances as a form of insurance. Geng et al. (2018) show that *remittances* are a key source of insurance for the poor. In particular, they draw a link between MM account ownership and usage of remittances as a risk mitigation measure. They find that households who have MM accounts are better able to use remittances to mitigate health and related shocks. This links to the discussion above that shows that the use of MM technology has eased the cost and speed of receiving and sending remittances.

Several other services are emerging, which include *group liability insurance*. A typical example is group liability in group credit where group members are liable to make repayment should a member of the group not be able to pay during an illness. Nevertheless, the impact of such support is limited as it is only related to the repayment of a specific loan and no other risks. The uptake of group insurance is much higher than individual insurance, probably because of the high level of free riding associated with such insurance (De Janvry, Dequiedt & Sadoulet 2014; Janssens & Kramer 2016).

■ Conclusion

It is evident that the poor need and use financial services. The discussion in this chapter has shown that despite years of programs by government and NGOs, the poor continue to mostly use informal financial services. Recent developments in digital finance are rapidly expanding the reach of financial services better and more efficiently than traditional services have done. The

56. Chemin (2018), Geng et al. (2018) and Haile et al. (2014) provide some helpful reading.

drive for financial inclusion for the poor is not an end in itself. Rather, it is a means by which the poor can lift themselves out of poverty. Savings, credit, payments and insurance services are key anchors for financial inclusion as a tool in the fight against poverty.

Great strides have been made in expanding financial inclusion. Nevertheless, the most successful interventions and services seem to be the ones that are modelled on informal models of finance. Some of the reasons for this could be the community ownership of informal services. Take the SHGs for example. These groups are run by members and members provide services to the group voluntarily. The group meetings take place either in the homes of the members or in publicly available and free locations. For that reason, the cost of running these groups is very low compared to bank charges. Furthermore, the social context within which these groups find themselves provide a sustainable business model. The meetings provide an opportunity to discuss matters beyond finance and lead to the development of social capital, which is a critical asset in accessing credit and other services. The business model used in these informal groups is flexible, allowing members to contribute at levels that they can afford. Furthermore, both savings and credit groups tend to be strictly timebound that imposes some discipline on the members. This provides a strong commitment mechanism that encourages both savings and high repayment rates for loans.

It should be noted, however, that these services are limited both in scale and scope. There is a need to extend and expand more formalised financial services. Digital finance has emerged as a mechanism through which transactions costs and information asymmetry can be reduced and a link between the formal and informal financial markets can be created. This minimises many of the agency problems typical of financial markets. Insurance services for the poor are still highly underdeveloped mainly because of the high levels of risk associated with the livelihoods of the poor. Savings, access to credit and remittances remain the most viable forms of risk mitigation for them. The evidence suggests that the poor are willing to utilise formal financial services. However, high transactions costs, regulatory barriers, inaccessibility, lack of trust and poor infrastructure continue to be barriers. Attempts to improve financial services for the poor need to pay more attention to these barriers in addition to efforts to expand outreach.

How digital finance affects poverty: The transmission mechanism view

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■ Introduction

Access to financial services has been poised as an important enabler in the fight against poverty. Formal financial services such as savings can allow the poor a safe place to accumulate money for either investment or managing the effect of shocks. A well-functioning financial services sector will enable people to save for unforeseen or expected events, thus building resilience in economies (Dara 2018). Moreover, savings are redirected towards operational expenses and invested in capital, improving cash flows for low-income

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consumers in unforeseen emergencies such as natural disasters, loss of employment and purchase of medical supplies (Agur, Peria & Rochon 2020a). In the same way, credit can allow households to manage productive investments as well as to improve their labour market opportunities by investing in education. The literature demonstrates that access to finance can affect poverty through access to credit, enabling savings, thereby facilitating intertemporal consumption smoothing (Karlan et al. 2017). Insurance services also reduce vulnerability, and payment services can improve welfare through reduced transactions costs.

Most of the effects of finance on poverty are understood from a traditional financial services view. For example, banks provide safety for deposits and allow for the pooling of savings to provide credit for capital. Such capital is also similarly allocated to high-return ventures through these institutions, boosting economic growth. Economic growth, in turn, increases the incomes of the poor and increases the number of economic opportunities available for them to increase human capital and participate in the labour market (Curea & Ciora 2013; Škare & Družeta 2016; Stone 2017). Furthermore, traditional credit is regulated through changing interest rates. The change in interest rates is expected to affect levels of demand. The changes in demand then result in changes in economic growth and again the impact on job creation. Most of these benefits are provided through contractual relationships with traditional financial service provider (FSPs) such as banks. Therefore, intermediation is the primary channel through which savings are pooled and credit allocated.

It is well-documented, however, that the cost of these services and the ubiquity of information asymmetries in financial markets results in the significant exclusion of the poor (Stiglitz & Weiss 1981). Digital finance, in contrast, has emerged to be more inclusive. One of the main reasons for this is that digital finance can be provided at costs much lower than the traditional mortar and brick financial institutions. Manyika et al. (2016b) demonstrate that this cost reduction could be as high as 90%. Digital finance can also increase the number of options that consumers have through increased competition. This would allow them to switch between alternative providers and force banks to improve their services (Ozili 2018).

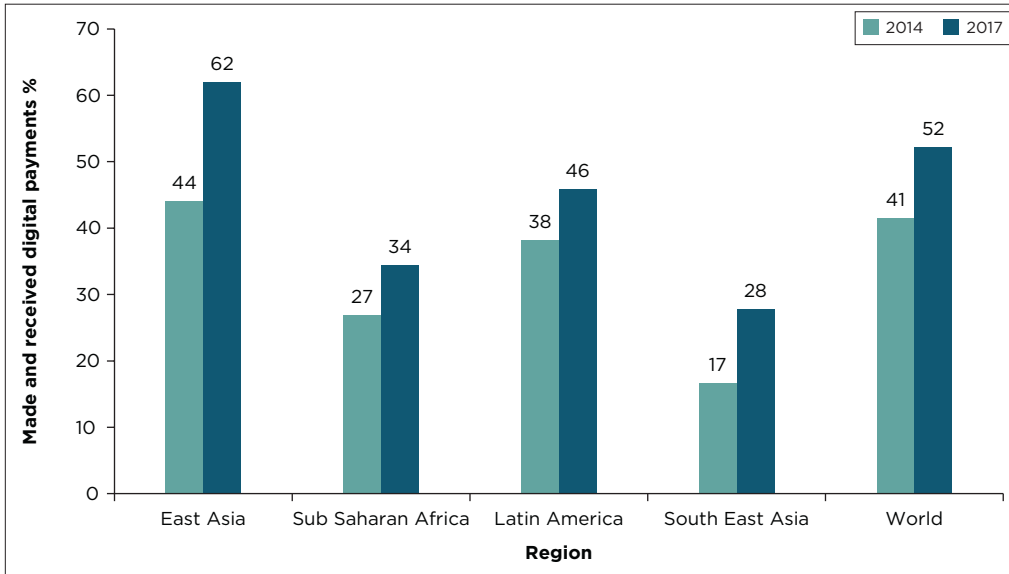
Although partly provided through banks, digital finance largely operates outside the traditional model's confines, especially in less developed economies. The main channel identified for the benefits of finance in Africa is through MM. MM is provided in many African countries through relationships with mobile network operator (MNOs) and money agents. Although some of these agents have relationships with banks, their users typically have no direct relationship with financial intermediaries. Most of these services provide a virtual platform that users can access through handheld devices and they never need to meet a service agent.

One important implication of this is that policymakers need to understand how changes in digital finance are transmitted to poverty. Literature such as the works of Kikulwe, Fischer and Qaim (2014) and Suri and Jack (2016) show that MM, for example, affects remittances and welfare. There is no clear understanding of the transmission mechanisms. There is no clear evidence as to whether the expected dampening of interest rates, for instance, will eventually affect poverty or whether the provision of digital credit, which would be cheaper than traditional credit, would reduce poverty. Such a clear understanding is important for the design of interventions. Many governments have put programs in place to push for a rapid expansion of financial inclusion, especially as we move towards the conclusion of the SDGs 2030 agenda. It is important to get an understanding of which variables respond most significantly to interventions and have the greatest impact on poverty. Against this background, this chapter investigates the transmission mechanism of digital finance to poverty, how access and usage of various DFS affect poverty. The next section provides the overview of digital finance and poverty, followed by the hypothesis development and the estimation techniques. The proposed transmission mechanism is then presented and is followed by the conclusion.

■ Overview of digital finance

Digital finance has emerged and has been praised as one of the key tools in the fight against poverty (Pazarbasioglu et al. 2020). The use of DFS has made access to financial services affordable, particularly for the poor. This is critical for poverty reduction and economic growth as high financial services improve income, resilience and livelihoods for people. Literature shows that the benefit of digital finance is significant for vulnerable groups such as youth and women. This assertion is supported by Gammage et al. (2017) and Global Partnership for Financial Inclusion (GPFI) (2020). This section provides a brief overview of digital finance from a global perspective with some attention paid to sub-Saharan African countries.

The use of digital finance in developed and developing economies has been powered by fintech innovations that have been viewed as a tool for lowering finance costs. Lowering the cost of finance is achieved by maximising economies of scale, increasing the speed, security and tailored financial services that serve the poor. An important innovation in digital finance is the increase in the number of platforms that can be used to make digital payments. Figure 4.1 shows the changes in the usage of digital payments between 2014 and 2017. The usage of digital payments is highest in East Africa where 62% of adults reported having used a digital payment service in 2017. This is above the world average of 52%. The average usage of MM in sub-Saharan Africa is 34% having increased from 27% in 2014. However, sub-Saharan Africa houses some of the highest MM users such as Kenya and Zimbabwe. In 2017, 79% of



Source: Global Findex Report (2018).

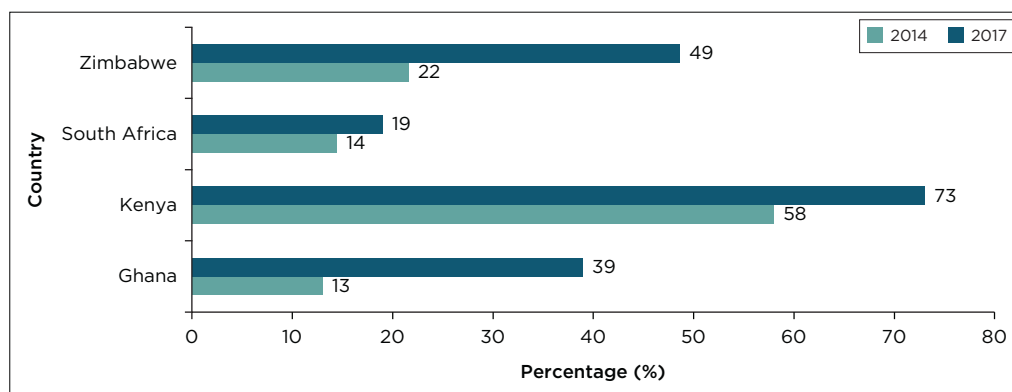
FIGURE 4.1: Digital payment service.

adults in Kenya reported used a digital payment service, whilst the rate in Zimbabwe was 53% compared to the global average of just 4%.

The high usage of digital payments in Africa is accounted for by the rapid growth of MM. This is mainly driven by the growth of Safaricom’s M-PESA product launched in Kenya in 2007. This has resulted in spillover within the region giving rise to the growth of MM in other countries. By 2020, M-PESA had expanded to seven African countries with 41.5 million active users (Vodacom 2020). However, M-PESA failed to take off in South Africa as much as it has done elsewhere. Evidence suggests that countries like South Africa that have significantly advanced financial markets tend to have very low adoption rates of MM (Hoernig & Bourreau 2017). This could be explained by the fact that such economies tend to have very high levels of inclusion through traditional financial services.⁵⁷ Figure 4.2 shows a rapid increase in usage in other countries, for instance, MM usage tripled in Ghana between 2014 and 2017 whilst it more than doubled in Zambia.

The significant growth in the use of MM experienced in Zimbabwe is mostly because of the collapse of the traditional banking systems after years of dollarisation. In a bid to restore functionality to the payment system, the Reserve Bank of Zimbabwe put a program in place to promote the use of electronic-based payments (Reserve Bank of Zimbabwe 2016, 2017, 2018). In 2019, the bank indicated that 84% of all payments in volume terms were

57. Despite high levels of access inclusion in South Africa, there is evidence that usage is fairly limited with a large number of accounts being used as mailboxes for salaries and government welfare benefits (FinMark Trust 2020).



Source: Global Findex Report (2018).
MM, Mobile money.

FIGURE 4.2: MM usage in sub-Saharan countries.

TABLE 4.1: Digital products in sub-Saharan Africa.

Sub-Saharan region	Years (%)		Change in the usage rate (%)
	2014	2017	
Paid utility bills in the past year	25.0	28.0	3.8
Sent or received domestic remittances in the past year	48.0	45.0	-2.1
Debit card used to make a purchase in the past year	9.0	7.0	-8.0
Credit card ownership	2.9	2.7	-2.9
MM account	12.0	21.0	21.6

Source: Global Findex Report (2018).
MM, Mobile money.

made using MM (Reserve Bank of Zimbabwe 2019). The growth in Ghana also reflects efforts by the government to increase the use of MM. The progression in Ghana has been largely because of support from the government such as the removal of fees for low-value remittances and flexible transactions that promote the use of MM.

The most common use of MM in sub-Saharan Africa is for remittances. Table 4.1 shows that although 28% of adults reported using MM to pay utility bills, 45% used it for remittances. The level of debt and credit card ownership and usage is very low in the region. This is mainly because of the poor infrastructure required to support the use of such payment instruments as well as the significant information asymmetry that makes it difficult for FSPs to assess users for unsecured credit.

The use of digital finance is premised on the presence of infrastructure that supports its use. For instance, MM is popular in many developing countries because of the basic infrastructure needed for its use. To use MM, a user only needs a basic digital device that can handle short messaging service (SMS), USSD and a MNO subscription. MM can be used to pay bills, transfer money as well as check balances on accounts making it easier for the poor, especially those who are geographically excluded to access financial services.

More advanced financial services require advanced infrastructure. For example, debit and credit cards require a complex network of connections between end users, retailers, card issuers and other players in the market. Moreover, access to these services is often linked to the need for Internet. Similarly, the use of e-commerce and online banking requires access to the Internet. Therefore, the level of Internet and mobile network coverage has a significant impact on the type and extent of service but is adopted.

Table 4.2 provides an overview of the level of necessary infrastructure for selected African countries. The data show that in countries with higher levels of broadband coverage such as South Africa, the reliance on MM is low. Furthermore, Table 4.3 shows that there is a high level of concentration in the MNO market. This has a significant impact on MM services as most of the countries do not have interoperability agreements. Ghana has made deliberate efforts to lower the cost of digital finance. This is reflected in a large number of mobile operators, which is much higher than the average in developing countries. Switching between providers is quite expensive for users. In many emerging economies, DFS markets are limited to one or two major providers, reducing innovation, customer choice and potentially facilitating monopolistic or cartelistic behaviour (Soursourian & Plaitakis 2019). The Ghanaian government

TABLE 4.2: Link between the usage of digital finance and relevant infrastructure.

Country	Active mobile broadband connections ^a	Mobile-cellular subscriptions ^a	Internet at home (%)
Botswana	97	174	63.5
Ghana	96.79	134	-
Kenya	96	104	17.9
Nigeria	94.33	882	7.5
South Africa	99.94	166	61.8
Tanzania	95	822	-
Uganda	98	573	-
Zimbabwe	93.4	901	-

Source: ITU (2020).

^a, per 100 inhabitants.

ITU, International Telecommunication Union.

TABLE 4.3: Number of mobile operators.

Country	Number of mobile operators
Botswana	3
Ghana	8
Kenya	4
Nigeria	5
South Africa	4
Tanzania	7
Uganda	8
Zimbabwe	3

Source: ITU (2020).

ITU, International Telecommunication Union.

put in place an interoperability agreement as well as initiatives to enhance innovation of DFS through the removal of fees for low-value remittances, relaxed transaction and wallet size limits for MM (Republic of Ghana 2020a, 2020b).

■ Hypothesis development

The use of digital finance can reduce the cost of providing financial services to the poor (Manyika et al. 2016a; Pazarbasioglu et al. 2020). The reduced cost will result in increased entry into the financial services sector leading to increased competition and innovation (Klapper & Singer 2014). The branchless nature of digital finance significantly reduces costs resulting in increased access. Increased access to financial services will give the poor safe and less risky savings options. Savings can be accumulated for investment, risk mitigation and consumption smoothing. Moreover, lower service costs also mean that the cost of borrowing can reduce (Parada & Bull 2014; Penicaud & Katakam 2013). The resulting expansion in access to credit can increase investment and options for risk mitigation. The use of digital finance also reduces the costs of remittances that as we shall discuss further increases the disposable incomes of the poor and reduces their vulnerability to shocks. For that reason, DFS would affect poverty through the cost of finance. This underpins our first two hypotheses:

- **H1:** An increase in the use of digital finance reduces the cost of financial services.
- **H2:** A reduction in the cost of financial services reduces the levels of poverty.

Evidence shows that reduced expenditure related to a fall in the cost of financial services leaves economic agents, especially low-income households with more income to spend (Agur, Peria & Rochon 2020b; Beck, Demirguc-Kunt & Honohan 2009; Claessens 2006). The fall in the cost of financial services creates room for an increase in real income, which reduces poverty. For instance, Kasali, Ahmad and Ean (2015) show that the use of digital finance enables farmers to have a higher disposable income that enables them to purchase farm products such as fertilisers that will help with crop production, therefore enhancing food security. As a result, we also posit that digital finance will positively affect real incomes reducing poverty. This gives us two more hypotheses to test.

- **H3:** The increased use of digital finance will increase real income.
- **H4:** Higher real incomes will reduce the level of poverty.

Moreover, digital finance reduces information asymmetry. By using digital finance, the poor can increase their credit market footprint through an improved credit record (Wang & He 2020). Information gathering allows

lenders to have better information about individuals and thereby reducing credit rationing. This leads to low-income economic agents having some form of risk profile, which enables low-income households to access credit. Further, the ability to access credit is a critical lifeline for SMEs, which represent a large proportion of the total economy (Yan, Yu & Zhao 2015). Through digital finance, SMEs can increase their footprint in the credit market. This digital footprint can help create credit histories that reduce the business's information opacity ameliorating the effects of information asymmetries. As a result, digital finance can indirectly increase SME access to credit. Therefore, we expect that an increase in the use of digital finance will increase the level of credit in the country, which in turn should reduce the level of poverty. Therefore, we propose the following hypothesis to test:

- **H5:** An increase in digital finance will lead to an increase in access to credit.
- **H6:** An increase in access to credit will lead to a reduction in the level of poverty.

A critical aspect of digital finance that is relevant to the poor is that of remittances. The literature shows that digital finance has reduced the cost of sending and receiving remittances (Jack & Suri 2014; Suri & Jack 2016). The use of digital finance theoretically increases the velocity of money, thereby creating a demand for money through various forms such as remittances as well as payment of utility bills (Ozili 2018). An increase in the use of remittances reduces poverty as the poor have access to income and can send and receive remittances to their families and friends. Further, the use of remittances has been an essential route that connects the poor to the mainstream economy through business start-ups, as well as income for sustenance (Perez-Saiz et al. 2019). Digital finance has also proved to be much safer and quicker than alternative methods (Simatele 2020; Simatele & Mbedzi n.d.). Furthermore, digital remittances increase access to the banking system and improve transparency and security (Klapper & Singer 2014). Consequently, we propose two more hypotheses:

- **H7:** An increase in the use of digital finance leads to an increase in the use of remittances.
- **H8:** An increased level of remittances leads to a reduction in the level of poverty.

The use of digital finance has the potential to reduce the ease of doing business. By reducing transactions costs, digital finance can make it easier for businesses to start as well as to finance working capital. Businesses can also make significant savings by using digital payments. Digital payments are likely to reduce the number of hands through which transactions pass. This will effectively reduce the level of corruption with a consequent improvement in the ease of doing business. The ease of doing business has a critical role in economic growth, reducing inequality and increasing digital finance adoption

and use. An increase in economic growth potentially increases income for the poor and the number of economic opportunities available to them by reducing the time taken to start a business and enabling business start-ups to access credit. Moreover, the ease of doing business increases the participation of the poor in the labour market that in turn reduces the level of poverty (Ncube, Anyanwu & Hausken 2014). Therefore, we also posit that digital finance will positively affect the ease of doing business and in turn reduce the level of poverty. As a result, the following hypotheses are developed:

- **H9:** An increase in digital finance will lead to an improvement in the ease of doing business.
- **H10:** An improvement in the ease of doing business leads to a reduction in the level of poverty.

Addressing asymmetric information in the market through digital finance positions the poor into being financially included in the mainstream economy. The adoption and use of digital finance create an enabling environment that is favourable for financial depth that allows the lender to gather critical information in the economy (Sahay et al. 2020). Literature shows that when financial markets are deep, they are very good at gathering information about savers as well as the borrower (Giovannini, Iacopetta & Minetti 2013). Therefore, this suggests that the use of digital finance will increase information gathering, which deepens the financial depth in the market. Therefore, we propose the following hypotheses to test:

- **H11:** Higher levels of digital finance will increase the financial depth.
- **H12:** An increase in financial depth leads to a reduction in the level of poverty.

■ Estimation and results

The hypotheses developed above are tested using path analysis using a Structural Equation Model. Structural equation modelling allows for the mapping of the paths as shown in Figure 4.3. Mediation provides a clear understanding of the nuances around the transmission mechanism between digital finance and poverty by identifying the strongest and significant proportion of mediated factors. By pinpointing mediating mechanisms, poverty reduction may be refined to focus on controllable variables of the path between digital finance and poverty that could lead to improvements in the access to financial services for the poor (Windgassen et al. 2016). The study used a multicountry dataset for sub-Saharan African countries. Data were sourced from the World Bank Development Indicators, International Monetary Fund as well as the Global Financial Inclusion (Global Findex) database. All the countries that had the relevant variables for the Findex survey years of 2011, 2014 and 2017 were included. In total, 46 countries were included.

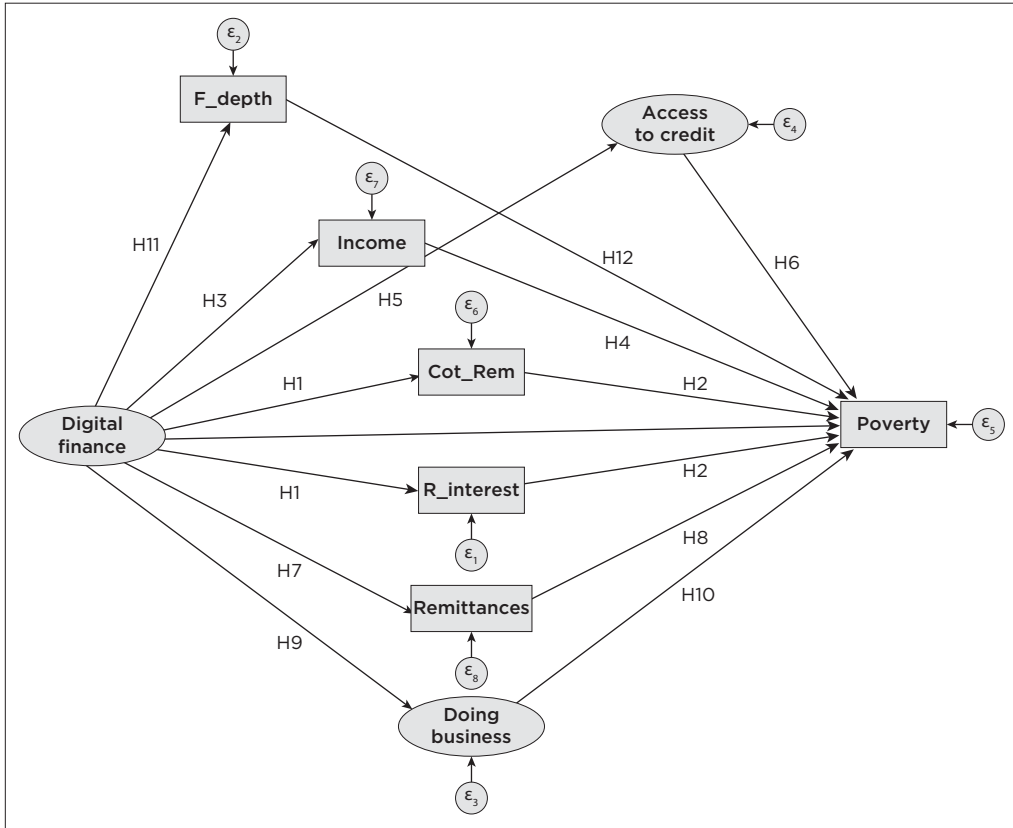


FIGURE 4.3: Proposed conceptual framework for digital finance and poverty.

■ Study variables

The variables that were used in the study are identified in the hypotheses. These are shown in Table 4.4. Three of the variables are measured as latent variables. These include digital finance, access to credit as well as ease of doing business. Whilst various variables exist that can proxy at least to some extent the aspects that these variables represent, they do not completely capture the concept as it needs to be measured. For example, to capture access to credit for the poor, we need to take account of the various aspects that comprise credit services to the poor as different population groups access different services. We only include formal services. We measure this construct by using a latent variable that includes the percentage of adults in the poorest 40% who borrowed from a former institution, those in the bottom 40% of income who used a credit card and the percentage number of small-medium enterprises, which had access to credit. The full set of variables used in the study and how they are measured is shown in Table 4.4.

TABLE 4.4: Overview of variables for the study.

Variables	Source	Item	Rationale
Construct	Digital finance	<ul style="list-style-type: none"> Made or received digital payments Paid utility bills using a mobile phone MM Account 	In this study, digital finance captures disaggregated measures that better understand how the factors differ for each subcategory (Hayworth, Colli & Melzer 2019; Jack & Suri 2014).
	Access to credit	<ul style="list-style-type: none"> Borrowed from a financial institution, income, poorest 40% Population that used a credit card, income, poorest 40% SMEs who report having access to credit 	Evidence in the literature shows that through digital finance, the poor can increase their footprint in the credit market, and it helps promote sustainable growth for the poor (Wang & He 2020).
	Ease of doing business	<ul style="list-style-type: none"> Cost of starting a business Time is taken to start a business Getting credit for a business 	Literature shows that digital finance reduces the time taken to start a business, as well as enabling business start-ups to access credit, as the use of digital finance increases the footprint in the credit market for the poor (Chakravorti, Chaturvedi & Filipovic 2019).
Measured	Remittances	<ul style="list-style-type: none"> Sent or received domestic remittances through a mobile phone 	Digital finance theoretically increases the velocity of money, creating a demand for money through various forms such as remittances sent and received (Ozili 2018; Perez-Saiz et al. 2019). Remittances sent and received are measured as observed variables in the study.
	Cost of financial services	<ul style="list-style-type: none"> Average cost of sending remittances Real interest rates 	A reduction in the cost of financial services makes it possible for the poor to reduce the risk of loss as well as economic loss. Further cost of financial services is also observed to leave the poor with more income to spend (Agur, Peria & Rochon 2020b; Beck et al. 2009; Claessens 2006). These variables are measured as separate variables in the study.
	Income	<ul style="list-style-type: none"> Adjusted level of income 	Literature shows that the fall in the cost of financial services creates room for an increase in real income that reduces poverty (Kasali et al. 2015). Income is also measured as an observed variable in the study.
	Financial depth	<ul style="list-style-type: none"> Broad money ratio to GDP 	Financial depth in financial markets enables lenders to gather information about savers as well as borrows (Giovannini, Iacopetta & Minetti 2013). Financial depth is measured as an observed variable in the study.
	Poverty	<ul style="list-style-type: none"> Poverty headcount ratio 	Percentage of the population living below the national poverty line(s) (World Bank 2018; Yang 2019).

Source: Data compilation – Global Findex Report 2018 and World Development Indicators (2020).
GDP, gross domestic product; MM, Mobile Money

Digital finance is measured as a latent variable that incorporates digital payment receipts, payment of utility bills and ownership over MM account. Access to credit is also measured as a latent variable to capture the effect of borrowing from financial institutions using credit cards and SME access to finance. Ease of doing business includes the cost of starting a business as well

TABLE 4.5: Research hypothesis and expected priori.

Hypothesis	Variable direction	Expected priori
1	Digital Finance → Cost of Finance	Negative (-)
2	Cost of Finance → Poverty	Negative (-)
3	Digital Finance → Income	Positive (+)
4	Income → Poverty	Negative (-)
5	Digital Finance → Access to Credit	Positive (+)
6	Access to Credit → Poverty	Negative (-)
7	Digital Finance → Remittances	Positive (+)
8	Remittances → Poverty	Positive (+)
9	Digital Finance → Ease of Doing Business	Positive (+)
10	Ease of Doing Business → Poverty	Positive (+)
11	Digital Finance → Financial Depth	Positive (+)
12	Financial Depth → Poverty	Negative (-)

as the time it takes to set up their business and the ease of getting access to credit. The observed variables adopted in this study include financial depth, remittances sent and received, real interest rate, cost of sending remittances, income and poverty. The importance of these variables is highlighted in Section 4 where we discuss the derivation of my hypotheses. Table 4.5 shows the expected paths from digital finance to poverty and the a priori expected signs.

■ Reliability and validity analysis

When latent variables are used in the analysis, it is important to check the reliability and validity of their measure, especially where there is no standard or generally agreed on ways of measuring the concepts. These help us to demonstrate that the variables are correctly measured. In the study, reliability is measured using Cronbach’s alpha and the composite reliability index. The average variance extracted was used as a measure of validity. It is suggested that a Cronbach’s alpha coefficient of 0.7 is generally accepted as an indication of internal consistency (Field 2013). The results indicate that all the Cronbach coefficients are above the accepted threshold of 0.7, which suggests a good fit of the model after exceeding the benchmark put forward by Malhorta and Birks (2017). The composite reliability index was also conducted in the study and shows that factor loadings are above 0.6 as stipulated by Bagozzi and Yi (1988). The reliability constructs are shown in Table 4.6.

■ Structural model

Seven of the 12 hypotheses are supported. Hypothesis 1 is supported showing that digital finance reduces the cost of finance for both digital and traditional

TABLE 4.6: Reliability of the constructs.

Constructs	Item	Description	AVE	CR	Cronbach alpha	Factor loadings
Digital finance	DFS1	Made or received digital payments				0.812
	DFS2	Paid utility bills using a mobile phone				0.794
	DFS3	MM account				0.768
			0.71	0.767	0.839	
Ease of doing business	EDB1	Cost of starting a business				0.788
	EDB2	Time taken to start a business				0.764
	EDB3	Getting credit for a business				0.731
			0.66	0.750	0.855	
Access to credit	ACR1	Borrowed from a financial institution, income, poorest 40%				0.768
	ACR2	Borrowed from a financial institution or used a credit card, income, poorest 40%				0.754
	ACR3	SMEs who report having access to credit				0.749
			0.75	0.796	0.853	

AVE, average variance extracted; DF, digital finance; ED, ease of doing business; ACR, access to credit; MM, Mobile Money

financial services. Both the coefficients for the interest rate and cost of remittances are negatively correlated with digital finance. Manyika et al. (2016a) argue that moving to digital platforms can reduce the cost of providing financial services to the poor by up to 90%, which in turn can reduce poverty. Furthermore, lower costs of remittances and interest rates can indirectly improve the chances of low-income households to access other financial services better than they would under the traditional finance channel (IFAD and World Bank Group 2015). However, Hypothesis 2 is not supported. The impact of interest rates on poverty is not significant. This result is not unexpected. The poor have very limited access to formal services where the interest rate is relevant. Moreover, both savings and credit are relatively interest inelastic (Deheja et al. 2012; Karlan & Zinmann 2005; Razaqq 2019). These are the channels through which the interest rate is expected to affect poverty. Similarly, the cost of remittances has a significantly negative effect. Lowering the costs of sending remittances reduces poverty. The literature suggests that the lower costs of remittances have increased the frequency and speed with which remittances are sent (Maloumy-Baka & Kingombe 2016). This has resulted in better economic opportunities as well as increased investment in education and health.

Hypothesis 3 is supported. Digital finance is positively correlated with income. The insignificance of the interest rate rules out interest income as a channel for increasing incomes. However, digital finance reduces interest rates, which in turn increase access to credit (H5). Hypothesis 6 is not supported. Therefore, we suggest that the income effect could work through increased labour income, which would increase in the face of reduced capital costs for firms. There is a negative correlation between

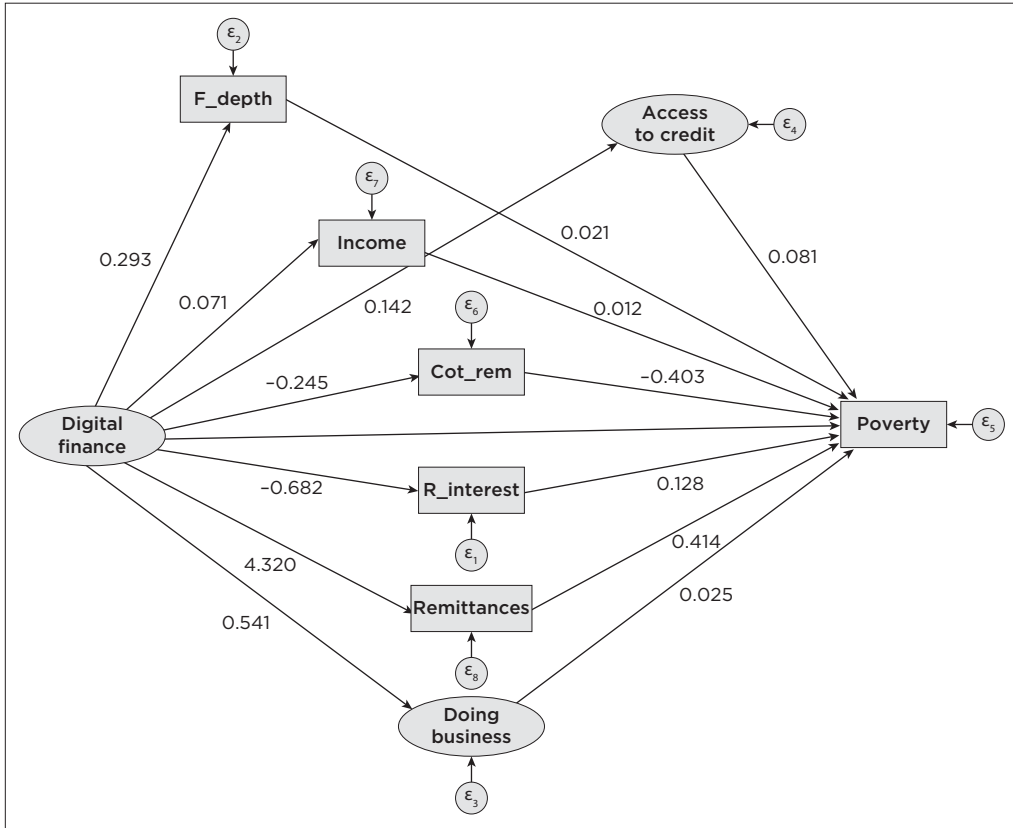


FIGURE 4.4: Digital finance and poverty path diagram findings.

access to credit and poverty. Many efforts have been made to increase access to credit for the poor because credit would help them in smoothing consumption and coping with income shocks. Moreover, it is expected to improve their capacity to get involved in entrepreneurship. Hence a negative relationship was expected. The positive result obtained could be related to the growing literature that bemoans the negative effect of credit on the poor. Low-income households tend to have the highest debt-income ratios as well as higher debt burdens (Barba & Pivetti 2009). The full set of variables and results for the study are shown in Table 4.7.

Hypothesis 7 is supported showing that digital finance increases the number of people who send and receive remittances. However, the positive coefficient on Hypothesis 8 is unexpected. An increase in the number of people sending and receiving remittances is expected to lead to a fall in the level of poverty. Zhu and Luo (2010), Yang and Batista (2012) and Suri and Jack (2016) show that remittances reduce the level of poverty for low-income earners by making significant contributions to food security, human capital, rural development and the overall GDP. The positive effect of remittances on

TABLE 4.7: Hypothesis results.

Hypothesis	Relationship	Coefficient	Expected sign	Result	Conclusion
H1	Digital Finance → Cost of Finance (interest rate)	-0.682***	-	-	Supported
H1	Digital Finance → Cost of Finance (cost remittances)	-0.245***	-	-	Supported
H2	Cost of Finance (interest rate) → Poverty	0.128	+	+	Supported
H2	Cost of Finance (cost of remittances) → Poverty	-0.403***	+	-	Not supported
H3	Digital Finance → Income	0.071***	+	+	Supported
H4	Income → Poverty	0.012*	-	+	Not supported
H5	Digital Finance → Access to Credit	0.142***	+	+	Supported
H6	Access to Credit → Poverty	0.061***	-	+	Not supported
H7	Digital Finance → Remittances	4.32***	+	+	Supported
H8	Remittances → Poverty	0.414***	-	+	Not supported
H9	Digital Finance → Ease of Doing Business	0.541**	-	+	Not supported
H10	Ease of Doing Business → Poverty	0.025	+	+	Supported
H11	Digital Finance → Financial Depth	0.293**	+	+	Supported
H12	Financial Depth → Poverty	0.021***	-	+	Not supported

***, 1% level of significance; **, 5% level of significance; *, 10% level of significance.

Fit indices: RMSEA, 0.04; NFI, 0.95; CF, 0.97; TLI, 0.93.

poverty has been observed in the literature. For instance, Acosta et al. (2008) find that remittances are positively correlated with the depth of poverty in El Salvador, Honduras and Peru. Similarly, Majeed (2015) estimates the effect of remittances on poverty for a set of 65 developing countries and finds that remittances have a negative effect on poverty in countries with underdeveloped financial markets. These results could be influenced by the structure of remittances. For example, Adams and Cuenca (2013) show that non-poor households get more remittances than poor households. This is likely to increase inequality with a consequent positive effect on poverty.

The relationship between digital finance and ease of doing business is negative and significant. This result is unexpected. The use of digital finance should reduce transactions costs for firms. Hypothesis 10 is not supported. Although the coefficient has the expected positive sign, it is insignificant. The ease of doing business largely has an impact on formal markets, whereas most of the poor are involved in informal economic activities.

As expected, Hypothesis 11 is supported showing that increased use of digital finance increases financial depth. Improved information gathering and monitoring through DFS reduce information asymmetries. This in turn makes it easier and less risky for FSPs to extend and expand services to the poor. However, the impact of financial depth on poverty is unexpectedly positive. Greenwood and Jovanovic (1990) in their model argued that at early stages of development, increased financial depth can actually hurt the poor and the positive effects would only be seen at higher levels of development when information gathering costs decrease and rationing of the poor in financial markets reduces. Empirical evidence has

confirmed that financial development can increase inequality even in the face of well-developed financial markets. This suggests that poverty is reduced partly using finance through human capital development (Beck, Demirguc-Kunt & Levine 2007; Johansson & Wang 2014).

Considering this, the high levels of information opacity of many low-income consumers in African financial markets could explain the unexpected result, which leads to high levels of exclusion for the poor. One reason could be that the level of use of digital footprints arising from services such as MM by mainstream institutions to evaluate and assess low-income borrowers is still in its infancy in most African countries (Handley et al. 2009). Consequently, the benefits of digital finance through intermediation are still limited. The literature shows that MM is the main conduit of most benefits of digital finance in Africa. Currently, most DFS through intermediaries are premised on the ownership of a bank account, which is out of the reach of many low-income consumers.

■ What is the transmission mechanism?

In the study, we established the channels through which digital finance affects poverty and three separate channels are identified. These channels are summarised further. The first channel is through remittances. When there is increased use of digital finance, in the case of African countries largely MM, the cost of remittances reduces. This increases the frequency and sizes of remittances received by low-income households. This in turn increases the money that households can invest in productive activities, human capital development and manage risk. Ultimately, this reduces poverty. The channel is shown in Box 4.1.

The second channel that is identified is through traditional finance. Digital finance makes it cheaper for formal financial institutions to provide financial services to the poor. This should ideally increase access to several financial services through improved intermediation and lower interest rates. Lower interest rates can reduce the cost of credit allowing the poor to access more credit and improve their living conditions. We note that the financial depth and credit variables in our study have an unexpected sign and have offered a possible explanation for this. Therefore, the second transmission mechanism suggests (Box 4.2):

The third channel (Box 4.3) of transmission is through the ease of doing business and its ultimate impact on incomes and growth. Digital finance

BOX 4.1: Transmission mechanism 1.

Transmission mechanism 1

↑ Digital Finance → ↓ Cost of Remittances → ↑ Total Remittances → ↓ Poverty

BOX 4.2: Transmission mechanism 2.*Transmission mechanism 2*

↑ Digital Finance → ↑ Financial Depth → ↓ Interest rates → ↑ Access to credit → ↓ Poverty

BOX 4.3: Transmission mechanism 3.*Transmission mechanism 3*

↑ Digital Finance → ↓ Cost of Doing Business → ↑ Productivity → ↑ Growth → ↑ Income → ↓ Poverty

reduces the cost of projects and payments and improves business efficiency. It also reduces the cost of setting up businesses both of which have an ultimate positive effect on growth. Growth results in the creation of more jobs and increased income for the poor as well as improvements in the government's capacity to make social payments. This will result in reduced poverty; therefore, we get the final mechanism as shown in Box 4.3. However, our results only partially support this channel.

■ Conclusion

Digital finance has been praised as one of the key tools in the fight against poverty. Literature suggests that it is one of the best ways to ensure faster, better, and more cost-effective ways to access financial services. Although digital finance has been identified as a key driver in easing financial exclusion and reducing poverty, the mechanisms by which this happens have attracted very little empirical investigation in literature. As a result, the paper investigated how digital finance affects poverty from a transmission mechanism view. Overall, the results support the fact that increased use of digital finance reduces poverty. Three mechanisms are identified through which this effect works.

The first channel operates through remittances. Digital finance reduces the cost of remitting resulting in increased remittances, which effectively increased disposable income for the poor. The second channel works through traditional financial services. We propose that this channel works via the interest rate and credit effects. The third channel works by reducing the cost of doing business. We propose that this improves general productivity and growth with a consequent reduction in the number of people living in poverty. Two additional important results in the paper are worth highlighting. Firstly, the results suggest that access to credit may have a perverse effect on poverty. The literature has demonstrated that in cases where credit is used for consumption rather than investment, it can lead to over-indebtedness and increases the

vulnerability of the poor. Our results seem to support this view. Therefore, we propose a caution on the expansion of credit without due diligence paid to borrowers' ability to repay and manage their finances.

The second result is that we find that remittances positively affect poverty rather than causing a negative effect as expected. The literature suggested that this is a result that is observed in countries with less developed financial markets. We therefore proposed that in addition to pushing for the expansion of digital finance, governments need to pay attention to the overall development of the financial sector to ensure that it provides an environment where digital finance can positively benefit poverty.

The development of the financial sector creates an enabling environment or a springboard for the off-take for financial inclusion. One can conclude that for the more significant impact of financial inclusion, government needs to have a stream of policies that complement each other and extend beyond the focus of remittances. To improve the benefit of remittances and the increase in financial inclusion in the African context, the development of the financial sector should be at the core of policy formulation. This implies government investing in digital infrastructure, which is expected to create a platform that increases financial inclusion.

The benefit of remittances should enable access, efficiency, and stability in terms of finance. For countries where households are affected by the structure of remittances, financial inclusion can be increased by the government considering alternative measures of digital finance such as MM services, where they can reduce the costs to receive finance from a MM service. Given that remittances are one of the many options available to households to reduce poverty, we expect that exploring alternative measures to improve access to finance will improve financial inclusion for poor households compared to remittances that benefit non-poor households. This finding underlines the fact that finance cost has a negative effect on the level of poverty.

Reducing the cost of finance, particularly for remittances, makes it possible and cheaper to send and receive remittances. The reduction in the cost of finance increases financial inclusion by enabling competition within the digital space and discouraging the rise of monopolies. The abundance of competition through the reduction in the cost of finance enhances the development of the financial system, leaving the region less vulnerable to calamities, thereby reducing the poverty gap.

As mentioned earlier, the third channel on the transmission mechanism focuses on the ease of doing business and its ultimate impact on incomes and growth. It should be noted that the type of businesses available in the market is still evolving and cannot be sustained by digital finance. This may

suggest that some businesses in Africa may still require traditional finance to enable the business to acquire more significant amounts of credit for business growth start-ups. This is expected to increase the level of financial inclusion.

From a business perspective, the traditional finance mechanism may be more suited for small businesses than the digital finance mechanism. This has been mainly because of a lack of infrastructure facilities essential for the greater use and adoption of digital finance. This, therefore, suggests a need for the change of mindset for government practitioners, given that traditional finance is still a limiting factor. In this aspect, policies in the region should be developed to enhance digital infrastructure, which is essential for creating an enabling environment for sustainable business growth.

The three channels identified have a common denominator that is related to costs. Given that the cost of finance is extremely high in sub-Saharan Africa, it is prudent for the government to develop policies that reduce costs and increase accessibility for poor households. This can be done by countries setting targets for cost reduction in their economic development plans. The study also recommends that development plans with targets need to be monitored through key performance indicators or a monitoring index that enables policy practitioners to trace the patterns or progress towards enhancing financial inclusion.

Moreover, countries also need to explore the use of mobile technology in financial inclusion. Given that mobile technology is on the rise in the sub-Saharan region, the transmission mechanism for all three channels can be further harnessed by governments investing in the growth of mobile technology and raising awareness on the benefit of using mobile devices. Raising awareness related to using mobile technology would discourage senders from using informal remittance channels, thereby increasing the appetite to use formal channels such as mobile technology, which is efficient in terms of cost.

A key policy recommendation on enhancing financial inclusion in all three channels would be for the government to unlock regulatory and market barriers concerning digital finance. For instance, increasing competition in terms of the number of digital finance providers would significantly reduce the cost of remittances. This is expected to have a significant impact on the total remittances received, thereby reducing poverty. The study recommends that capturing smaller remittance values compared to traditional players would harness financial inclusion and strategically position countries to place lower costs in the digital space. Further, leveraging existing networks in the digital space and unlocking infrastructure would significantly enhance the financial depth, enabling access to credit, thereby reducing poverty. This is observed in the second channel.

One of the key outcomes in the third channel is growth, which results in the creation of more jobs and increased income for the poor. This also leads to improvements in the government's capacity to make social payments. From a policy perspective, the government should play a strategic role in promoting and developing policies that enhance E-finance or E-governance. These policies would have the capacity to improve government's mandate to make social payments and reduce the level of corruption.

From the above analysis, disaggregation of the variables could help trace more closely some of the paths through which digital finance affects poverty. For example, the literature suggests that MM is the main conduit for digital finance on poverty in the African context. Further research could disaggregate the digital finance variable to investigate this assertion. Moreover, the strength of these effects can further be investigated to identify the channels that most lend themselves to the faster reduction of poverty.

DFSs, COVID-19 and future financial services landscape in Uganda

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■ Introduction

On 31 December 2019, the Chinese authorities notified the World Health Organization (WHO) about a mysterious respiratory infection, which was spreading in one of its provinces (WHO 2020). By 12 January 2020, the WHO had confirmed that a novel coronavirus (SARS-CoV-2) was the cause of the respiratory illness with pneumonia-like symptoms in Wuhan City, Hubei Province, China. The illness was named COVID-19. On 30 January 2020, COVID-19 was declared a 'public health emergency of international concern' and on 12 March 2020, it was categorised as a pandemic.

As of 03 December 2020, the disease had ravaged 190 countries with 64964775 confirmed global cases and 1501076 deaths resulting in a

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mortality rate of 2.311% (Johns Hopkins University Coronavirus Resource Center [JHUCRC] 2020). Africa has not been spared from the effects of COVID-19. The total number of confirmed cases stood at 1507 349 individuals with 24 464 fatalities. The mortality rate though lower than the global rate was high at 1.623% (World Health Organisation Regional Office for Africa [WHOROFA] 2020). During the same period, Uganda had registered 21.409 cases with 206 fatalities translating into a lower mortality rate of 0.962% (JHUCRC 2020). The COVID-19 era for Uganda is assumed to have commenced in March 2020 with the first case having been reported on 21 March 2020.

Even though COVID-19 has not yet ravaged the weak public health systems of the developing countries of Africa to the extent of advanced economies, it has not spared their economies on account of the almost complete national lockdowns and restrictions of in-land and cross-border travel. The estimated impact of COVID-19 on the African continent is expected to be a contraction in the economic growth of between 4.9% and 5.1%.⁵⁸

African economies will be affected through two main channels. Firstly, through the impact of foreign flows including directly through a decline in workers' remittances from African Diaspora, Foreign Direct Investment (FDI) and Official Development Assistance (ODA). The second channel is through local impacts including indirectly through morbidity and mortality, disruption of supply chains, contraction of domestic demand because of loss or decline of income and rising public expenditure to support economic activities and safeguard human health against COVID-19 (African Union [AU] 2020). Similar impacts are projected for the Ugandan economy (Bank of Uganda [BoU] 2020; Ministry of Finance, Planning and Economic Development [MoFPED] 2020b).

Mugume et al. (2020) observed that economic activity in Uganda is expected to contract from 6.8% in 2018 to 3.1% in 2020 before recovering to between 4% and 5.0% and 6% and 6.5% in 2021 and 2022, respectively. The projected economic contraction is to be expected because Uganda is a small open economy with various interlinkages in the global trade and financial system. As a result, any upheavals in the major world economies can result in major shocks to the Ugandan economy.

As a consequence of the negative projections and the recent memories from the global recession of 2007/2008, countries across the globe have proposed several measures to mitigate the impact of COVID-19 on national economies (AU 2020):

58. Economic growth for the region was 2.4% in 2019 and is expected to contract between -2.1% and -5.1% in 2020. This translates into output losses of US\$37 billion up to US\$79 billion (Overseas Development Institute [ODI] 2020).

In order to cushion the effect of the crisis on households and firms, Governments are designing a wide range of policy responses, including direct income-support, tax breaks extension of guarantees, and deferred payments on debt. (p. 10)

The responses adopted in various developing countries like Uganda have been collaborative in nature involving the Central Banks, Central Government and private sector economic agents.

In Uganda, like the rest of the world, the mechanisms deployed by the government to combat the SARS-CoV-2 microbes included quarantine, hygiene and social distancing. Specifically, Uganda deployed mandatory use of face masks in public spaces, restriction of movements of people by closing borders and the airspace and banning of movement between jurisdictions. Furthermore, the banning of mass gatherings like public prayers, congregating in educational institutions, clustering in business places and entertainment-related gatherings coupled with sensitisation of the masses to enhance nutrition were undertaken.

The governments' restrictions introduced to curb the spread of COVID-19 have affected businesses across the country. The FSPs have not been spared as well. For example, at the height of the national lockdown, FSPs closed 50% of their branch networks and had to abide by a hard curfew that affected their operations.⁵⁹ Moreover, the FSPs ceased operating over the weekend. As a consequence, financial consumers were encouraged to use Information Communication Technology (ICT)-based delivery models such as MM, mobile banking, Internet banking and automated teller machine (ATM) banking. The spatial movement was not permissible outside one's administrative jurisdiction and curfew limitation restrictions on human movement introduced by the state implied that access to financial services was largely moved onto digital finance channels.

As a consequence, digital delivery channels that were perceived as complementary to traditional face-to-face delivery channels were now the defacto means of accessing financial services. The World Bank observes that (Pazarbasioglu et al. 2020):

[7]he current COVID-19 pandemic has amplified the urgency of utilizing fintech to keep financial systems functioning and keep people safe during this time of social distancing, falling demand, reduced input supply, tightening of credit conditions and rising uncertainty. (p. 3)

It is not known with certainty whether the financial services access traffic pushed towards digital channels on account of COVID-19 will continue in the

59. The height of the lockdown was between March and April 2020. During this time, a strictly enforced curfew was imposed between 19:00 and 06:30. This effectively reduced the working hours from 12.5 h to 6 h per day. Providers who had previously been licenced to operate on weekends and extended hours also suspended this service.

post COVID-19 era. Nevertheless, it is important to understand the impact this shock has had on the provision of financial services and how individuals have changed how they use them as a result.

To address the issue, the chapter utilises descriptive statistics to explore how MM has been used before and after the COVID-19 pandemic shock. Furthermore, it draws inferences from the data to shed light on the likely direction of the subsector and what ought to be done to ensure the continuance of DFS uptake to militate against similar shocks in the future. The rest of the chapter is organised as follows. The section on 'DFSs in Uganda' discusses DFS in Uganda. This is followed by a discussion on the uptake of MM, MM services and then a discussion of the various types of MM services used in Uganda. The following sections discuss the costs associated with the use of MM services as well as the infrastructural support required for MM. The disruptions to MM observed over its 12-year life in Uganda are briefly discussed. This is followed by a discussion of disruptions in MM and how the COVID-19 pandemic has affected MM use in Uganda. Finally, lessons and conclusions are drawn from the discussion.

■ DFSs in Uganda

DFS encompass a broad range of financial services that are delivered and accessed using digital channels. The digital channels include the Internet (via computers and other digital devices), mobile (cellular) phones, ATMs and points of sale terminals. DFS include traditional brick and mortar financial institutions (TBMFIs)-based digitally delivered, financial services such as Internet banking, cheque truncation, telegraphic transfer, agency banking, etc., as well as mobile financial services (MFS) such as MM, mobile payments and mobile banking. In Uganda, DFS is dominated by MFS with seven MMSPs in the market, namely AfriMoney, Airtel Money, EzeeMoney, mCash, MicrOpay, MTN Mobile Money (MoMo) and UTL M-sente.⁶⁰ Moreover, other fintechs exist in the market.

DFS have numerous benefits that can expand the delivery of financial services to the Bottom of the Pyramid (BoP) clients through innovative technologies like mobile phone-enabled solutions, electronic money models and digital payment platforms (AFI 2020; Kambale 2018; Pazarbasioglu et al. 2020). Some of the benefits include cost reduction and lower surcharges on account of maximising economies of scale, enhanced accessibility and outreach, increased efficiency, better quality service, increased speed, security and transparency of transactions, potential for product customisation, as well

60. Eight, over the time MMSPs have existed in Uganda. Warid Pesa was integrated into Airtel Money with the Airtel-Warid merger that was finalised on 23 April 2013.

as convenience (AFI 2020; Kambale 2018; Masocha & Dzomonda 2018; Pazarbasioglu et al. 2020).

Ssonko (2011) explored the salient characteristics of Uganda's MMSPs and noted that the prevalent business model was MNO centric. The MNOs did the bulk of the work (marketing, customer care, mobile account opening and clientele safety) whilst the commercial banks provided custody of the 'physical cash' through maintenance of an escrow account. The main operators included MTN MM, Airtel ZAP and UTL M-sente. As on February 2011, MTN MM held about 89.40% of the market share measured as a proportion of total registered customers. The balance of the market share was split between Airtel ZAP and UTL M-Sente with 7.55% and 3.05%, respectively. The study also shows that provision of MM services relied on SMSs and USSD to deliver services to their clientele, which comprised cash-in, cash-out, purchase of airtime, person-to-person (P2P) money transfers, person to business (P2B), mobile accounts inquiry and bills payment. The regulatory framework was provided by BoU and Uganda Communications Commission (UCC) under a Memorandum of Understanding.

Over the ensuing period since February 2011, several changes have occurred in the DFS space including amongst others financial deepening resulting from the increased use of existing MM services and products. Financial widening so increased through the creation of new product offerings. Moreover, the sector has been affected by policy disruptions such as switching off MM during 2016 national elections as well as the introduction of a plethora of taxes on MNOs. Twenty-one months after the introduction of the social media tax⁶¹ and taxes on the value of MM payments in July 2018 that led to the contraction of MMS business volume, the COVID-19 disruption struck in March 2020. The concern of this chapter is to show how large-scale disruptions can affect modern financial services using the case of COVID-19's impact on MM in Uganda.

■ Uptake of MM services

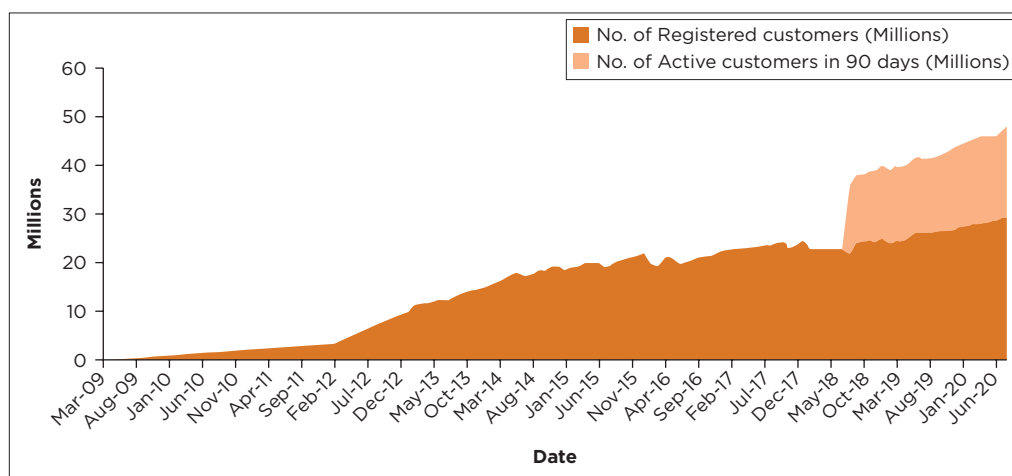
MM has become a major enabler of financial inclusion on account of the low financial and economic costs of opening and maintaining MM accounts compared to bank accounts in TBMFIs. Financial inclusion is a multidimensional concept that focuses on access, usage, quality, etc. The number of registered users is a reflection of access, whilst the number of active customers is indicative

61. In June 2021, the Income Tax (Amendment) Bill, 2021 repealed the excise duty on OTT services and instead introduced a 12% of the fee charged on internet data, except data for provision of medical services and education services.

of usage.⁶² The number of registered users has steadily grown from 10 011 individuals in March 2009 when MM was introduced in Uganda to 27 529 017 consumers in February 2020. The number of MM accounts has been increasing as can be seen from Figure 5.1. For instance, the number of active MM accounts was well over 17 million in 2020 compared to just over 14 million in 2018.

■ MM services in Uganda

The services that were being offered by MMSPs as of March 2016 included P2P, P2B, Person-to-Government (P2G), Business-to-Person (B2P), cross-border remittances, Bank-to-Wallet (B2W), Wallet-to-Bank (W2B) and Government-to-Person (G2P) (Ssettumba 2016). Over the last 54 months (4.5 years), financial widening has taken place and newer products/services have been devised by MMSPs. Some of these are merely automation of financial services/products provided by TBMFIs whilst others are innovative solutions to address the needs of the public that may not have existed in the TBMFIs space. The subsections below reflect the services offered by MMSPs as on February 2020, which has been considered a cut-off date for the pre-COVID analysis.



Source: Bank of Uganda Mobile Money Statistics (2020).⁶
MM, Mobile money

FIGURE 5.1: Registered and active customers of MM.

62. Active customers are defined as those who have used the MM service to perform at least one person-to-person payment, bill payment, bulk payment, merchant payment, airtime top-up, cash-in to account, cash-out from account, mobile money-to-bank account transfer, or used to send or receive international remittances during at least 30/31 days prior to end of the reporting period for the year indicated. Balance inquiries, PIN resets and other transactions that do not involve the movement of value do not qualify a customer account as active.

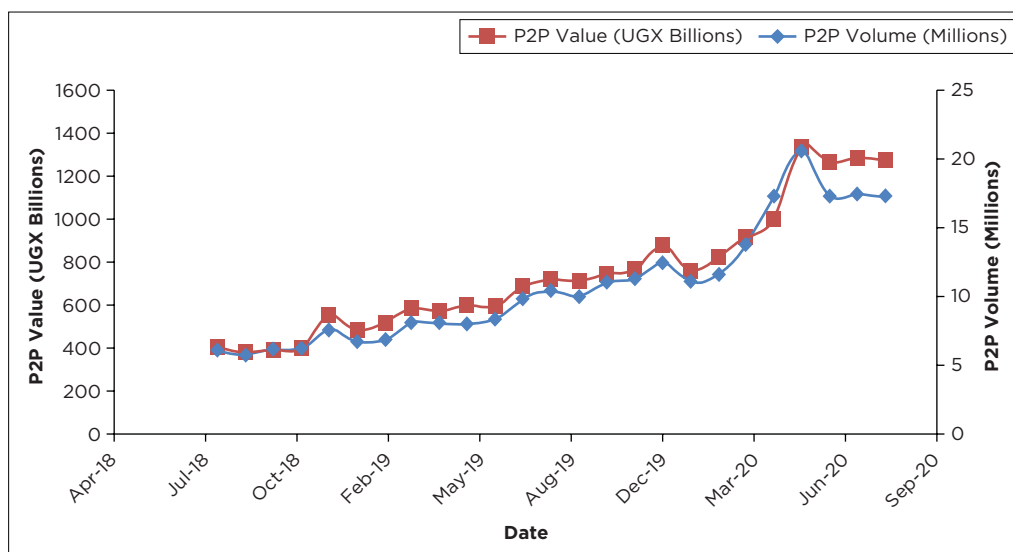
63. Effective August 2018, the reporting format was amended to include number of active customers in 90 days.

■ Person-to-person

Peer-to-peer or personal transfers involve the movement of funds between two parties using their MM accounts. This was the first service on offer when MM rolled out in March 2009. Figure 5.2 shows that by February 2020, there were 11.6 million P2P transactions worth UGX822.5 billion up from 6.06 million transactions worth UGX404.8 billion⁶⁴ recorded in August 2018 when P2P was first reported to BoU by MNOs.

■ Deposits

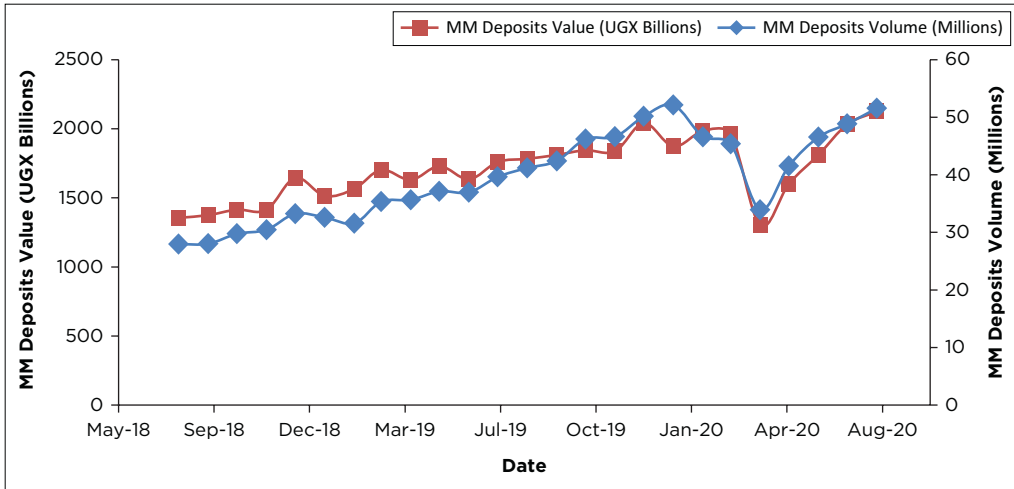
Deposits or cash-in within the MM ecosystem, are defined as funds handed over to a MM agent to acquire electronic value (e-value) colloquially known as float. By February 2020, there were 46.6 million deposit transactions worth UGX1984.6 billion up from 28 million transactions worth UGX1355.2 billion in August 2018. Figure 5.3 shows a drop in deposits during the lockdown period of March to April 2020.



Source: Bank of Uganda Mobile Money Statistics (2020).
P2P, Person-to-person.

FIGURE 5.2: Person-to-person volumes and values before and after COVID-19.

64. The official average midrate of the US\$/UGX exchange rate for calendar years 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019 and 2020 was UGX 2030.49 per US\$, UGX 2177.56 per US\$, UGX 2522.75 per US\$, UGX 2503.31 per US\$, UGX 2600.33 per US\$, UGX 3245.54 per US\$, UGX 3420.45 per US\$, UGX 3611.36 per US\$, UGX 3727.79 per US\$, UGX 3703.98 per US\$ and UGX 3717.49 per US\$, respectively.



Source: Bank of Uganda Mobile Money Statistics 2020.
MM, Mobile money

FIGURE 5.3: MM deposits volumes and values before and after COVID-19.

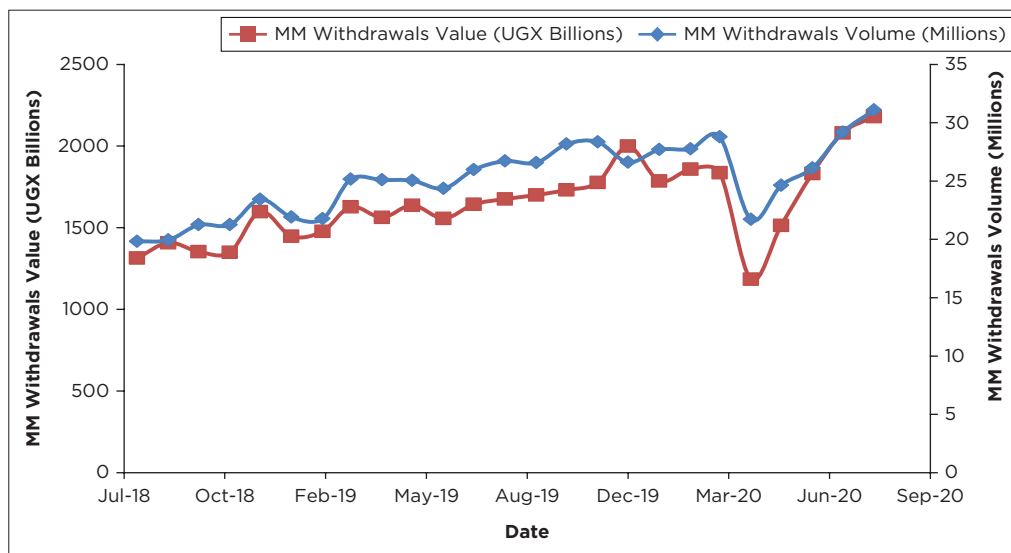
Withdrawals

Also known as cash-out, withdrawals represent the volume and value of funds received from an agent when a customer decides to convert the e-value held on the subscriber identity module (SIM) card into physical cash. This action reduces the e-value balances on a given customers’ MM account. MMSPs prefer that customers use their MM balances to meet and electronically settle obligations other than withdrawals. Consequently, the cost structure is such that the withdrawal charges are often prohibitive to dissuade customers from drawing their accounts to zero balances. By February 2020, there were 27.8 million withdrawal transactions worth UGX1858.1 billion up from 19.8 million transactions worth UGX1313.8 billion in August 2018. As with deposits, Figure 5.4 shows a dip in withdrawals during the lockdown period.

Bank-to-Wallet and Wallet-to-Bank

The B2W is a service that allows bank clients to transfer funds from their bank account to a mobile wallet (MM account). This service was introduced many years after the introduction of MM and caters for fund transfers between the TBMFI and MMSPs. By February 2020, there were 901 152 B2W transactions worth UGX 174.5 billion up from 616 525 B2W transactions worth UGX102.2 billion in August 2018.

Wallet-to-Bank is a service that allows MM account holders to transfer funds from their mobile wallet (MM account) to a bank account. In comparison



Source: Bank of Uganda Mobile Money Statistics 2020.
MM, Mobile money

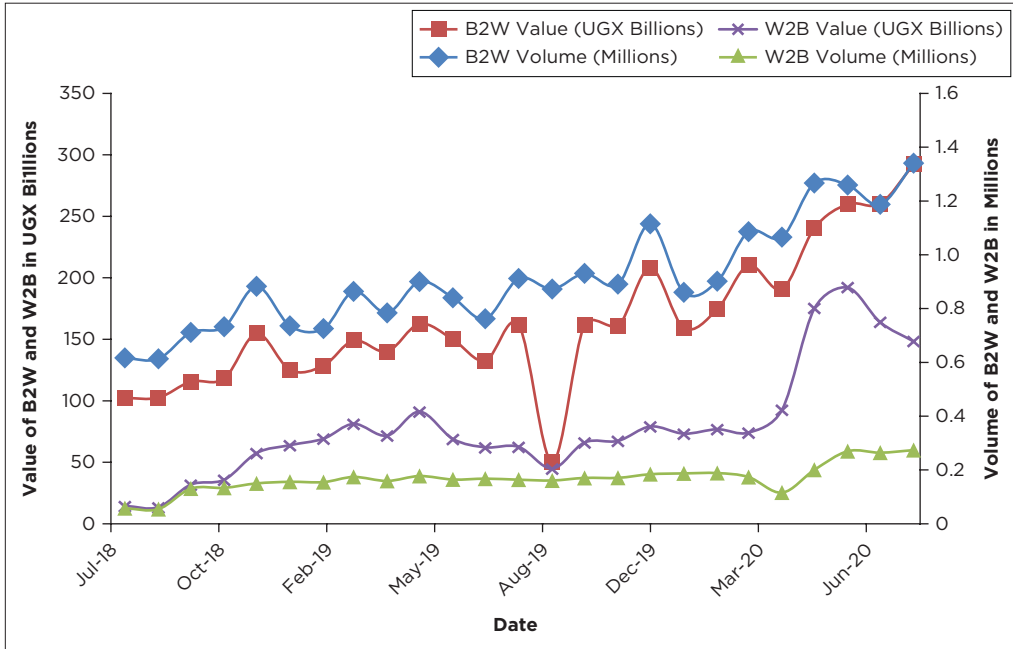
FIGURE 5.4: MM withdrawals volumes and values before and after COVID-19.

to B2W, W2B is not very common and remains the preserve of a few. The low uptake of W2B is partly because of the delayed granting of access by TBMFIs to the first layer of information that provides the financial consumer with the capacity to verify account details before transacting. By February 2020, there were 188 413 W2B transactions worth UGX76.8 billion up from 57 564 W2B transactions worth UGX14.5 billion in August 2018. According to Figure 5.5, the volumes of transactions have declined less than the values.

■ Bill and merchant payments (P2B)

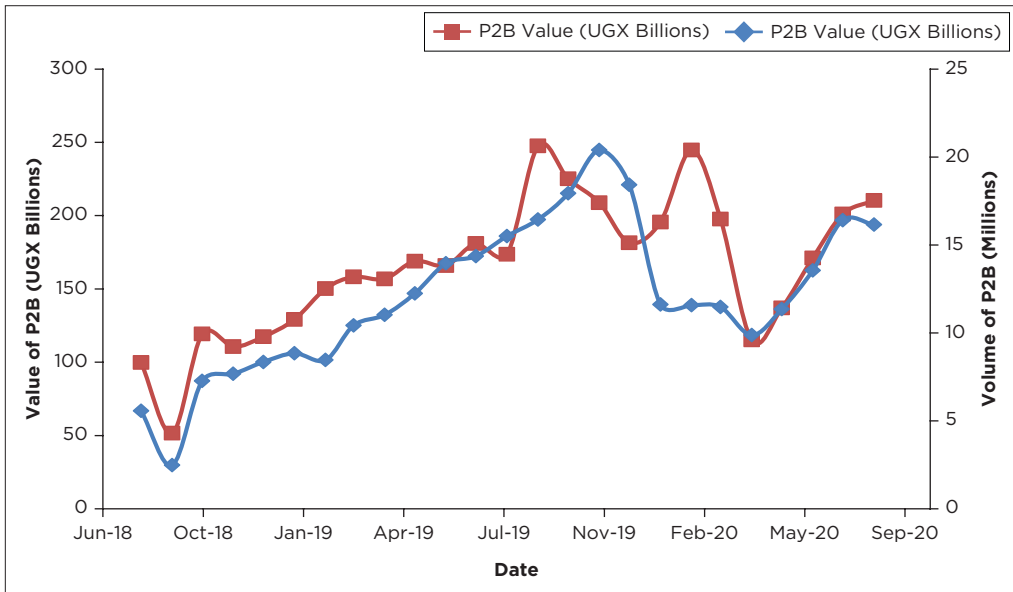
MMSPs have made available within their platforms, options for bill payments, especially for utilities including water, electricity and Internet and payments because of merchants as a result of purchases. The latter are in the form of Airtel Pay and MTN MoMoPay, which allow the transfer of balances to the merchant without the subscriber incurring costs. Between 2011 and 2014, the providers of utilities took advantage of this provision and the revenue collectors scaled back their cash offices to avoid long lines at their premises and improve efficiency in revenue collection. The decision enhanced P2B payments via MM.

Figure 5.6 shows the trends in P2B volumes and values between June 2018 and September 2020. By February 2020, there were about 11.5 million P2B transactions worth UGX244.8 billion up from 5.5 million P2B transactions worth UGX99.8 billion in August 2018. The large volume and values registered



Source: Bank of Uganda Mobile Money Statistics 2020.
B2W, Bank-to-Wallet; W2B, Wallet-to-Bank.

FIGURE 5.5: B2W and W2B volumes and values before and after COVID-19.



Source: Bank of Uganda Mobile Money Statistics 2020.
P2B, Person-to-business.

FIGURE 5.6: P2B volumes and values before and after COVID-19.

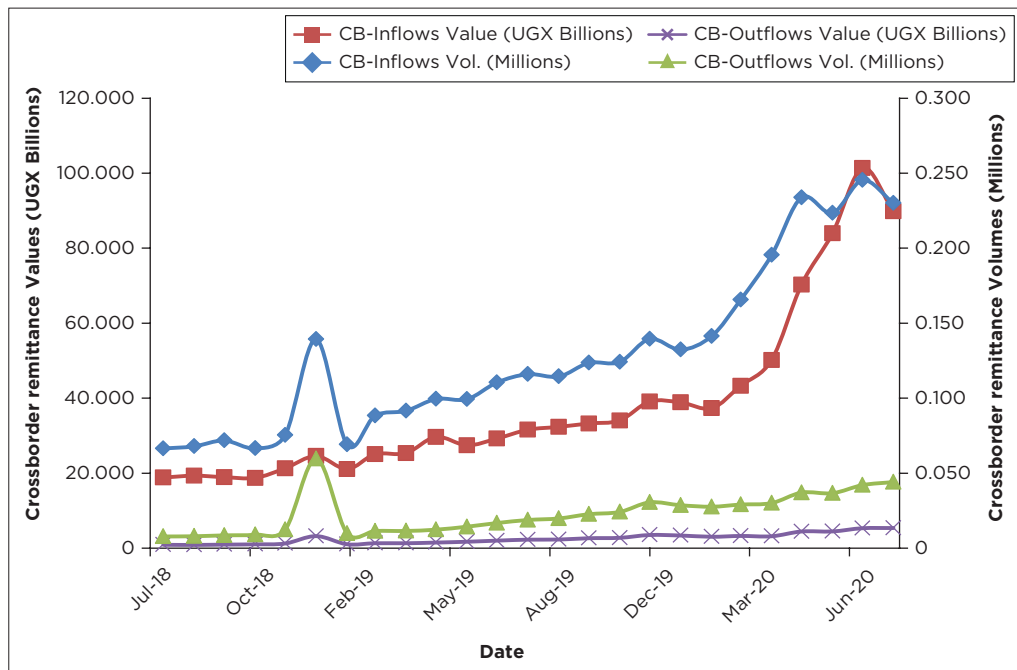
in the category reflect the breadth of items included therein such as utilities, cable and pay TV, merchant payments (school fees, supermarkets) and government revenues (tax and non-tax).

■ Cross-border remittances

Remittances from outside the country can be received via MM. MMSPs have provided a safe platform for fast and efficient money transfers from foreign sources. In many parts of the African continent, those wishing to send and receive money across the border still incur the highest transaction fees globally. As such, the MM cross-border payments, especially within East Africa, provide a cheaper alternative.

The volume of inward cross-border flows more than doubled from 66.5 thousand in August 2018 to 141 thousand in February 2020 just before the lockdown. During the same period, outward cross-border flows increased almost fourfold from just under 8 thousand to 27.7 thousand. Similarly, the value of inward and outward cross-border flows more than doubled within this period.

On average, the volume and value of inward cross-border remittances were higher in the 6 months after the official declaration of a COVID-19 case in Uganda compared to a similar period before (Figure 5.7). The higher outturn



Source: Bank of Uganda Mobile Money Statistics 2020.
CB, cross-border.

FIGURE 5.7: Cross-border remittances inflows and outflows volumes and values before and after COVID-19.

of inward cross-border remittances volumes and values suggests that individuals did receive private flows from outside Uganda during the COVID-19 pandemic to supplement their incomes, which had dwindled to zero on account of the national lockdown that led to the closure of all sectors save those considered to be critical such as financial services, agriculture and health.

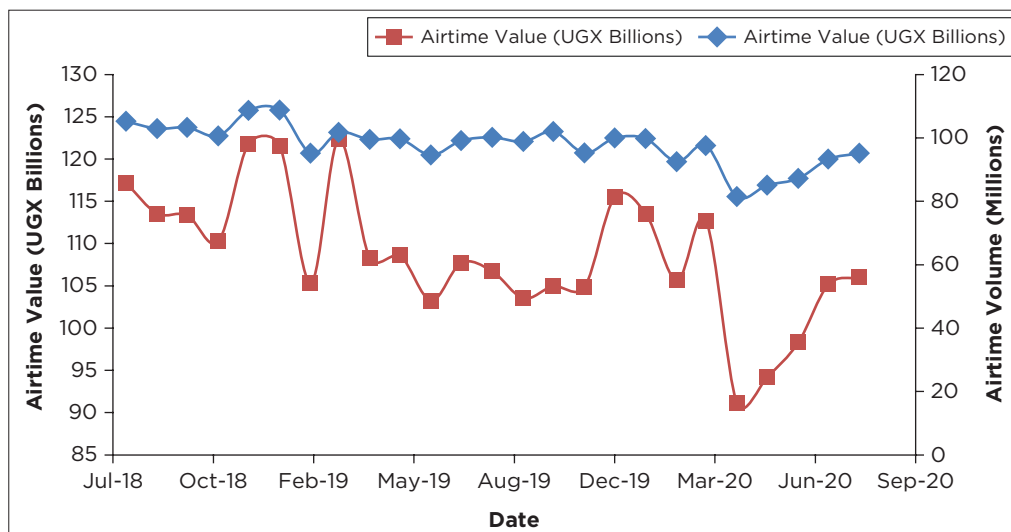
As shown in Figure 5.7, on average the volume and value of outward cross-border remittances were also higher in the six months after the official declaration of a COVID-19 case in Uganda compared to a similar period before. The higher outturn of outward cross-border remittances volumes and values suggests that individuals did send out money to relatives outside Uganda. This was expected given that Uganda has a high number of foreigners from the East African region (Rwanda, Kenya and South Sudan) working in the country. Given that these countries were also under lockdown, it is not surprising that the outturn for outward cross-border remittances was high.

■ **Airtime**

Airtime is amongst the top five products purchased using MM to be used for voice calls. It is through voice calls that the semi-literate and illiterate MM users who may struggle deciphering user codes can contact call centres for customer support during the use of MM. The purchase and consumption of MNO airtime were done using scratch cards before the advent of MM in March 2009. After the advent of MM, scratch cards remained a major mechanism through which airtime was being consumed. In August 2018, the UCC, a regulatory body of the communications sector issued an order to phase out the use of airtime scratch cards. These were supposed to be replaced by the use of MM or 'easy load' (Kisekka 2018a, 2018b; Walubiri 2019). However, easy load facilities were not easily accessible in rural areas. As a result, Parliamentarians made efforts to reintroduce scratch cards in 2019. These efforts were unsuccessful and loading airtime continues to be anchored on MM. By February 2020, the number of airtime loading transactions stood at 92.5 million worth a value of UGX105.613 billion. Figure 5.8 shows very little change in the volume of airtime over the 18 months before the COVID-19 pandemic. Contrary to this, the value of airtime has fluctuated at critical periods including during the lockdown and has shown larger deviations from the trend than the volume of airtime.

■ **Digital credit and balances on customers' accounts**

Digital credit and balances on customers' accounts akin to TBMFIs' loans and savings products are value-added services by MNOs via MM platforms. Digital credit typically consists of microloans. It has the potential to enhance financial



Source: Bank of Uganda Mobile Money Statistics 2020.

FIGURE 5.8: Airtime volumes and values before and after COVID-19.

inclusion through the provision of much needed loans without the bureaucratic process of paperwork in TBMFIs. Unfortunately, it also has the potential to exacerbate financial exclusion through the blacklisting of defaulters of digital microloans. For instance, in Kenya, most digital loans are used for consumption purposes increasing the probability of default. Indeed, more than 10% of the adult population is negatively listed (Microsave 2019). This 10% translates into about 400 000 people blacklisted for defaulting on loans as low as KES200 (about US\$2) and who are now rationed out of the formal credit market (Robinson & Wright 2016) because providers of microloans are obligated to file such adverse information with the Credit Reference System (CRS).

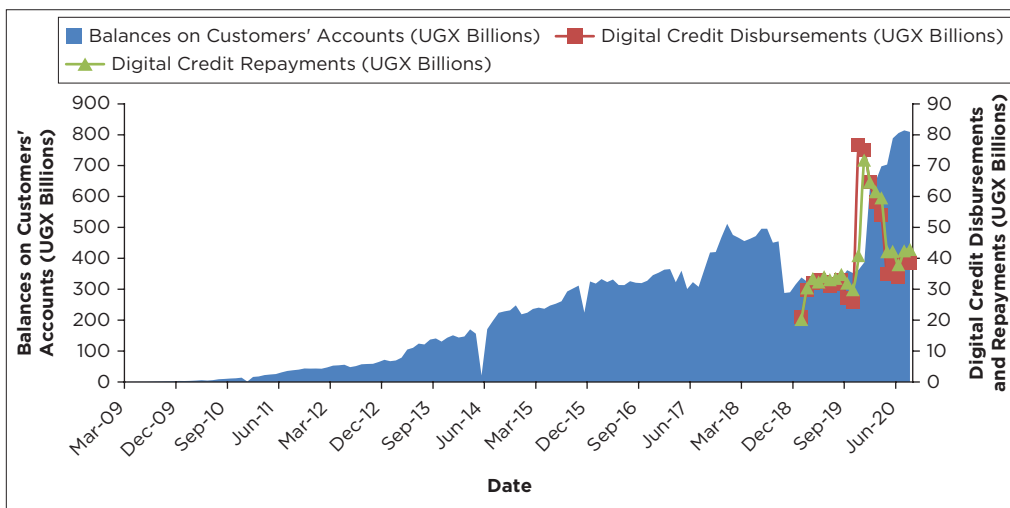
In Uganda, the Financial Institutions (CRS) Regulations 2020 that would allow providers of digital credit access to the credit reference services are yet to be finalised (BoU 2019, 2020).⁶⁵ Therefore digital credit providers in Uganda are not yet able to file information on the CRS as accredited credit providers. Nonetheless, the repayment rates of digital loans in Uganda are still relatively high. For example, JUMO/Airtel Uganda registered repayment rates in the range of 93% to 95% (Microsave 2019). However, there are isolated cases of digital credit defaults. For instance, a man was arrested for failure to repay the equivalent of a US\$106 digital loan (Zawedde 2019).

65. The regulations would allow non-bank institutions such as utility providers and MM operators to provide and access data to/from the CRS. Currently, only Bank of Uganda supervised financial institutions have access to the CRS.

Digital credit is extended by two major players, that is, Airtel Uganda Limited's Wewole and MTN's Uganda Limited's MoKash. The two players also hold the largest market share (about 99%) of the MM business in Uganda. The inherent duopoly in the mobile market can lead to unfair pricing to the detriment of consumer protection of clients. This is also exacerbated by the various MM taxes discussed in the section titled 'Costs of Mobile Money Services in Uganda'. By February 2020, the number of loan disbursements stood 549.1 thousand transactions up from 428 thousand in January 2019. Similarly, the number of loan repayments rose to 1.4 million transactions an increase of almost half a million within a year. Similarly, the credit values more than tripled within the same period.

No interest is paid on customers' balances maintained on their MM accounts. Despite this, balances have continued to grow over the years as shown in Figure 5.9. The balances on customers' MM accounts increased to UGX0.770 trillion in the 6 months after the official declaration of a COVID-19 case in Uganda compared to UGX0.458 trillion in a similar period before. The higher outturn suggests that customers were using MM accounts that are primarily transaction accounts for savings purposes.

The increasing patronisation of MM accounts as savings vehicles (customers' balances) and sources of microcredit (digital credit usage) suggests the inherent potential these accounts have to compete with bank accounts in TBMFIs. MNOs offer a plethora of other services that have not been examined in this paper on account of the lack of quality administratively collected data. These include Business-to-Business (B2B), B2P, Agent-to-Agent (A2A), microinsurance and money transfer to non-users of MM.



Source: Bank of Uganda Mobile Money Statistics 2020.

FIGURE 5.9: Digital credit values as well as balances on customers' accounts before and after COVID-19.

■ Costs of MM services in Uganda

■ MM surcharges

The MMSPs charge for the different services rendered using a tiered charge structure. The design of the charge structure is such that a financial consumer pays more per unit Shilling transacted (sending or withdrawing) at lower tiers compared to the higher tiers. MMSP do not charge for deposits but charge for withdrawals with higher fees for monies being accessed from a competing MMSP. The lack of interoperability agreements makes conducting cross network transactions unattractive. Furthermore, withdrawing money from an agent is cheaper than accessing it from an ATM. Similar patterns are reflected in charges for other MM services. Ssonko and Tait (2018) compared the cost of wholesale payment systems domiciled in TBMFIs such as real-time gross settlement to MM, which is a retail payment system. They note that in both the wholesale and retail payment systems, the cost of transacting across platforms decreased with increases in the amount transacted.

■ Taxation of MM services

In a bid to increase the share of tax as a proportion of GDP, Uganda's government has sought to bring more taxpayers from the informal sector into its tax base. Given the high administrative cost of pursuing taxpayers in informal set-ups such as agriculture and cottage enterprises, mobile telephony provided an indirect route of at least taxing individuals in the informal sector because of the fact that most utilise services such as MM provided by MNOs. Nonetheless, the taxation of mobile telephony and its service provisions remains an issue of public debate in Uganda. Table 5.1 shows the ICT sector taxes.

TABLE 5.1: ICT sector taxes in Uganda.

Product/service	April 2002	July 2005	July 2014	July 2018
Airtime	7%	12%	12%	12%
Value-added service (VAS)	-	-	20%	20%
Landlines	-	-	5%	12%
International calls ^a	-	-	US\$0.09 per minute	US\$0.09 per minute
MM fees	-	-	10%	15%
Value of MM payments, transfers and withdrawals ^b	-	-	-	0.5%
Social media tax	-	-	-	UGX200/=per day

Source: Modified from Stork and Esselaar (2018).

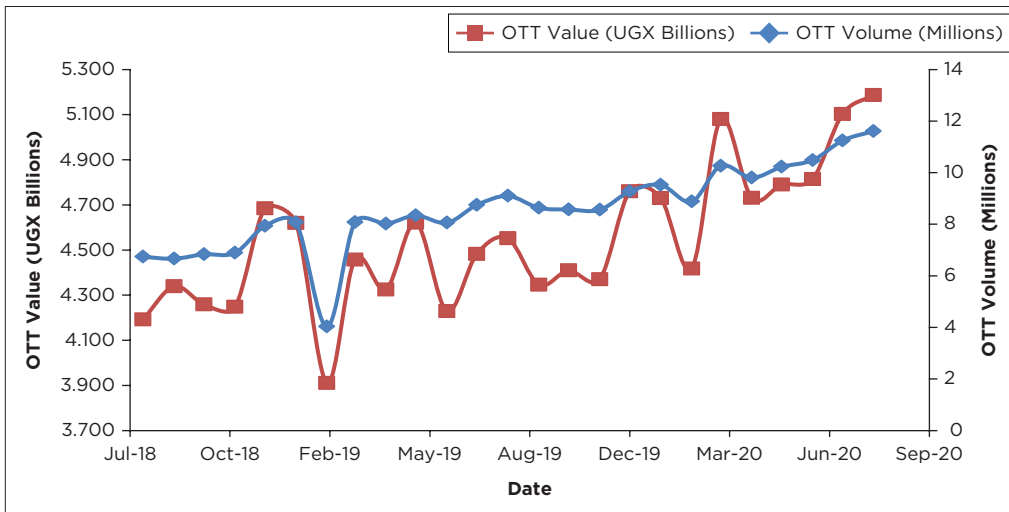
^a, Calls from Kenya, Rwanda and South Sudan are exempt in the 2018 amendment.

^b, Originally 1% and covering all MM transactions but was lowered to 0.5% and focused strictly on withdrawals. ICT, Information Communication Technology, MM, mobile money.

Using an example of the monthly social media tax of UGX6000, Stork and Esselaar (2018:9) suggest that on average 71% of a customer’s communications budget would be spent on tax before even consuming data or airtime. Similarly, GSMA (2008:11) cited in Musazi (2010:19) ranks Uganda’s airtime as the most taxed out of 16 countries in sub-Saharan Africa with 18% value-added tax (VAT) and 12% in other airtime specific taxes.

Stork and Esselaar (2018) note that MM is highly price elastic and the July 2018 introduction of MM transaction tax of 1.0% led to an average price increase of between 4.7% (Airtel) and 71% (MTN) with a disproportionate increase experienced in transacting higher amounts. The MM transaction tax led to the transaction values declining more than the number of transactions suggesting discrimination against higher-value transactions. Furthermore, the MM transaction tax threatened the trust and simplicity associated with MM. The result was an increase in transaction costs that made MM unaffordable for the poor with the consequent increased use of cash in the awakening of tax compliance.

Just before the lockdown, there were 8.8 million Over the Top (OTT)⁶⁶ tax transactions worth UGX4.418 billion (Figure 5.10). The high elasticity of MM transactions negatively affected tax revenues. The government only collected 17% of the targeted MM tax in 2019 (Daily Monitor 2019). A similar pattern was



Source: Bank of Uganda Mobile Money Statistics 2020.
OTT, over the top tax

FIGURE 5.10: OTT volumes and values before and after COVID-19.

66. OTT tax also known as social media tax was introduced in Uganda effective 01 July 2018. The tax is an excise duty on OTT services which mean ‘the transmission or receipt of voice or messages over the internet protocol network and includes access to virtual private networks’ (MTN Uganda Limited 2020b:1).

repeated in 2020 partly explained by the fact that 7.6 million mobile Internet subscribers do not pay OTT (Lyatuu 2020). Only 11.3 million mobile Internet subscribers pay OTT out of 18.9 million subscribers with the rest evading the tax through the use of virtual private networks (VPNs) and/or WiFi, which is not subject to OTT.

■ Infrastructural support to MM

Infrastructure was one of the limiting factors to payment systems development identified by the stocktaking survey of Uganda's payment system in 1998 (BoU Annual Report 1998, 1999). The automation of the wholesale payment systems domiciled in TBMFIs was the harbinger to the introduction of retail payment systems such as MM. Infrastructure support for MM services includes aspects such as access to electricity, mobile and Internet coverage and connectivity, number of gadgets, possession of national identity documents for Know Your Customer (KYC) purposes, legacy of payment systems and status of data privacy and protection (Davidovic, Prady & Tourpe 2020; FSoFM 2020:18; Von Allmen et al. 2020; Xiao & Chorzempa 2020).

Access to electricity is key because DFS gadgets such as ATM deployments, mobile phones and MNO cell sites rely upon electricity to function. Access to electricity demonstrates gaps between urban and rural as well as low per capita usage MM. Whereas 57.5% of the urban population in Uganda has access to electricity, only 38.02 of the rural areas have access (World Bank Data 2020). The inadequate access to electricity is one of the primary causes of huge discrepancies in urban-rural Internet use and mobile phone penetration rates in Uganda (Gillwald et al. 2019; Ikonjo-Iwela 2016).

The successful adoption of MM has depended on a user interface that was designed to match the technological capabilities of the region and adaptability of users at the time. Whilst smartphones have become more prevalent for today's urban users, MMSPs still largely deliver their service via USSD. MMSPs have continued to provide their services using this simple user interface. Depending on the MMSP, the customer approves the transaction using a four- or five-digit personal identification number or code (PIN). MMSPs provide confirmation details such as the name of the recipient, merchant name or account title in the case of utilities before a user approves any transaction over their MM account. This is to prevent funds from being transferred to the wrong beneficiary, for which a reversal is not instant.

MM can be delivered without Internet connectivity via channels such as USSD and SMS (FSoFM 2020:26). However, Internet connectivity is key for the delivery of certain value-added services and m- or e-commerce. As on September 2019, there were 23 million Internet users in Uganda, representing an Internet penetration of 37.9% (UCC 2020).

Whilst mobile phone ownership has improved over the years, gaps remain such as digital features phones compared to smartphones, access between rural and urban areas as well as a difference in use between males and females. The National IT survey 2017/2018 that sampled 2400 entities estimated mobile phone ownership at 70.9% of which 15.8% were smartphones (CIPESA 2018). The share of smartphones in the total mobile phone ownership is one of the lowest in Africa (Gillwald et al. 2019). Phone sharing is still practiced like in other African countries. Seventy-two percent of individuals who did not own a mobile phone had used someone's phone in the past three months (CIPESA 2018).

One of the issues that the G20 High-Level Principles for Digital Financial Inclusion 2016 emphasise is the need for consumer data protection and privacy (GPFI 2016). In Uganda, data protection is safeguarded under the *Data Protection and Privacy Act 2019* that seeks to 'protect the privacy of the individual and personal data by regulating the collection and processing of personal information'. Whilst the data collected by MNOs are safeguarded through ICT security measures such as PINs deployed on the MM platforms, there is a loophole at agents' premises. Most MM agents leave records of mobile phones and associated transactions visible to all financial consumers who patronise their kiosks. This presents a major risk of unauthorised exposure of personal information.

The MM ecosystem exists through the collaboration between MMSPs and a diverse arrangement of stakeholders, namely agents, financial institutions, MNOs, payment system aggregators, customers, merchants and regulatory authorities. All stakeholders work together symbiotically to deliver MM. With the multiplicity of stakeholders, there are issues of individual institutional cultures and systems as well as industry specific market conduct practices that might hinder MM. The diverse nature of stakeholders and their conduct determines issues of consumer protection and prudential regulation given the different regulators for each stakeholder.

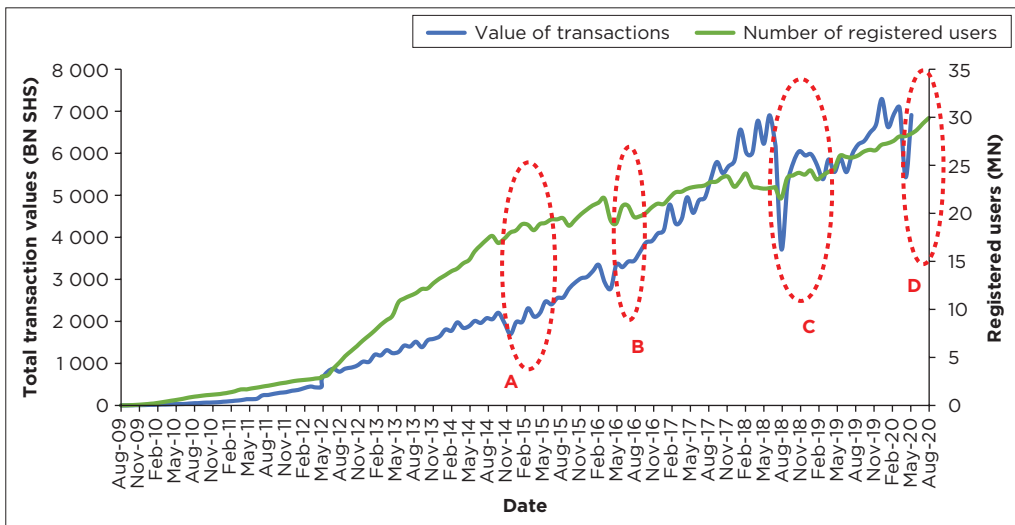
In terms of legislative and institutional frameworks, MMSPs were set up through partnerships between MNOs (regulated by UCC) and commercial banks (supervised by the BoU). The BoU and UCC entered a Memorandum of Understanding to share information and regulatory responsibilities so as to coordinate the regulation of MM. The partnership received a letter of 'no objection' from BoU, which oversees deposit accepting FSPs. The *National Payments Systems Act 2020* enacted in July 2020 is expected to streamline the MM industry.

An identification documentation is key for fostering financial inclusion through support for KYC or Customer Due Diligence (CDD) (FSofM 2020). Despite its critical nature, in many developing countries, it remains a major limiting factor (FSofM 2020:20) in that without an identification document

you cannot enroll for a SIM card, which is the first step in accessing MM. By 2016, 14.8 million Ugandans had registered for a national identification number or national identification card (Handforth & Wilson 2019). The 14.8 million national identification cards are way below the population of Ugandans 15 years and above which in 2020 stood at 24.6 million (United Nations Population Fund 2020).

■ Disruptions in the MM ecosystem

In MM's 12 year existence in Uganda, it has faced disruptions such as legal (the suing of stakeholders for lack of comprehensive legal framework), political (the switching off of MM systems during political events like elections or riots), political economy (changes to taxation arrangements of MMSPs), technological (switch off MMSP platform on account of system upgrade or overhaul) and health-related (pandemic or epidemic that changes financial consumer behaviour and/or interaction with the MMSP system). Figure 5.11 provides a snapshot of those that have impacted the usage of MM. Four clear disruptions can be identified. This includes the system upgrade of 2014, the national shut down in 2016, the introduction of OTT and MM tax in 2018. We propose that COVID-19 is the fourth disruptor to the functioning of MM services in Uganda. We briefly discuss each of the first three further and take up the impact of COVID-19 in more detail in the next section.



Source: Bank of Uganda Mobile Money Statistics 2020.
MM, Mobile money

Note: Lettered circles within the figure mark periods of disruption. A, the payment system upgrade in 2014; B, The national shutdown due to elections in 2016; C, The introduction of over the top and mobile money tax in 2018; D, COVID-19 shutdown in 2020.

FIGURE 5.11: Disruptions in Uganda's MM services from 2009 to 2020.

■ System upgrade

In September 2014, there was a scheduled three-day upgrade of MM systems that forced the service to experience downtime. The system was taken down for three days and a new one was installed. This followed the repeated concerns about the security of users. BoU had in the previous year issued MM guidelines, which, although not binding, offered some relief to customers. The providers prepared consumers for this upgrade indicating that it was necessary to make MM more secure, reliable and easier to use. The downtime lasted for five days.

■ Nationwide shutdown

Another nationwide shutdown occurred during the presidential and parliamentary elections of 2016. The UCC citing a threat to 'national security', ordered MNOs to shut down key social media sites including WhatsApp, Facebook and Twitter and to disable MM platforms. Restrictions on the latter were lifted after four days, whilst users found a way round to access social media using VPN. Bold and Pillai (2016) state that the abrupt shutdown left millions of customers stranded as many had topped up their accounts on account of bank closures on public holidays and fear of election violence. This shut down saw the volume of transactions falling by 6.94 million and the total value of transactions declining by UGX139.4 billion.

■ OTT and MM Tax

In July 2018, an amendment to the *Excise Duty Act* came into effect. This amendment imposed a 1% tax on the value of all MM transactions including receipts, payments and withdrawals. This caused great dissatisfaction amongst users of MM. The tax was later changed to apply only to monies received. The 1% charge also applied to bill and merchant payments but did not apply to the payment of Uganda Revenue Authority⁶⁷ taxes. During the parliamentary proceedings of October 2018, the house approved the *Excise Duty (Amendment) (No.2) Bill, 2018* effectively reducing the MM transaction tax from 1% to 0.5% on withdrawals.

Customers responded by making changes to their MM behaviour almost immediately. Starting June 2018, the value of transactions dropped by UGX743 billion, even before the tax came into force owing to the media campaign by various civil society organisations decrying the tax, which had been passed by the parliament months earlier. The reaction was intensified the following month when the value of transactions fell by UGX2.45 trillion in July 2018. The

67. Semi-autonomous body under the Ministry of Finance, Planning and Economic Development established for tax policy implementation and tax collection.

service would take another 19 months to recover transaction values equal to pre-MM tax levels. Soon after, COVID-19 was declared a public health emergency.

■ Impact of COVID-19 on MM services

The COVID-19 disruption led to the introduction of a national lockdown that saw the closure of businesses⁶⁸ including micro, SMEs (MSMEs) that employ over 80% of the 20 million strong labour force and contraction of household incomes. Furthermore, the social distancing measures, banning of public and private transportation and imposition of curfew that reduced working hours of TBMFIs pushed financial consumers of DFS towards digital channels especially MM. The magnitude and direction of the effect of COVID-19 disruption on MMSPs are still in flux. This disruption is the focus of this chapter in which we explore preliminary evidence of the likely effects of the COVID-19 disruption and how it might shape the DFS landscape going forward.

■ Industry responses to minimise impacts of COVID-19 on MMS

□ Business Continuity and Risk Mitigation measures underpinned the Industry Responses

□ *Business continuity and risk mitigation measures underpinned the industry*

During the pandemic, DFS needed to be promoted in a bid to prevent the spread of the virus by limiting person-to-person contact and adhering to social distancing norms. Generally, FSPs including both TBMFIs and fintechs implemented measures aimed at safeguarding their stakeholders against contracting the COVID-19 disease and ensuring that the business continued. They provided personal protective equipment to staff who worked on-site and moved several staff to work off-site. Moreover, work days were shortened and additional health check procedures were enforced at points of service. In order to continue supporting their financial intermediation business, FSPs moved a lot of their financial services business onto digital channels. Other provisions included remote support for COVID-related relief programs such as the credit relief and loan restructuring measures introduced by BoU.

68. Sectors such as human health & medical services; agricultural & veterinary services; security; banking; telecommunications; construction; factories; utilities; groceries; supermarkets; food markets and segments of transportation (cargo haulage and delivery services of boda bodas/motorbikes) were exempt from certain forms of extreme lockdown measures.

■ Collaboration amongst the regulators and industry stakeholders shaped the COVID-19 responses

The efforts to support the FSPs to continue undertaking the role of financial intermediation and the broader economy to sustain residents' livelihoods during the COVID-19 pandemic involved a diverse group of stakeholders including FSPs, a member association of FSPs, MMSPs, BoU, MoFPED and development practitioners like Financial Sector Deepening Uganda.

The Uganda Bankers' Association deployed measures that included precautions to safeguard people against the disease, business continuity to minimise disruptions of bank operations, contingency plans to monitor liquidity and minimise credit risk. They also provided support to ensure smooth flow and running of payment processes and access points including alternative electronic and digital channels (UBA 2020). With the operationalisation of these measures, members of the Uganda Bankers Association had to review the payment-related tariffs resulting in reduced cost of MM to cushion customers during the COVID-19 pandemic period. This was also aimed at decongesting the traditional services points. The cost reduction covered B2W transactions, withdrawals made at agency banking terminals, withdrawals at SFIs' ATMs and online transactions.

BoU issued measures that would enable FSPs to navigate the economic shock occasioned by the COVID-19 pandemic. These included accommodative monetary policy, readiness to intervene in the foreign exchange market to smoothen volatility and macro and micro-prudential policy measures such as the COVID Liquidity Assistance Program (CLAP) and the credit relief and loan restructuring. Furthermore, a moratorium on payment of dividends for 90 days and moral suasion such as encouraging MMSPs to further reduce costs of services and expand the scope and duration of coverage of the reductions were used (BoU 2020a, 2020b, 2020c). The MMSPs initially targeted the lower tiers for reducing P2P transaction surcharges by offering zero rated services. The MMSPs later reduced surcharges across the entire spectrum of P2P transactions. The reduction in surcharges lasted from 21 March 2020 to mid-May 2020. Thereafter, the surcharges were revised upwards to 50% of pre-COVID rates.

■ Effects of industry responses on MM

During the COVID-19 pandemic, the infrastructure and taxation regime for MMSPs did not change. However, there were changes to the financial services offered on account of the responses the industry took to shield the financial consumers against COVID-19. The COVID-19 pandemic provided a confluence of factors that shaped the MM landscape albeit of a temporary nature. The measures introduced to slow the advance of COVID-19 included factors such

as zero-rated MM P2P transfers, a grace period for the repayment of digital credit for 30 days without penalty fees, free MoMoPay and Airtel Money Pay (P2B) and reduced tariffs for W2B and B2W. These measures happened against a backdrop of reduced economic activity induced by the coronavirus pandemic. The situation provides a natural experiment of how a reduction in the pricing of MM services (P2P, W2B, B2W and P2B) and reduction in other financial services transactions costs including factors such as the provision of a grace period for the repayment of digital credit without penalty fees can be evaluated. Moreover, the impact of large-scale shocks like the COVID-19 pandemic and its impact on the economy and how it affects the usage of financial services such as MFS can also be observed, and a disruptive force (disease pandemic that led to the cessation of economic activity in most sectors of the macroeconomy) affected the usage of MFS in Uganda.

Independent samples *t*-tests were conducted to compare whether differences in variables six months before the official declaration of COVID-19 in Uganda (September 2019 to February 2020) and six months after (March 2020 to August 2020) were statistically significant. Table 1.2 in the Appendix provides a summary of all the results at an alpha level of 0.05. Whilst most products show that there were statistically significant changes in their usage in the six months before COVID-19 (September 2019 to February 2020) compared to the six months after the official declaration of COVID-19 in Uganda (March 2020 to August 2020), which was to be expected, there are notable exceptions.

The confounding nature of results points to the complexity of consumer behaviour in the use of MFS in particular and DFS in general; the interconnectedness of MFS services and products; the granularity of the data to capture differences in product characteristics and usage is still inadequate and the increased integration of MFS into TBMFIs to create a resilient DFS ecosystem.

The withdrawals and deposits, which are the most common transactions in Uganda's MFS ecosystem (both in terms of number and value of transactions), were not statistically significant when compared over the six months before and after the official declaration of COVID-19 in Uganda. However, the picture marks of the behaviour of various products were hidden within the withdrawal and deposit overall behaviour. For example, P2P transactions were statistically significant in both the number and value of transactions. The results suggest that in addition to the commonly used approach of deposits at agents, financial consumers used B2W to fund these P2P transactions. Given that the TBMFIs were operating at just 30% branch network capacity, withdrawing funds for later depositing at MM agents (a common practice outside the COVID-19 pandemic period) whilst possible because of the wide-reaching ATM network especially in urban areas, would be costly for the users. The

economic costs of withdrawing money from TBMFIs and cashing it in at MMSPs would be greater than those of B2W because of restrictions on public transportation and COVID-19 exposure risks. As a consequence, the use of the B2W was the optimal consumer behaviour for funding MM accounts.

The use of wallets to fund TBMFIs accounts (W2B) was not statistically significant. Despite the slowdown in economic activity, there is no significant difference before and after the pandemic. This partly reflects the reliance of BoP users who use mobile wallets to send money to their TBMFIs accounts after earning a wage in the informal sector at the end of the business day. This behaviour was maintained. However, the value of transactions was statistically significant suggesting that although users such as the BoP users continued to use W2B transactions normally, the value of transactions declined resulting from slowing economic activity.

In the case of P2B, the value of transactions was significant, yet the number of transactions was not statistically significant. P2B is a broad category where individuals are paying money for utilities (electricity, water, post-paid solar power systems and cable TV) as well as goods and services. Because of the closure of most businesses especially in the hospitality and travel sector, the payment for goods and services slowed down thereby impacting transaction numbers. The low uptake of electronic or mobile commerce by Ugandans means that once the physical shops where MoMoPay or Airtel Money Pay could be used to pay for goods and services were closed, the transaction numbers in P2B had to dwindle.

In contrast, the regular payments for utilities remained more or less the same. This is expected as households are typically locked into long-term utility contracts. The president gave a directive to differ utility bill payments till after COVID-19. Nevertheless, there are significant portions of the population with pre-paid electricity meters popularly known as YAKA who had to continue paying for electricity as an example. Moreover, there was a concerted effort by Umeme (the power distribution concession holder in Uganda) to change post-paid customers to pre-paid customers by replacing old post-paid meters with new pre-paid meters known as YAKA during the lockdown.

The difference in the number of airtime transactions was significant, but the value of transactions was not. Airtime has two purposes when consumed by customers, that is, make voice calls and purchase data. However, voice calls can now be made via other models such as WhatsApp, Zoom, Microsoft Teams and Skype, which require Internet data. Mobile Internet data may be purchased using USSD prompts without first purchasing airtime. Alternatively, it might be purchased via the airtime channel. The decline in airtime usage alongside a non-significant difference in the number of transactions suggests two things. First that during this period individuals may have reduced their spend on airtime and probably replaced traditional voice calls with 'voice over the

Internet calls'. Secondly, it may also reflect the fact that the lockdown forced individuals to stay home and a significant amount of airtime used to call family and friends may have been diverted to other uses such as Facebook and related data uses linked to MM.

The number of transactions for loans disbursements and the value therein dropped, but the latter was not statistically significant whilst the former was statistically significant. Overall, the decline points to risk averseness to the digital credit lenders because of the slowdown in economic activity occasioned by COVID-19. It appears that the number of micro digital credit applicants and thereby approvals (disbursements) dropped significantly reflecting the self-censure by borrowers (self-credit rationing) during tough economic times as well as a more stringent evaluation and therefore rationing by microcredit providers.

The number of transactions for loan repayments dropped and the difference was significant. The difference with post COVID-19 activity was significant for the number of transactions but not for the values. Overall, the decline reflects the moratorium on charging default penalties for 30 days imposed by the digital credit providers and the tough economic times. The economic shock is likely to be constraining for borrowers whose income was largely from the informal sector, which was shut down during the national lockdown. Similarly, those on variable incomes were most likely affected the same way. Even though the value of loan repayments dropped, it was not statistically different across the two periods suggesting that financial consumers who could afford to service loans especially those on fixed incomes continued honouring their obligations even during tough economic times to prevent being disadvantaged in future credit worthiness assessments by the MFS algorithms.

■ Lessons for stakeholders

The chapter examined how the change in pricing of MFS services and products (P2P, W2B, B2W and P2B), easing of digital credit repayment terms and other COVID-19 relief measures implemented in the financial sector impacted the use of MM. The measures taken by Ugandan MNOs are largely in line with those taken at the international level to contribute to the prevention of the spread of COVID-19 and support economic activity during the pandemic. Muthiora (2020) suggests that the anti-COVID measures introduced are likely to be temporary. We draw several lessons for stakeholders within the industry:

- Pricing influences the adoption of MFS.
- Disruptions are major drivers of DFS access, usage, affordability and quality of the customer experience.
- Infrastructure gaps exist in the DFS ecosystem.

- The relaxation of terms and conditions for digital credit repayments led to a reduction in loan repayments as was expected.
- There is a need for stakeholders especially regulatory authorities and FSPs to undertake financial literacy activities targeted at popularising the safe use of DFS.

■ Pricing influences adoption of MFS

Reduction in prices as those effected by MNOs during the COVID-19 pandemic can increase usage of MFS products and services. The price reduction had both direct and indirect effects. For instance, the uptake of a product whose prices were adjusted changed and those whose prices did not change was also affected depending on the substitutionary and complimentary relationships. For example, a price reduction in the cost of P2P transfers was manifested in higher P2P volumes and transactions. In contrast, the reduction in prices of B2W directly and positively affected volumes and values of B2W but negatively impacted deposits (cash-in of MM).

The pricing structure is tiered and reflects the marketing strategy of the MNO and the cost of doing business that includes taxation by the government and cost of operations. Furthermore, the pricing takes into account the financial consumer's ability to pay (larger amounts attract larger fees) and the profit margin of MNO's MM business of which MM surcharges are a major source of revenue for MMSPs with estimated daily revenues grossing above UGX5 billion, amongst others. Thus, whilst lower prices would foster affordability and increased uptake of the MFS products and services, MNOs may not be able to unilaterally reduce their prices without due regard to other stakeholders like fiscal authorities. The reduction implemented during the COVID-19 pandemic was a result of wide-ranging consultations between MNOs, the Uganda Bankers' Association and the BoU.

None of the reduced prices altered tax policy or the tax component in MM surcharges. Even though the government forfeited tax on the MM surcharges revenue that would have been collected from March and June 2020, the long-term effect on tax is restricted to that period of no collection. The MNOs also lost revenues for the same period. However, in the long term, they benefitted in terms of goodwill from their clients as caring and responsible corporate players willing to support the country's citizenry through a major economic shock induced by a health risk. Moreover, MNOs benefitted from a wealth of data demonstrating how price reduction could be used to influence usage. Indeed, the decision by MTN MM to reduce withdrawal charges in November 2020 appears as quick learning from this price reduction induced by the COVID-19 response (Asingwire 2020; TechJaja 2020; Twaha 2020). The November price adjustment was followed by another in May 2021.

It is highly likely that the reduction in prices is temporary, but future uses of pricing as a competition tool in the MMS space will persist going forward continuing a culture observed in the past in the areas of voice and mobile Internet data business components of MNOs. However, there is ample room for stakeholders to negotiate and agree on a pricing structure that does not disadvantage any of the stakeholders especially BoP clientele. A scheme is akin to cross subsidisation where high-income P2P users subsidise the surcharges of low-income P2P users can be devised. Furthermore, Muthiora's (2020) suggestion of using interest earned from escrow or trust accounts to subsidise P2P transactions is one way in which cross-subsidisation can be achieved.

■ **Disruptions are major drivers of DFS access, usage, affordability and quality of the customer experience**

In its 12 years of existence, MFS have experienced numerous disruptions, and there is a high likelihood of recurrence. For instance, hotly contested elections in 2016 led to the switching off of MMS (Bold & Pillai 2016). The electoral cycle of 2021 was characterised by similar features. In January 2021, a 5-day voting holiday was established, during which the Internet was fully shut down. MM services came to a standstill on 14 January 2021, election day, as a result of lack of Internet availability and poor network conditions. Livelihoods were negatively impacted.

This interference served to the detriment of financial consumers. It is imperative that financial consumers who are usually the ones most affected by such disruptions devise modalities of hedging against such eventualities.

One such approach would be to spread the risk of personal income between accounts in MMSPs and TBMFIs. As both have agent networks, one can access their monies from anywhere in the country. If one of the platforms is switched off, a financial consumer may substitute it with the other, which would be up and running. However, the MMSPs have about 31 million accounts compared to about 16 million accounts of TBMFIs. The financial consumers without TBMFIs should be incentivised to open such accounts. Government can work with service providers to offer these services at affordable prices. Moreover, the GoU authorities should expedite the issuing of identification cards issued by the National Identification and Registration Authority. To support these efforts, we suggest that the BoU should introduce tiered KYC for such transactional accounts. Furthermore, MMSPs should partner with Uganda Bankers' Association to tap into the electronic know your customer (e-KYC) project, which seeks to authenticate National Identity Card details electronically using a database of NIRA (National Identification Registration Authority) mirrored at the BoU.

The TBMFIs' transactional platform has not yet experienced any shutdowns on account of national security concerns probably because of the higher KYC requirements used in opening TBMFIs accounts. In other words, it is easier to trace and apprehend a TBMFI account holder if they get involved in AML/CFT crime compared to an MMSP account holder.

■ Infrastructure gaps exist in the digital financial service ecosystem

The gaps in the infrastructure to support MM provision and usage include amongst others electricity supply bottlenecks, ICT infrastructure gaps (e.g., low numbers of smartphones that make up 7.9 million of the 31 million phones), financial infrastructure (poor interoperability across networks) and challenges with obtaining or replacing national identification documents that are still a stringent condition for all kinds of KYC. Current KYC standards are not tiered to reflect different risk profiles for various activities and/or individuals. These gaps limit the extent to which DFS can be leveraged to foster financial widening and deepening. These infrastructural gaps possibly explain why MM services have remained money transfer services rather than growing rapidly into a support system for mobile commerce. Nonetheless, a nascent mobile commerce value chain appears to be forming in Uganda partly supported by the developments in the MM space. The government through public-private partnerships should explore modalities of expanding ICT infrastructure in the country.

■ The relaxation of terms and conditions for digital credit repayments led to a reduction in loan repayments as was expected

Moreover, the general economic condition characterised by low economic activity led to low loan disbursements suggesting self-credit rationing for fear of default or FSP-induced credit rationing because of stringent approval criteria. Given that the microcredit facilities are not yet documented in the CRS, tempering with terms and conditions may lead to moral hazard and adverse selection. The tough economic times are further exacerbated by the relatively high lending interest rates of the microcredit facilities, which range from 81% per annum to 180% per annum. The credit relief measures to be deployed in this space need further scrutiny by the MMSPs and regulatory authorities to ensure that they are not detrimental to this fledgling subsector.

■ **There is a need for stakeholders especially regulatory authorities and FSPs to undertake financial literacy activities targeted at popularising the safe use of DFS**

The efforts must entail Digital Financial Literacy including knowledge, skills, confidence and self-efficacy of using DFS and also to utilise open distance electronic learning approaches to minimise cost and COVID-19 spread. MMSPs should also establish dedicated customer interfaces that deal with the financial service segment of their client base and not the default customer response to all other clients for voice and data, etc.

Overall, the COVID-19 pandemic is likely to negatively impact the achievement of regulatory objectives represented by the acronym I-SCIIIP, short for Inclusion, Stability, Competition, Integrity, Information, Innovation and Protection. For instance, as more transactions move online because of COVID-19-induced restrictions, cases of DFS fraud have increased (Ikeda 2021), which could scare away financial consumers, compromise financial system integrity and consumer protection, thereby leading to financial exclusion.

■ **Conclusion**

MM services uptake and usage are driven by a multiplicity of factors like all other technological advancements. In this chapter, the impact of COVID-19 on the MM subsector in Uganda has been reviewed using administratively collected data. It has been shown that COVID-19 is a major disruptor and has affected financial services, consequently affecting the use of traditional financial services. It has driven consumers towards the increased use of DFS. Key factors in this process include the price of MM services, terms and conditions of service as well as administrative and infrastructural set-ups. The findings provide information on how to design an appropriate pricing strategy as part of the broader marketing and competition strategy of MMSPs. Moreover, the findings challenge regulators to re-examine the pricing models of FSPs and how aligned these models are to financial inclusion policy objective(s), which regulators are tasked with achieving. A longitudinal study to examine the effect of anti-COVID measures on MFS over a longer-term horizon would enrich the findings presented in the chapter.

Appendix

TABLE 5A-1: Comparison of means 6 months before and after COVID-19 for select MFS variables.

MFS Product/ service	Unit of measures	Six months before COVID-19		Six months after COVID-19		df	Computed t-value	Computed p-value	Sig. OR Not Sig.
		Mean	SD	Mean	SD				
1. Transactions	No. of trans (Bn)	0.258	0.015	0.274	0.020	10	-1.543	0.154	Not Sig.
	Value (UGX trillion)	6.617	0.388	7.094	1.002	10	-1.086	0.303	Not Sig.
2. Balances on customers' accounts	UGX trillion	0.458	0.143	0.770	0.054	10	-5.009	0.0005	Sig.
3. Registered customers	Total registered customers (Mn)	26.657	0.469	28.304	0.631	10	-5.129	0.0004	Sig.
	Active customers on quarterly basis (Mn)	16.434	0.649	17.982	0.527	10	-4.532	0.001	Sig.
	Active customers on monthly basis (Mn)	12.664	0.450	13.939	0.590	10	-4.210	0.001	Sig.
4. 'Over the top' (OTT) tax	No. of trans. (millions)	8.907	0.406	10.605	0.684	10	-5.229	0.0004	Sig.
	Value of trans. (UGX billions)	4.506	0.188	4.951	0.194	10	-4.037	0.002	Sig.
5. Loans repayments	No. of tTrans. (millions)	1.473	0.124	1.131	0.110	10	5.051	0.0005	Sig.
	Value of trans. (UGX billions)	50.108	18.055	44.532	7.589	10	0.697	0.501	Not Sig.
6. Loans disbursements	No. of trans. (millions)	0.641	0.095	0.416	0.057	10	4.980	0.0006	Sig.
	Value of trans. (UGX billions)	54.560	22.792	39.765	7.290	10	1.515	0.161	Not Sig.
7. Data	No. of trans. (millions)	23.024	9.510	44.257	4.990	10	-4.843	0.0007	Sig.
	Value of trans. (UGX billions)	32.118	12.602	61.827	5.286	10	-5.325	0.0003	Sig.
8. Airtime	No. of trans. (millions)	98.026	3.523	89.938	6.333	10	2.734	0.021	Sig.
	Value of trans. (UGX billions)	107.997	5.118	101.229	8.128	10	1.726	0.115	Not Sig.
9. Cross-border remittances - outflows/outward	No. of trans. (millions)	0.026	0.004	0.037	0.006	10	-3.661	0.004	Sig.
	Value of trans. (UGX billions)	2.948	0.456	4.349	0.956	10	-3.238	0.004	Sig.
10. Cross-border remittances - Inflows/inward	No. of trans. (millions)	0.129	0.010	0.216	0.030	10	-6.737	5.125×10^{-5}	Sig.
	Value of trans. (UGX billions)	35.833	2.967	73.159	22.875	10	-3.964	0.003	Sig.

Source: Authors' computation using MS-Excel Data Analysis Functionality.

B2W, Bank-to-Wallet; MFS, mobile financial services; P2B, person to business; P2P, person-to-person; SD, standard deviation; W2B, Wallet-to-Bank.

Table 5.A-1 continues on the next page→

TABLE 5.A-1 (Continues...): Comparison of means 6 months before and after COVID-19 for select MFS variables.

MFS Product/ service	Unit of measures	Six months before COVID-19		Six months after COVID-19		df	Computed t-value	Computed p-value	Sig. OR Not Sig.
		Mean	SD	Mean	SD				
11. P2B	No. of trans. (millions)	16.063	3.682	13.134	2.705	10	1.570	0.147	Not Sig.
	Value of trans. (UGX billions)	217.233	26.669	172.029	38.540	10	2.363	0.040	Sig.
12. W2B	No. of trans. (thousands)	176.970	11.193	216.269	64.287	10	-1.475	0.171	Not Sig.
	Value of trans. (UGX billions)	67.946	12.397	141.013	47.220	10	-3.666	0.004	Sig.
13. B2W	No. of trans. (thousands)	784.745	261.004	1.200.621	108.447	10	-3.604	0.0048	Sig.
	Value of trans. (UGX billions)	152.473	53.293	242.289	36.915	10	-3.394	0.0034	Sig.
14. Withdrawals	No. of trans. (millions)	27.518	0.767	26.911	3.432	10	0.422	0.682	Not Sig.
	Value of Trans. (UGX Billions)	1808.664	107.754	1771.375	369.007	10	0.238	0.817	Not Sig.
15. Deposits	No. of trans. (millions)	47.350	3.387	44.626	6.234	10	0.940	0.369	Not Sig.
	Value of trans. (UGX billions)	1898.356	92.820	1805.647	308.370	10	0.705	0.497	Not Sig.
16. P2P	No. of trans. (millions)	11.221	0.802	17.266	2.160	10	-6.426	7.576×10^{-5}	Sig.
	Value of trans. (UGX billions)	779.468	59.855	1178.040	175.076	10	-5.277	0.0004	Sig.

Source: Authors' computation using MS-Excel Data Analysis Functionality.

B2W, Bank-to-Wallet; MFS, mobile financial services; P2B, person-to-business; P2P, person-to-person; SD, standard deviation; W2B, Wallet-to-Bank.

Where are the men? Understanding why men shun savings groups in rural Zambia

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■ Introduction

Savings-led microfinance programs, popularly known as savings groups (SGs), have become a popular tool to promote financial inclusion in rural communities across many developing countries. These groups have become important globally in efforts to reduce poverty and vulnerability. SHG initiatives like SGs are essential interventions that help improve the financial status of households. The credit received by households because of initiatives such as SHG assists households in reducing existing debt levels, smoothing consumption levels and engaging in productive investments (Hoffmann et al. 2021). These initiatives have not only been useful as a medium- to long-term intervention but have also been effective in assisting households to overcome shocks that

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are short term. Demont (2020) establishes that SHGs play a key role in assisting households to overcome weather shocks that threaten food security. In many cases, membership in SHGs ensures that households have continued access to credit throughout the shock (Demont 2020).

According to Demirguc-Kunt et al. (2018), accessing financial services helps individuals accumulate savings and increase spending on necessities. Globally, 31% of adults do not have a bank account. The data also show unequal access between men and women, with access at 72% for men and 65% for women. The unequal access to financial services amongst men and women has been a key motivation for non-profit organisations that promote SGs to sell the concept to women primarily. As a result, 80% of SG members worldwide are women (Wheaton 2019).

The concept of SGs is premised on community members, usually 20–30 members pooling resources through periodic (monthly or weekly) savings. The groups usually give out loans amongst themselves at a low interest rate and share all proceeds at the end of a particular cycle, usually between 8 and 12 months. This savings approach has become popular in rural communities that are often not catered to by formal financial services such as banks that require regular income from clients or lack the physical infrastructure to serve rural communities. For this reason, unequal access between men and women is still an important policy question. This chapter provides a synthesis of findings from the study undertaken by the Zambia Institute of Policy Analysis and Research (ZIPAR) to understand the low participation of men in SGs in rural Zambia.

Various reasons have been advanced to explain the low participation of men in SGs. Understanding these reasons is crucial as they are critical to developing appropriate policy responses. Seel (2015) found that the initial targets for the SDGs were the underserved and financially disadvantaged, who were mainly identified as women, thus attributing the high participation of women in SGs to the programme target (Seel 2015). Allen (2018) also found that this programme targeting had led to the deliberate exclusion of men (Allen 2018). The focus on women was precedence traced back to the 1970s when women were identified as financial agents. Furthermore, those who have supported the idea of promoting women's financial inclusion viewed the high participation of women in SGs as a positive outcome (Wheaton 2019).

Literature also shows that men and women behave differently and have different attitudes towards savings. Women and men differ regarding their risk tolerance that affects the different financial decisions (Fisher 2010). On the one hand, SGs may be viewed as safe investments by women generally perceived to be risk-averse. On the other hand, men who are more willing to

take risks may be discouraged by the low return and length of the investment return, which takes months.

Negative stereotypes about men and their attitudes towards savings and their views about financial discipline have been identified as contributing factors to their financial exclusion (ACET 2019). Men in rural communities were often viewed as having little patience to save, often only seeking huge loans at no cost (Waller 2014). Trust is a key factor in the formation of SGs; as a result, these stereotypes often lead to self-selection, which excludes men and youth. Similarly, because of the high levels of unemployment, young people in rural areas are associated with much mobility in their efforts to seek employment. This makes it difficult for them to make commitments to SGs. The high likelihood of migration to look for work could also lead to mistrust (ZIPAR 2020).

The low participation of men in the activities of SGs may not necessarily imply that men are not receiving the benefits of SG membership. It was found that women who are members of SGs often act as proxies for the family (Allen 2018). It has also been shown that women also need to seek permission from their husbands before joining SGs, whilst in some instances, husbands even provide finances for membership fees and other related financial costs (Waller 2014). These findings imply that for married couples, membership of the male counterpart maybe not be viewed as necessary. As a result, men whose spouses are members may choose to exclude themselves from participating in SGs. The low participation of men in SGs is documented globally and in Africa (Seel 2015). However, the factors reviewed above suggest that contextualisation is important, especially with respect to the role of attitudes and risk. There is very little empirical work documenting the participation of men in SGs in Zambia. Understanding the reasons that explain men's option to stay away from SGs activities is vital if these groups are to be used as a tool to promote financial inclusion. This understanding will also aid policymakers and promoters of financial inclusion to develop responsive and effective policies that meet the needs of the rural populations in Zambia. This chapter therefore makes a practical contribution not only to the Zambian-specific context but also to the broader literature on understanding how SGs function as a tool for financial inclusion.

The study was designed to target the rural population, and as such, 15 rural districts across eight of Zambia's 10 provinces were sampled in a manner that was representative of the population characteristics. A survey and interviews were used to obtain statistical information of both members and non-members of SGs in rural Zambia. Interviews were also conducted with promoters of SGs with a view to establish why the levels of participation in SGs by men were significantly lower than those of women. The second

section of the chapter presents a brief overview of financial inclusion and SGs in Zambia. This is followed by a discussion of the methodology. Subsequently, the fourth section the results. The chapter concludes with a discussion on whether men should still be targeted for inclusion given the reasons for their low participation.

■ Financial inclusion and SGs in Zambia

Access to financial services remains a concern in Zambia. In 2015, 40% of the adult population was financially excluded. This was equivalent to 3.3 million people. Nonetheless, Zambia has made steady progress in increasing the levels of financial inclusion. The percentage of adults financially included increased from 37.3% in 2009 to 59.3% in 2015 (FSDZambia 2015). The significant rise in financial inclusion was driven by increased uptake of both formal and informal services.

The World Bank defines financial inclusion as ensuring that all individuals and businesses have access to useful and affordable financial products and services that meet their individual needs. The World Bank further adds that these means must be delivered responsibly and sustainably.⁶⁹ Thus, efforts to achieve poverty alleviation, private sector development and financial sector stability all hinge on the proportion of financial inclusion, which is necessary for providing a conducive environment for all these targets to be met.

Formal inclusion refers to accessing financial services that are regulated or officially supervised. Formal financial services refer to any of the following: banking, microfinance, insurance and pension, capital markets and MM. Formal inclusion increased from 23.1% of adults in 2009 to 38.2% of adults in 2015. These changes were a result of increased uptake of the services of all providers in the formal sector and growth in the non-banking sector driven by the uptake of MM services (FSDZambia 2015).

The rise of DFS such as MM and mobile banking has changed the landscape of financial inclusion in Zambia. The World Bank estimates that the share of adults with MM accounts in Zambia increased from 20%-29% to 30%-39% between 2014 and 2017 (Demirguc-Kunt et al. 2018). The growth of cell phone subscriptions and the introduction of MM services by all the three major MNOs in Zambia has seen unprecedented growth in MM transactions. In 2015, about 29.2% and 70.8% of the adult population in rural and urban areas had MM services (FSDZambia 2015). Since 2015, there has been an expansion of network coverage that has increased the number of phone subscriptions. Although the exact number of the population with MM accounts is not known, the Zambia Information, Communication and Telecommunication Authority

69. <https://www.worldbank.org/en/topic/financialinclusion/overview>.

(ZICTA) estimates that MM accounts for 23.6% of payment methods adopted for e-commerce transactions (ZICTA 2018). With this, MM services are amongst the most reliable form of financial services, especially in rural areas.

Informal inclusion, which is categorised as access to SGs or Chilimba,⁷⁰ refers to accessing unregulated financial services. Informal inclusion increased from 22.2% of adults in 2009 to 37.9% in 2015, which resulted from increased uptake of both informal savings and credit services. As of 2015, it was estimated that 400 000 adults belonged to SGs in Zambia (FSDZambia 2015).

Although Zambia has made important improvements in financial inclusion as outlined above, there remain important disparities in access based on region and gender. As shown in Table 6.1, financial inclusion in 2015 stood at 50.1% in rural areas and 70.3% in urban areas compared to 42% in urban areas and 34.4% in rural areas in 2009. Whilst there has been an improvement in both urban and rural areas, the gap between the two regions widened between the two time periods. The difference between urban and rural areas widened from 7% points in 2009 to 20% points in 2015. Table 6.1 also shows that financial inclusion increased significantly more in urban areas compared to rural areas between 2009 and 2015. Financial inclusion in urban areas increased by 28% points compared to rural areas, where it increased by 16% points.

Disparities also exist between men and women in relation to financial inclusion. Men have slightly higher access to finance as shown by the higher financial inclusion rate of 61.2% compared to 57.4% for women in 2015. However, this gap has reduced over time from 3.8% points in 2009 to 6.9% points in 2015. The financial inclusion rate for women increased significantly more between 2009 and 2015. For women, the rate increased by 23.5% points compared to 20.4% points for men.

SGs in Zambia were popularised by NGOs and faith-based organisations that target to empower vulnerable groups mostly located in rural areas. The two prominent organisations in Zambia are the Catholic Relief Services and CARE. Catholic Relief Services have 131 000 active SGs in 48 countries, whilst CARE, established in 1991, is active in over more than 20 countries across Africa, Asia and Latin America (CARE 2021; Parker et al. 2017). The two have developed SGs models that are the most widely used in Zambia (ZIPAR 2020). Catholic Relief Services developed the Savings and Internal Lending Communities (SILC) model, whilst CARE developed the Village Savings and Loan Association (VSLA) model. Both models rely on self-selection and self-management, allowing members to access small, flexible loans that are not easily obtained from formal and semi-formal financial institutions. One

70. Chilimba is a traditional system of saving that involves three or more individuals pooling resources by saving a fixed amount of money, which is then allocated to one member each month until all members have had a turn receiving the total sum.

TABLE 6.1: Financial inclusion in Zambia

Financial inclusion	Years	
	2015 (%)	2009 (%)
All adults	59.3	37.3
Urban area	70.3	42.0
Rural area	50.1	34.4
Females	57.4	33.9
Males	61.2	40.8

Source: FSDZambia (2015).

significant difference between the SILC and the VSLA is that the SILC model has a market-based strategy that enables local entrepreneurs or Private Service Providers (PSP) to expand SG services at a fee (CARE 2021).

The proliferation of SGs in Zambia in recent years has provided an opportunity to enhance financial inclusion. Given the low access to financial services, especially in rural areas where half of the population is financially excluded (FSDZambia 2015), SGs have emerged as an alternative to formal financial services. In 2018, there was a total of 331704 people in 74 districts of Zambia who are members of SGs (Mwenge & Bwalya, 2020). Interestingly, SGs have been widely utilised and adopted more by women than men. This is true globally (Wheaton 2019) and is reflected across different sub-Saharan African countries (Allen 2018; Seel 2015). In Zambia, women constitute 72% of members of SGs, whilst only 28% are male (Mwenge & Bwalya, 2020). However, if SGs are to be used as a tool to promote financial inclusion in rural Zambia, these efforts will be hampered by the imbalance in the representation of males in SGs.

Table 6.2 shows that Central, Lusaka, Eastern, Copperbelt and Southern provinces all had a significantly lower share of men in their SGs compared to the rest of the provinces. In these provinces, men accounted for less than 28%, which is the national average for the proportion of men in SGs. Coincidentally, all four provinces except for Eastern Province are highly urbanised and have lower poverty levels compared to the rest of the provinces. In 2015, the four provinces had an average poverty rate of 41.2% compared to the national average of 54.4% (Central Statistical Office 2016). Luapula Province had the highest number of SGs in Zambia in 2018. Interestingly, Luapula also had the lowest income per capita of all 10 provinces in Zambia and recorded the second-highest rate of poverty, with 81% of the population classified as poor (Central Statistical Office 2016). Similarly, all provinces with an above-average proportion of men mainly were rural provinces characterised by high poverty rates. From Table 6.2, we deduce that the participation of men in savings was higher in poorer provinces where economic opportunities are likely to be limited.

Addressing financial exclusion has therefore taken centrestage in various government policies in Zambia which aim to alleviate poverty and spur

TABLE 6.2: Distribution of SGs under SaveNET

Province	Total members	Women	Men	Proportion of males in SGs (%)	# of Savings groups
Lusaka	11 543	10 308	1235	11	704
Central	45 808	39 163	6645	15	2445
Eastern	62 777	50 504	12 273	20	2803
Southern	34 203	26 958	7245	21	1648
Copperbelt	34 956	26 415	8541	24	1748
Muchinga	10 774	7380	3394	32	492
North Western	5792	3896	1896	33	321
Western	14 970	9850	5120	34	711
Luapula	73 760	42 135	31 625	43	3077
Northern	37 121	21 140	15 981	43	1781
Percentage	100	71.60	28.40	-	-
Total	331 704	237 749	93 955	-	15 730

Source: Adapted from Mwenge and Bwalya (2020).
SG, savings groups.

economic growth. The promotion of financial inclusion as a way of reducing the developmental inequalities is included as a key target in Zambia's Seventh National Development Plan (7NDP), which targets increasing access to financial services from a baseline of 50% in 2015 to 70% in 2021 (MNDP 2017). Other policies and strategies have also been crafted to provide frameworks to improve financial inclusion in Zambia; these include the National Financial Sector Development Policy (MOF 2017b), the National Financial Inclusion Strategy 2017–2022 (NFIS) (MOF 2017a) and the Rural Finance Policy and Strategy (MOF 2012). These strategies aim to attain universal access and usage of a broad range of quality and affordable financial services and products.

■ Methodology

This study uses data collected through a survey and interviews of respondents in rural communities in Zambia. The survey included both members and non-members of SGs. The inclusion of both members and non-members was necessary to obtain the characteristics of both groups of individuals with a view to identify the background characteristics that influenced the participation in SGs. This also helped to provide an understanding of the social and cultural norms that influence participation in SGs. Key informant interviews were used to target key members of the community who were knowledgeable about the factors that influence the participation of community members in SGs. These included promoters of SGs who are members of both local and international NGOs and leaders of SGs. Furthermore, the multiple viewpoints provided a perfect blend of biased and unbiased, subjective and objective research findings. To this effect, the research design included a survey of SG members and non-members, key informant interviews and focus group discussion.

The study included members of the SGs to obtain their experiences of belonging to a SG and on the openness of groups to accepting male members. Questions also addressed how SG promoters mobilise members, the motivation for joining the SGs and group dynamics. Moreover, the respondents were asked to reflect their social and cultural beliefs on the inclusion of men into SGs. Assertions about participation in SGs gathered from the literature were also presented to both members and non-members. They were asked to share their views on whether this assertion can explain why men shun SGs. Their views were a critical component of the study and therefore formed the larger proportion of the survey. The non-members were drawn from the same geographical areas as the members. This was done to ensure to mimic the population characteristics. Finally, the promoters of SGs were included because they were the initiates of the SGs, and they continue to support the SGs after they are established. The promoters had also experienced rejection from some community members and thus were helpful in providing insights into why members of the community chose to stay away. The promoters were also able to provide insights on the models that are used and other promotional-related aspects.

The study used a multistage sampling approach to select the desired respondents. The first stage included the sampling of members of SGs who would participate in the study. Because of the informality of SGs, the only available listings of SGs were the SaveNET database, which was adopted as a sampling frame for members of SGs for this study. The next stage was to eliminate all urban areas from the sampling frame as the focus of the study was the rural areas. This was done by removing Lusaka and Copperbelt provinces, which are highly urbanised. Further, all provincial capitals for the remaining eight were also eliminated for the same reasons. As a result, there were only eight provinces from which members of SG could be selected. This was done to reduce the sampling biases that may emanate from having respondents who have urban characteristics respond to questions meant for rural respondents.

The next stage involved using Cochran's formula with the desired confidence interval of 98%, and a 5% margin of error was used to determine the actual number of members of SG to be sampled. Cochran's formula is given as follows:

$$N^{\circ} = \frac{Z^2 pq}{e^2}, \quad [\text{Eqn 6.1}]$$

where N = the required sample size; Z = the Z score, which is 2.326 at 98% level of confidence; p = the proportion of the population that meets the

attributes of the target population; $q = 1-p$, which is equal to 0.5; e = is the margin of error set at 5%.

The required minimum sample size of individual members of SGs using the above formula was therefore 540. The sample size was adequate to draw statistical inferences:

$$540 = \frac{2.326^2 \cdot 0.5 \times 0.5}{0.05^2} \quad [\text{Eqn 6.2}]$$

However, to cater to the possibility of non-responses that were anticipated to be very low because of the abundance of SGs in target areas, 20 extra individuals were added, resulting in a total sample size of 560. The 560 individuals were then equally distributed amongst the eight provinces, resulting in 70 members of SGs being selected from each province. Two districts were then randomly selected in each province, translating to 35 members of SG in each district. The SaveNET database did not include actual contacts of members of SGs, and as a result, members were randomly selected at the district level through promoters that were operating in the sampled districts. Thus, the promoters enumerated were also sampled from the same districts as the members of SGs.

The final group that required sampling was the non-members of SGs; however, there was no sampling frame for non-members, and thus, one had to be generated. The desired key characteristic of the non-members was that they must have been aware of the promotion of SGs and had still chosen to stay away. This ensured that the study was targeting individuals who had chosen to shun SGs. This implied that non-members had to be selected from communities where promoters of SGs were present and active. Thus, the study selected non-members from the same districts in which members of SGs were selected. promoters of SGs were used to identify communities where promotions of SGs were taking place or had recently taken place. The study applied a ratio of 1:2, enumerating two non-members for every member of an SG interviewed. This ratio was applied because the focus of the study was to establish the reasons for staying away from SGs, and non-members were identified as better placed to provide these reasons. As a result, a total of 70 non-members were selected in each district, resulting in a total of 140 non-members per province, resulting in a total of 1120 in the eight provinces.

For both non-members and members, the study did target not only men but also targeted women. This was done to understand whether the factors that influenced the participation by men in SGs varied significantly from those

that influenced women. Women were also key in providing an understanding of the social and cultural norms that may influence the participation of men. Further, women as the dominant gender in the SGs were critical in assessing whether there was systemic discrimination against men.

Thus, a combined total of 105 respondents were targeted from each district for the survey, with the exception of the Mwinilunga district in the North-Western province, where 210 respondents were interviewed because it was the only district with SGs in the North-Western province. It was later discovered in the second district initially sampled that the promoters were no longer active, and as a result, the respondents could not be traced. As a result, a total of 15 districts were enumerated across the eight provinces. The sample size is summarised in Appendix Table 1A.

A combination of key informant interviews and focus group discussions were used to collect information from the targeted respondents. In the 15 districts sampled, a total of 17 key informant interviews were conducted with every active promoter of SGs in the sample.⁷¹ Moreover, four key informant interviews were conducted with leaders of SGs in four randomly selected districts from the 15 sampled districts. Further, two focus group discussions were conducted with members of SGs, whilst four were conducted with non-members. The study ensured that focus group discussions and the key informant interviews with leaders of SGs were not held in the same district to enhance the diversity of the information obtained.

■ Presentation and discussion of results

■ Descriptive statistics

As shown in Table 6.3, females accounted for 73% of members of SG, whilst males accounted for 27%. This picture confirms the situation in many African countries and is consistent with the work of Allen (2018). The majority of male and female members were aged between 36 and 64 years. This implied that there was little participation from the youth⁷² or the elderly.

For the non-members, the study purposively sampled more men than women for reasons given earlier. As a result, Table 6.4 shows that males accounted for 67% of the non-members enumerated compared to females, who accounted for 33%. As shown in Tables 6.3 and 6.4, both members and non-members accounted for a very minimal proportion of respondents over the age of 65 with 5% and 1%, respectively.

71. See Appendix Table 2 for a list of the names of the promoting organisations.

72. In Zambia, a youth is someone below the age of 35 years.

TABLE 6.3: Summary descriptives for members of SGs.

Age group	Female		Male		Total
	<i>n</i>	%	<i>n</i>	%	
15–35	129	23	51	9	180
36–64	263	46	96	17	359
65+	19	3	8	1	27
Total	411	73	155	27	566

Source: Adapted from Mwenge and Bwalya (2020).
SG, savings groups.

TABLE 6.4: Summary descriptives for non-members of SGs.

Age group	Female		Male		Total
	<i>n</i>	%	<i>n</i>	%	
15–35	331	29	487	43	818
36–64	35	3	262	23	297
65+	4	0	9	1	13
Total	370	33	758	67	1128

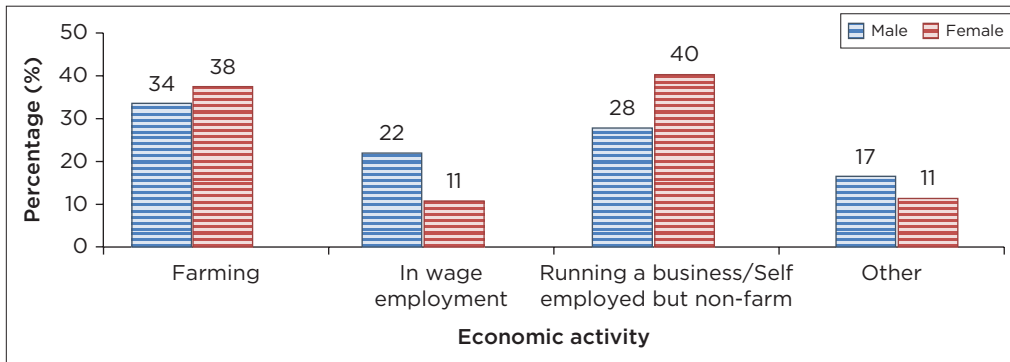
Source: Adapted from Mwenge and Bwalya (2020).

In terms of access to economic opportunities, the survey findings shown in Figure 6.3 reveal that the proportion of men in waged employment at 22% is double that of women at 11%. There are fewer men than women engaged in both farming and self-employment, as shown in Figure 6.3. Both of these economic activities are characterised by poor working conditions and low wages. Thus, these findings are an indication that men have better access to economic opportunities, and this is also reflected at the national level (Central Statistical Office 2016). This is likely to affect their participation in SGs. Despite the difference in access for women and men, access to economic opportunities in rural areas in Zambia is generally low for everyone.

Figure 6.1 shows the main economic activities of the respondents by membership status. More than half of members of SGs (51%) are involved in farming compared to 27% of non-members. Amongst members, the second-largest economic activity is running a business or being self-employed, which stood at 38% compared to 31% amongst the non-members. Approximately 22% of the non-members were in waged employment compared to 6% of members of SGs.

■ Why men shun SGs

This section presents findings on the reasons men have limited participation in SGs. The findings were mainly from the survey and interviews analysed using thematic analysis. The findings were supplemented with descriptive statistics. An inductive approach was used for the analysis as themes were



Source: Adapted from Mwenge and Bwalya (2020).

FIGURE 6.1: Main economic activity of all respondents by gender.

drawn from literature and interactions with key informants. The emerging themes included the role of economic activities in influencing the participation of men in SGs, the role of family members in influencing participation of men in SGs, the role of societal norms in influencing participation of men in SGs and the role of the promotion of SGs in influencing participation of men in SGs. Each of these themes is discussed in detail.

□ The role of economic activities

It is well-known that in Africa, men are generally well off compared to their female counterparts. In Zambia, men have higher labour force participation and lower unemployment rates (Central Statistical Office 2018). Female-headed households also have higher poverty rates compared to male-headed ones (Central Statistical Office 2016). As earlier shown, men also have higher financial inclusion rates (FSDZambia 2015). The survey data presented above confirm that men in Zambia have better labour market participation rates, even in rural areas. Wheaton (2019) argues that this could be one of the reasons that men chose to stay away from SGs. The incomes from their jobs could be sufficient for them not to need the services of SGs. Key informants with promoters also revealed that a significant proportion of men in rural areas in Zambia were involved in economic activities that required high levels of mobility. These activities included cross-border trading, seasonal agricultural employment and fishing activities, amongst others.

From the descriptive statistics presented earlier in Figure 6.1 and the national data on employment from the Labour Force Survey (Central Statistical Office 2018), we deduce that males have better access to economic opportunities. The results showed that men were more likely to be in waged employment. This implies that they have better access to

TABLE 6.5: Type of economic activity by membership status.

Economic activity	Members (%)	Non-members (%)
Farming	51	27
Running a business/self-employed but non-farm	38	31
In wage employment	6	22
Other	5	10
Grand total	100	100

Source: Mwenge and Bwalya (2020:14).

income and less time to engage in these activities because of the time constraints associated with employment. The findings in Table 6.5 also showed that non-members, the majority of whom are male, also had better access to economic opportunities, as shown by their economic activity. The findings from the survey were corroborated by findings from the interviews from which it was revealed that those in wage employment are unable to participate in SGs because some SG models required members to meet very often.

It was also established from the interviews that most of the members who were in wage employment happen to be public service workers like teachers in the rural areas. The demands to meet frequently made it difficult for those informal wage employment to keep up because of their work commitments. Being in wage employment in Zambia has important connotations as people with wage employment tend to have more stable earnings from their labour compared to those who are in self-employment.

Key informants further revealed that some men were involved in economic activities that require them to be mobile. These activities include cross-border trading for those living in border towns, long periods spent in fishing camps for those involved in fishing activities and inter-district travel to purchase goods for resale for those involved in retail activities, amongst other activities. The nature of these economic activities limits the time available for some men to participate in SG activities. One of the respondents reflected as follows (Mwenge & Bwalya 2020):

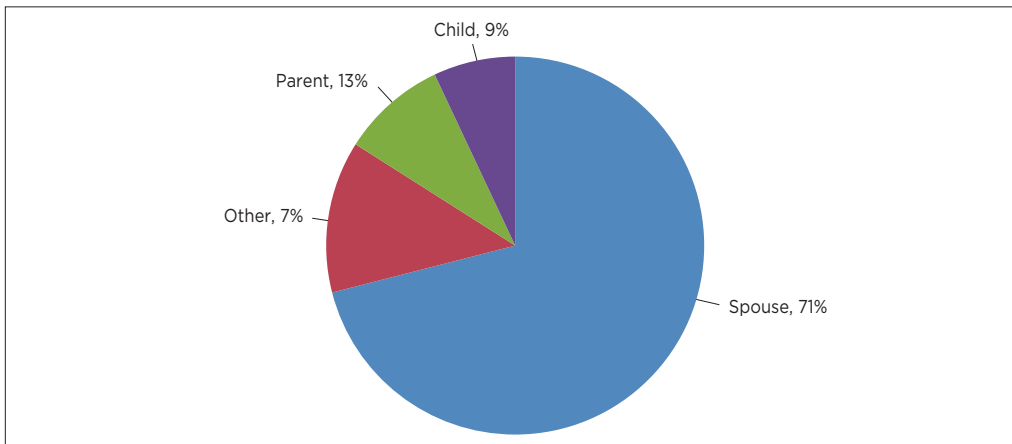
A lot of men in Eastern Province travel to Malawi and stay there for weeks trying to sell goods Zambia and looking goods that they can bring back here to sell. As a result, they do not have the time to participate in SG activities and sometimes ask their wives to join SGs instead. (p. 22)

Promoters using the VLSA model also reported that the model provides flexibility to integrate services that included capacity building, entrepreneurship, market linkage and market access. As a result, it also required more time from members in terms of attendance of meetings and training. Accordingly, this discouraged the participation of men who tended to be very mobile, and thus they end up participating in SGs through their wives.

□ The role of family members

The study established that 42% of members of SGs in the sample were influenced by a member of the family to join an SG. This is equivalent to 235 individuals who reported they were influenced by a family member out of the 560 members of SGs enumerated. A total of 167 individuals (71%) of the 235 reported that the individual who influenced them to join was the spouse. The distribution is shown in Figure 6.2.⁷³ As stated earlier, 73% (408) of all members of the enumerated were female, and thus we can conclude that a majority of those influenced to join an SG were influenced by the husband, confirming the findings of Waller (2014) that family members are proxies for men.

The notion that family members act as proxies is further supported by the finding of this study that family members were involved in the decision making of SGs and even provided finances for family members to save. Approximately 63% (353 individuals) of SG members surveyed reported that their family members were involved in deciding when and how much to save or borrow from the group. Furthermore, more than half of SG members, 54%, reported that family members provided them with money to save in SGs. The promoter interviews further established that it was common to find that a number of male members sent their family members to attend meetings on their behalf. These findings are consistent with those of Waller (2014) as they show that men can influence how much can be borrowed, and it can be expected that they also influence how the funds are utilised.



Source: Mwenge and Bwalya (2020:17).

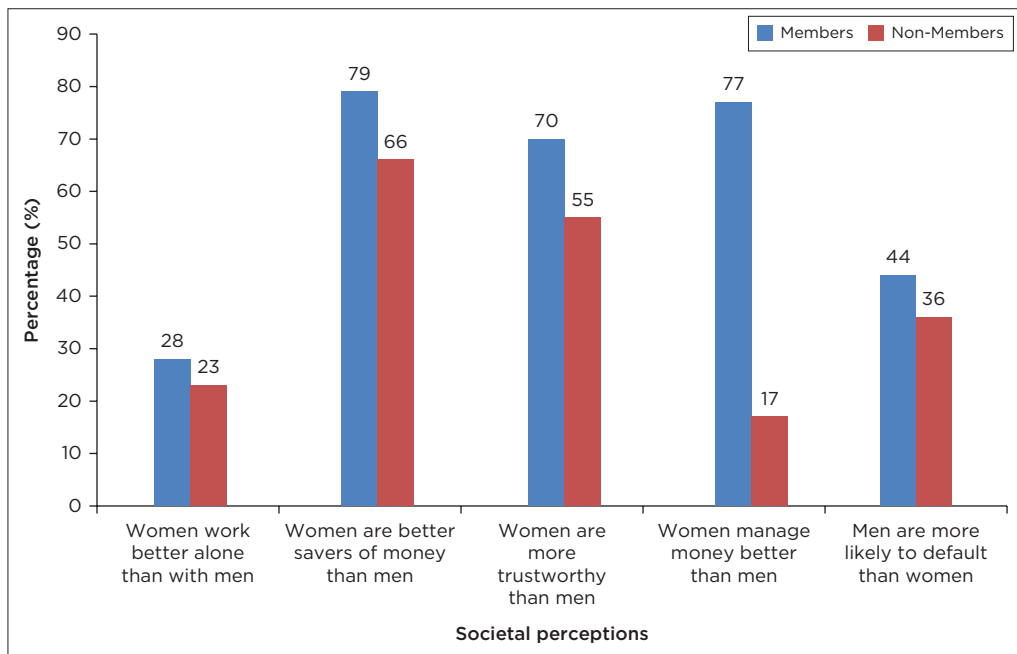
FIGURE 6.2: Proportion of family members who influenced a decision to join a savings group.

73. Child refers to persons over the age of 18 years whose parents belong to SGs.

□ The role of societal norms and cultural beliefs

Cultural beliefs and societal norms are believed to influence the participation of men in SGs. The norms and beliefs come from different sections of society. ACET (2019) showed that the women in SGs viewed men as having negative attitudes towards saving and a poor savings culture (ACET 2019). Interactions with key informants revealed that some sections of society viewed SGs as women's activity and men who were associated with SGs were looked down upon.

The study tested these assertions by putting forward a set of statements to the respondents relating to societal norms and cultural beliefs. As shown in Figure 6.3, there were three views with which a significant proportion of both groups agreed. Firstly, 79% of members of SGs were of the view that women are better savers than men compared to 66% of non-members who held a similar view. Secondly, 70% of members were of the view that women were more trustworthy than men compared to 55% of non-members who held a similar view. However, non-members disagreed with the claim that women are better managers of finances as only 17% answered in the affirmative compared to 77% of members. Therefore, although many non-members, of whom men were the majority, agree that women are better savers and more trustworthy, they disagree that women are better at managing finances.



Source: Mwenge and Bwalya (2020:18).

FIGURE 6.3: Societal perceptions.

These views are likely to lead to the exclusion of men and favouring of women in participating in SGs. Moreover, these perceptions also show that a larger proportion of society views women as better savers and more trustworthy than men. The participation in SGs is highly dependent on trust (Sabhlok 2011). If men are seen to be less trustworthy, they could be involuntarily excluded from their participation in SGs. Similarly, the view that men are more likely to default contributes to the suggestion that they cannot be trusted and could also lead to exclusion. Nonetheless, less than 50% of both members and non-members indicated that they believed that men are more likely to default. The fact that the people who agreed with this view are less than 50% means that a majority of the respondents did not agree and therefore means this is not the view of the larger society. The following were some of the views of promoters (Mwenge & Bwalya 2020):

As promoters, we cannot dictate who is recruited into a savings group. The most important attribute is trust, and the members of a savings group must be able to trust someone before they can allow one to be admitted into a group.

Some community members do see men as more likely to default because men are viewed as more likely to take risks and may end up losing the groups money through a risky venture. (n.p.)

The perception that women are more trustworthy and less likely to default implies that women are more likely to be welcome in SGs. At the same time, at the household level, men would still be comfortable giving their wives money to save in SGs, knowing that it will be saved and accounted for.

Furthermore, analyses of the responses revealed that this trend was mainly promoted by men who felt they could not join SGs because they were dominated by women. So, they stayed away, fearing to be laughed at by their peers but still go ahead and urge their spouses to do so on their behalf. To this effect, one member of a focus group discussion had this to say (Mwenge & Bwalya 2020):

Men shun saving groups because they still hold the belief that saving groups are for women. Men fear that they may be seen as poking their noses in women's business if they participated in SGs. (n.p.)

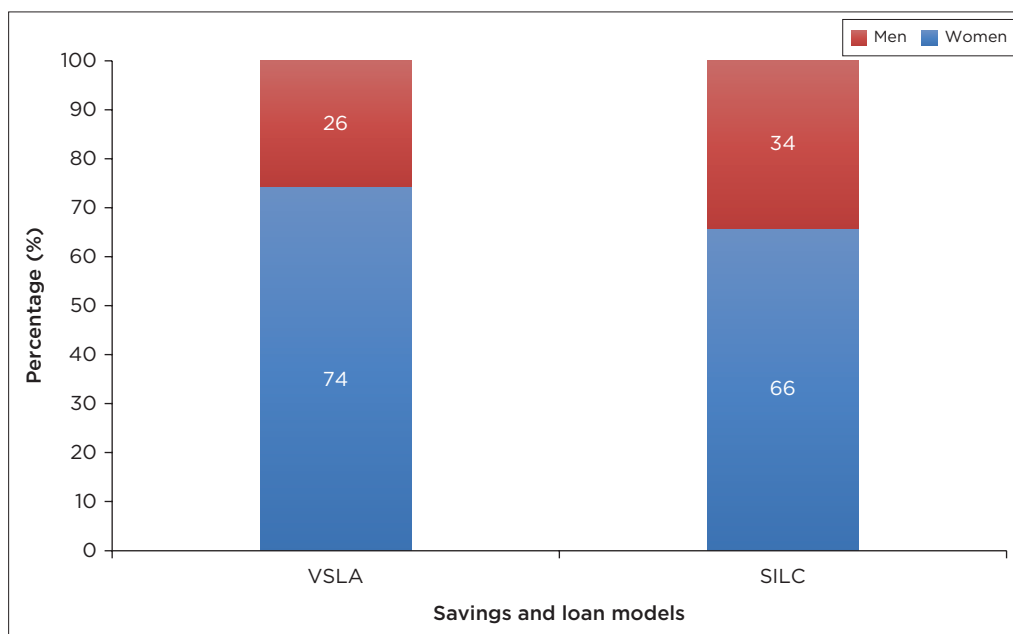
□ The role of the promotion

The promotion of SGs plays a crucial role in eventually determining the composition of the songs. The initial target group and entry point into a community play a role in determining the beneficiaries of the intervention. According to Seel (2015), self-help initiatives such as SGs initially targeted women with a view of improving financial inclusion and uplifting livelihoods. As a result, many NGOs deliberately targeted women and were not concerned about the low participation of men (Seel 2015).

The promotion of SGs in Zambian rural areas is often done by institutions that already work to improve the livelihoods of rural people. As mentioned earlier, there are two models mainly used in Zambia, namely: The Village Savings and Loans Association Model and the SILC Model. One major difference between the SILC and the VSLA is that the SILC model has a market-based strategy that enables local entrepreneurs or PSP to expand SG services at a fee (Parker et al. 2017). Payments are made to PSP directly by the group for the services that they render to the group. In the initial stages, CRS trains and provides PSPs with financial assistance, after which qualifying PSPs are certified and weaned to become self-sustainable. This results in an easily replicable and self-sustainable savings-led program (Parker et al. 2017). In the 15 districts that were visited, the SILC model was implemented in six districts, whilst the remaining 11 implemented the VSLA.

Figure 6.4 shows the proportion of men and women in each of the two models. Approximately 26% of members in the VSLA are men compared to 74% of women. In the SILC, 66% are women compared to 34% who are men. Despite the difference in the SG model, the proportions reflect the general picture presented earlier that there are more women than men in SGs.

Despite the SILC model recording a higher proportion of men compared to the VSLA model, both promoters reported that they did not have any



Source: Mwenge and Bwalya (2020:28).

ICT, information and communication technology; SILC, Savings and Internal Lending Community; VSLA, Village Savings and Loan Association.

FIGURE 6.4: Proportion of men and women in SILC and VSLA models.

deliberate policies to encourage the recruitment of men. However, they noted that their approach is universal and non-discriminatory, and it is open to all community members regardless of gender and age group. The challenge, however, seems to be the old notion that SGs are primarily for women. The promotion of SGs is non-discriminatory and is open to both men and women. Therefore, promotion plays a small role in men shunning SGs.

■ **Lessons learnt and implications**

Given the findings of our study, we provide some key lessons and make three policy recommendations that must be undertaken to improve the uptake of SGs in rural communities in Zambia;

1. Increase community sensitisations on the purpose and importance of SGs.
2. Promoters of SGs must broaden their recruitment strategies to include men and those in wage employment.
3. Facilitate for the graduation SGs from informal to formal financial platforms.

□ **Increase community sensitisations on the purpose and importance of SGs**

Our first recommendation is that there is a need to enhance community sensitisation on the purpose and importance of SGs. The study finds that societal norms and cultural beliefs influence decisions to join SGs, however, the norms and beliefs are often based on misinformation or limited information. The dissemination of accurate information about SGs to both members and non-members would improve the uptake of SGs. This would make members of SGs more willing to welcome and recruit new members especially men and youth whilst non-members would be better placed to make the decision to join SGs.

□ **Promoters of SGs must broaden their recruitment strategies to include men and those in waged employment**

We recommend that promoters broaden their recruitment strategies to include men and those in waged employment. This study and other studies have found that majority of the promoters deliberately target women for recruitment. This study also found that those men who usually have higher incomes and those in waged employments usually shun SGs. However, the recruitment of men and those in waged employment is beneficial for SGs and could improve sustainability through high financial contributions.

□ Facilitate for the graduation SGs from informal to formal financial platforms

SGs have been a success in rural areas and have had a positive impact on the livelihoods of the poor so far. As they grow stronger and reach more people, government must actively put in place measures to transition SG into Financial Cooperatives that are formal. This broadens the opportunities available to SGs as they are able to acquire legal identity to enable them acquire assets and operate as enterprises that are business oriented. This also allows for them to access financial instruments from formal markets.

■ Conclusion

The study establishes that men in rural communities in Zambia opt to stay away from activities of SGs for a variety of reasons. The main reasons cited include the nature of economic activities of men that makes it difficult to comply with the physical demands of participation in SGs. The systematic targeting of women by promoters of SGs is also important. Moreover, cultural and societal norms as well as misinformation played a role in influencing the participation of men in SGs.

The study further found that the low participation of men in SGs did not necessarily imply that men were not benefitting from SGs. Although women actively participate, men are involved in the decision making and actively made contributions through the women who acted as proxies.

Thus, we conclude that whilst men may choose to stay away from SGs for various reasons as stated earlier, they must still be targeted for two main reasons. The first is that it can improve the livelihood and empowerment of women. Because men are better off, they can improve women's livelihoods through financial contributions as these can strengthen the financial status of SGs and improve sustainability. The second reason is that despite men having better access to financial services generally, the gap between men and women remains narrow. This implies that both men and women in rural areas remain largely underserved, and both groups could benefit from participating in SGs.

■ Appendix

TABLE 6A-1: Sample districts.

Province	District	Members	Non-members	Total
Eastern	Chadiza	35	70	105
	Petauke	35	70	105
Central	Chibombo	35	70	105
	Chisamba	35	70	105
Muchinga	Mpika	35	70	105
	Isoka	35	70	105
Western	Kaoma	35	70	105
	Luampa	35	70	105
Northern	Mungwi	35	70	105
	Mbala	35	70	105
Southern	Monze	35	70	105
	Mazabuka	35	70	105
Luapula	Nchelenge	35	70	105
	Mwense	35	70	105
North Western	Mwinilunga	70	140	210
Grand Total		560	1120	1680

Source: Mwenge and Bwalya (2020:35).

TABLE 6A-2: Promoters of savings groups and the promotion models used.

Promoter	District	Model
Zambia Land Alliance	Nchelenge	VSLA
Caritas	Nchelenge	SILC
Catholic Relief Services	Mwense	SILC
Catholic Diocese of Mansa	Mansa	SILC
Kasama Christian Community Care	Kasama	SILC
Caritas	Mpika	SILC
Caritas	Isoka	SILC
Minge Mission Hospital/ CHAZ	Petauke	SILC
Community Development	Petauke	VSLA
Plan International	Chadiza	OSAW (VSLA)
World Vision Zambia	Mwinilunga	VSLA
CARITAS	Kaoma	SILC
World Vision Zambia	Luampa	SILC
Zambia Land Alliance	Monze	VSLA
World Vision Zambia	Mazabuka	VSLA
World Vision Zambia	Chibombo	VSLA
Zambia Land Alliance	Chisamba	VSLA

Source: Mwenge and Bwalya (2020:35).

VSLA, Village Savings and Loan Association; SILC, Savings and Internal Lending Communities; OSawe, Owning Saving for Assets and Wealth.

The social economy and market failure in the financial sector: A case of Eswatini

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■ Introduction

Classical economic theory is predicated on the perspective of a self-regulating market system largely dictated and driven by individualistic behaviour and choices defined as the maximisation of benefit to the individual. In such a case, markets will tend to be self-correcting and optimally restoring equilibrium and apportioning rewards and losses from trade. Pockets of exceptions to the rule identified as market failures exist when production and allocation of goods and services are suboptimal and fail to achieve a Pareto-efficient solution. This can arise as a result of external factors that make it unviable for

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markets to function profitably. Market failures can therefore be viewed as a rational response of the market mechanism to prohibitive transaction costs in excess of the gains from trade. Consequently, transactions that should occur do not occur even if they create value and transactions that do not create value occur even if they should not occur (Phills & Denend 2005). The result can be inequitable distribution, which is often inconsistent with values of fairness and justice often creating a justification for government intervention (Salmenkaita & Salo 2002; Stiglitz 2009, 2017).

A typical response to market failures is to evoke government intervention through regulation to nudge the market towards more optimal outcomes. Where this is not possible or offers outcomes that are less desirable or equitable, the government can intervene by providing the services or goods needed. Research and global experience, however, have shown that government intervention also fails to lead to optimal allocation in many cases (Boettke, Coyne & Leeson 2011; Devarajan & Kanbur 2013; Vujovic n.d.). The public sector has failed to redistribute welfare equitably, resulting in economic and social strife, heightened levels of poverty and wide disparities between the rich and poor, even where national income levels are increasing. Market imperfections have proved to be the rule rather than the exception and economic principles underlying their behaviour and guidance to their resolution remain unresolved.

The reaction of commercial financial institutions to market failure is avoidance. This coupled with government failure to adequately provide financial services to excluded groups has given rise to special-purpose vehicles in the form of microfinance social enterprises to provide a 'visible hand' or directed financial services. Social enterprises attempt to create markets where they are not automatically created by the market mechanism. However, the question is whether there is a theoretical and practical premise for the advantage of the social economy intervention over other forms of interventions in viably correcting for market incompetence. The study uses qualitative data to determine and analyse the advantages of the intervention of social enterprises in their response to market failure. It considers the ability of the social enterprise model to correct or mitigate the impact of market failure; the extent to which it can restore the functioning of markets in sustainable manner and ameliorate the factors that cause financial exclusion on a permanent basis.

The performance impact of the social economy has proven to be challenging to measure and assess as a result of the non-monetary nature of its objectives and the absence of an underlying theoretical framework from which standards can be formulated and developed. Nevertheless, the ultimate theoretical response envisaged is that they ameliorate the effects of market failure. In the absence of a measurement tool, an inspection of the activities they engage in, and the pursuant strategies followed are interrogated to determine their effect on market behaviour. The financial sector is selected as a representative sector

and setting. The paper begins with an overview of the Swazi financial landscape. This is followed by a review of literature on the concept and theoretical background of market failure as it applies to the financial sector. The methodology is then discussed followed by the results and concluding remarks.

■ A brief review of literature

One of the core functions of financial markets is to allocate capital to its most productive investment opportunities efficiently. The main instrument that markets use to allocate capital is the interest rate. The interest rate must be high enough to encourage savers to postpone current consumption so that they can save, and the pool of loanable funds increases. At the same time, they must be low enough for those who want to borrow for investment to be willing and able to repay the loans. This should ideally be obtained when the interest rate is market determined giving rise to Pareto efficiency where there is no possibility to improve or find a better welfare utility combination (Besley 1994). A market failure in the financial sector therefore exists when a competitive market fails to perform this role adequately. The assumption that underpins Pareto optimality often does not hold. As a result, market failures are pervasive especially in financial markets as a result of their reliance on the information (Stiglitz 1993).

Traditional economic analysis of credit markets based on Stiglitz and Weiss (1981) supposes that projects to be funded by borrowers carry some risk. That risk entails that the borrowers may sometimes not have enough to repay their loans and lenders will lose money. This risk is compounded where there is asymmetric information; the inability of the market to provide enough information for lenders and borrowers to make rational choices about the value of an asset. The inadequate flow of information on both the demand and supply side creates an imbalance of power between buyers and sellers. Suppliers choose not to serve unknown markets and buyers may be less willing to transact without adequate knowledge of products.

In lending for example, the lack of information cripples the ability of the lender to assess the risk-return profile of the borrower and to set the related level of terms and conditions congruent to the profile of the borrower (Jin & Zhang 2019; Stiglitz 2017). Suppose that funds are lent at the opportunity cost of those funds, say interest rates paid to depositors. The lenders must therefore charge a premium interest rate above the opportunity cost to cover the probability of non-payment. The problem arises that in such a case, less risky borrowers are more likely to be discouraged from borrowing leading to an increase in more risky borrowers. The price mechanism is eschewed in favour of the deliberate selection of less risky clients leading to a generally low supply of financial services and consequent financial exclusion because of the high risk. The result is a Pareto violation leading to a mismatch between demand and supply because that supply is not based on the best available

investment opportunities. Further, it results in credit rationing and a shrinking of markets and reduced formation of social and private value (Auronen 2003). Counteracting measures such as guarantee mechanisms are standard as potential loss prevention actions. Signalling and screening devices to identify qualities that reflect features of a deal to minimise risk are also utilised (Barth et al. 2015; Besley 1994; Yamamoto et al. n.d.).

Participants resolve information asymmetry only if there is adequate incentive in that the benefit of the transaction is higher than the cost of obtaining information. Jin and Zhang (2019) and Tang and Guo (2017) argue that fixed transaction costs play a significant role in rationing individuals and groups out of the financial sector. Fixed transaction costs in credit evaluation, for example, decrease with loan size (Ramlee & Berma 2013). Financial institutions often find that gains from small-scale financial services are not proportionate to the effort required to provide such services. Low-income groups therefore are rationed because of the size of their financial needs and the sunk costs required to provide those needs.

A typical agency problem associated with information asymmetries in financial markets is moral hazard. A borrower may be tempted to increase exposure to risk once the loan has been received because the lender bears the economic risk of such behaviour. To mitigate against this risk, financial institutions request for collateral from borrowers. Collateral decreases the impact of information asymmetry by giving the lender a last resort asset to cover the size of the loan (Okurut, Olalekan & Mongadi 2011). The absence of inadequacy of collateral amongst low-income individuals and groups especially in emerging and developing countries exacerbates the effect of market failures in the financial sector (Kimutai & Ambrose 2013).

Further, poor complementary markets such as insurance, inefficient judiciaries, literacy levels, communication infrastructure and other risk and cost reduction structures may be a disincentive to supply and demand. The difficulties in the realisation of collateral offered because of inefficient judiciaries have a bearing on the ability to enforce the transfer and re-assignment of property rights between individual and financial institutions. Enforcement may also suffer under political interference and pressure in poverty-directed programs as they attract such interest and attention. Financial institutions want to operate in an environment of strong property rights established without friction and cost. These conditions are neither temporary nor can they be auto corrected by the market mechanism. High covariant risk resulting from poor diversification of opportunities contributes to market failures in the financial sector. For instance, smallholder farmers located in the same geographic region are likely to engage in similar livelihood activity, exposing them to the same shocks (Boucher, Carter & Guirkingner 2007; Carter, Cheng & Sarris 2011; Fernando 2007; Zhao 2017). Similarly, the copycatting syndrome amongst micro-scale enterprises is very prevalent

because of low business innovation and restricted business knowledge by entrepreneurs in each locality.

The consensus on the prevalence of market inefficiencies is not matched by a related agreement on how to deal with the resulting market failures. The argument is that the prevalence of market failures does not necessarily render responses like government intervention as the most effective mitigation strategies. Those who argue in favour of government intervention show that financial exclusion is a social problem and should not be addressed by market mechanisms. Following implications from related seminal works such as Rosenstein-Rodan (1943), Hirschman (1958) and Rowstow (1962), many developing country governments responded with various interventions. State-owned financial institutions were set up to mobilise savings and fund projects with high social impacts. In addition, private banks were mandated to lend at capped interest rates to specific sectors such as agriculture. These interventions were largely unsuccessful resulting in adverse effects on growth and development arising mainly from wasteful administration expenditures, rent seeking and political manipulation (Carvalho 2014; Lazzarini et al. 2015). Moreover, such intervention resulted in a negative effect on bank expansion and financial sector development.

A more recent approach has been through social entrepreneurship. The social entrepreneurship approach combines traditional market-based approaches of entrepreneurship with a mission to address social problems. In the financial sector, this intervention has been dominated by microfinance spurred on by Yunus Muhammad's Grameen Bank Model. The attraction of the social entrepreneurship approach is its hybrid nature that allows the businesses to be at least financially viable apart from being able to meet specific social needs within the society. Moreover, financial exclusion is 'deeply integrated with social exclusion'. As a result, social entrepreneurship may be better placed to address financial exclusion and to ameliorate the market failures so commonly at play in financial markets (Ault 2016; Rosengard 2004, 2009; Siqueira, Mariano & Moraes 2014; Simatele & Dlamini 2020)

The consequences of these market frictions are that Pareto improvements are not exhausted resulting in inefficient allocation of financial services. As a result, large populations especially in developing countries remain either underserved or not served (Burkett & Drew 2008; Park & Mercado 2018). The commercial nature of banks and their focus on profits mean that they tend to disregard social returns such as economic participation and wealth creation for the poor. In the end, people are excluded from financial services such as savings, credit, insurance and cheaper payment mechanisms. Financial services are not allocated efficiently in that the supply of financial services is withheld before Pareto improvements are exhausted. Services do not reach some segments of the population despite a high demand for them. Commercial financing decisions tend to disregard social returns such as economic participation and wealth creation for the poor (Mellor & Affleck 2006).

■ The Swaziland context

The formal financial sector in Swaziland is dominated by South African subsidiaries. There are four commercial banks and one building society in Swaziland. Three of the banks are foreign owned whilst the Development Bank (Swazibank) is locally owned. The Swaziland Building Society is the only building society and is locally owned. The insurance industry has 10 insurance companies. Six of these are life insurers. The industry is highly concentrated, especially in the non-life segment. Most of the companies in this sector are foreign owned as well. Micro insurance products are on the rise.

Registered non-bank formal financial institutions include pension funds, the Swaziland Industrial Development Company (SIDC), the Financial Corporation (FINCORP), the Central Bank Guarantee Scheme and Non-Governmental MFIs comprising the Inhlanyelo Fund, Imbita Swaziland Women's Finance Trust and more recently, the SWEET Trust. Non-bank formal institutions include the SIDC and FINCORP. These were created by the Government to bridge the perceived demand gap left by commercial banks. The SIDC was established primarily to finance industrial projects whilst the Swaziland Development Bank was to meet the agricultural credit demand. In the early 1990s, the bank was declared insolvent because of an excessively poor loan portfolio and for several years thereafter faced a protracted restructuring process. FINCORP emerged in 1995, during the restructuring of the Development Bank and in response to an increasing demand from small and medium local enterprises that were also underserved by commercial banks. After a few years of development financing, FINCORP embarked on retail or consumer lending, which has since overshadowed the development wing by more than two thirds in portfolio size (Annual Report, FINCORP 2018). The SIDC has recently been downscaling to penetrate the development finance market in the face of stiff competition from commercial banks. Both the Inhlanyelo Fund and ISWFT have been in operation for more than 15 years. The former focuses on rural enterprise services using traditional structures for credit screening and loan collection. Imbita Swaziland Women's Finance Trust is a membership-based women's financial services organisation that offers savings, loans and financial literacy training.

There is also a strong cooperative movement comprising many registered work-based savings and credit cooperatives whereby employees pool their savings from which members can borrow at concessionary terms. The largest one is the civil service-based Swaziland National Association of Civil Servants, followed by the Swaziland Association of Teachers. The police force, correctional services and large parastatal companies such as the Swaziland Electricity Company, Swaziland Water Corporation are also prevalent players amongst private company-based employees. Multipurpose primary cooperatives are mostly rural and agriculturally based, the most prominent

and most vital being in the sugar belt. These pool financial resources to operate commercial agricultural projects and use their collective savings to leverage for loans from financial institutions, using joint liability and peer monitoring as guarantee.

Multipurpose cooperatives with a strictly financial purpose are few and tend to remain small with a few exceptions such as the Asikhutulisane Savings and Credit Cooperative and a Lutsango LwakaNgwane Savings and Credit Cooperative. There have also been several failed Government credit schemes such as the Regional Development Fund, Constituency Empowerment Fund, the Community Poverty reduction Fund, The Youth Fund and others, some of which are currently being re-constituted and redirected to improve their successful implementation. Consumer lending organisations have also shown a rapid increase in the last 10 years. There are 108 registered credit entities (FSRA 2021), the three largest being First Finance Company, a subsidiary of FINCORP, Select Management Services, Letshego Financial Services. These are strictly client based and lend only to salaried individuals. Informal community-based membership financial services organisations such as ROSCAs, Accumulated Savings and Credit Associations, burial associations and self-help SGs are also in abundance. Accumulated Savings and Credit Associations are usually established in a workplace or in a neighbourhood by the organisation's participant beneficiaries. They pool together their savings and take turns to borrow from those savings.

According to FinScope (2018), the commercial banks in Swaziland maintain a solid level of profitability by focusing on a conservative range of services and minimising services to risky sectors such as smallholder agriculture and rural ventures. In 2018, banks accounted for only 52% financial access which was an improvement from 44% in 2011. Non-bank formal financial institutions, on the other hand, which include microfinance organisations accounted for 33% access, also an increase from 9% in 2011. Informal sources accounted for the balance of 2% and the balance of 13% were financially excluded.

■ Correcting for market failure in the Swazi social economy

■ Sampling and data collection

The study elected to use maximum variation sampling (MVS), which purposively selects a wide variation of respondents in terms of individuals, groups or categories, offers the best opportunity to gather multiple and diverse perspectives (Nastasi et al. 1998; Onwuegbuzie & Leech 2007). A new approach seeking to expand the theoretical foundation such as the social entrepreneurship domains derives the maximum benefit from varied and unique ideas that are obtainable under the MVS method. Financially inclusive

organisations varied in terms of the approaches, strategies, systems and processes employed, and the chosen sampling technique enabled the study to accommodate most of the categories. In view of the nascent stage of research activity in the area of social entrepreneurship, especially a study that includes informal organisations, the study opted to use in-depth interviews. The interviews were used to investigate participant perceptions on how their nature of organisation met their financial service needs as well as how they interacted in such organisation to remain viable as entities.

Participants were drawn from financial sector entities with articulated social value creation missions as the core purpose of their existence. As a result, the sample included various institutions with this core value including DFIs, finance sector cooperatives, credit and savings organisations and community savings organisations. Purposeful sampling was used, and an effort was made to include organisations of various kinds. One Development Bank in Swaziland was included. Furthermore, two institutions from the six registered non-bank financial institutions, which target micro and small enterprise development, were also included. This included one development financial institution as well as two MFIs. The country has many multipurpose registered cooperative organisations. From these, two that have both a credit and savings component are included in the sample. There is also a significant number of informal savings and credit as well as rotating credit and savings associations, which include merry go round financing schemes and credit and savings societies. Three of these are included in the sample. Representation across organisational size, formal and informal sector, as well as how the financial service was delivered to end users, was taken into account. The inclusion of both formal and informal sector organisations was necessary to highlight the differences in how institutions in these two subsectors address the exclusion factors, especially how the differences in the formal and informal infrastructure diversely affect access for users.

Table 7.1 shows that the study sample included two organisations for the MFIs, DFIs (DFIs), cooperatives and a community-based SHGs as well as one Savings and Credit Association (SCA). Inclusion of a larger number of participants was precluded by data saturation and unavailability of participants in some cases. In total, 18 participants were interviewed on an individual basis whilst the balance of 24 people from three organisations was interviewed in informal group discussions. The interviews were mainly conducted in the local language SiSwati to maximise participation.

Investigating issues of strategic responses, dimensions and positioning of organisations to incidents of market failure, organisational financial viability in relation to the mission of organisations, demands that informants must be able to capture and provide a holistic view. Therefore, the targeted participants were CEOs of organisations and senior staff members and committee

TABLE 7.1: Sample size.

Organisation	Number of participants planned	Number of participants
MFI A	5	3
MFI B	5	3
DFI A	5	4
DFI B	5	3
SHGA	Undetermined	10
SHG B	Undetermined	9
Cooperative 1	5	2
Cooperative 2	5	3
SCA	5	5
Total	40	42

SHG, Self-help group, SCA, Savings and Credit Association.

members of informal organisations as key informants. The informal SHGs and informal SCAs could only be obtained on their regular meeting days, so interviews were generally held with group members who were present during the meetings. Many of these do not have formal premises and move from one place to another. The SHGs did not subscribe to the committee structure so all members equally qualified as participants. SCAs were also selected from amongst members in a very informal manner, and the committee posts generally consisted of a chairman, treasurer and secretary. Strategy formulation is vested with all members as decisions are all made at membership meetings.

■ Analysis and results

Thematic analysis was used in the study. A hybrid coding approach was preferred incorporating both data-driven inductive coding as well as deductive coding driven by a priori expectations and dictated by the need to understand how the enterprises address matters of market failures. The review of literature above indicated that information asymmetries and lack of complementary markets are the core causes of market failures in financial markets. Accordingly, a search of the interview transcripts was first designed to identify incidences of information asymmetry (adverse selection and moral hazard), externalities and the manifestation of incomplete markets. We identified three broad categories of constraints including adverse selection, moral hazard and regulatory compliance. The resultant analytical framework is represented in Figure 7.1.

□ Identified market failures

Adverse selection makes it difficult for the lenders to select the less risky borrowers. A typical response by mainstream lending institutions in modern financial markets is to do a credit check where such facilities exist. In the

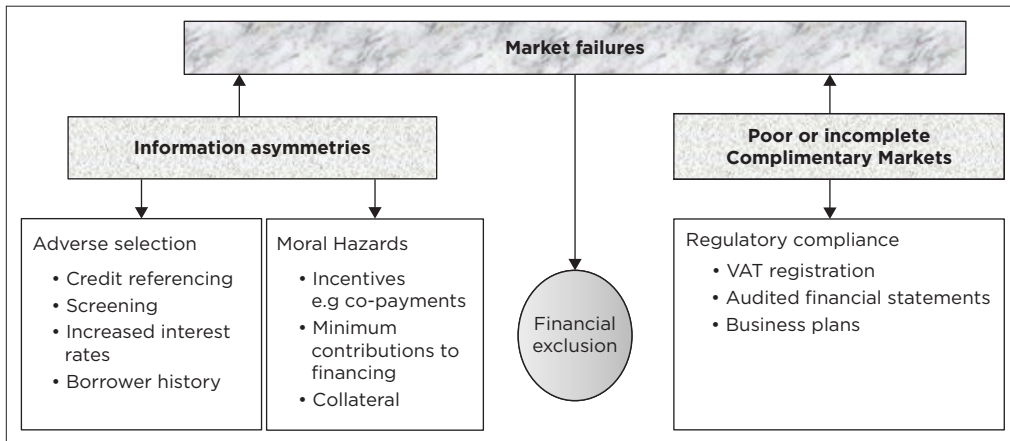


FIGURE 7.1: Mainstream financial sector responses to market failures.

absence of credit rating institutions or as a complement to their checks, lenders will invest in other means of obtaining a potential borrower’s history. This may include savings and repayment history of the individual as well as the cash flow of the business. Where the level of information opacity is high, lenders will often increase the lending rates to compensate for the probability of default resulting in credit rationing, mainly of borrowers who may have viable but low return investments.

Moral hazard, on the other hand, happens after the loan has been given. Because of asymmetric information, the lender may not be very sure about how the borrower will appropriate the loan. To ameliorate this risk, the lender may request some form of commitment on the part of the borrower. Commitments can take the form of a co-payment in the case of insurance or minimum contribution to the investment in the case of new projects. More often, lenders will require a commitment through collateral. Mainstream institutions typically accept real estate, invoice financing where there may be significant invoices outstanding as well as blanket liens. To deal with the absence of complementary markets, lenders often rely on regulatory compliance. These include VAT registration, the analysis of audited financial statements and feasible business plans for start-up businesses.

■ How do the social enterprises respond?

These requirements, however, are not feasible for many low-income households and small businesses. Many of them do not have an observable credit history or savings in a formal institution. The literature is replete with evidence that such individuals do not have sufficient collateral (Abraham & Schmukler 2017; Rahman et al. 2017). Moreover, the increase in interest rates leads to the exclusion of such groups even when they may have feasible business projects.

■ Adverse selection

Like mainstream financial institutions, social enterprises use information about their customers to inform lending decisions. The methods by which this is done, however, are more aligned with the characteristics of low-income borrowers and businesses. Further, the customer screening is done in ways that minimise costs. Moreover, the screening process is individualised and does not often rely on standardised criteria. The screening and monitoring mechanisms differ depending on the nature of the enterprise. DFIs rely heavily on their own appraisal and screening processes, and this is an onerous task as often, businesses are new without historical information. Further, customers are first-time business owners without adequate industry knowledge and/or if they do, are unable to articulate and document the information needed by the financial institution. The literature emphasises the importance of such information often articulated for a business plan (Hassan Abdesamed & Wahab 2014; OECD 2015). The DFI instead uses intensive appraisal in lieu of submissions of business documentation received from customers. The appraisal is then kept on record to develop a customer profile that is referred to for subsequent loans.

Development finance institution's appraisal processes consist of an initial site visit. This establishes the location of the business and its suitability and physical viability. It also allows technical information to be gathered for the preparation of financial plans. Historical data for existing enterprises in the form of business records may be gathered if available. This is followed by intensive interviews. Any evidence of previous handling of loans is also collected. Although DFIs have developed standard application forms and appraisal formats, they emphasise the uniqueness of each customer and the individualistic approach in loan screening. The process of collecting soft information about the applicant is referred to as relationship lending in the literature. Development finance institution established a social relationship with the applicant through the intensive interview during the screening process. Such processes give the lender informational advantages over the other potential lenders and reduce the impact of information asymmetries allowing them to select less risky borrowers (Malmström & Wincent 2018).⁷⁴ Finally, loan screening and approval are staggered depending on the amounts required, and likewise, the turnaround time also varies. Large loan amounts are approved at the senior level and may even escalate to the DFI board level.

MFIs also engage in an extensive and intensive screening of potential customers. Moreover, they have set up participatory structures to facilitate the processes. MFI A also relies significantly on traditional governance

74. This intensive relationship building process is costly and has contributed to the credit rationing of low-income borrowers whose loan sizes are very small.

structures for screening. Communities are organised around chiefdoms. The traditional leaders of the chiefdoms form committees that screen loan applicants. This allows the MFI to validate the residency and to elicit the support of authorities as early as possible, making it easier when needing intervention with difficult customers. The MFI operations manager makes site visits once a batch of applications has been accumulated and vetted by the chiefdom. Lending is done in batches per chiefdom to contain transaction costs for the MFI. The appraisal process is flexible, allowing customers to be appraised on whatever information is available. The screening process is rigorous entailing customer interviews and site visits conducted by local monitoring officers (LMOs). In the process, relationships with customers are built, and extensive and valuable customer and project information is gathered as LMOs are compelled to independently seek for and accumulate knowledge on a variety of businesses. Once the process is complete at the chiefdom level, the applications are sent to the areas constituency (Inkhundla), which serves several chiefdoms, for collection by the MFI head office. They are further appraised for financial viability at the head office, and approvals and disbursements are made. MFI B uses a similar mode of operation by relying on local membership committees (LMCs) comprising community-based members to gather customer information for appraisal. The MFI approach to addressing adverse selection combines relationship lending techniques and social capital. In relying on the local communities to evaluate applicants, the MFI leverage is under knowledge imbedded within the community. Ferrary (2003) argues that social capital can improve the quality of risk evaluation in a loan application.

The cooperative model relies heavily on savings that facilitate credit availability. Loan amounts are leveraged on savings accumulated, and this is normally stipulated in the by-laws of the cooperative. There are no restrictions to the use of funds borrowed. These are often used for consumption and small business activities. Approval for borrowing is less dependent on appraisal and related capacity to repay but rather on savings availability. Site visits are conducted where funds are borrowed for business activities but have little bearing on the decision to lend. Administrative documents, such as identity documents, an affidavit and a loan contract, are drawn up upon granting of loans. Where credit is issued, the average loan size is small. The first loan is equal to total savings, with the shares paid being considered as security on interest due. The second loan is twice the savings accumulated.

The rural informal groups model is built around the common bond between members who are neighbours and community members in the case of the rural informal groups and workmates in the third group. Membership in these groups is based on self-selection and, therefore, high reliance on local knowledge leveraging on social capital as a source of information. Barboni et al. (2013) argue that self-selection can reduce adverse selection problems.

The groups meet once a week to save an equal amount of E2 per member and a once-off joining fee of E25.⁷⁵ The groups do not have a management structure, and meetings are chaired on a rotational basis so that each member gets a chance to chair. Savings are collected and redistributed as loans in one meeting, and there is no banking done. One group reported that any unclaimed funds are distributed equally amongst members whilst the other gives it to the chairperson of the day for safekeeping. If funds are insufficient, the group determines and agrees on the members with the most pressing needs such as illness or overdue school fees to receive the money.

■ Moral hazard

Various methods have been employed by social enterprises to minimise risky behaviour by borrowers after the loan has been issued. The groups still require some form of collateral. However, the collateral adapts to fit what is available within the communities. This often exploits partial collateral as well as social bonds, often using group liability to solicit peer pressure.

■ Collateral

Various forms of collateral are used. Table 7.2 shows the collateral requirements by type of enterprise. All the social enterprises waive collateral conditions to some extent, albeit in different ways and at different levels. One of the DFIs initially complied with the expectation to fully waive collateral. However, a high level of default in repayments and the realisation of a weak commitment by customers to their business success necessitated an introduction of collateral. A partial cash collateral in the form of a 20% cash deposit, a lien over all equipment and material bought through DFI funds and cessions over business revenue as possible collateral. This is still considered to be second-rate collateral compared to the collateral in the form of immovable property, which is generally required by banks and is more reliable and realisable.

For the microloan product, customers are required to make daily savings from sales proceeds, which are utilised for repayments when instalments fall due. The DFI collaborates with the local municipalities in a tripartite agreement to use access to the customers' market stalls as collateral for loans. All shareholders, in the case of companies, sign personal suretyships. The DFI is of the opinion that the social mandate is still fulfilled as the required collateral is partial, not as high as that required by commercial banking institutions. The DFI argues that the use of collateral, no matter how little, demonstrates commitment and eliminates opportunistic people posing as customers leading to improved liquidity.

75. Equivalent to 15 cents and US\$2 an at the time of writing.

TABLE 7.2: Collateral requirements by social enterprise.

Social enterprise	Collateral requirements
DFIs	<ul style="list-style-type: none"> o Minimum cash contribution o Lien over equipment and stock o Cession over the sale of proceeds o Company directors' surety o Mortgage bonds where available o Surety from third parties o Loan contracts or agreements o Stop order over salary
MFIs	<ul style="list-style-type: none"> o Peer pressure from traditional authorities o Collective community liability o Customer savings
Cooperatives	<ul style="list-style-type: none"> o Member's savings o Stop order over salary for retail lending
Informal groups	<ul style="list-style-type: none"> o Member's savings o Peer pressure from group members o Common social bonds

MFI, Microfinance institution; DFI, Development Finance institutions.

Furthermore, cessions over salaries for retail lending customers are taken. Stop order arrangements ceding repayments are made, facilitating deductions by employers that are remitted to the DFI under a tripartite agreement between the DFI, customers and employers. DFIs rely heavily on cessions over revenue of the funded businesses rather than collateral. They undertake comprehensive financial appraisal and monitoring of the business to ensure its potential to repay. Moreover, borrowers need to make a cash contribution and a deed of hypothecation over any equipment purchased through borrowings will also be registered.

MFIs rely primarily on social collateral in the form of peer pressure, and where available, they leverage loans on customer savings. Hasan et al. (2017) argue that leveraging on social capital embedded in the local communities will provide environmental pressure, which will moderate the behaviour of the borrower, mitigating the chances of morrow hazard MFI A interacts with customers through the community chiefdoms, which is also responsible for screening customers and collecting repayments in the cases of defaults. The whole chiefdom is penalised by withholding further loans to the whole community if a community member is at default. MFI B is a membership-based institution that collects savings from members and uses them as part collateral. MFIs also rely more on screening for the customers' potential or capacity to repay and intensive monitoring rather than collateral. Cooperatives also leverage loans on members' savings as part collateral whilst informal

groups rely more on social bonds as group membership is restricted to social acquaintances such as neighbours, church members or a single employer staff member.

Social enterprises innovatively pursue alternative collateral by seeking and identifying feasible assets suitable for their target market. They are flexible and adaptable to the circumstances and environment of the customers. However, they have all been unable to waive collateral as that causes negligent behaviour amongst customers altogether. Most collateral taken is neither easily nor readily realisable in financial terms but is designed to encourage moral commitment by customers by exposing them to some of the risk involved in providing the service to them. Collateral is used more to instil commitment than as protection as it is harder to realise in cases of default payments. For example, the fields of sugar cane farmers can be used as collateral but cannot easily be liquidated if a farmer defaults on a loan. Social bonds that are exploited by smaller social enterprises are also prone to being used contrary to their purpose as closely bonded members become sympathetic to each other's plight. Social enterprises seem to rely more on the determination of the potential ability of the customer to repay such as enterprise success or salary payments or savings contributions than the availability of collateral.

■ Group lending

The group lending approach is favoured by most social enterprises and serves to minimise transaction costs and enterprises. It utilises the bonds between group members to exert influence on each other. In some cases, joint contracts for joint liability are enforced to boost collateral for loans. The principle and motivation for the group lending business model are to reduce credit risk in the absence of collateral by exploiting joint or collective group liability for loans (Lehner 2009). The assumption is that if jointly liable, group members will exert pressure on borrowers to repay. The model also transfers the responsibility of customer screening and monitoring from the social enterprise to the group. This reduces transaction costs and promotes self-selection of borrowers exploiting prior customer knowledge or information held by the group members obtained through the group members social or other common bond. The model is applied more often to small loan size borrowers than larger loans where there is a preference for individual loans by social enterprises. The success of the group lending model to overcome information asymmetries is supported in the literature (Ahlin 2020; Ferrary 2003).⁷⁶

76. The peer pressure on members resulting from member default has sometimes placed undue stress on members. As a result, some models are adjusting the way they operate to combine individual liability portfolios, which allow individual defaulters to renegotiate the terms of their loans but still remain as supporting members of the group (Giné & Karlan 2014).

The value of group lending comes from relationships developed through repeated interaction, again contributing to the creation of economically advantageous social capital (Feigenberg, Field & Pande 2013).

The most common group lending approaches include the solidarity groups used by the Grameen model, which views the group as a customer and uses it to support the functions of the social enterprise, making them extensions of the institution. Access to credit within the group is on a rotational basis and in case of default, all members must cover the repayments and may not access other loans as a group until all overdue loans are repaid in full. In contrast, the community-based organisation approach aims to create a mini bank for the group by developing its financial management capacity. This enables the group to operate its own mini lending operation known as village banks by using external funds or internally generated savings.

The DFIs studied apply the group lending model primarily for smallholder sugarcane farmers on communal lands and micro business customers. Micro business borrowers are required to form groups comprising 10 members to access financial services. Members submit their loan requests to the group for initial screening and pre-approval by the collective group members before it is submitted for financing. The group determines if a member is eligible for a loan. Compulsory savings are also made through the group to facilitate ease of repayment when loans fall due. These are more compatible with the solidarity group model of the Grameen Bank. Although not jointly liable, the group exerts peer pressure on members to repay loans as further loans to group members are dependent on the loan position of the group. The majority of the micro business groups are urban based consisting of vegetable and fruit hawkers based in market stalls provided by the city municipality. The sugarcane associations are limited companies consisting of many shareholders who are rural farmers in the sugar belt. They pool their fields together or obtain land from the chief to cultivate sugarcane for sale to the sugar mills and borrow funds from the DFIs to establish and maintain production. Grouping their fields provides members with the necessary economies of scale. The sugarcane model, however, relies on a robust market driven value chain. Stop order arrangements over sale proceeds at the market ensure that loans are adequately serviced.

MFIs have adopted the same group lending model as solidarity groups with minor variations. The main variation is that MFIs use the existing traditional chieftdom structures for both selection and enforcement. The inner council of the chieftdom vets the applications before submitting them to the MFI. To reduce on transactions costs, the council submits a batch of applications once a month. The MFIs leverage off the chieftdom's knowledge, task them with ongoing monitoring of projects under the assumption that community members are always aware and knowledgeable about their fellow community

members' affairs and would therefore be aware of the success and/or failure of their projects. This is supported by the MFIs own LMO who follow-up application submissions by conducting rigorous appraisals consisting of site visits and customer interviews. LMOs are also resident in the communities and monitor the physical progress of projects.

The MFIs use peer pressure and social capital as collateral. The lender suspends lending to the chiefdom if someone in the chiefdom defaults. Peer pressure takes up to five years to function effectively as relationships build up slowly. 'Embarrassment' is used by chiefdoms through the announcement of defaulting households at community meetings. Some chiefdoms are reluctant to do this as they are wary of straining social relations and use delaying tactics to avoid it. The motto of the MFI is that: 'Defaulters don't just owe the fund but owe the chiefdom'. Some chiefdoms have paid on behalf of defaulters to avoid sanctions. Loyalty of residents to the chiefdom is another factor. The model also exploits peer pressure between the chiefdoms. Defaulting chiefdoms are perceived negatively, and residents are unhappy with an underperforming chiefdom. A variation in the MFI approach is the use of LMC groups that are in the target areas. The establishment of these groupings is facilitated by the MFI but partially run and administered by the members themselves. They meet monthly with an MFI field officer in attendance to collect savings and loan repayments and to submit loan applications. Liability is not collective. However, if a member of the group defaults on loan repayment, the group is in default, and further loans to other members are withheld.

Cooperatives and informal groups are collectivised and by nature exploit the advantages of the group lending model. This is because as membership-based organisations, they are expected to derive such bonds from the cooperation and participation. In some cases, however, these benefits are not realised or may eventually breakdown. One of the cooperatives interviewed indicated that it initially had a homogenous membership of members working for the same company and it could benefit from the existing bonds. When membership was expanded to include individuals from other companies outside wage employment, these bonds were compromised and credit risk increased. Figure 7.2 illustrates how social enterprise responses to market failures in the financial sector.

■ Complementary markets

One of the causes of market failure is the incompleteness or absence of critical complementary markets. Business and financial management and skills are identified as one such essential skill (Abor & Quartey 2010; Bouazza & Ardjouman 2015; Rungani & Potgieter 2018). Respondents indicated that lack of these competences and skills negatively affects returns on investments and can increase default rates. The DFIs provide training to equip borrowers with

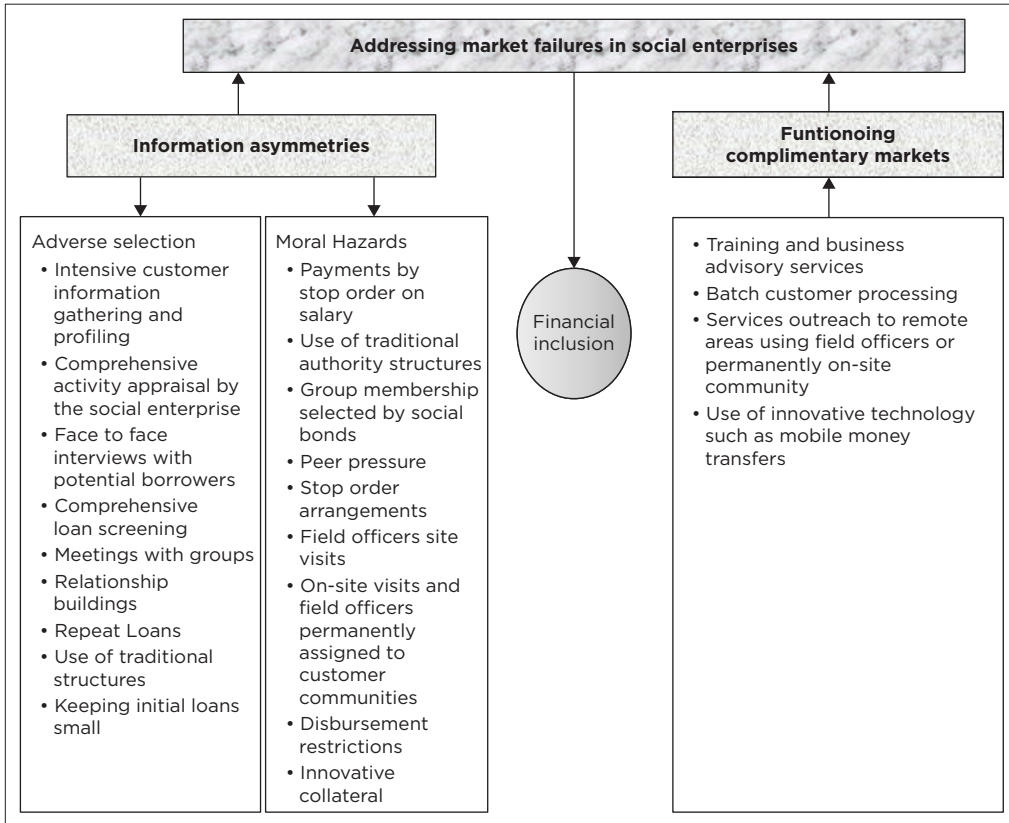


FIGURE 7.2: Social enterprise responses to market failures in the financial sector.

these skills as a key complementary service that reduces risk and increases repayment rates. Borrowers, however, do not often see the need for training because of high transactions costs. Accordingly, the training is provided free of charge. The services provided, however, are not well-organised and respondents indicated that the services serve more as a ‘destination information centre than training’. Other services include the use of MFS. Though not a service provided by the enterprises, mobile banking has proved to be a beneficial service for the low-income borrowers and a key complementary service. MM has reduced the transactions costs by allowing borrowers to make repayments and receive money using mobile banking. The benefits of MM to small groups. This has significantly reduced the need to travel to banks and other points of service. Several studies have confirmed MM as a key complementary service in financial markets that serve the poor (Aggarwal, Brailovskaya & Robinson 2020; Aker & Wilson 2013; Mutebi et al. 2017). Other complementary services already alluded to above include services outreach provided by the MFIs.

■ Conclusion

Market failure mitigation through market strategies is a double-edged sword for the excluded as the strategies designed to restore markets often entail stringent customer selection albeit amongst the target group but creates more exclusion. The paper used data collected in Swaziland to evaluate whether financial social enterprises are well placed to address inclusion in the face of market failures. There is evidence that social entrepreneurs in the financial sector are aware of the fact that market failures are ubiquitous in the markets within which they operate. The discussion shows that these enterprises have mobilised strategies to address the financial needs of the excluded even in the face of market failures. A summary of the techniques they use to address market failures is presented in Figure 7.2. Social collateral and relationship building are widespread and are effectively used to overcome the effects of information asymmetries. Social capital in the form of peer pressure, traditional governance structures and social bonds are used as prevalent forms of collateral. Partial collateral and cessions over project proceeds are also used. This type of collateral is used to engender commitment more than as a safety net for loan defaults.

Risk management and control procedures engaged are also innovatively applied to respond to the unique conditions of the social markets. Enterprises adopt an aggressive customer information gathering strategy enabling them to make an independent assessment of customers' potential to utilise financial services successfully. This may increase transaction costs but reduces loan default risk by ensuring that accurate information is obtained. Other credit risk control measures such as limits on lending for first-time borrowers, loan disbursement controls and regular monitoring are also applied. Furthermore, customer participation in appraisal and monitoring processes is engendered through customer groupings to collectivise liability and exploit common bonds for accountability. Prior knowledge amongst customers is exploited to make up for inadequate historical information. Various models of collectivisation are explored in order to select one that is compatible with already existing grouping structures. Repeat lending is used to accumulate information as well as to increase loan sizes over time.

Group lending is also used to overcome the fixed costs of small loans as well as the costs of screening. Continuous customer engagement and profiling help build up customer data banks as a strategy to reduce the cost of trading by encouraging customer relationships and loyalty amongst repeat clients. The presence of banked information eliminates the need for repeated extensive screening, reducing service delivery costs. Enterprises also emphasise the provision of business support services to their customers. This is done either through the enterprises' own extension outreach service and/or in collaboration

with relevant external institutions. It comprises business training, advisory and mentorship services. The benefit is more informed customers within a more enabling environment and a resultant increase in financial inclusion.

Reforming markets to correct market failure pursued by social enterprises is very risky. It entails 'Market mending' to adjust markets that the market mechanism failed to correct (Beaton & Kennedy 2021). The study determines that social enterprises attempt to correct the markets by using multi-pronged strategies of adverse selection, moral hazards and complementary markets. Nonetheless, financial exclusion is not entirely resolved and may even be further aggravated by adverse selection. As market mending is never entirely successful, social enterprises expose themselves to high risks and financial losses. The hybrid position of social enterprises also discourages investment as it is neither a non-profit nor a profit maximising entity (Fasiki 2010). They need to be able to simultaneously communicate business models at opposite sides of the spectrum and synchronise accounting and reporting systems for economic and social values. This is often not understood by potential financiers. Public funding is essential to incentivise the formation of social enterprises and subsidise their activities at least until they attain financial self-sustainability. A variety of financial support strategies could be utilised, either as direct public funding or loan guarantees, or incentives for investors such as tax breaks (Beaton & Kennedy 2021). Pro-social enterprise regulation such as tax exemptions should also be applied. DFIs in Eswatini benefit from such public intervention through government shareholding; however, MFIs, cooperatives and other formations do not.

Financing of agricultural small, medium and micro-enterprises in Zimbabwe: Financing options and life-cycle challenges

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■ Introduction

This chapter looks at how agricultural small, medium and micro-enterprises (agricultural SMMEs) are financed in Zimbabwe. It looks at access to funding and highlights both the supply and demand-side influences before exploring the types of funding used and their suitability at the different stages of the

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TABLE 8.1: SMME contribution to GDP and employment in selected African countries.

Country	Contribution to GDP (%)	Contribution to employment (%)	Reference year
Ghana	70	49	2013
Kenya	40-50	80	2013
Nigeria	50	70	2012
South Africa	50-60	60	2012
Uganda	18	90	2015

Source: Muriithi (2017).

GDP, gross domestic product; SMME,

business life cycle. Available literature indicates that small, medium and micro-enterprises (SMMEs) play a crucial role in the development of an economy, especially in developing countries (Ayyagari, Demirguc-Kunt & Maksimovic 2012). They contribute significantly to food security for the majority of low-income households globally, to national GDP, as well as job creation. Data indicate that SMMEs contribute as much as 50% to GDP and close to 70% to employment in high-income countries (Alper & Hoomes 2013). In Africa, the significant role played by SMMEs has been documented. Table 8.1 summarises the critical contributions of SMMEs in general to GDP and employment in selected sub-Saharan African countries. The comparatively more minor contribution in Uganda may be attributed to a narrower definition of SMME categories used. Studies with broader categorisations have shown that SMMEs in the country contribute up to 75% to GDP (Pozhidaev 2020).

For a majority of the poor, especially in the rural and peri-urban areas, agricultural SMMEs are the mainstay for employment and income generation. In agriculture, SMMEs include small-scale commercial farms engaged in agricultural production and small-scale agri-businesses involved in agriculture-related activities such as the processing of agricultural produce and supply of agricultural inputs and implements (IFC 2012). The small-scale commercial farms are regarded as SMMEs to differentiate them from peasant farming, whose thrust is merely for subsistence. Agricultural SMMEs are promoted differently from peasant farming as they are encouraged to be more involved in mainstream economic activities and not just to achieve household food security. This categorisation means that in terms of financing, they are treated as business ventures together with immediate support activities in the agricultural value chain.

■ SMMEs access to funding

Despite their essential contributions, SMMEs face substantial hurdles that impede their survival and growth. Access to suitable finance is one of the most significant challenges faced by SMMEs in most countries across the globe (IFC 2013). Other challenges include unreliable power supply, poor management, negative perception, limited access to information, inadequate and unfavourable policy frameworks, as well as economic and

political instability. It is estimated that the unmet demand for credit by all SMMEs has exceeded US\$8.9 trillion (IFC 2017) compared to a related credit supply of US\$3.7 trillion (Beyani 2020). In sub-Saharan Africa, access to suitable finance has also been singled out as one of the most critical constraints to SMME survival and growth, as documented by Rungani and Potgieter (2018) for South Africa, Osano and Languitone (2016) for Mozambique and Beyani (2020) for Zambia.

There are several reasons for the lack of suitable finance. In most developing countries, financial markets are not well-developed and are often shallow, small and costly. This forces most SMMEs to rely on their own funding supported by funding from friends and family members. The financial systems do not reach out effectively to rural communities citing high administrative costs (Muriithi 2017; Osano & Languitone 2016). As a result, very few SMMEs are able to borrow from the financial system. The high interest cost of external borrowing and high collateral security demands are significant impediments faced by SMMEs (Alper & Hoomes 2013). Moreover, tight liquidity and the need for financial institutions to implement prudential lending and comply with capital adequacy requirements further curtail SMME funding.

Potential financiers are discouraged by the high cost of administering small financing facilities across broad geographical areas as the cost of enforcing financing contracts erodes profitability. Furthermore, private financing institutions such as commercial banks and micro-financiers also regard loans to SMMEs as high-risk portfolios, especially those extended to the small-scale agricultural sector. As a result, they charge higher risk premiums on loans to this subsector. Attempts by governments to impose interest rate caps as one of the pro-poor measures to boost access to finance have often inadvertently resulted in a reduction in lending by micro-financiers who complain about squeezed profit margins. Studies have been conducted on the effects of these interest rate caps in sub-Saharan African countries (Chikalipah 2016; Mbengue 2013). They found that interest rate caps push financial institutions out of business as their operations become unprofitable.

Whilst the finance institutions use higher interest rate spreads as a hedge against risky lending, such as funding agricultural SMMEs, the government puts interest rate caps to protect borrowers. Weak institutional supervision and high inflation drive the wide interest rate spreads, which these caps seek to narrow. Interest rate caps were re-introduced notably in Zambia and Cameroon in 2013, before Zambia scrapped them in 2015, followed by several countries because of their unintended adverse effects on lending (Chikalipah 2016). In Zimbabwe, the government has sought to cushion borrowers from inflation-indexed interest rates by capping rates between 25% and 35% (Reserve Bank of Zimbabwe 2015). This has crippled the financial sector, especially the micro-financing industry. In a hyperinflationary environment, lenders prefer to issue inflation-indexed financing instruments rather than

fixed-interest facilities to enable them to adjust the interest rates as inflation rises. Fixed interest rates discourage lending by squeezing profit margins.

An alternative source of funding for SMMEs comes from donors. However, access to donor funding is increasingly becoming difficult because of policy shifts in traditional donor funding source markets (OECD & WTO 2013). Governments in these markets are now more inclined towards the Monterrey Consensus on financing for development, arguing that non-concessionary trade-related finance is a more effective driver of development in developing countries than pure aid. Furthermore, they are tying human rights records to the ability of countries to access donor funding (World Bank 2019). As a result, donor funding is plummeting, with traditional ODA commitments remaining unfulfilled, thus severely limiting grassroots development funding.

Private contract financing is usually readily accessible when firms have adequate liquidity to be able to contract SMMEs on out-grower schemes.⁷⁷ In countries with financial market constraints and chronic macroeconomic fragility, access to contract financing remains very low (African Center for Biodiversity 2015; Minot & Ronchi 2015). When governments attempt to close the funding gap, they provide direct funding through budgetary allocations, intermediated finance through government-owned development financing institutions or infrastructure support. However, access to their facilities is often limited because of their targeted nature enforced by the tight screening of beneficiaries based on profitable business models and plans, collateral, past performance and development impact. The ability to present bankable business plans is a significant hurdle for most SMME owners (James 2015; Mutami 2015).

At the continental level, the World Bank (2019) notes that most African governments miss their targeted annual budgetary commitments to fund agriculture under the Comprehensive African Agricultural Development Program (CAADP). The CAADP is an AU initiative through the 2014 Malabo Declaration to boost economic growth and eliminate poverty and hunger amongst African countries. International development partners use it as an avenue to support the agricultural sector in Africa. Despite the importance of the initiative, only a few countries have achieved its benchmark of 10% of public spending on agriculture (AU 2020). Hence, access to public finance, especially for SMMEs, remains a significant challenge for the continent.

■ Sources of funding used by SMMEs

Agricultural SMMEs use both internal and external funding. Internal funding is raised from own savings and retained profits for already operating entities. These are augmented mainly by donations or soft loans from friends and

77. An out-grower scheme involves a company providing inputs and technical support to small-scale farmers who then supply their produce to the company on agreed terms.

family members. External finance is sourced mainly from microfinance banks, credit-only institutions, DFIs, donor agencies, commercial banks, government-targeted facilities and private contractors. The literature shows that internal funding is limited for the majority of SMME owners (Food and Nutrition Council 2013). Therefore, access to external finance is vital to plug the internal resource gap.

There are both demand and supply-side factors that limit access and use of external SMME funding. On the demand side, the low level of financial education that SMME owners have, the limited use of financial advisors and the lack of collateral are identified as major limiting factors. Many entrepreneurs with limited knowledge totally shun external funding for fear of falling prey to unscrupulous private financiers who may offer complex but often unsuitable financing instruments (Meyer 2002; OECD 2017). The limited use of financial advisors by SMME owners compounds the problem. The literature points to this as a major impediment to accessing finance (Beyani 2020). With respect to collateral, most SMMEs lack adequate or the correct type of collateral as they have a very narrow asset base.

On the supply-side, literature cites various factors that limit access to funding. The perceived high-risk profile of agricultural SMMEs because of insufficient administrative and managerial capacity is a significant hurdle for funders (Abor & Quartey 2010; Bouazza, Ardjouman & Abada 2015; Rungani & Potgieter 2018). The high cost of administering small financing facilities often coupled with interest rate controls (Reserve Bank of Zimbabwe 2015) also limits the supply of funding. The financiers' lack of information about the SMMEs and future prospects discourages potential funders. Regulatory requirements such as capital adequacy and other prudential lending requirements limit the supply of credit, with SMMEs being the most affected (IOSCO 2015). Poor relations with international development financiers as well as weak public spending on agricultural SMMEs in Africa compound the problem (World Bank 2019).

When faced with these constraints, one effective way to ensure that SMMEs are properly financed is for the owners and managers to adopt a life-cycle financing approach. A life cycle is a series of phases through which a new business develops from inception to decline (Scott & Bruce 1987; Yihainen 2017). Paying attention to the challenges at each stage can increase funding efficiency and boost the chances of survival for a small business, as illustrated in Table 8.2. The approach ensures that owners and managers appreciate the challenges at each evolutionary phase and use such knowledge to select and use the most suitable funding options.

In literature, many life-cycle models are suggested. These include Weston and Brigham's (1970) financial life-cycle of the firm, Churchill and Lewis's (1983) five-stage growth model, Myers and Majluf's (1984) Pecking order theory and more recent variations such as the Nadeau (2012) business life-

TABLE 8.2: Business life cycle stage and associated challenges.

Life cycle stage	Main challenges
1. Inception	Idea generation, feasibility and viability assessment and business planning.
2. Setting up	Infrastructure development, cash flows stability, setting up e management systems.
3. Growth	Capacity utilisation, market growth, inventory management
4. Expansion	Stock-outs, competitive advantage, capitalisation.
5. Maturity	Growth opportunities, productivity improvement, creativity and innovativeness.
6. Decline	Propping markets, product obsolescence, cost containment

cycle model. Table 8.2 shows an adapted life-cycle model with the six main life-cycle stages typical to most of the models, as well as the typical challenges that characterise the stages. This is the model used in this study. The life-cycle models posit that the development of a business is measured by the successful phased resolution of the challenges at each stage. Some of the models express the challenges in terms of sales growth, costs and profitability metrics. Resolving each problem enables the business to enter the next phase of development (Lanjesi 2005; Nadeau 2012). Sufficient and suitable funding needs to be used at each stage if these challenges are to be resolved.

Several initiatives have been pursued to address challenges linked to access and use of suitable agricultural SMME funding. These include government schemes through targeted DFIs. These focus on the provision of concessionary seed capital, infrastructure finance facilities, stop-order facilities for inputs such as fertilisers, seeds and chemicals. Moreover, the promotion of agricultural micro-financing facilities, increasing the availability of venture capital financing and the development of contract farming finance have been viewed as effective ways of improving access and usage of stage-specific funding (Baumann 2015).

In some sub-Saharan African countries, governments have provided direct subsidies under various schemes. For example, in Zimbabwe, the Presidential Input Scheme, Productive Sector Facility (PSF),⁷⁸ Agricultural Special Productivity Enhancement Facility and the Special Maize Programme have been used (World Bank 2019).⁷⁹ In Malawi, Zambia, Ghana and Tanzania, the ‘smart subsidy programmes’, to support agricultural small-scale agricultural activities during the start-up phases, have been used (Baltzer & Hansen 2011). The design of such schemes has been anchored on three pillars. Firstly, they target specific farmers. Secondly, they aim to develop existing private input supply networks and not supplant them (Goyal and Nash 2017). Thirdly, they have an exit strategy that reduces dependence and guides the beneficiaries towards self-financing. The smart subsidy schemes aim to support marginalised

78. PSF was offered at a concessionary rate of 25% in 2004 when market rates were up to 400%.

79. The Special Maize Programme incentivises farmers through inputs and higher delivery prices to the Grain Marketing Board (GMB) while subsidising maize sales to consumers.

communities with affordable inputs whilst using market-based solutions to increase the efficient use of inputs. Ostensibly, the programmes are better than the costly universal (not targeted) previous programmes of the 1990s. However, in all the schemes cited above, poor timing of funding, poor targeting of beneficiaries and unsuitability of such funding for unique needs and at given stages in the life of a business still leave many small-scale farmers without support largely because of political interference (Meyer 2011). Monitoring how agricultural SMMEs access and actually use such funding is important in ensuring the suitability and adequacy of funding.

Farming in Zimbabwe has always largely comprised small-scale farmers. The recent trend also shows that there is a further shift towards more small-scale farming concentrating on food crop production with an average of two crops (World Bank 2019). Because of government-related subsidies, the number of small-scale farmers growing maize is increasing. One of the main drivers in the growth of small-scale farming in Zimbabwe is the Fast-Track Land Reform Programme (FTLRP). As a result of this program, small-scale farmers have become the major contributor to agricultural output, overtaking large-scale commercial farmers especially in maize, tobacco, cotton and small grain production. Nevertheless, output remains subdued. This is largely because of inadequate support, climate change and misuse of funding provided for capacitating the new farmers (Echanove 2017). By 2012, small-scale farmers constituted 98% of farmers and utilised 73% of arable land, contributing 80% of maize production (Government of Zimbabwe 2012). This contribution contrasts sharply with those in previous decades dating back to independence in 1980.

By 1980, large-scale commercial farmers contributed 14% of GDP, 95% of all marketed products and nearly 33% of national exports (James 2015). The large-scale commercial sector was well-financed through a system initiated by the colonial government, which provided funding for infrastructure development, inputs and farm subsidies. The small-scale mainly rural poor households chipped in particularly to the output of the main cereal crops such as maize, sorghum and millet (African Centre for Biodiversity 2015). This was, however, not well-integrated into commercial agriculture save for limited sales through the Grain Marketing Board (GMB). Production in the small-scale agricultural sector was, therefore, mainly for subsistence (Mutami 2015).

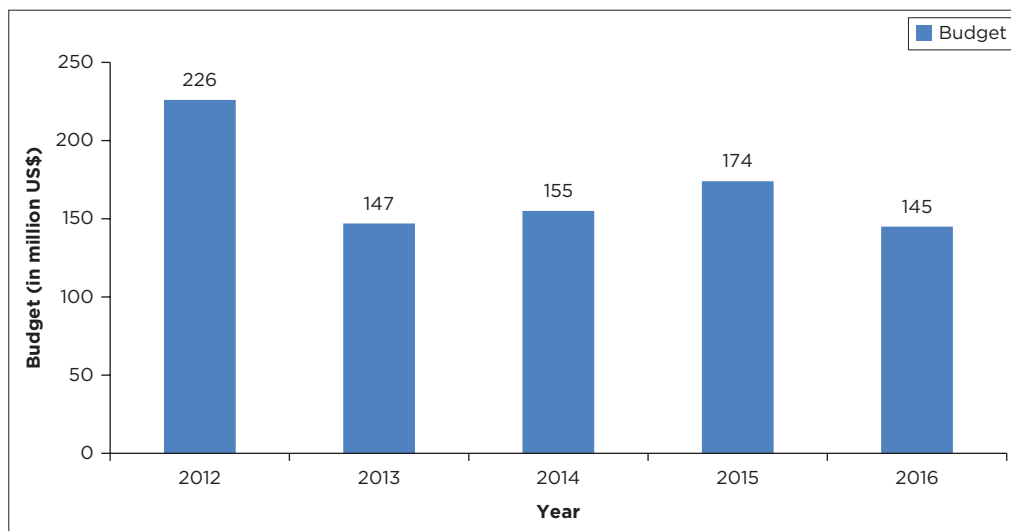
■ **The land reform program and agricultural small, medium and micro-enterprise access to finance**

In 2000, the government embarked on the FTLRP, which involved redistributing land from minority white farmers to the majority of the poor blacks in the country. Historically, colonial land policies systematically dispossessed the indigenous population of the most productive land. In the process, they

created densely populated communal lands that have been over-cultivated and over-grazed over the years. Since then, these communal lands have gradually become less productive. To redress the situation, a key objective of the FTLRP was to transfer arable land in the spirit of fairness in land ownership, indigenisation and black economic empowerment for the poor majority. Despite receiving large portions of land under the program, the majority of Zimbabwean small-scale farmers continue to struggle to access funding to boost their active participation in decent economic activities. In fact, FTLRP has exposed the need for greater access to funding for the agricultural SMMEs (Scoones et al. 2011; Ton et al. 2018).

A significant challenge that the small-scale farmers re-settled under the FTLRP face is that the 99-year leases offer letters and permits issued to them by the government to secure land rights are not accepted in their current form as collateral. Specialised government DFIs and contractors are, however, less stringent on their demand for collateral. For this reason, commercial banks have significantly cut down on their agricultural SMME loan portfolios. In 2018, the lack of suitable collateral security accounted for about 60% of loan applications rejected by commercial banks (World Bank 2019). Through the Bankers' Association of Zimbabwe, however, the banks have explored options to enhance the 99-year lease with reference to programs in other African countries such as Kenya, Ghana, Nigeria and Uganda (Bankers' Association of Zimbabwe 2020). The purpose of the engagement with the government is to find ways in which lease agreements can be conclusive and elaborate enough to assure the lender of the safety of their investment. Micro-financiers also, despite their stated social mandate to fund this sector shunned by commercial banks, are increasingly charging market rates to be viable in a challenging environment (Baumann 2015). They are tightening their credit screening and offering short-term funding (up to three years) as a means to ensure their own survival.

The funding challenges are being experienced at a time when several stakeholders are keen to see how the FTLRP is financed. As part of the United Nations (UN) The System, Zimbabwe subscribes to the UN 2030 SDGs. The success of small-scale agriculture has a direct bearing on Goal 1 (*No poverty*), Goal 2 (*Zero hunger*), Goal 3 (*Good health and wellbeing for people*), Goal 8 (*Decent work and economic growth*) and Goal 10 (*Reducing inequalities*). Several international development commitments and national policies bind the government to ensure that small-scale farmers access suitable and affordable finance to support the achievement of goals. Whilst improved SMME access to suitable funding is acknowledged as vital, replicating the support structures that large-scale commercial farmers benefitted from remains a significant challenge. For instance, as shown in Figure 8.1, between 2012 and 2016 annual agricultural budget primarily targeted at small-scale agriculture declined, curtailing access to public funding.



Source: Echanove (2017).

FIGURE 8.1: Annual agricultural budget in Zimbabwe (2012–2016).

Within the context of the CAADP, the funding target has remained elusive because of poor government revenue performance. Moreover, spending on agriculture has been guided mainly by political rather than policy priorities such as agricultural productivity and infrastructure development. As such, limited headway has been registered in affecting both national and international policy commitments. For instance, between 2011 and 2015, only 1.1% of GDP was spent on agriculture. Furthermore, budgeted allocations have not always been released in full because of diversion to expunge recurrent expenditure pressures. For instance, of the budgeted US\$145 m in 2016, only US\$105 m was released by the Treasury (World Bank 2019).

■ Demand and supply constraints to funding small-scale agriculture

Several factors affect the demand and supply of funding for agricultural SMMEs in Zimbabwe. The country's own funding is severely limited by other competing pressures on meagre incomes (Food and Nutrition Council 2013). The small owner's equity is also not enough to attract significant external funding. The poor relations with external creditors have reduced lines of credit, thus limiting both bank lending and donor funding. At the same time, the tight prudential banking regulations in a difficult environment further curtail the supply of funding for SMMEs. This is compounded by the negative perception of agricultural SMMEs as risky investments (Baumann 2015).

TABLE 8.3: Factors limiting the demand and supply for agricultural small, medium and micro-enterprise finance.

Factors	Agricultural SMME
Demand factors	<ul style="list-style-type: none"> • Limited owners' awareness of funding options • Small owner's equity • The low expected benefit from external funding • The limited use of financial advisors • The existence of unscrupulous lenders • Limited availability of pro-poor micro-financing • Stringent credit rationing • The bureaucratic credit approval system • Lack of collateral security
Supply factors	<ul style="list-style-type: none"> • High-risk profile of agricultural funding • Capital adequacy requirements • Need for tighter credit controls • The high cost of financing SMMEs • Pro-poor interest rate controls • Donor fatigue • Availability of lines of credit • Low budgetary provisions • Liquidity constraints

SMMEs, small, medium and micro-enterprises.

In terms of public funding, the Agriculture ministry (in its various forms since 2000)⁸⁰ has not adequately funded agricultural knowledge information systems (AKIS) programs such as research, extension services, education and training to benefit agricultural SMMEs. For instance, at the continental level, the 2006 African Union's Khartoum Decision binds member states to spend at least 1% of GDP on research and development to boost innovation, productivity and economic growth (World Bank 2019). This was also adopted by CAADP as a benchmark for AKIS spending. Whilst most countries have fared well on R&D spending, Zimbabwe is amongst the few countries that have missed the benchmark, and this has negatively impacted AKIS development over the years as well as the use of suitable funding by farmers. The high cost of external borrowing also dampens demand already curtailed by a lack of adequate and acceptable collateral. Table 8.3 summarises these primary demand and supply factors in Zimbabwe. The combined influence of these factors has restricted access to funding for agricultural SMMEs. Within that context, it is crucial, therefore, to investigate how the business owners and managers use the funding accessed and ensure that the enterprises are suitably funded.

80. The responsible ministry has been scaled down, split or expanded several times since 2000, often resulting in inter-departmental conflicts in the actual discharge of vital responsibilities such as funding of key activities.

■ Methodology

To investigate the relationship between business life-cycle and funding, time-series data would be most appropriate to use. However, the majority of SMMEs do not keep time-series information. In line with other related studies (Gulst & Maritz 2011; Menike 2015; Salamzadeh & Kesim 2015), this study used a cross-sectional dataset obtained from a survey. A sample comprising agricultural SMMEs was drawn. In Zimbabwe, SMMEs are officially classified in terms of the Finance Act's qualifying criteria for small business support. Table 8.4 shows a point system used for the classification of SMMEs.

Four points are allocated to each of employment levels, annual turnover and gross value of assets (Zimbabwe Revenue Authority 2014). The points scored for the three measures of size are then added and applied to determine the overall size category of the firm. An enterprise is deemed to be medium sized if it has 8 or 9 points and small sized if it has between 5 and 7 points and micro if it scores 3 or 4 points. This is the approach used to screen SMMEs by size. Moreover, all the businesses were screened to fit into the A1 agrarian model of landholding ranging between 5 and 70 hectares and medium-scale farms (A2) not exceeding 318 hectares as defined in World Bank (2019).

The most recently available comprehensive SMME study in 2012 reported that out of 2.8 m SMMEs, 1.2 m were engaged in agricultural-related activities (Government of Zimbabwe and FinMark Trust 2012). To select respondents from this population, multistage sampling was used, as shown in Table 8.5. In the first stage, the FinScope study was used to identify the provinces with the most significant number of agricultural SMEs. Four provinces, including Harare, Bulawayo, Mashona East and Manicaland, were selected.

TABLE 8.4: ZIMRA small, medium and micro-enterprise classification.

Base	Range	Points	Factor
Number of employees	Up to 5	1	A
	Less than 41	2	
	Between 41 and 76	3	
	76 and above	4	
Annual turnover	Up to US\$50 000	1	B
	Between US\$50 000 and US\$500 000	2	
	Between US\$500 001 and US\$1 000 000	3	
	Above US\$1 000 000	4	
The gross value of assets	Up to US\$50 000	1	C
	Between US\$50 001 and US\$1 000 000	2	
	Between US\$1 000 001 and US\$2 000 000	3	
	Above US\$2 000 000	4	

Source: www.zimra.co.zw/special initial allowance for SMEs.

TABLE 8.5: Sampling strategy.

Stage	Strategy
1	Using the FinScope study SMME distribution map to identify main provincial SMME clusters resulting in the selection of Harare, Bulawayo, Mashonaland East and Manicaland.
2	Sampling in provincial clusters using support agencies databases to classify SMMEs into size categories.
3	Using the provincial database figures to assign quotas for micro, small and medium-size categories.
4	Voluntary participation to fill a quota. Distribution and collecting of questionnaires continued until each quota was filled.

SMME, small, medium and micro-enterprise.

TABLE 8.6: Sample by quotas.

Province	Micro size	Small size	Medium size	Total
Harare	50	30	20	100
Bulawayo	30	20	10	60
Mashonaland	50	30	15	95
Manicaland	30	25	10	65
Total	160	105	55	320

In stage 2, SMMEs within each province were identified using the Zimbabwe Association of SMES's and the Lands and Agricultural ministry databases. Firm size was then used to stratify the data into small, medium and micro-sized strata, as discussed above. This classification results in an over-representation of micro-enterprises. For this reason, at the next stage, quotas are assigned to each stratum based on the province's category concentration as size weights. In the last stage, SMME owners in each stratum are randomly invited to participate until the desired quotas are filled.

A summary of the final sample of 320 participants is shown in Table 8.6. In filling the quotas, only respondents who indicated how they funded all the stages were included in the final sample. This criterion was important in understanding how different types of funding were used at each stage of the business' life cycle. The respondents in each case were either owners or managers who made financing decisions based on their experience and knowledge.

The data were collected through a semi-structured questionnaire to SMMEs between July 2018 and February 2019. The questionnaire elicited quantitative data and qualitative explanatory responses. For each of the six life-cycle stages identified in Table 7.2, the SMME owners identify the types of funding and evaluate the suitability of such funding in view of the main operational problems at each stage.

■ Results and analysis

Table 8.7 shows the characteristics of the SMMEs included in the study. The bulk of respondents were involved in poultry and crop production. Poultry

TABLE 8.7: Distribution of businesses by business characteristics.

Characteristic	Category	Frequency	Age (%)
Business type	Crop	76	23.7
	Animal	54	16.9
	Horticulture	53	16.9
	Poultry	105	32.8
	Agribusiness	32	10.0
Business age	less than equal 1yr	111	34.7
	2yrs	58	18.1
	3yrs	56	17.5
	4yrs	26	8.1
	5yrs and above	69	21.6
Business ownership	Sole	198	61.9
	Family	86	26.9
	Partnership	36	11.2
Annual turnover (US\$000)	<100	129	40.3
	101-240	80	25.0
	241-499	61	19.1
	500+	50	15.6
Value of assets (US\$)	<50 000	246	76.9
	50 000-1 000 000	62	19.4
	1 000 000+	12	3.7
Number of full-time employees	< 5	216	67.5
	6-40	91	28.4
	41+	13	4.1
Location of business	Harare	101	31.6
	Bulawayo	59	18.4
	Mashonaland East	95	29.7
	Manicaland	65	20.3

production is attractive for the 6-week production cycle, which allows for greater prospects of earning more money through multiple batches over a short period. For most business owners, it is relatively easy to start with minimal start-up costs. Greater involvement in crop production is driven by the availability of targeted funding from the government through input schemes as well as a steady increase in contract farming finance. Government funding, especially for cereal crops, tobacco and cotton, is provided under the fast-track land-reform programmes because of their direct positive impact on food security, import bill and export earnings. Other activities are yet to attract similar levels of external funding.

Most of the SMMEs are up to two-year-old and are sole proprietorships, with the rest being either family-owned or cooperatives. These short life spans suggest a high rate of attrition. The sole proprietorships give the owners sole control of the business and afford them independence in decision making regarding investments and distribution of profits. The SMMEs have low annual

turnovers, and the majority have total asset value not exceeding US\$50 000. This largely explains why they struggle to meet external funding criteria, significantly raising adequate collateral. A majority formally employs not more than five workers because of the high cost of labour in a complex inflationary environment. They are located mainly near major commercial centres though this does not translate to easy access to external funding.

This profile of the main small-scale agricultural activities is consistent with the historical as well as recent development pattern of small-scale agriculture in Zimbabwe. The mainly rural small-scale agricultural sector produces 70% of the staple crops (maize, millet, groundnuts), relying on rain-fed farming. In the peri-urban areas, urban dwellers who have taken up small landholdings are actively engaged in horticulture, staple crop production as well as limited rearing of livestock to back up falling urban incomes. Livestock production contributes significantly to the economy of Zimbabwe. The significance of animal husbandry is the provision of meat, eggs, hides and skins, draught power and manure. Small ruminants and poultry production provide a vital safety net for small-scale farmers given the recurrence of drought.

■ Life cycle stages and how they are funded

The owners and managers were asked to indicate the types of funding they mostly used at each of the six stages in the business life-cycle model in Table 8.8. The responses were then classified into four primary sources, namely, own funding, bank and microfinance, contract funding and donor funding. Own funding included personal savings, sale of assets and contributions from family and friends. Bank and microfinance included funding facilities offered by credit only, microfinance and banking institutions. Contract funding covered both government and private contract financing facilities. Donor funding included grants, capacity building and training facilities offered by local and international aid agencies. The frequency of use by stage in the life-cycle stage is indicated in Table 8.8 and broken down by SMME size in Table 8.9.

The results show that SMMEs are largely self-funded regardless of the stage in the life cycle. This is in line with the dominant literature, which shows that small businesses are credit constrained and rely on self and informal sources of finance to both start and grow their businesses. A related study showed that banks and MFIs in Zimbabwe do not fund Greenfield investments (Kichini 2021).

At the setting up stage, own funding quickly declines from a high of 83% to 53%. This reduction is compensated by the increased use of traditional loans from microfinance. There is a decline in own funding and a compensatory increase in bank and micro-financing continues at the growth

TABLE 8.8: The main types of funding used as a %age of overall funding mix.

Life-cycle stage	Life-cycle funding type				Total (%)
	Own (%)	Bank and microfinance (%)	Contract (%)	Donor (%)	
1. Inception	83	7	7	3	100
2. Setting up	58	26	10	6	100
3. Growth	44	33	18	5	100
4. Expansion	46	32	18	4	100
5. Maturity	68	20	11	1	100
6. Decline	63	22	11	4	100

TABLE 8.9: Type of funding by firm size.

Life-cycle stage	Business size	Type of funding			
		Own funding	Bank/Micro-financing	Donor	Contract
Inception	Micro	83	17	1	8
	Small	83.3	4.4	10	2.3
	Medium	100	0	0	0
Setting up	Micro	57	22.5	3.8	16.7
	Small	40.2	42.5	13.8	3.4
	Medium	66.7	53.3	0	0
Growth	Micro	47.4	31.3	4.2	17.1
	Small	39.6	31.9	7.7	20.8
	Medium	41.7	58.3	0	0
Expansion	Micro	49.1	30.8	3.7	16.4
	Small	36.7	32.2	4.4	26.7
	Medium	53.8	46.2	0	0
Maturity	Micro	64.1	21.5	0.5	13.9
	Small	73.3	17.8	0	8.9
	Medium	83.4	8.3	8.3	0
Decline	Micro	72	10.3	2.8	14.9
	Small	68.2	19.3	6.8	5.7
	Medium	41.7	50	0	8.3

and expansion stage. This apparent trade-off of own funding for more debt can be attributed to both demand and supply factors. From the demand side, the setting up stage, for instance, requires significant investments in infrastructure such as irrigation equipment for crop farmers, heating and lighting for poultry, as well as for procurement of inputs. These expenses are large and highly indivisible, making it difficult for owners to source the funding internally. Furthermore, growing businesses gain confidence in their ability to exploit the benefits of debt whilst managing the risk of loss of control.

From the supply side, private funders are reticent at the inception stage owing to the new businesses still being informationally opaque. Typically, the operations of sole proprietorships and family-owned businesses, who are in the majority, are opaque to outsiders as the owners seek to maintain control of the businesses (Freeman 2015; Myers & Majluf 1984; Yihainen 2017). At the setting up stage, it is likely that the potential of the business is more visible.

The information on the cash flow, growth prospects, product markets and associated costs is also more readily available, making it easier for banks and MFIs to assess the creditworthiness of the businesses. Moreover, at this stage, there are higher turnovers, and some level of asset building would have taken place, giving businesses some collateral for funders to hold as security (Modigliani & Miller 1963). Similarly, external funders also report that they are more comfortable funding more established businesses with a traceable trading and credit history as well as proven feasibility and viability. Table 8.9 provides further information on the type of funding by form size.

In addition to increased funding from banks and microfinance, there is an increase in contract farming from 7% at inception to 18% at the expansion stage. Contract farming is largely a risk-sharing tool and also the source of funding for imports for the farmers. Because it allows the sharing of the risk of product failure between the owner and the funder, the reasons for increased contract farming are very similar to those discussed for banks and MFIs. As a business becomes less opaque and its cash flow and quality of products more certain, the contract funder has more confidence that the risk is reduced when the business starts to grow.⁸¹

At the maturity stage, financing from banks and MFIs as well as contract funders declined significantly. This results in a significant increase in own financing contrary to theory. From a theoretical perspective, business expansion is positively associated with higher demand for external funding. Modigliani and Miller (1963)'s theory posits that firms at the expansion stage will opt for external funding because of the debt tax shield. Such benefits, however, are not obtained in the Zimbabwean context. Instead, external debt is associated with high-interest rates and a hyperinflationary environment making external debt rather expensive. This result is more in line with Myers and Majluf (1984)'s pecking order theory that postulates that firms will always pick cheaper sources of funding first. Similarly, older firms have more opportunities to accumulate retained earnings and therefore have more internal funding for running capital (Gregory et al. 2005).

Older farm businesses tend to follow the pecking order theory (Zhao, Barry & Katchova 2004; Zhao, Katchova & Barry 2008). Consequently, in a situation like that of the Zimbabwean small-scale agriculture where internal funding is cheaper, it would be preferred over external debt once enough retained earnings have been accumulated. Furthermore, most of the external financing facilities available are short term and therefore not suitably structured to fund expansion. Thus, as collateral is typically not a problem and businesses now

81. Contract farming is a relationship between a firm getting in agricultural input funders. The farm produce is bought in advance before it is produced at a fixed price on the market. In exchange, the farmers get services such as inputs. See Ton et al. (2018) and Minot and Ronchi for useful literature reviews.

have credible trading history at this stage, the funding pattern is influenced more by demand-side considerations than the credit screening policies of funders.

When faced with a decline, businesses typically rely on external business rescue funding facilities. These include government-provided distressed business rescue facilities, management buyouts or invitations for external equity investments.⁸² At this stage, internal funding is not enough to revive firms. On the contrary, the results show that the funding structure remains largely like that at the maturity stage except for a marginal increase in donor funding. The nature of agriculture is also instead telling. Unlike most other sectors, agricultural products in Zimbabwe are primarily commodity-based with minimal value-adding activities. Decline, therefore, is unlike other industries. It does not relate to product obsolescence but instead might be an indication of the limitation of small-scale agriculture, which limits expansion into higher-value products, creating an implicit ceiling in expansion because of capacity rigidities.

■ The most challenging business life-cycle stages

Business failure often arises from the challenges faced, usually at the most challenging stages. For entrepreneurs to effectively fund their businesses, especially in financially constrained environments, they must ensure that the most challenging stages are prioritised and suitably financed. To be able to rank the stages from the most to least challenging, qualitative failure mode, effects and criticality analysis (Qualitative-FMECA) method is used. This method of risk analysis is used when there are no quantitative data on SMME failure rate for each life-cycle stage that can be used to rank the stages in terms of risk of business failure (Lipol & Haq 2011). This is the case in this study. Using this method, each owner or manager qualitatively rated each stage out of 10 for the *occurrence of key problems (O)*, the *severity of impact or how critical the problems are (S)* when they occur and the *ease of detecting (D)* them so that suitable funding is sourced timeously. The individual qualitative ratings for the occurrence are summed up, and an average occurrence rating per stage is calculated using the formula:

$$ARO = \frac{\Sigma(O1....ON)}{N} \quad \text{[Eqn 8.1]}$$

Where 1... N are the individual owner's stage ratings, each out of 10; 1 is the lowest and 10 the highest. A similar method is used to calculate the average severity as well as the average ease of detection ratings for each life-cycle

82. In Zimbabwe, these include the Livestock Restocking Revolving Fund, the Basic Commodities Supply-side intervention (Bacossi), the agricultural Special Productivity Enhancement Facility (ASPEF), the Mechanisation Programme and the Distressed Companies Fund.

stage. The three average ratings are then multiplied to obtain a risk priority number (RPN), which is a composite risk indicator for each stage using equation (2):

$$RPN = (O * S * D) \quad [\text{Eqn 8.2}]$$

Where:

$$RPN \text{ min} = 1 \text{ and } RPN \text{ max} = 1000, \text{ that is } [O * S * D = 10 \times 10 \times 10] \quad [\text{Eqn 8.3}]$$

The stage with the highest average occurrence rating is considered to be where there is the highest chance of key problems occurring in the business. The setting up stage is identified at the stage where problems are most likely to occur. At this stage, businesses would be expanding their investment in infrastructure and setting up management systems with an increased reliance on external funding. The inception stage is considered the stage with the least chance of problems occurring. Most entrepreneurs find a few problems occurring, though enthusiasm and optimism could explain this favourable rating of this first stage. The high occurrence of problems at a given stage carries more weight when such problems have a severe impact on business success.

The setting up stage is again identified as the stage where occurring problems have the highest average severity, followed by the expansion stage. The maturity stage problems have the least impact rating. The problems that are easy to detect make it easier for managers to address them as compared to those that are difficult to identify. As expected, problems at the decline stage are the easiest to detect, whilst the maturity stage has problems that are difficult to detect. Complacency during the maturity stage of the business can lead to problems creeping in barely noticed by owners or managers (Lanjesi 2005). Table 8.10 provides an overview of the Risk Assessment Matrix Results of Q-FMECA.

The overall risk measure for each stage is a product of the three risk measures (occurrence, severity and detection) and is referred to as the RPN. This is shown in Figure 8.2. Ranking the RPNs shows that overall, the SMMEs consider the setting up stage as the riskiest and most challenging. This is not

TABLE 8.10: Risk assessment matrix results of Q-FMECA.

Stage of potential failure mode	Average occurrence rating (O)	Average severity rating (S)	Average rating for ease of detection (D)	RPN = O*S*D	Stage rank
1. Inception stage	5.309375	5.987500	5.821875	185.06	5
2. Setting up stage	6.568750	6.565625	5.990625	258.36	1
3. Growth stage	5.881250	5.906250	5.981250	207.77	4
4. Expansion stage	5.978125	5.996875	5.912000	211.95	3
5. Maturity stage	5.351097	5.658307	5.646880	170.98	6
6. Decline stage	6.122257	5.830721	6.518800	232.70	2

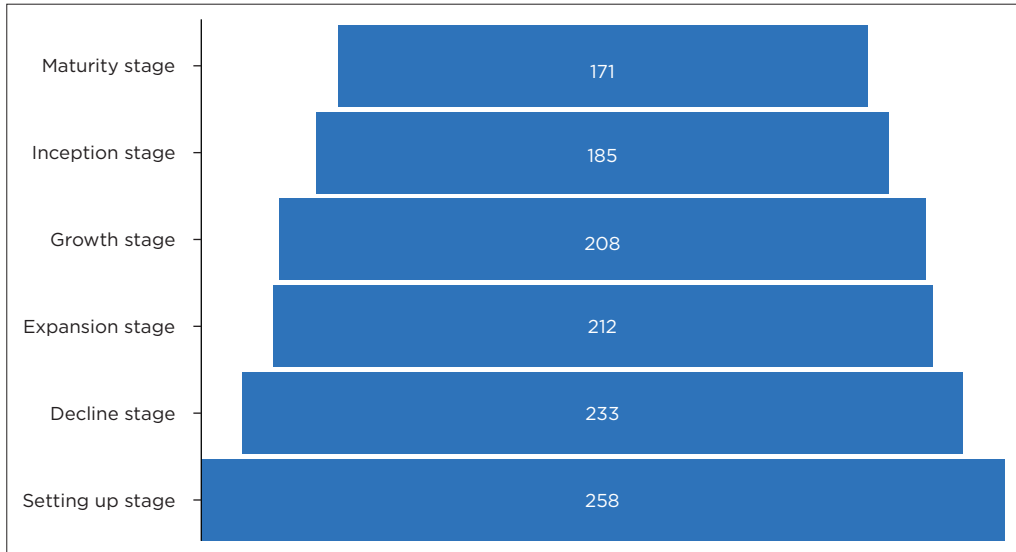


FIGURE 8.2: Risk priority number.

too surprising, considering that this is the stage at which the businesses start to actively seek out external funding and make prominent, fixed investments. This reveals the order in which prioritisation and targeted funding should be carefully considered, mindful of the impact of the problems on the success of the business. Such an approach can significantly lessen the rate of business failure unlike when risk assessment is not undertaken.

■ Suitability of life-cycle funding of agricultural SMMEs

For each of the stages, the entrepreneurs identify the key problems that cause business failure and the reasons for sourcing the various funding options. Moreover, the respondents were asked to rate their assessment of the appropriateness of funding used at each stage on a 5-point Likert scale. The results are summarised in Figure 8.3.

Only a cumulative 28% indicates that funding addresses the problems cited in Table 8.11. The main reasons cited by SMMEs for this inappropriate stage funding include poor timing of provision of funding, the type of need, the tenor of the funding facility and the cost and structure. Table 8.11 shows the identified problems juxtaposed with the main types of funding used to address them. At all the stages, inadequate funding is cited as the main problem.

Given that *the setting up* stage was cited as the most problematic, we first focus on discussing the problem affecting the business at this stage.

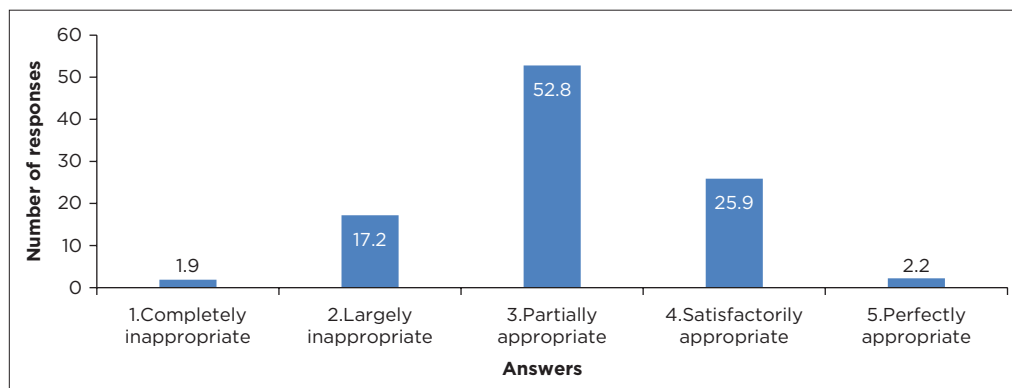


FIGURE 8.3: Respondent assessment of the suitability of funding at each stage.

TABLE 8.11: The key challenges and the main types of funding used at stages.

Life-cycle stage	Main problems cited	% owners citing the problem at this life cycle stage	Types of funding used to address the problems cited
1. Inception	Inadequate resourcing	38	Own funding, bank and microfinance, contract finance and donor funding
	Poor business plan	30	
	Poor feasibility	26	
	Poor product offering	6	
2. Setting up	Inadequate resources/assets	58	Own sources, bank and microfinance, contract funding and donor funding
	Meeting operational targets	26	
	Poor management systems	10	
	Other	6	
3. Growth	Inadequate resources	44	Own sources, bank and microfinance, contract funding and donor funding
	limited capacity utilisation	33	
	Poor market adaptation	18	
	Other	5	
4. Expansion	Undercapitalisation	46	Own sources, bank and microfinance, contract funding and donor funding
	Limited new market opportunities	32	
	Inelasticity of supply	18	
	Inadequate management skills	4	
5. Maturity	Stagnating sales	32	Own funding, bank and microfinance, contract funding and on or funding
	Waning business opportunities	20	
	Lack of innovation	18	
	Poor productivity	16	
6. Decline	Inadequate investment	63	Own sources, bank and microfinance, contract funding and donor funding
	Rising coordination costs	22	
	Shrinking markets	11	
	Declining profitability	4	

Inadequate resources have been cited as the main challenge. At this stage, businesses are making major infrastructural investments such as the purchase of machinery and setting up management systems. As a result, businesses seek external funding to supplement their own funding, which is likely inadequate for such large and indivisible investments. Affordable government

infrastructure development funding facilities, venture capital funding as well as targeted input facilities are vital to support new agricultural SMMEs till they are fully established. However, the respondents indicated that such funding was not structured to fully cover training and disease control in preparation for setting up. Similarly, most external funding comes with increased contractual obligations to meet the delivery of output, management of the business and ensuring the repayment of debt. These increased obligations put pressure on the business. This is reflected in the perception that meeting operational targets and inadequate management systems is the next most important challenge. The literature shows that SMMEs struggle with management capacities. Moreover, agricultural businesses are plagued with uncertainty and risk. Without adequate management, it can be quite challenging to meet both delivery and repayment obligations (James 2015; Meyer 2015). In Zimbabwe, there is a high attrition rate of agri-businesses owing to poor management and exposure to the risks in the agricultural sector. These include dealing in inputs and produce whose prices are regulated (ZAS 2019).

For the rest of the stages, stagnating business or market-related constraints such as poor market adaptation, lack of innovation and shrinking markets are also cited across the different stages as additional constraints. For instance, long-term funding that addresses the expanded infrastructure needs of the businesses, management training and capacity building for maintaining quality standards, disease and pest controls and market development is required. For instance, one of the affected entrepreneurs explained that 'more suitable funding needed to support growth through enhancing production and setting up refrigeration and suitable heating systems'. Another one pointed out that funding was 'not appropriate because, during the decline, I used my salary whilst the profits were stuck at the GMB because of late payment'. Therefore, in addition to market constraints, the SMEs are also challenged by layers of government bureaucracy and resultant delays.

Interestingly, there is no discrimination as to what kind of funding should be used at different stages. The different problems cited are all addressed by randomly trying to access all the types of funding. Various reasons are cited for this behaviour. Internal funding mainly used at inception is not suitable for activities such as research and development of project ideas, feasibility and viability analysis and business planning. Seed capital such as government infrastructure grants, concessionary funding schemes and donor funding for capacity building are needed especially in the early stages as they are relatively cheap and patient funds.

Whilst the type of funding shown in Table 8.11 shows that there is an increased amount of external funding used at this stage, there is still a 45% reliance on own funding. Moreover, respondents complained about the delays

in loan approvals from banks and micro-financing institutions, as well as the bureaucratic screening process for beneficiaries of government funding, including contract farming arrangements. This was compounded at the decline stage, where the business is not seen as viable for external funding. In some cases, business owners had to use personal salaries to fund the business because of delays in payments from the GMB. Furthermore, they indicated that bank and microfinance loan applications took a long time to be approved, which resulted in delayed production. Where loans were approved, respondents decried the short repayment periods. As a result, businesses experienced quick cash outflows before realising any profits.

In general, respondents indicated that most of their financing choices were not made as a first choice but were because of the absence of suitable options. It was found that family savings were the first go-to option because of ease of access and cost. These results are in line with the theoretical propositions of both the trade-off and pecking order theories. Furthermore, they align with empirical findings, which show that SMME's typically follow the pecking order theory but at the same time seek external funding whenever it is affordable (López-García & Sogorb-Mira 2008; Masiak et al. 2019). Moreover, Masiak et al. (2019) show that because of market frictions, microbusinesses (of which are the majority in the current study) tend to use more short-term debt instruments such as credit cards, overdrafts and trade credit that are likely to be more expensive than internal funding.

■ Conclusion

Overall, there is evidence of internal funding as a permanent rather than transitory component of the capital structure throughout the life cycle of agricultural SMMEs in Zimbabwe. The main demand-side factors that explain this pattern include the low level of knowledge of financing options, the limited use of AKIS and the lack of adequate collateral. On the supply side, tight credit screening in a challenging financing environment contributes to the limited use of external funding. This is compounded by the high cost of administering small financing and the persisting negative perception about small-scale agricultural lending.

In order to improve the life-cycle financing of SMMEs, some measures need to be adopted, especially by the government and other SMME support agencies. Working together, they could increase the level of knowledge of financing options for SMME owners through financial education programmes. Moreover, the owners could be encouraged to increase the use of AKIS, particularly the use of research and agricultural extension services that help in linking appropriateness of funding to the specific funding needs at each stage. Furthermore, the availability of cheaper blended finance could be increased to cater for the developmental needs of SMMEs in an environment where

private sector finance is expensive. The cost of administering small financing facilities could also be reduced if SMMEs in a given geographical area or farming schemes collectively seek funding and are encouraged to improve farm management systems and reverse the negative perception about lending to small-scale agricultural enterprises.

Whilst the findings are significant, the study uses cross-sectional data, which give a static view of agricultural SMME financing. The use of time-series data could better reveal the life-cycle financing effects of the businesses. Furthermore, the findings are based on aggregate data, yet the agricultural SMME sector is disaggregated by type of crop, livestock produced or agricultural inputs and products traded. Therefore, further studies focusing on the life-cycle effects on financing small-scale agricultural activities could provide invaluable insights.

The effect of social capital on small business performance in Cameroon: A structural equation modelling approach

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■ Introduction

Research has progressively recognised that social capital (SC) or resources rooted in entrepreneurs' relationships with stake/shareholders, such as employees, customers, suppliers, government and investors, to mention a few, is essential for the performance of any business (Bhagavatula et al. 2010; Primadona & Emrizal 2018). This form of entrepreneurial capital enables

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business owners to consolidate relationship qualities, such as trust, respect, friendliness and group solidarity (Mahadea et al. 2013). It further assists entrepreneurs to acquire and organise resources efficiently and recognise opportunities around them whilst building their business legacy (Bhagavatula et al. 2010). It is clear from the literature that SC cannot be used in isolation as far as business is concerned. Hence, entrepreneurs who are social beings combine SC with their level of human capital (HC), referring to cognitive and non-cognitive resources or capabilities, expressed in terms of education level, work experience, skills and training (Becker 2000; Kimosop, Korir & White 2016; Lucas 201; Marvel, David & Sproul 20145). Such a combination can create business confidence, generate share values and a culture of cooperation or team spirit amongst members whilst boosting business performance (BP).

The term BP is unclear as its definition varies from one scholar to another. It is often used interchangeably with the firm's business growth, success and competitiveness (Dobbs & Hamilton 2007). Eniola and Enterbang (2015) linked BP to the firm's ability to generate good outcomes and actions that bring wealth creation and value. For Storey (2010), BP refers to the firm's ability to create employment and wealth over time. Baumol, Litan and Schramm (2009) look at BP in terms of sales maximisation and profit making, which are standard measurements of BP used in the literature (Delmar, Davidsson & Gartner 2003; Mari, Poggesi & De Vita 2016) and will also be used in this study.

Moreover, studies have recognised the relationship between HC and access to financial capital (FC) (Alharbi, Yahya & Ahmed 2018; Do et al. 2019; Harding 2002), suggesting that entrepreneurs with a high quality of HC can easily use their entrepreneurial capabilities to search for business opportunities and apply for funding. However, the reality in many emerging countries is that not all business owners are sufficiently educated to draw up comprehensive and well-elaborated business proposals. Many entrepreneurs are also unable to make substantial and well-researched business presentations to potential stake/shareholders to secure seed capital or business loans. These business owners, therefore, rely on their level of SC in terms of social networks (who they know) and social ties (for how long) (Anwar, Rehman & Ali Shah 2018) to access capital for their business ventures (Chowdhury & Amin 2011; Solano & Rooks 2018). For instance, Yu and Nilsson (2019) in China revealed that SC within the cooperatives could be converted into FC, benefitting cooperative institutions and entrepreneurs. Effendi and Utami (2016), in Indonesia and other emerging economies, argued that access to funds from MFIs is successful mainly because of the closest relationship and strong ties that borrowers (i.e. entrepreneurs) have developed with these MFIs.

Moreover, SC serves as a filter used to boost HC and implicitly enhance access to financial resources available (Monametsi, Mkwizu & Swai 2018;

Nuryani et al. 2018; Tunji-Olayeni et al. 2018). However, it is unclear from these studies as to how SC affects the performance of businesses. Regardless of the surge of interest in SC, little information exists concerning the relationship between SC and small BP. The present paper intends to fill this research gap and contribute to the existing literature on SC and BP in the context of an emerging economy like Cameroon.

The next section of the paper presents the theoretical framework and the literature review. This is followed by a discussion of the data and the methodology used. This will be followed by a section on the results, discussion and conclusion with policy implications.

■ Funding and small businesses in Cameroon

Cameroon has put in place the *Cameroon 2035 vision* in which it aspires to become an emerging economy by 2035 (Beckline et al. 2018). Part of this vision prioritises the development of SMEs, constituting 60% of total employment and 36% of GDP in the country. The government has put various programs to support their growth and contribution (Nkafu Policy Institute 2019). For example, in 2004, the government established a SMEs ministry, social economy and handicrafts (MINPMEESA). The ministry's mandate is to provide support for SMEs by providing access to funding, promoting SME outputs and enabling the transition of informal SMEs into the informal sector. One of the main challenges for SMEs in Cameroon is access to funding. As a result, 8 out of 10 Cameroonian businesses, on average, survive only for less than 5 years (National Institute of Statistics 2016).

The World Bank enterprise survey 2016 lists access to finance as the second most important constraint to small businesses in Cameroon (World Bank 2016). Because of their inadequate financial records, most of them cannot provide banks with the relevant track record required for lenders to evaluate risk. Dumas et al. (2017) argue that one of the significant constraints to accessing loans from banks is the lack of collateral security in the form of own fixed assets such as land and buildings. D'pola and Touk (2016) further confirmed that because of high-interest rates (about 20%) from commercial banks, entrepreneurs tend to self-finance their business activities for a short term or rely on their social network to access capital from their inner circle. Many of them rely on family and friends as a source of capital as well as *Djanggi* or tontines, which is a kind of rotating savings and credit savings scheme.

In response, the government has put several programs in place to increase SMMes' access to funding. Firstly, through the national agency for SMEs supported under MINPMEESA (2018), the government actively promotes access to finance for SMEs. The pivotal program used is creating a database

of projects that are then made available to potential investors who would express interest in the project and provide funding. The second is creating a guarantee fund for SMEs linked to the Africa Guarantee Fund created as a Pan-African non-bank financial institution. Thirdly, in 2015 the Cameroonian government established the Cameroon bank for SMEs. The bank aimed to assist formal traders in accessing short-, medium- and long-term loans to finance their business activities (Bank of SMEs 2020).

About 95% of Cameroonian's businesses fall within the definition of SMEs. Microbusinesses refer to businesses that employ less than five employees and whose turnover is less than 15 million CFA franc (about US\$ 27800). Ayuk, Bystryakov and Karpenko (2016) indicate that 81% of all SMEs fall in this category. Small businesses refer to businesses that employ between 6 and 20 people with a turnover estimate between 15 and 250 million FCFA franc (up to US\$46 380), and medium businesses employ between 21 and 50 people with a turnover of more than 250 million CFA franc (MINPEESA 2018). The country recognised the significant contribution of SMEs to the national economy from 22% in 2004 to 34% in 2016 (Ministry of SMEs and Handcraft 2017), with small businesses recording about 88.4% of business activities in the country. Moreover, about 70% of these small businesses are in the major cities of Douala and Yaounde (Kinfaek & Akinboade 2011). Table 9.1 provides a comparative view of the different measures used in Cameroon, China and South Africa. This comparison is based on the fact that these are emerging economies, which Cameroon wishes to attain using SMEs as a vehicle.

Cameroon's economic growth declined from 5.65% in 2015 to 3.72% in 2019, mainly because of political instability between the French and anglophone regions. This resulted in a slowdown of economic activities keeping the level of unemployment high (30%) since 2014 (Heifer International 2014). This economic decline has resulted in the growth of an already large SME sector in the country. More importantly, for this paper, the resulting lack of jobs has led to falling levels of HC as many educated and skilled young graduates end up working as street vendors, taxi drivers or photographers, to mention a few (AfDB 2012). This loss in HC combined with the difficulty in obtaining loans from financial institutions pushes entrepreneurs to rely on their family members and close friends for financial support. Against this background of financial constraints and unemployment, the present chapter investigates how SC, vested in relationships between business owners and family and friends, can boost BP.

■ Hypothesis development

The paper is rooted in the resource-based view (RBV) and social capital theory (SCT). In terms of the RBV theory, entrepreneurs leverage different resources to trigger entrepreneurial efforts off the ground (Davis & Simpson 2017).

TABLE 9.1: Comparative measures of SMEs.

Businesses	Number of people			Turnover ^a			Value of assets ^a		
	China	South Africa	Cameroon	China US\$ (equivalent)	South Africa US\$ (equivalent)	Cameroon US\$ (equivalent)	China US\$ (equivalent)	South Africa US\$ (equivalent)	Cameroon US\$ (equivalent)
Micro	<20	≤5	<6	<\$95 983	< \$9733	\$27 780	>95 983	< \$64 886	\$926 028
Small	20 to <500	<50	6 to <20	\$95 983 and < \$287 950	< \$129 770-\$1 622 125	\$27 780-\$463 010	<\$83 934	< \$129 773 -\$29 1990	<\$1 852 057
Medium	500 to > 2000	<100 -200	>20	\$287 950 and < \$2 879 507	< \$259 540 -\$3 244 250	>\$463 010	<\$3 839 342	< \$129 773 -\$1 167 963	>\$1 852 057

Source: *The National Small Business Act 102 of 1996 (South Africa)* (Republic of South Africa 1996); Hoffmann (2017); MINPEESA (2018).

^a Converted at prevailing exchange rates from the local currency.

SMEs, small and medium enterprises

US\$1 = 539.96 CFA franc (Cameroon), = 15.40 Rands (South Africa) and = 104.29 Yen (China).

This theory highlights the relevance of entrepreneurial capital, such as financial, human and social resources promoting entrepreneurship (Alvarez & Barney 2017). In the context of this paper, the focus is mainly on HC examined under owner human capital (OHC), employees' human capital (EHC) and SC. The rationale is the challenges small business owners encounter to access FC directly from financial institutions in Cameroon. Entrepreneurs are therefore forced to find alternative ways to finance their businesses.

The SCT is drawn from the relational network regarded as a valuable tool to drive the business forward. This theory also considers networks as an instrument that facilitates economic activity by connecting traders to the right individuals who can provide them with relevant information for business whilst building solid collaborations and partnerships and creating alternative ways of accessing FC (Dyer, Nenque & Hill 2014; Nahapiet & Ghoshal 1998). Hence, business owners capitalise on HC to increase their SC and implicitly enhance their access to FC.

■ SC and firms' performance

SC refers to connections and trust that allow individuals, especially entrepreneurs, to act and bond together with a specific objective to enjoy benefits resulting from social networks and social ties (Davidsson & Honig 2003; Putman 2001). Social network refers to the level of connection or relationship between people, whilst social ties indicate the strength (i.e. weak or strong ties) of such association. The literature suggests that the presence of suitable networks and social ties can positively influence BP. Kenny (2009) supports the point that small businesses with weak ties in networking tend to perform negatively. Putman (1993) added that traders with higher social connections and ties could perform better than their counterparts with poor connections and weak ties who tend to 'bowl alone'.

Similarly, Pruthi (2014) shows that business with good social networking and strong ties can boost firm performance and generate employment opportunities. Mahadea et al. (2013) further confirmed that a business with solid ties could improve its visibility and reputation in the market environment. However, it is unclear whether such visibility and reputation can assist in attracting more seed capital from various sources and, by extension, translate this capital into performance in terms of sales revenue and profit making. Nevertheless, the literature on informal finance suggests that SC can boost repayment rates of loans implying that it can increase the amount of lending available to SMEs (Hasan et al. 2017)

The literature indicates that individuals are naturally social beings who create social networks and develop social ties whilst doing business (Davidsson & Honig 2003; Kwon & Adler 2014). Social networks can result in more information, which is helpful in the business (Mcpherson, Smith-Lovin &

Cook 2001). Moreover, it can increase the willingness and ability to open intrapreneur networks to provide resources (Wang & Steiner 2020). SC is a multidimensional concept explained using the cognitive, relational and structural lenses (Nahapiet & Ghosal 1998). In terms of the cognitive lens, entrepreneurs learn to communicate and share ideas with other stakeholders or shareholders (De Carolis & Saporito 2006). The structural lens of SC looks at relational patterns established amongst people or groups (Putman 2001). The relational dimension of SC assists entrepreneurs in developing both external (bridging) and internal (bonding or ties) relationships with different stake/shareholders (Putman 2001).

The paper will mainly make use of both cognitive and relational lenses. The main argument is that entrepreneurs' sound reasoning and communication skills can create more business openness, opportunities and social networking. Such scarce skills from entrepreneurs can also help them secure reliable suppliers and referrals, supportive clients and close friends, qualified employees and gain access to credits (Adler & Know 2002). Akehurst, Simarro and Mas-tur (2012) and Powell and Eddleston (2013) added that many traders connect with their family members and close friends to access funds to access a formal source of capital coming from government agencies. Banks mainly remain a significant hurdle. Such ability by entrepreneurs to secure capital from their inner circle, combined with access to business inputs (i.e. labour, land and technology), can influence BP in terms of sales revenues and profit making (Adler & Know 2002).

Entrepreneurs interacting with their competitors and customers, for instance, can acquire relevant information and knowledge about other firms' business strategies to optimise sales revenues and profits-making when addressing clients' needs. Park and Luo (2000) in China highlighted the fact that entrepreneurs' social ties with their rivals could encourage sharing information about resources and reduce operational costs. The literature further shows that in terms of the relational lens, the connection of business owners with clients generates both customers and brand loyalties, customer satisfaction, retention and recurrent purchasing, which boost performance in terms of sales revenue (Maurya et al. 2015; Park & Luo, 2001). Furthermore, a sound affiliation between entrepreneurs and suppliers can provide access to raw materials, better service, fast and reliable deliveries (Peng & Luo 2000). Accordingly, the first hypothesis of the study states that:

H₁: SC positively affects BP in Cameroon.

■ HC and firm performance

People represent the most significant asset or HC any firm can possess. Several scholars acknowledge the fact that business owners constantly invest in themselves and their employees through education, work experience, skills

and training to boost their productivity and quality of life (Kimosop et al. 2016; Lucas 2015; Marvel et al. 2014). This implies that HC splits into OHC and EHC, increases individuals' cognitive and non-cognitive capabilities to produce efficient outcomes, as far as BP is concerned. Furthermore, individuals involved in business show high levels of alertness in exploring opportunities around them. Some of these skilled traders are self-confident when taking risks relative to their counterparts with low skills (Shane 2003; Storey 2010). Other studies found a positive association between education level (Ayala & Manzano 2014; Chowdhury et al. 2014; Hampel-Milagrosa, Loewe & Reeg 2015), training (Rose, Kumar & Yen 2006), work experience and BP. These findings suggest that HC, inborn or acquired, is essential for the formation and development of any business. We, therefore, hypothesise that:

H₂: Owner capital has a positive effect on BP in Cameroon

H₃: Employee capital has a positive effect on BP in Cameroon

■ HC and SC

The quality of HC matters considerably to connect to other stake/shareholders in the business sector. For instance, educated, skilled and experienced entrepreneurs can use their entrepreneurial abilities to communicate their ideas clearly and effectively and present solid business plans to potential investors or financial institutions with a high probability of securing loans or seed capital for business ventures. Though traders with high HC are crucial to business and intellectual development, it is interesting to establish that HC alone may not be sufficient to enhance firm performance (Zimmerer & Scarborough 2008). This could result from traders' poor SC (i.e. weak social network and social ties) and financial constraints to business.

Other scholars added that knowledge could be created through HC, accumulated and easily shared or passed on to others as they connect (Felicio, Couto & Caiado 2014; Subramony et al. 2018). As a result, HC can contribute to the development of economically useful SC. Repeated interaction between business owners and other stake/shareholders is an investment in capacity and skills development resulting in strong social networks (Kate & Lacey 2008; Tang 2010). Through efforts to acquire sound HC, entrepreneurs can better connect with the networks they form whilst exploiting business possibilities around them. Felício et al. (2014) in Portugal found that HC, specifically in terms of experience and cognitive ability, affects individual interactions and collaboration. Their findings further revealed that BP is highly influenced by the HC of the business owner relative to that of the employees. Hence, the paper assumes that traders with a high level of HC would also have a high level of SC, which can push entrepreneurs to lean on their social connections to acquire capital for business. Felício et al. (2014) argue that the

diversity of interconnectedness required for HC development implies that different aspects of HC are likely to affect SC differently. We, therefore, hypothesise that HC (OHC and EHC) influences SC that in turn can improve performance in terms of sales revenue and profit making:

H₄: OHC has a positive effect on the development of SC in Cameroon

H₅: EHC has a positive influence on the development of SC in Cameroon

■ Data and methodology

The paper seeks to examine the influence of SC on small BP using a SEM. Data were gathered from 370 formal traders who operate in the service sector, ranging from restaurants, pubs, hair salons, photography to retailing (to mention a few), using a survey instrument. In total, 185 traders were selected from Yaounde (central region) and another 185 from Douala (Littoral region). The sample size was drawn following the Krejcie and Morgan's table (1970), and traders were selected using stratified random sampling from two strata (i.e. Yaounde and Douala). The study used only small, registered businesses run by the owners to separate data on HC between employee and owner capital.

The key variables arising from the hypothesis include BP, SC, OHC and EHC. These four variables are captured as latent variables. The items of each variable are indicated in Appendix 1. The summary of the information is presented in Table 9.2.

■ Result of the study

■ Characteristics of the respondents

From the socio-demographic profile of the surveyed entrepreneurs (Table 9.3), the results show that about 64% of them were men and 36% women. About 20% of the respondents were between 18 and 35 years old, 49% were between 36 and 45 years old and the remaining 31% were above 45 years. Regarding education, 41% of the surveyed operators had a bachelor's degree, about 25% had secondary education. A total of 20% had completed a specific training or certificate related to their business. Only 7% had a postgrad degree, and the

TABLE 9.2: Summary of measurement items.

Variable	Number of items	Measurement
Business performance (BP)	2	Monetary terms (strongly agree)
Social capital (SC)	11	Likert scale (strongly disagree to strongly agree)
Owner human capital (OHC)	4	Likert scale (strongly disagree to strongly agree)
Employee human capital (EHC)	4	Likert scale (strongly disagree to strongly agree)

TABLE 9.3: Socio-demographic profile of entrepreneurs.

Categories	Profiles	Frequency	%	Valid %	Cumulative %
Gender	Male	236	57.4	63.8	63.8
	Female	134	32.6	36.2	100.0
Age	18-25	12	2.9	3.2	3.2
	26-35	60	14.6	16.2	19.5
	36-45	182	44.3	49.2	68.6
	46-55	100	24.3	27.0	95.7
	56-65	15	3.6	4.1	99.7
	Above 65	1	0.2	0.3	100.0
Education level	Some/all primary education	23	5.6	6.2	6.2
	Some/all secondary education	91	22.1	24.6	30.8
	Diploma or certificate	73	17.8	19.7	50.5
	Bachelor's degree	153	37.2	41.4	91.9
	Postgraduate degree	30	7.3	8.1	100.0
Prior work experience	No experience	6	1.5	1.6	1.6
	Less than 1 year	16	3.9	4.3	5.9
	From 1 to less than 4 years	99	24.1	26.8	32.7
	From 4 to less than 8 years	133	32.4	35.9	68.6
	From 8 to less than 12 years	74	18.0	20.0	88.6
	From 12 to less than 16 years	26	6.3	7.0	95.7
	Sixteen years above	16	3.9	4.3	100.0

rest (6%) had primary education. In terms of experience, about 27% of entrepreneurs had one to less than 4 years of previous work experience, about 36% of them had 4 to less than 8 years. About 20% mentioned having eight to less than years, 11% had at least 12 years, whilst the remaining 6% had less than 1 year of prior work experience.

■ Measurement model

A principal components analysis was run to check that the factors used to measure the latent variables were run. Using the Kaiser criterion to determine the number of components or constructs needed in this study, only components having an eigenvalue of 1 or more were considered in the PCA (Pallant 2013). The results in Table 9.4 indicate three components explaining about 60% of the total variance in entrepreneurs' social and HC.

Moreover, the study used the oblimin rotation method (Field 2013) to provide all three components with the coefficient loadings of items related to them. The summary of the coefficient loading of each construct and related tests are shown in Table 9.5. A Cronbach's alpha coefficient of 0.7 is

TABLE 9.4: Total variance explained of entrepreneurs' social and HC.

Component	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.535	29.132	29.132	5.535	29.132	29.132
2	2.360	12.419	41.551	2.360	12.419	41.551
3	1.591	8.372	59.923	1.591	8.372	59.923
4	0.819	7.469	67.392			
5	0.717	6.930	68.322			
6	0.734	5.441	69.763			
7	0.694	3.653	73.416			
8	0.634	3.339	76.755			
9	0.622	3.272	80.028			
10	0.564	2.967	82.995			
11	0.463	2.435	85.430			
12	0.458	2.412	87.842			
13	0.432	2.275	90.117			
14	0.396	2.085	92.202			
15	0.367	1.932	94.133			
16	0.358	1.882	96.016			
17	0.309	1.624	97.640			
18	0.253	1.334	98.974			
19	0.195	1.026	100.000			

HC, Human capital.

TABLE 9.5: Test models of entrepreneurs' social and HC.

Test	Measurement	Outcome
KMO and Bartlett's test	Kaiser-Meyer-Olkin measure of sampling adequacy	0.825
Bartlett's test of sphericity	Approximately chi square	2788.3
	Degrees of freedom	171
	Significance	0.00

HC, Human capital; Extraction method: Principal component analysis.

generally accepted as an indication of model consistency. The alpha statistics for SC and EHC are above the threshold. The test for owner capital is 0.684. However, studies such as those of Griethuijsen et al. (2014) and Taber (2018) also show that a Cronbach's alpha of 0.067 or above is acceptable. Validity is checked to confirm that constructs in the current SEM are likely to be interconnected (Hair et al. 2014). Statistically, this is conducted by calculating the composite reliability (CR) expected to be greater than 0.7 and the

TABLE 9.6: Construct reliability and measurement model.

Construct	AVE	CR	Cronbach's alpha	Item	Loading
Social capital	0.555	0.701	0.803	SC10	0.831
				SC9	0.812
				SC11	0.811
				SC8	0.801
				SC7	0.801
				SC6	0.804
				SC5	0.555
				SC4	0.551
				SC3	0.402
				SC1	0.412
Owner capital	0.509	0.805	0.684	SC2	0.410
				HC3	0.777
				HC2	0.710
				HC1	0.669
Employee capital	0.623	0.868	0.746	HC4	0.696
				HC7	0.840
				HC8	0.832
				HC6	0.805
				HC5	0.670

average variance extracted (AVE) expected to be greater than 0.5 for each construct. All the measures of validity meet the AVE and CR criterion and are presented in Table 9.6.

SEM result and model fitness

The model proposed by hypotheses 1-5 was estimated using the latent variables constructed using the measurement model.

To validate the fitness of the SEM, three types of model fitness indices were used. These included the absolute, relative and parsimony fitness indices. According to Hair et al. (2014), these fitness indices look at the extent to which the SEM is consistent with the data gathered. A summary of the most common fit indices used in the literature is presented in Table 9.6.

In terms of the absolute measures, 3 out of 4 indices tested were acceptable measures and consistent with our findings, confirming the fitness of the SEM. The fourth fit index (prob > chi² statistics) was found not to be acceptable. This measure is sensitive to sample size. Mak (2001) argued that for large samples ($n > 200$), the p -value is likely to be significant. This was expected as the sample size ($n = 370$) was greater than 200. Moreover, several scholars agreed that p -value is not the best fit index to assess the SEM's overall goodness-of-fit (Hair et al. 2010; Hu & Bentler 1999). The other relative measure used and recommended in the literature is the comparative fit index and

TABLE 9.7: Goodness of fit tests.

Fit	Measure	Threshold	Indices of the hypothesised model	Comment
Absolute fit	Chi-2/df (cmin/df)	<3 good, <5 (Hu & Bentler 1999)	3.339	Acceptable
	Prob > chi2	>0.05 (Hu & Bentler 1999)	0.000	Not acceptable
	Goodness of fit (GFI)	≥0.95 (Mak 2001)	0.979	Acceptable
	Adjusted goodness of fit (AGFI)	≥0.9 (Mak 2001)	0.938	Acceptable
Relative fit	Comparative fit index	≥0.95 (Mak 2001)	0.969	Acceptable
Parsimony fit measures	Root mean square error of approximation (RMSEA)	<0.06 (Hu & Bentler 1999)	0.058	Acceptable
	Standardised RMR	>0.05 (Hu & Bentler 1999)	0.304	Acceptable

Source: Adapted from Hair et al. (2014).

confirmed the model's fit. Similarly, the parsimony fit measures also confirm the fit of the model.

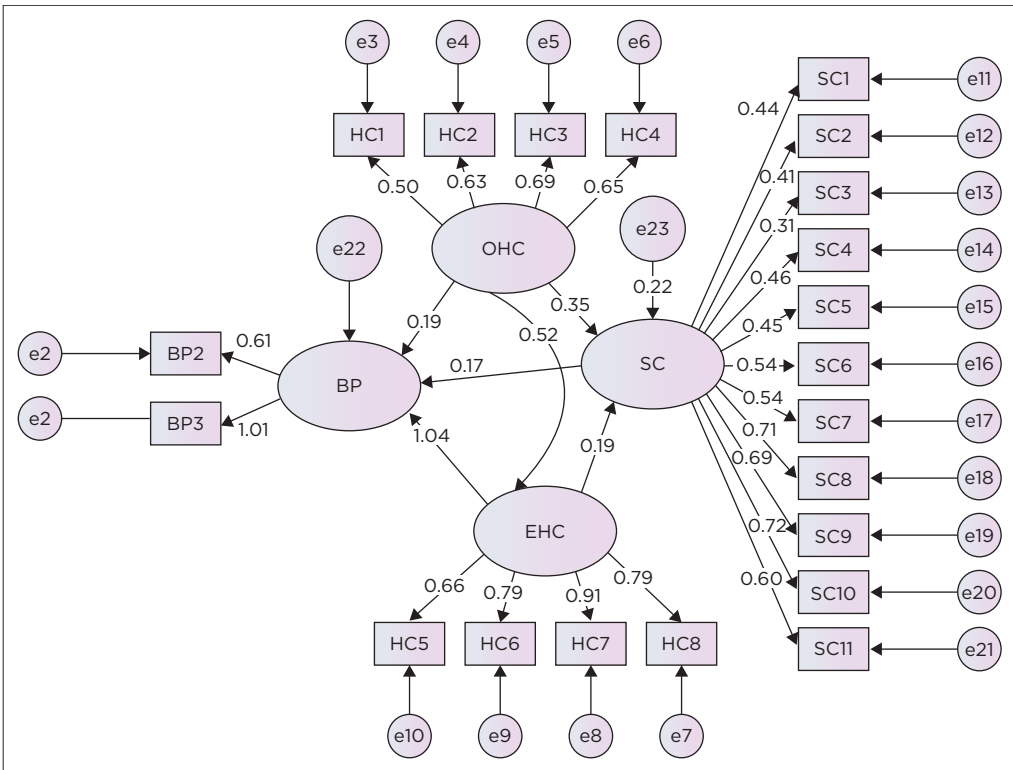
■ Discussion of the hypotheses

The results support the hypothesis that SC has a positive correlation with BP. The coefficient of 0.171 is significant, though marginal in size. The largest influence on SC comes through the effect of family/close friends and business owners (SC_{10}), followed by a strong tie between the business owner and employees (SC_8) (Appendix 2). This could be because of a consolidation of social ties and networks through relationship qualities, such as trust, respect, friendliness and group solidarity (Mahadea et al. 2013). The factor loading shows that the MFIs (SC_9), suppliers and entrepreneurs (SC_7) and interaction between employees themselves (SC_6) explain a fair amount of the variations in SC. We argue that they, therefore, have some influence on BP through the SC variable. The variables that relate to business angels (SC_1), banks (SC_2) and government funding (SC_3) play a very insignificant role with loadings of less than 0.5. The relationship between government and entrepreneurs had the lowest coefficient loading. The limited government support could be explained in terms of the support that Cameroonian traders receive in terms of access to government funds, entrepreneurial education and training to mention a few (Mahadea & Kabange 2019). The findings corroborate those of Akehurst et al. (2012) and Powell and Eddleston (2013), who confirmed that family members and close friends remain an indispensable source of support to entrepreneurs' business activities.

The results further support the hypotheses that both owner and employee's HC positively affect BP, with significant coefficients of 0.190 and 0.04, respectively.

The most considerable effect on OHC comes from a business owner’s experience (H_3), followed by the entrepreneurs’ business training (H_4) and skills (H_2). The effect of education is marginally lower. The measurement model suggests that the impact of experience on BP may be more robust than education. Education provides the critical stock of knowledge that can help an entrepreneur identify opportunities.

Nevertheless, it is the coordination of such opportunities with one’s networks and capabilities that is more likely to result in better BP (Davidsson and Honig 2003; Felício et al. 2014). Moreover, education can affect performance through increased access to finance. Their education can enhance their communication skills, develop critical thinking to make rational decisions and boost their confidence, which may assist them in securing FC and improving performance (Bhagavatula et al. 2010; Mosey & Wright 2007). The literature also indicates that business owners who invest in the quality of their HC are likely to maintain sound business records, develop solid business plans and acquire adequate skills capable of deciphering information and disseminating it to financial institutions (Alharbi et al. 2018; Do et al. 2019).



SEM, structural equation model
FIGURE 9.1: Estimated SEM.

The SEM in the above figure regards firm performance (BP) as the dependent variable that is associated with three independent latent variables, namely SC consisting of 11 items (SC_1 – SC_{11}), OHC and EHC, composed of 4 items (H_1 – H_4 and H_5 – H_8 , respectively). There is a possible influence of SC, OHC and EHC on BP.

Hypothesis 4 is also confirmed. EHC is positively correlated with BP. We find that the same variables emerge as the most important for explaining the variations in employee capital. This confirmation is because the economy is mainly built on meritocratic values, considering the capabilities in terms of experience and skills employees bring to the firm. Moreover, owners and employees use their relationships (who they know) to influence firm performance. Whilst their education level is necessary, their experience and training are more important. EHC, generated through competencies (i.e. education and skills, training and experience, mainly), attitude and intellectual agility, also shapes the behaviour of employees to work efficiently and think creatively in providing solutions to problems.

We also find that the results support the hypothesis that both owner and EHC affect SC. Both owner and EHC have a positive effect on the development of SC. With a significant coefficient of 0.350, OHC has the most considerable impact on SC, followed by a significant coefficient of 0.190 for EHC. As discussed earlier, the most significant sources of SC for both owners and employees are training, experience and skills. These can be called acquired capital as such knowledge typically comes from outside the employee or owner of the business. Repeated interaction with either business peers (SC_6) potential funders (SC_9) and with encouragement from family and friends, the acquired skills can be turned into what Madriz, Leiva and Henn (2018) term transmitted or SC.

The main contention of this paper is that SC mediates the effect of HC on BP. This suggestion is captured through the mediatory role of SC, as shown in Table 9.8:

Chi-Square = 618,987 df = 180; Prob = 0.000; cmin/df = 3.439; GFI = 0.969; AGFI = 0.918; CFI = 0.959; RMSEA = 0.008 RMR = 0.206

Both employee capital and owner capital affect BP through SC. Both variables have a positive correlation showing that they enforce the effect of SC and BP. The most substantial impact of OHC on BP, with a coefficient

TABLE 9.8: Hypothesis tests and mediation results.

Variables	Direct effect	Indirect effects	Total effects	Remarks
SC	0.171***		0.171***	Direct effect only
OHC	0.190***	0.350***	0.250***	Complementary mediation
EHC	0.04**	0.190***	0.072**	Complementary mediation

***, p -value significant at 0.001; **, p -value significant at 0.05.

SC, social capital; OHC, owner human capital; EHC, employee human capital.

of 0.190, results from the influence of traders' experience, representing the highest factor loading (H_3), followed by their training (H_4). Similarly, the impact of EHC comes from the knowledge and skills of employees. Hence, an entrepreneur and employees who come with greater work experience, skills and training can significantly affect how the business is perceived. Such capabilities, in turn, can increase the demand for the business outputs and opportunities for accessing FC resulting in higher revenues and profits. The findings further support Lucas' (2015) ideas, claiming that individuals with more excellent capabilities can earn a greater reward. It suggests that enhancing the quality of the owner's HC and that of the employees, in terms of experience, skills, training and education, assists the business to flourish and, by extension, enables a firm to perform well.

These findings also support the firm's RBV, which suggests that business resources such as HC can foster the development of essential skills, in this case, SC (Campbell & Park 2017; Wernerfelt 1984).

■ Conclusion

The purpose of this chapter was to investigate the effect of SC on BP in Cameroon. Whilst studies that confirm the importance of SC exist, contextual evidence is lacking in the African and Cameroonian contexts. The case of Cameroon is vital because of the country's high levels of poverty and dependency on SMEs. The government has put its hopes of becoming an emerging economy by 2035 on the performance of SMEs, which currently contribute up to 60% of employment in the country. As a result, several programs have been put in place to increase access to FC, which is seen as the second most binding constraint on SMEs growth and performance in Cameroon. This paper suggests that because SMEs struggle to access FC, there may be other ways of enhancing their BP and longevity through SC. We propose that SC also mediates the effect of HC on BP. The results support both of these assertions.

From the financing perspective, owner relationship with microfinance explains a significant proportion of the variations in SC and impacts BP. Overall, the most substantial effects are owner and employee experience, skills, training, the relationship between the owner and employees, as well as friends and family of the owner. Government relationships have minimal effect. A burgeoning literature suggests that SC can be leveraged to access FC and improve BP. The reliance on informal sources of capital has primarily been spoken of in pejorative terms as a source of capital for SMEs. Yet the results in this paper, in line with others in the literature, suggest that social relationships of which SC is a key may improve SME performance and growth than many funding programs put in place by the government of Cameroon. We recommend that efforts to provide access to formal financing should be accompanied by significant efforts in providing skills training for both SME employees and owners.

■ Appendix

TABLE 9A-1: Overview of the indicators of the SEM.

Items	Indicators of the SEM	Meaning of the variables	Measurement
1	H ₁ : education level of the business owner is satisfactory.	Trader's level of schooling.	7-Likert scale
2	H ₂ : the business owner has the skill for the business.	Trader's ability to do the business well.	7-Likert scale
3	H ₃ : the business owner has experience in the business.	Trader's expertise for the business.	7-Likert scale
4	H ₄ : the business owner has received training for the business.	Trader's acquisition of job-related skills and knowledge.	7-Likert scale
5	H ₅ : education level of the employee is satisfactory.	Employee's level of schooling.	7-Likert scale
6	H ₆ : employee has the skill for the business.	Employee's ability to do the business well.	7-Likert scale
7	H ₇ : the employee has experience in the business.	Employee's expertise for the business.	7-Likert scale
8	H ₈ : employee has received training for the business.	Employee's acquisition of job-related skills and knowledge.	7-Likert scale
9	SC ₁ : there is a good relationship between business angels and I.	The connection between entrepreneurs and business donors.	7-Likert scale
10	SC ₂ : there is a good relation between bank institutions and I.	The connection between entrepreneurs and banks.	7-Likert scale
11	SC ₃ : there is a good relationship between the government and I.	The connection between the public sector and I.	7-Likert scale
12	SC ₄ : there is a good relationship between my competitors and I.	The connection between business rivals and I.	7-Likert scale
13	SC ₅ : there is a good relationship between the cooperatives and I.	The connection between informal lenders and I.	7-Likert scale
14	SC ₆ : there is a good relationship between employees themselves.	Connection among workers.	7-Likert scale
15	SC ₇ : there is a good relationship between my suppliers and I.	The connection between dealers and I.	7-Likert scale
16	SC ₈ : there is a strong tie between my employees and I.	Solid bondage between my workers and clients.	7-Likert scale
17	SC ₉ : there is a good relationship between microfinance's institutions and I.	The connection between microfinance organisations and I.	7-Likert scale
18	SC ₁₀ : there is a good relationship between family/close friends and I	The connection between family/close friends and I.	7-Likert scale
19	SC ₁₁ : there is a strong tie between family/close friends and I.	Solid bondage between family/close friend and I.	7-Likert scale
20	BP ₂ : business performance - profit.	Performance measured in terms of profit.	Monetary term - CFA franc
21	BP ₃ : business performance - sales revenue.	Performance measured in terms of sales revenue.	Monetary term - CFA franc

BP, business performance; SC, social capital; SEM, structural equation model.

TABLE 9A-2: Standard regression weight results.

Model constructs		Businessperformance constructs		Estimate
Step 1: effect on SC	SC	<-----	OHC	0.350***
	SC	<-----	EHC	0.190***
Step 2: effect on BP	BP	<-----	SC	0.171***
	BP	<-----	OHC	0.190***
	BP	<-----	EHC	0.040**
Estimates - construct OHC	HC ₁	<-----	OHC	0.500***
	HC ₂	<-----	OHC	0.632***
	HC ₃	<-----	OHC	0.687***
	HC ₄	<-----	OHC	0.655***
Estimates - construct EHC	HC ₅	<-----	EHC	0.660***
	HC ₆	<-----	EHC	0.794***
	HC ₇	<-----	EHC	0.906***
	HC ₈	<-----	EHC	0.793***
Estimates - construct SC	SC ₁	<-----	SC	0.440***
	SC ₂	<-----	SC	0.410***
	SC ₃	<-----	SC	0.310***
	SC ₄	<-----	SC	0.465***
	SC ₅	<-----	SC	0.450***
	SC ₆	<-----	SC	0.540***
	SC ₇	<-----	SC	0.540***
	SC ₈	<-----	SC	0.710***
	SC ₉	<-----	SC	0.692***
	SC ₁₀	<-----	SC	0.724***
	SC ₁₁	<-----	SC	0.600***
	BP ₂	<-----	BP	0.60**
	BP ₃	<-----	BP	1.01***
			EHC<--> OHC	

SC, social capital; BP, business performance; OHC, owner human capital; EHC, employee human capital.***, *p* value significant at 0.001; **, *p* value significant at 0.05; *, *p* value significant at 0.1.

Do DFIs help to alleviate poverty?

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■ Introduction

The importance and contribution of SMMEs in promoting global economic growth, employment creation and poverty alleviation in developed and developing economies are widely documented (Aminul Islam et al. 2011; Fatoki & Asah 2011; Gherghina et al. 2020; Musamali 2013). Small, micro and medium enterprises account for the majority of businesses worldwide and are pivotal in stimulating private ownership and entrepreneurial skills. They are flexible and can adapt quickly to volatile markets demand and supply situations. Moreover, SMMEs help to diversify economic activity and make an important contribution to exports and trade (Gherghina et al. 2020). They are also seen as the vehicle by which the lowest-income people in society gain access to economic opportunities. As a result of this contribution, the creation of a conducive and enabling environment for SMME growth and development is

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prioritised globally. SMMEs represent about 95% of businesses and more than 60–70% of employment worldwide (STATSSA 2020)

Formal SMMEs contribute up to 40% of GDP in emerging economies. These numbers are significantly higher when informal SMMEs are included. For South Africa, the number is estimated at more than 2.5 million, representing 97.5% of the total number of business firms and 42% of total remuneration. They accounted for approximately 60% of all employment and more than 35% of GDP in 2018 (Taljaard & Van der Walt 2018). This amounted to some 66% of all jobs (16.5 million) in the South African economy (STATSSA 2020). The National Development Plan envisioned that by 2030, SMMEs would contribute 60–80% to GDP growth and generate 90% of the projected 11 million new jobs in the country.

Despite the significant positive impact on economic growth highlighted above, there is considerable evidence that failure rate of SMMEs is high. The Global Entrepreneurship Monitor (2016) reports that South Africa has one of the highest business start-up failures in the world. For example, about 75% of newly established SMMEs in South Africa close down after having operated for approximately 2 years (Fatoki & Asah 2011). This phenomenon can be attributed to several constraints faced by SMMEs, such as access to markets, technology, business infrastructure and information, amongst others. Literature suggests that SMMEs' access to credit is one of the critical challenges negatively impacting SMME growth and development (Irwin & Scott 2010; Kira & He 2012; Rogerson 2008; Taljaard & Van der Walt 2018)

Anecdotal evidence shows that SMMEs continue to struggle to access funding even from institutions especially set up to provide them with funding. The government noted this and, in 2012, requested that all commercial banks and DFIs explain to the Select Committee of the National Council of Provinces why they had very restricted lending to SMMEs (NCOP 2012). Although several reasons were given, not much improvement has been made in an SMME's access to credit. This paper proposes that one of the reasons this high level of credit rationing exists amongst both specialised institutions and commercial banks is that they evaluate SMMEs based on very stringent criteria that do not account for their unique characteristics. This assertion is evaluated using SMME survey data from the Eastern Cape Province in South Africa. In addressing the criteria used to assess credit applications to SMMEs, we inevitably ask the question of whether DFIs fulfil the developmental role for which they were set up.

■ Government efforts to support SMMEs in South Africa

SMMEs require finance to start and expand their operations, develop new products and invest in new staff or production facilities. In a survey of SMME

access to finance in South Africa, Monyae (2011) reported that 93% of micro firms in the survey did not have access to formal or informal credit. Kelley, Singer and Herrington (2015) revealed that lack of access to finance led to 28% of SMMEs closing in 2016. This is despite the country's formal solid financial sector as well as opportunities for funding through DFIs and commercial banks. The South African government has, since the dawn of democracy in 1994, realised the vast contribution made by SMMEs in the country's economy. As a result, it prioritised their promotion and growth. Since then, the government has put various strategies and plans in place to enhance the operations of SMMEs. Table 10.1 shows a summary of government interventions initiated by the government.

The country's first economic policy, the Reconstruction and Development Programme (Republic of South Africa 1994), advocated for the support of SMMEs for employment creation, income distribution and growth. In 1995, the White Paper on National Strategy for the Development and Promotion of Small Business in South Africa was developed. It emphasised the need for the government to facilitate the creation of an enabling environment for SMME access to information, procurement opportunities, markets, business infrastructure and finance. The White Paper culminated in the *National Small Business Act No. 106 of 1996*. The act was subsequently followed by the establishment of Khula Enterprise Finance Limited, which focused on promoting SMME access to credit. Following the establishment of Khula, Ntsika, aimed at providing non-financial support to SMMEs, was also formed. Moreover, the Centre for Small Business Promotion (CSBP), charged with the operationalisation of the National Small Business Strategy, was also established.

TABLE 10.1: Government initiatives to support SMME.

Intervention	Year initiated	Target groups
The Reconstruction and Development Programme	1994	All businesses, including SMMEs
The White Paper on National Strategy for the Development and Promotion of Small Business in South Africa	1995	All SMMEs
The <i>National Small Business Act</i>	1996	All SMMEs
Khula Finance Limited	1996	All SMMEs
Centre for Small Business Promotion	1996	All SMMEs
GEAR	1998	All businesses, including SMMEs
Umsobomvu Youth Fund	2001	Youth-owned and run SMMEs
Small Enterprise Development Agency	2004	All SMMEs
ASGISA	2006	All businesses including SMMEs
The New Growth Path	2010	All businesses including SMMEs
The National Development Plan	2012	All businesses including SMMEs
The National Department of Small Business Development	2014	All SMMEs

AsgiSA, Accelerated and Shared Growth Initiative for South Africa GEAR, Growth, Employment and Redistribution Plan; SMMEs, small, micro and medium enterprises.

The promotion of SMMEs continued to feature in subsequent government economic policies such as the Growth, Employment and Redistribution plan (GEAR). This plan encapsulated the promotion of SMMEs as one of the critical elements in the government's strategy for employment creation and income generation. Upon realisation of the rampant youth unemployment, the Umsobomvu Youth Fund (now the National Youth Development Agency) was established in 2001 to, amongst others, provide finance to youth-owned and run SMMEs. In 2004, Ntsika and CSBP were amalgamated into the Small Enterprise Development Agency. This agency's directive was to execute the National Small Business Strategy and to provide non-financial support to SMMEs. The government acknowledged continued slow economic growth, resulting in poverty, unemployment and low income. This led to the replacement of GEAR by the Accelerated and Shared Growth Initiative for South Africa (AsgiSA) (Republic of South Africa 2008).

One of AsgiSA's strategies was to eliminate the second economy, enhancing increasing the formalised of small businesses. Small business promotion and broad-based empowerment (such as the broad-based black economic empowerment [BBBEE] strategy) were some of the vehicles used to achieve the strategy.⁸³ Access to credit and preferential procurement were therefore prioritised. In 2010, the government revealed The New Growth Path economic strategy (Republic of South Africa, 2010). The New Growth Path listed the strengthening of SMMEs' access to credit as one of its core strategic components aimed at increasing the economic participation of previously disadvantaged population groups. This goal also features prominently in the subsequent government's economic blueprint, the National Development Plan 2030, which aims to reduce unemployment by 6% and create 11 million jobs by 2030 (Presidency 2009). The policy document calls for the examination of the state's role in promoting SMMEs' access to credit.

In 2012, an amalgamation of Khula, the South African Micro-Finance Apex Fund (SAMAF) and the Industrial Development Corporation (IDC)'s small business wing led to the establishment of the Small Enterprise Finance Agency, which was mandated to provide credit to SMMEs. Furthermore, several other initiatives geared towards SMME development were introduced by provincial and local governments, as well as the private sector and civil society.

This policy process resulted in the creation of about five DFIs. These include Khula Finance Limited, Umsobomvu Youth Fund, the National Empowerment Fund, the SAMAF and the Micro Agricultural Finance Scheme

83. The Broad-based Black Economic Empowerment (BBBEE) is a program launched by the South Africa government to extend and expand meaningful economic empowerment of South Africans post-apartheid. It includes, amongst others, the development of skills, employment equity preferential procurement especially for previously disadvantaged groups, as well as enterprise development. At its core, it promotes the black entrepreneurship.

of South Africa (MAFISA). The establishment of DFIs was underpinned by the realisation that SMMEs were credit rationed by commercial banks because of a plethora of factors. These include, but are not limited to, information asymmetry, high transaction costs, the risk profile of these firms, lack of collateral and firm and entrepreneurship characteristics. DFIs were thus established to close the gap between SMMEs and large enterprises' access to funding. They were therefore required to address the above-mentioned shortcomings of the mainstream funders by providing funding to SMMEs whilst taking their unique characteristics into account.

For example, the challenge of collateral was addressed by the introduction of the Khula Credit Guarantee Scheme geared towards providing surety for SMMEs, which could not provide any collateral. Small Enterprise Finance Agency was, amongst others, tailored towards providing short-term loans to SMMEs who have cash flow challenges. Provincial DFIs such as the Eastern Cape Development Corporation were also established to provide low interest rate loans to SMMEs. These initiatives were complemented by the provision of non-financial support such as business registration, business plan development, market access, coaching and handholding of amongst others. In addition to the above strategies aimed at bolstering the SMME sector, the South African government established a stand-alone Ministry for Small Business Development in 2014. The Ministry is mandated to create a conducive environment for the growth and development of SMMEs and cooperatives through the provision of enhanced financial and non-financial support services and leveraging public and private partnerships. The mission of the department is to focus on enhanced support to small businesses and cooperatives with an emphasis on programmes to advance entrepreneurship amongst women, youth and people with disabilities to contribute to job creation and economic growth. The department also oversees all the above-mentioned SMME-related interventions by the government.

Despite all these different actions by the government, the private sector and civil society, access to credit continue to be a challenge for SMMEs. In 2012, the National Council of Provinces called a meeting of all commercial banks and DFIs to its Select Committee on Trade and International Relations to make presentations on their SMME services regarding SMME access to credit and the progress they made during the 2012/2013 financial year (National Council of Provinces 2012). In the meeting, both commercial banks and DFIs were asked to explain the continued credit rationing of SMMEs. For instance, the Development Bank of Southern Africa (DBSA) received more than 2000 funding applications during the 2012/2013 financial year but funded only 26 of the applications received. Furthermore, a study by Monyae (2011) on Financial Access and SMME Size in South Africa revealed that only 7% of the 5667 SMMEs surveyed had access to credit from DFIs. The reasons offered included SMMEs' inability to provide viable proposals that persuaded finance

institutions of their viability and sustainability, difficulty in accessing markets, hurdles posed by business regulations and legislations, the high-risk nature of SMMEs as well as their inability to provide collateral.

■ Development financial institution versus commercial lending

Development Financial Institutions are special-purpose financial institutions at the national and international levels designed to provide finance to the private sector for investments aimed at promoting economic growth and development in general (Monyae 2011). They pay special attention and focus on developing to provide finance for development. In this study, we focus on national DFIs that are accountable to the South African government. Development financial institutions accelerate sustainable socio-economic development through funding. They provide long-term capital and know-how to local SMMEs. The finance is generally offered in the form of long-term loans, equity investment and credit risk guarantees.

The kind of finance provided by DFIs is expected to meet the financial needs of the 'missing middle' (Berardi 2011). SMMEs lie in between the large enterprises that largely get funding from commercial banks and relayed institutions and micro businesses that can get funding from MFIs. On the one hand, SMEs are considered too costly and risky by commercial banks, and on the other hand, they are mostly too large to qualify for microfinance. Microfinance loans are often too small to meet SME capital needs. Hence, they are in what is referred to as the 'missing middle' in financing. The offerings made available by commercial banks to SMEs are often mismatched by their characteristics and needs. For example, banks charge high-interest rates, require collateral, audited financial statements, a good credit record and a good track record of loan repayments, to mention but a few. These result in the needs of SMEs being underserved, thus limiting their growth. Consequently, SMEs rely on informal sources such as family members, members' savings, overdrafts and money lenders who can charge high-interest rates for loans that are too small to cover the SME needs. In South Africa, DFIs were established to create a conducive and enabling environment for SME access to finance. Their establishment was intended to address SMEs that were struggling to access finance from commercial banks because of information asymmetry.

By virtue of their mandate, DFIs are meant to assume project risk and thus should provide lending that does not require much collateral (Monyae 2011). They are established to use project appraisal as the basis for making lending decisions. Similarly, SMMEs that are unable to provide collateral but present projects with clear cash flow plans, viable and sustainable proposals should be able to receive funding from DFIs. Project appraisal focuses on technical, financial, marketing, management, environmental as well as

economic aspects of the project. Loan repayment is based on the cash flow to be generated by the project.

Contrary to the above lending criteria and proposal assessment, commercial banks use risk asset management as a tool to assess the borrower's funding application. The tool is geared towards the 5C's of credit, namely character, capacity, capital, collateral and condition (Pretorius & Shaw 2004).⁸⁴ Character is the general impression the funding applicant makes on the prospective lender (Pretorius & Shaw 2004). Based on this impression, the lender subsequently forms an opinion as to whether the applicant is sufficiently trustworthy to repay the loan offered or not. Character focuses, amongst other things, on the experience of the business as well as its owner/employees. Ramlee and Berma (2013) pointed out that SMMEs are credit rationed because they have either no or inadequate experience because of short business history.

Capacity refers to the ability of the funding applicant to repay the loan. Under this factor, commercial banks consider the business plan of the firm, cash flow, payment history on existing credit relationships and turnover. Theory suggests that credit markets are riddled with information asymmetries (Stiglitz & Weiss 1981). This is particularly pronounced for SMMEs as they do not typically keep books that show their cash flow and other related information. As a result, funders cannot easily distinguish between good and bad potential borrowers' applications. This results in an adverse election where lenders could raise the interest rate to compensate for the risk.

Adverse selection refers to difficulties of choosing credit risk before credit is offered. Although such risk can be recompensed by raising the interest rate, such an increase would, in turn, swell adverse selection and moral hazard. Moral hazard refers to the lack of the ability of the lender to adequately enforce the agreed-upon credit agreement after credit has been lent to the borrower. It can be influenced by high-interest rates. After the loan has been issued, when financial markets are beset by information asymmetry, the lender has no way of monitoring how the borrower uses the loan. The high-interest rates can incentivise risk-loving borrowers to invest in potentially high return but high-risk ventures, which can result in high default rates. Therefore, moral hazard can also result in increased credit rationing as borrowers who may have good, but low return ventures get crowded out.

As the interest rate increases, this will draw riskier borrowers to the pool and will lure borrowers into taking on riskier projects with a higher prospect of failing to fulfil the debt obligation (Berardi 2011). The difficulty in using interest rates as an assessment tool is that it forces the financiers to employ non-interest assessment measures such as collateral, warrants or assessments

84. Various funding models are used and stated in the literature as summarised in Table 2. However, the facets of these various models are captured with the 5C faces approach .

based on screened information (Bosma et al. 2020). They will limit credit rather than let the interest rate increase to the market-clearing level.

Capital refers to the money personally invested in the business by the shareholder borrower and is an indicator of how much the shareholder has at risk should the business fail. The capital investment is also seen as proof of the shareholder's commitment to the business. Characteristically, many SMMEs do not have enough funds to make a meaningful contribution to the business capital. As a result, SMMEs fail to provide the owner's contribution required by funding institutions with a consequent rejection of their funding applications (Fatoki & Asah 2011).

Collateral often takes the form of fixed or movable property and can include financial assets such as shares and inventory financing. It is provided as security in the case the applicant fails to meet their repayment obligations. Empirical and theoretical evidence shows that collateral is one of the key reasons why SMMEs fail to access funding from the above-mentioned institutions (Kimutai & Ambrose 2013). Condition describes the intended purpose of the loan and the conditions under which the credit is being granted. Under this factor, the lender will consider local and macroeconomic conditions and the overall climate that could affect the business. Based on the above five factors, it can be concluded that commercial bank financing is borrower oriented, whereas that of DFIs is expected to be project focused.

Other lending technologies that are common in the literature include financial statement lending, small business scoring, financial statement lending, factoring and relationship lending. Apart from relationship lending, most aspects of the other technologies are captured by the 5C's approach discussed above. The document review discussed below was used to extract the criteria outlined by the lenders in assessing applicants. Table 10.2 captures that information and shows how it is related to the key funding technologies available in the literature. Financial statement lending uses a borrower's financial statement to evaluate an applicant. Credit scoring, in contrast, whilst based on the same notion, considers other assets and data from the financial statement that is put into an automatic scorecard. The scorecard then generates an automatic index that indicates whether the applicant will be funded or not. Asset-based lending uses a similar principle because it is based on the value of the business, which is used as underlying collateral. Factoring uses a business's credit and collection activities as a form of collateral that the funder can buy and therefore use to provide the SMME with financing. Like the other technologies, factoring is related mainly to the financial statement as well as the value of the business.⁸⁵

85. Mbedzi and Simatele (2020) and Berger and Udell (2006) provide useful background reading on lending technologies.

■ SMMEs in the South African context

■ Defining a small, micro and medium enterprise

Whilst the importance and significant contribution of the SMMEs are acknowledged in both developed and developing economies, there is no standard and uniform definition of an SMME. Countries across the globe use different terminologies to refer to this category of businesses that do not form part of the large enterprises. For example, some countries refer to them as 'small businesses', others such as the European Union, the World Bank, the UN and the World Trade Organisation, use the concept 'SMEs whilst others (including South Africa) refer to them as 'small, micro and medium enterprises' (SMMEs).⁸⁶ These concepts are very often used interchangeably though they differ in some aspects. Table 10.2 provides an overview of lending criteria.

In terms of the *South African National Small Business Act 102 of 1996* (as amended), in South Africa, the standard definition of an SMME incorporates

TABLE 10.2: Lending criteria.

Lending criteria	Lending technology	Literature reference
Business plan	5C, Small Business Credit Scoring, Relationship	Kabir et al. (2010); Pretorius and Shaw (2004)
Cash flow statement	Financial statement, 5C, Factoring, Small Business Credit Scoring	Stein (2002)
Owners' contribution	5C, Small Business Credit Scoring, Financial Statement	Brown and Moles (2014)
Collateral	Asset-based, 5C, Small Business Credit Scoring, Factoring, Financial Statement	Kabir et al. (2010); Berger and Udell (2006)
Tax clearance	5C, Relationship	Brown and Moles (2014)
Experience	Relationship, Small Business Credit Scoring	Kabir et al. (2010)
BBBEE status	5C, Relationship	Berger and Udell (2006)
Location of business	5C, Relationship, Small Business Credit Scoring	Berger and Udell (2006)
VAT registration	5C, Relationship	Degryse, Ongena and Tümer-Alkan (2009)
Education level	5C, Relationship, Small Business Credit Scoring	Ferri et al. (2019); Kabir et al. (2010)
Age of business	5C, Relationship, Small Business Credit Scoring	Hirofumi (n.d.); Kabir et al. (2010)
Form of business	5C, Relationship, Small Business Credit Scoring	Kabir et al. (2010)
Industry sector	5C, Relationship, Small Business Credit Scoring	Kabir et al. (2010)
Association membership	Relationship, Small Business Credit Scoring	Degryse et al. (2009)
Age of owner/manager	5C, Relationship, Small Business Credit Scoring	Kabir et al. (2010)
Average annual turnover	5C, Financial Statement, Factoring	Kabir et al. (2010)
Gender of owner/manager	5C, Relationship	Kabir et al. (2010)
Financial statements	Financial statement, 5C, Factoring	Berger and Udell (2006); Stein (2002)

BBBEE, Broad-Based Black Economic Empowerment; VAT, Value Added Tax.

86. Gibson (2008) provides the definition of an SME in developed and developing countries.

two aspects, namely the number of employees and the turnover of a firm excluding fixed property. In terms of the act, the two aspects vary according to industry sectors. The definition of SMEs by size is necessary, but it is not sufficient for an understanding of a sector where the realities are not only composite but also dynamic. In South Africa, a ‘small business’ is officially defined in Section 1 of the *National Small Business Act* of 1996 (as amended) as (Republic of South Africa 1996):

[A] separate and distinct business entity, including co-operative enterprises and nongovernmental organisations, managed by one owner or more which, including its branches or subsidiaries, if any, is predominantly carried on in any sector or subsector of the economy mentioned in Column I of the Schedule14. (p. 3)

The NSB Act further categorises small businesses in SA into four distinct groups, namely survivalist, micro, very small, small and medium, hence the use of the term ‘SMME’ for small, medium and micro-enterprises. However, the terms ‘SMME’ and ‘SME’ are used interchangeably in SA. The SMME definition uses the number of employees (the most common mode of definition) per enterprise size category combined with the annual turnover categories, the gross assets excluding fixed property, as summarised in Table 10.3.

It is important to note that the South African definition incorporates survivalist and micro-enterprises, which form the majority of the SMME category and play a significant role in the economy of the country. These groups do not feature in the definitions of many developed countries. Moreover, many businesses categorised as SMEs by the EU, World Bank, UN and other international organisations are regarded as large enterprises in South Africa. Below is a summary of the SMME categories in South Africa:

- *Survivalist enterprise*: The income generated is less than the minimum income standard or the poverty line. This category is considered pre-entrepreneurial and includes hawkers, vendors and subsistence farmers. In practice, survivalist enterprises are often categorised as part of the micro-enterprise sector.
- *Micro-enterprise*: The turnover is less than the VAT registration limit (that is, R150 000 per year). These enterprises usually lack formality in terms

TABLE 10.3: *National Small Business Act* definition of a small, micro and medium enterprise.

Enterprise size	Number of employees	Annual turnover	Gross assets (excluding fixed property)
Medium	Fewer than 100–200 depending on industry	Less than R4 to R50 million depending on industry	Less than R2 to R18 million depending on industry
Small	Fewer than 50	Less than R2 to R25 million depending on industry	Less than R2 to R4.4 million depending on industry
Very small	Fewer than 10–20 depending on industry	Less than R200 000 to R500 000 depending on industry	Less than R150 000 to R500 000 depending on industry
Micro	Fewer than 5	Less than R150 000	Less than R100 000

Source: The *National Small Business Act* 102 of 1996 (Republic of South Africa 1996).

of registration. They include, for example, spaza⁸⁷ shops, minibus taxis and household industries. They employ no more than five people.

- *Very small enterprise*: These are enterprises employing fewer than 10 paid employees, except for the mining, electricity, manufacturing and construction sectors, in which the figure is 20 employees. These enterprises operate in the formal market and have access to technology.
- *Small enterprise*: The upper limit is 50 employees. Small enterprises are generally more established than very small enterprises and exhibit more complex business practices.
- *Medium enterprise*: The maximum number of employees is 100 or 200 for the mining, electricity, manufacturing and construction sectors. These enterprises are often characterised by the decentralisation of power to an additional management layer.

■ SMMEs performance in South Africa

The creation rate of new SMMEs in South Africa is one of the lowest in the world. Despite increasing from a low of 4.3% in 2003 to 10.8% in 2019 (Bosma et al. 2020), it still remains below levels in other sub-Saharan African and peer emerging economies. For example, in 2014, South African total early-stage entrepreneurial activity (TEA) was significantly below that of Nigeria and Uganda, which stood at 39.9% and 25.2%, respectively. That of peer economies like Brazil stood at 17%. Given that the government, through the Growth Path strategy, anchored its hopes of 11 million jobs by 2030 as outlined in the National Development Plan on SMMEs, the country needs an increasing annual TEA of 14% – 16% (Kelley et al. 2015).

Table 10.4 shows that between 2015 and 2019, the number of SMMEs in South Africa increased by only 13.3%, from 2.25 million in 2015 to 2.55 million in 2019. This growth is significantly less than the 14% growth in the country's GDP over the same period. However, the percentage growth is significantly higher compared to the period between 2008 and 2015, where SMME growth in numbers increased by only 3%. The slow growth can be attributed to several constraints; chief amongst them is their lack of access to funding. This does not auger well, especially for a country whose labour absorption rate is 42.4% (STATSSA 2020). A breakdown of the number of SMMEs in the country by province from 2015 to 2019 is provided in Table 10.4.

The provincial data show that the Free State Province had the highest growth rate of SMMEs (25.7%), followed very closely by the Northern Cape (25.5%) and Western Cape (25.1%). The Eastern Cape is the only province to record a decline with a fall of 8.8% in the number of SMMEs between 2015

87. A spaza is a South African slang for a small shop in a township.

TABLE 10.4: Number of SMMEs by province from 2015 to 2019.

Province	Number of SMMEs in 2015 (Quarter 2)	Number of SMMEs in 2019 (Quarter 1)	Percentage difference
Western Cape	230 324	288 194	25.1
Eastern Cape	197 366	179 908	-8.8
Northern Cape	20 611	25 577	25.5
Free State	96 864	121 740	25.7
KwaZulu-Natal	373 434	390 115	4.5
North Western	112 856	126 725	12.3
Gauteng	785 321	903 220	15.0
Mpumalanga	185 399	219 083	18.2
Limpopo	249 663	295 978	18.5
Total	2 251 821	2 550 540	13.3

Source: STATSSA (2020).

SMMEs, small, micro and medium enterprises.

and 2019. The province is characterised by high levels of poverty, unemployment and inequality.

■ Methodology

To investigate how DFIs and commercial banks assess loan applicants, it was necessary to collect information directly from institutions as well as from openly available documents that are given to potential applicants. The data used in this paper are drawn from a broader study that investigated SMME access to finance in the Eastern Cape Province of South Africa. The province was chosen because it is the poorest province in the country. The province also has the highest levels of poverty (67.3%) in the country and an unemployment rate that is high at 39.5% compared to the national average of 29.1% (ECSECC 2019).

Two sets of data are collected, one from a wide range of lender documents and the other directly from the commercial banks and DFIs. The document information used in the study was systematically collected from DFIs and commercial banks' websites, brochures, annual reports, advertisements, newsletters, flyers and application forms. This information was used to determine the different types of information that lenders collect from loan applicants. This information then fed into the construction of the semi-structured questionnaire, which was administered to respondents of the lending institutions. The questions related to the criteria identified were phrased in a Likert scale style so that the respondents indicated how important each item was on a scale of 1–4. The data collected from the documents were also used to construct responses to the Likert-style questions based on the documents given and available to potential borrowers.

The lender population sample consisted of 13 institutions in two categories. The first category was made up of all the eight DFIs operating in the Eastern Cape Province. A list of these institutions was obtained from the Provincial Department of Economic Development and Environmental Affairs. The second category included the five major commercial banks that have offices in the Eastern Cape Province. All the banks are listed on the Johannesburg Stock Exchange and have asset values ranging from R500 billion to over R2000 billion.

A combination of document review and survey data was used to triangulate the results. This was particularly important in this study to eliminate researcher bias, given the small size of the population. The document review was used as an initial point of identifying the criteria used by both DFIs and commercial banks in assessing applicants. The questionnaire was piloted in one commercial bank and DFI to refine the instrument. The result of the lending criteria identified and included in the questionnaire was an 18-criteria list shown in Table 10.5.

TABLE 10.5: A summary of the comparison between the demand and supply findings of factors affecting small, micro and medium enterprise access to credit.

Lending criteria	SMME Survey findings	Funding institutions findings	Firm attribute
Business plan	Required	Required	36% with no business plan
VAT registration	Not required	Not required	69% not registered for VAT
Tax clearance	Required	Required	36% not registered for tax
Financial statements	Not required	Not required	60% with no audited financial statements
Average annual turnover	Required	Not required	70% with an annual turnover of more than R150 000
BBBEE status ^a	Required	Required	35% with no status
Cash flow statement	Required	Required	Majority with no cash flow
Own contribution	Required	Required	Majority with no owner's contribution
Collateral	Required	Required	Majority with no collateral
Form of business	Not required	Not required	Majority were close corporations
Industry sector	Not required	Not required	Spread across all sectors
Location of business	Not required	Required	Majority urban
Member of business association	Not required	Not required	Majority not affiliated
Age of owner/manager	Not required	Not required	36-60
Education level	Not required	Not required	Typically, tertiary
Experience	Required	Required	40% with no previous experience
Age of business	Required	Not required	Existence for more than three years
Gender of owner/manager	Not required	Not required	Majority men

^a, BBBEE status, Broad-based Black Economic Empowerment is an integration programme launched by the South African government to reconcile South Africans and redress the inequalities of apartheid by attempting to compensate for land that was dispossessed from Africans.

SMMEs, small, micro and medium enterprises.

■ Data analysis

The Likert scale responses obtained from questionnaires were transformed into the Relative Importance Index (RII). The RII is a technique used to calculate the relative importance of predictors when independent variables are correlated to each other and have been used in the literature to gauge the importance of factors in different settings (Holt 2014; Johnson & Lebreton 2004). This exercise was done in order to determine the importance of each of the 18-lending criteria identified. The aim was to find out if there is a fundamental difference between the lending criteria used by DFIs and those used by commercial banks. The RII analysis was selected to rank the criteria according to their relative importance.

The RII for each of the 18-lending criteria was calculated using the following formula:

$$RII = \frac{\sum W}{A * N}. \quad \text{[Eqn 10.1]}$$

Where:

W = the weighting given to each criterion by the respondents and ranges from 1 to 4 (where 1 = not important, 2 = somewhat important, 3 = important and 4 = very important),

A = is the highest weight (i.e. 4 in this case) and

N = is the total number of respondents (i.e. in this case, 8 for DFIs and 5 for commercial banks).

The higher the value of RII, the more important is the lending criterion. In this case, the highest RII was 1.000, and the lowest was 0.250. The RII results for each criterion were ranked in order of importance.

■ Lending criteria applied to SMMEs

In this section, we discuss the lending criteria to evaluate whether the DFIs are fulfilling their role of improving access to credit by SMMEs, or not. We use the ranking of the RII derived from Equation (1) as the basis of the analysis. The RII for each type of institution is calculated and ranked in descending order to show the importance of each criterion. We use survey ranking as the primary criteria for ordering. The survey data were provided by lending practitioners through the questionnaire. We interpret that data to represent practice. As the data used to calculate the document index were obtained from documents that are in the public domain and therefore used by applicants as the source of information for making loan applications, we interpret this index to represent the quality of communication to potential applicants. With

reference to Table 8, we start by discussing the criteria used by DFIs, followed by those used by commercial banks. We then compare the criteria to see if the assessment of credit applicants differs in any significant way between the two types of funders. We focus on indices ranked above 0.5. Table 10.6 provides details of the importance of lending criteria by type of lender.

■ Criteria used by DFIs

The RII results of the DFIs indicate that a bankable business plan (RII = 1.000) is the most important criteria used for evaluating loan applications. This is followed by cash flow statements, owner's contribution and collateral, all of which are considered equally important in practice. Each of these has an index of 0.75. The indices for cash flow and owner's contribution from the document review are higher than those from the survey at 0.812 and 0.781, respectively, showing a discrepancy between practice and the criteria communicated to potential applicants.

Three other criteria are deemed necessary by DFIs. These include tax clearance, experience and BBBEE status. The survey results show that these three criteria are essential, and all have indices above 0.6. The document

TABLE 10.6: Importance of lending criteria by type of lender.

Lending criteria	Commercial bank ranking				DFI ranking			
	Survey		Doc review		Survey		Doc review	
	RII	Rank	RII	Rank	RII	Rank	RII	Rank
Business plan	1.000	1	1.000	1	1.000	1	1.000	1
Cash flow statement	1.000	1	1.000	1	0.750	2	0.812	2
Owners' contribution	1.000	1	1.000	1	0.750	2	0.781	3
Collateral	1.000	1	1.000	1	0.750	2	0.750	4
Tax clearance	0.900	2	1.000	1	0.730	3	0.500	5
Experience	0.850	3	1.000	1	0.718	4	0.500	5
BBBEE status	0.750	4	0.800	2	0.625	5	0.500	5
Location of business	0.700	5	0.750	3	0.531	6	0.350	6
VAT registration	0.550	6	0.600	4	0.375	7	0.250	7
Education level	0.437	7	0.550	5	0.375	7	0.250	7
Age of business	0.400	8	0.350	6	0.375	7	0.250	7
Form of business	0.350	9	0.281	7	0.343	8	0.250	7
Industry sector	0.350	9	0.250	8	0.343	8	0.250	7
Member of business association	0.281	10	0.250	8	0.281	9	0.250	7
Age of owner/manager	0.250	11	0.250	8	0.281	9	0.250	7
Average annual turnover	0.250	11	0.250	8	0.281	9	0.250	7
Gender of owner/manager	0.250	11	0.250	8	0.250	10	0.250	7
Financial statements	0.250	11	0.250	8	0.250	10	0.250	7

DFI, Development Financial Institution; RII, Relative Importance Index.

review, however, showed that the information given to potential applicants is that these criteria are not very important. The document review indicated an index of only 0.5 for all three criteria. The implications of these discrepancies are discussed further. Both the survey and document indices for the rest of the criteria show that these are not very important in the process of making lending decisions by DFIs. These factors registered an RII less than 0.5 and were consequently considered insignificant.

■ Criteria used by commercial banks

Results from commercial banks show that the business plan, cash flow statement, owner's contribution and collateral are the essential criteria in making lending decisions. The results from the survey and those from the document review all allocate an index of 1 for each of these criteria showing that they are necessary conditions for successful loan applications. This means that all the commercial banks allocated a scale of 4 (very important) to all these criteria. The next most important criteria are the tax clearance and experience of the applicant with indices of 0.9 and 0.85. The information communicated to applicants, however, suggests that these criteria are necessary as the document review had an index of 1 for both. BBBEE status and the location of business are also important lending criteria and are ranked 4th and 5th in the survey results, although again, the document review shows that applicants are made to believe that these criteria are more important than they are in practice. VAT registration falls just below the threshold in the survey results, but the document review suggests applicants are made to believe that this criterion is important when making lending decisions.

■ The SMMEs lending criteria and the development mandate

The results show that both commercial banks and DFIs use various lending technologies but with more reference to the 5Cs of lending, although the conditions criteria are not considered to be very important. The focus of commercial banks reflects their commercial nature, paying attention to the likelihood of default and the possibility of profit. By focusing on the business plan and their cash flow statements, the banks ensure that funded projects are viable and that the likelihood of profit and repayment is high. Similarly, DFIs also indicate that a good business plan is necessary for a loan application to be approved. A business plan shows the applicant's commitment and program of long-term sustainability.

The literature supports this focus on a bankable business plan as it is important in ensuring that the funded projects are viable (see Hassan Abdesamed & Wahab 2014; OECD 2015; Pretorius & Shaw 2004). However,

small businesses struggle to draw up business plans even when they have a good idea. They often resort to asking someone else to write their business plans. As a result, they fail to clearly articulate those plans and fail to get their loan applications approved. A survey of the Banking Association of South Africa showed that lenders indicated that SMMEs need to make significant improvements in their business plans in order to get funding (Banking Association South Africa 2018).

A good project can also fail because of various factors, including changes in demand, external shocks and the ability of the owner or manager to execute the business plan. To account for these unobserved characteristics, banks indicate that the owner's contribution and collateral are required. DFIs also indicated that these criteria are very important. The owner's contribution gives a greater incentive to manage the business more prudently and minimise the possibility of failure and loan default. Should the business fail, collateral protects the lender's investment in the project and allows the bank to recover at least some of the funding provided.

Collateral is a dominant method used by banks to screen applicants in the presence of high information asymmetry. However, it is also well-documented that SMMEs do not have collateral. They lack physical capital, which can be used as security. Consequently, they are rationed out of credit markets (Abraham & Schmukler 2017; Rahman et al. 2017). Similarly, out of the 12 most important financing obstacles for SMMEs, Beck and Demirguc-Kunt (2006) show that collateral rates are the third most important obstacle. The focus of DFIs is to foster growth and sustainable development. The DFIs we focus on in this paper have a special mandate to focus on SMMEs. Therefore, by design, the DFIs are supposed to provide alternative financing mechanisms for markets where commercial banks are reticent about providing funding because of the lack of collateral. Our results show that collateral plays a very important role in the success of funding applications to DFIs. In fact, this is one of the few criteria where practice and what is communicated to potential applicants have the same index.

Similarly, most small businesses do not have sufficient capital to invest in their businesses. Most of them get start-up capital from family and friends. They are placing great importance on owner contribution which disadvantages SMMEs and further rations them out of the credit market. A tax clearance certificate is also deemed important. It provides additional information that shows that the applicant is compliant with the country's tax requirements and does not owe anything to the Revenue Authority. This information helps lenders to determine the character of the business and the probability of default. Many SMMEs in South Africa are informal. This means that they are unlikely to have the required tax registration and the consequent tax clearance. Similarly, experience is also deemed important for funding. Given the

development mandate of the DFIs, emphasis on experience would preclude the funding of greenfield microbusinesses, which are very important for development and livelihoods especially given the high attrition rates amongst SMMEs in the country. The South African government put the BBBEE status program as a transformative approach to business to redress the inequalities from the apartheid era. DFIs do not pay much attention to this criterion. In fact, information that is communicated to potential applicants suggests that this criterion is not important at all. The document index is only 0.5, whilst the survey index is 0.625.

■ Conclusion

The review of funding criteria in this paper shows that DFI criteria for making funding decisions for SMMEs in South Africa are not that different from those used by commercial banks. Both types of institutions emphasise the necessity of a business plan. Furthermore, the DFIs also indicate that cash flow, owner's contribution and collateral are very important factors in making decisions to fund SMMEs. However, these requirements are at odds with the characteristics of the majority of the SMMEs in the country. Most SMME owners do not know how to write business plans and lack physical capital that can be used as collateral. Furthermore, as most of them rely on family and friends for capital, they are unlikely to provide sufficient capital for the owner's contributions. The tax clearance requirements exclude many SMMEs who are informal and therefore not registered for tax. Transformation also ought to be a priority for the DFIs, considering the country's agenda to redress the effects of the dispossessed population groups and apartheid. Relationship lending has been adopted successfully in lending. Because of the development mandate, the government can provide schemes of absorbing the high transactions costs associated with using relationship lending.

Although these criteria are put in place to ensure the sustainability of the lender, it limits the extent to which the DFIs can fulfil their development mandate. The literature suggests some innovative alternatives that can be used by DFIs in place of traditional assessment criteria. For example, applicants with viable business plans can be mentored through public guaranteed schemes. These schemes can be offered directly through the DFI, where a separate fund can be set up or through private commercial bank supported schemes using instruments such as tax incentives.

Another approach that is working very well in microfinance and could be adopted in various ways is group lending. Taking account of the caveats noted in the literature, group liability would improve the repayment rates, reducing the risk for the DFIs at the same time allowing SMMEs to access the much-needed funding. Finally, developments in technology have increased the possibility of creating a digital footprint for SMMEs. They can use their

presence online through services such as MM as an alternative way of creating a credit history that they can make available to potential lenders. Reverse factoring can also be used where SMMEs can post their accounts receivable online. These can then be bought by financial institutions giving SMMEs an alternative source of funding.

Social performance assessment of alternative financial institutions: Lessons from South Africa

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■ Introduction

Despite numerous global initiatives, poverty has continued to grow, which is worrisome, especially given the SDG targets in reach. Although poverty dominates many government agendas, some argue that more time should be spent on creating a conducive environment for businesses (Gadisi, Owusu-Sekyere & Ogundeji 2020). Furthermore, despite the efforts by various governments to address this issue, their actions remain necessary but not sufficient to solve the problem completely. Unlocking finance is touted to be one of the key solutions to addressing many social ills, as small businesses can easily finance operations; - however, such sectors are often frowned upon by financial institutions as too risky. This has led to the emergence of many NGOs to close any gap or supplement any work done by governments. To achieve this, the NGOs have utilised self-help activities as a vehicle to emancipate the poor and marginalised (Banks, Hulme & Edwards 2015; Green & King 2013).

South Africa is faced with three main socio-economic ills: poverty, unemployment and inequality; Van der Westhuizen and Swart (2015) - *and the fourth one of low economic growth*. The effects of these social challenges are, however, more common in some societal groups as compared to others. For instance, evidence has shown that these social challenges are more pronounced amongst the black African population group, females and youths in general (Klasen & Woolard 2008; Phan 2005; Woolard, Harttgen & Klasen 2011). There are various initiatives and opportunities to help these marginalised groups to emancipate themselves from such ills. In many cases, the root of the problem is traced back to lack of access to affordable finance (Levine 1997; Moreno 2011; Rewilak 2017). This is the case even in countries with well-developed financial sectors such as South Africa (Abel et al. 2019; Muyambiri & Odhiambo 2018). There is a significant amount of evidence that links financial sector development and growth (Akhter, Liu & Daly 2010; Jeanneney & Kpodar 2011; Kavya & Shijin, 2020; Kheir 2018; Moreno 2011; Weychert 2020). Mainstream financial institutions have failed to help address these challenges, and general financial development does not automatically lead to growth and redress of social ills.

Because of the failure of the sophisticated mainstream financial institutions to effectively finance the poor and marginalised population, the World Bank (2008) has advocated for microfinance as a potential solution to the problem. The bank further suggests that microfinance seems to be ideal as it is a continuum between pure capitalism and socialist economics. One such opportunity through which microfinance is a fundamental component is through the formation of financial cooperatives, which in essence are a type of microfinance established based on SC (Klasen & Woolard 2009). Moreover, another demerit of the mainstream financial entities is that they seldom supply credit to the poor, marginalised and less educated part of the population.

When they do, they often charge steep interest rates. A case in point in the context of South Africa is that of inflated and discriminatory bond rates by a South African bank (Ryan 2019). Consequently, MFIs, in the form of CFIs,⁸⁸ have been formed to address such anomalies. In general, cooperatives can take various forms, such as agriculture, manufacturing or finance. Of interest to this study are the CFIs. Their effectiveness, however, depends on understanding how they function, how human dynamics interplay and how this affects their operations.

■ A brief literature review on CFIs

In general, economies operate through markets, whether these markets are formal or informal. Di Giannatale, Elbittar, Roa and López (2016) reveal that financial markets and banks are not perfect and are fraught with information asymmetries. Asymmetric information occurs when two or more economic agents involved in an agreement possess different forms of material and decide not to share the information amongst themselves (Sceral, Erkoyuncu & Shehab 2018). The impact of asymmetric information is felt in two problems typical in financial markets: adverse selection and moral hazard (Keane & Stavrunova 2016). The former relates to problems of assessing risk before the loan is made because the potential borrower has more information than the lender, whilst the latter occurs after the lending transaction has been completed. In the latter, the lack of information means that the lender cannot monitor how the borrower uses the loan, which can result in default. Two crucial factors can explain why such problems exist, especially amongst marginalised groups. First, the lack of well-documented credit and work histories makes it difficult for lenders to assess the level of risk (Glode & Opp 2016). Second, the literature also shows that widespread financial illiteracy within these population groups leads to opportunism whereby banks end up overcharging the poor or competing on non-price terms (Hsieh, Dawson & Carlin 2013; Tong & Crosno 2016).

According to Grant (1996), information asymmetry can be resolved by two mechanisms: the level to which joint material exists amongst subjects and the level of administration amongst group participants. These characteristics can be found in common bond institutions like CFIs. This is because the common bond attribute of CFIs reduces the information asymmetry within its member clients and has positive effects on performance, trust, satisfaction and commitment. Furthermore, it has the potential to bring about sustainability as members are connected and have a common understanding before coming

88. CFIs are one type of MFIs that are established as a co-operative with the primary function being to put resources (savings) together and grant loans mainly to members and may extend to others (clients) at a higher lending rate.

together to form the business. The common bond may be based on residential location, workplace or religious beliefs, amongst other things. Members bring SC to the business of lending, which helps reduce the effects of information asymmetry typical of the financial sector (Levin ,2014). Moral hazard is substantially reduced because of group commitment. Nevertheless, it is not eliminated because common bonds do not necessarily improve credit worth.

CFIs focus on providing sizeable credit at affordable rates targeting the poor and marginalised. These types of groups are often considered financially 'unbankable' by traditional financial institutions. When individuals have access to correctly priced credit, they have a greater incentive to invest in their own betterment, which in turn leads to more significant economic activity and higher social welfare for the whole community (Cassar, Crowley & Wydick 2007). Conversely, when the financial system does not adequately serve a community, social decay and poverty persist (Keyes 2006).

CFIs have the mandate of achieving the 'double bottom line' - wherein an institution aims at addressing social goals such as poverty reduction, promoting education and outreach on the one hand, and aiming for sound financial performance and operational sustainability on the other side (Abrar 2019). Therefore, the mission is to reach out to as many of the target population as possible whilst ensuring their own financial sustainability. The success of such financial institutions can be assessed by looking at their financial and social performance or what is often referred to as outreach in the literature. Whilst evidence exists on the financial performance of CFIs, social performance is less studied because of limited data (Hasan & Batra 2018). Social performance can be assessed by looking at how well they perform in improving the welfare of their members. However, outreach depends on the target population taking the initiative to join and participate in the cooperative model. This is because a cooperative is an autonomous association of persons united voluntarily to meet their everyday economic, social and cultural needs and aspirations through a jointly owned and democratically controlled enterprise (Webb & Cheney 2014). Therefore, the outreach of the CFI may be affected by the level of empowerment of potential members.

Jayanthi (2016) argues that the success of CFIs can be evaluated using two approaches: the institutional and welfare approaches. An institutional approach is an approach that measures success based on the institutions' sustainability, whilst the welfare approach measures the success of how well CFIs fulfil the need of the very poor in the short term. Fried and Lovell (1994) and Taylor (2006) argue that because of the importance of social bonds in CFIs, the best way to understand their relevance in society is to investigate the role that the self-help nature of their business plays. This focuses on the welfare impact or approach. Asante (2015), Fairbairn et al. (1997) and Mavenga (2010) support this view. They argue that the existence of CFIs is not driven

by rationality but rather by social behaviour. For this reason, evaluating the social purpose of CFIs is a better measure of the achievement of the outcomes. Similarly, economists have identified CFIs as one of the vehicles that can improve financial inclusion and community development (Cardoso et al. 2019; Myers et al. 2012). Despite this, the literature suggests that the effectiveness of CFIs is hampered by a lack of sustainability (Duguma & Han 2018; Kusumajati & Titus 2017; Nyankomo & Aziakpono 2015). Therefore, there is a need for studies that link the performance of CFIs both in their outreach and financial sustainability.

There is a significant amount of literature on CFI performance, particularly in the context of developing countries (Alexopoulos & Goglio 2011; Cook 2014; Temu & Ishengoma 2010; Yamori, Harimaya & Tomimura 2017). However, the literature has concentrated on measuring financial performance. There is a paucity of research in the measurement and analysis of social performance. Nevertheless, measuring social performance is central to provide credence to the existence of CFIs. A well-functioning, practical and welfare-enhancing CFI should be able to reduce poverty and help emancipate the marginalised. To do this, the CFI must achieve the double bottom line noted above; there must be self-sustainability to guarantee social performance. To date, literature linking the two is sparse (Mushonga, Marwa & Arun 2017). This chapter contributes to this gap by linking financial performance and social performance.

In addition to the focus on financial performance, existing studies use reported survey data that have been known to have inherent reporting biases (Abrar 2019; Hasan & Batra 2018). This study has the advantage of using annual financial statements instead of reported survey data. Financial statements more accurately reflect the financial performance of the CFIs. This allows for an assessment of the 'double-bottom line' model of CFIs, which is a good way to assess whether CFIs are living to their mission and whether they can sustainably do so.

The definition of social performance used in the study focuses on outreach and includes both breadth and depth dimensions. The breadth of outreach is measured by the number of both members and non-member clients. Moreover, a CFI can be said to have a greater breadth as its clients are sourced mainly from the marginalised groups who are excluded from mainstream finance. In contrast, the depth of outreach is measured by the average loan size (Cull, Demirgüç-Kunt & Morduch 2007; Olivares-Polanco 2005). A lower value of loan per capita implies deeper outreach as it can be argued that the institution is catering (reaching out) to those who need finance the most by providing adequately sized credit (Hasan & Batra 2018). This indicator can be calculated by computing the ratio of an average loan to gross national income (GNI) per capita, which compares how deeply an institution reaches out in relation to national income distribution (Abrar 2019; Rosenberg 2009). A loan size to GNI

per capita value below 20% indicates the CFI is serving very poor clients. Other indicators of interest are a proportion of female and youth clients served by the CFI, as well as the share of wealth per member (proxied by per capita income, capital and total assets).

Against this background, this study attempts to contribute to this scanty literature on the social performance of CFIs. Data on South African CFIs are used to assess how well the CFIs perform both their social and sustainability functions and the factors that determine their success. The study is structured as follows: following this introduction, a summary of the key issues within the South African CFI sector is discussed. This is followed by a discussion of the methodology and empirical results and, finally, the conclusion.

■ CFIs sector in South Africa – A brief overview

CFIs in South Africa are established through registration as cooperatives under the Department of Trade and Industry and as financial institutions under the Prudential Authority of the South African Reserve Bank. South Africa is well-known for informal savings clubs known as Stokvel, which have combined savings running into billions of Rands Mulaudzi (2017) and millions in membership. A Stokvel is a popular rotating credit union and saving scheme that is mainly used by the poor for economic independence. Most of the South Africans may appear banked, especially after the Mzansi account drive (Kostov, Arun & Annim 2015). However, usage of the banks is very limited, and most of the accounts are dormant despite banks maintaining them (Maarten Mittner 2010). At best, this distorts the financial inclusion indicators in South Africa (Finmark Trust 2009).⁸⁹ In addition to Stokvels, South Africa has a large financial informal sector that holds and rotates funds. This includes burial societies and other ROSCAs such as family and friends saving clubs (Kibuuka 2007). The existence of ROSCAs, like other cooperatives, depends on a common bond, as a group of people who know and trust each other consent to contribute a fixed amount at regular intervals to a fund. These savings clubs play an essential role in meeting basic households needs such as food, necessities and improving general welfare (Matuku & Kaseke 2014).

The government has noted the critical role played by these savings clubs. Accordingly, the Co-operative Banks Development Agency (CBDA) was set up. The overall objective of the CBDA is to help the Stokvel and other organised SGs become CFIs and to develop the existing CFIs into cooperative banks. The process is expected to result in increased access to financial products by the poor, less educated and often marginalised populace, with the potential to

89. 1.6 million accounts were classified as dormant within the first four years after the Mzansi account operation.

unlock inclusive growth (Rewilak 2017). This drive towards formalisation has not been without challenges. It has not been able to reproduce the success of the informal structures in local communities. There has been an overall dip in the number of CFIs nationally over the recent years. Notably, the number of CFIs declined from 121 CFIs in 2011 to 26 CFIs in 2015 (Mushonga et al. 2017). The decrease in CFIs can be partially explained by the setting of the minimum membership and increase in membership share capital contribution to 200 and R100 000, respectively, by the CBDA. This forced the weak entities out of the formal market back to the informal set-ups. The cycle continues with the expectation that the informal groupings would grow and formally register as CFIs and eventually register as cooperative banks and ultimately contribute to poverty alleviation.

The South African CFI sector is still in its nascent stage (in terms of membership and asset size), with the oldest CFI having been registered in the North Western Province between 1994 and 1996. Currently, there are only five cooperative banks in South Africa and 31 CFIs. These include Financial Services Cooperatives and Savings and Credit Co-operatives with combined total assets below R500m. The CFIs are far from meeting the requirements for becoming cooperative banks.⁹⁰ Furthermore, as noted, the process of formalising and increases in minimum memberships and capital has mostly discouraged CFIs and pushed them back into the informal sector. At registration, each CFI is required to convince the registrar that a well-defined common bond exists.

The formation of CFIs and their advancement to various stages is a well-regulated process. In many developing countries, financial cooperatives are fully regulated by a general cooperative societies' law that regulates all other types of cooperative organisations, whilst in other countries, financial cooperatives can fall completely under the regulatory and supervisory responsibility of the central bank or the bank superintendence (Khafagy 2018). In South Africa, the CFIs are governed by the *Cooperative Act of 2005*, *Cooperative Banks Act of 2007*, *Financial Sector Regulation Act of 2017* and the *National Credit Act of 2005*. The *Cooperative Act* provides for the registration of the CFIs as cooperatives at the Companies and Intellectual Property Commission, whilst the *Co-operative Banks Act* gives the CFIs the deposit-taking licence. The *National Credit Act* regulates the lending business of the CFIs in terms of the interest rates and the fees that are associated with lending. The *Financial Sector Regulation Act* gave rise to the Prudential Authority and Financial Sector Conduct Authority that are charged with the prudential regulation and market conduct regulation, respectively. The multiplicity of regulations has negatively affected the number of registered

90. Co-operative banks are different from co-operative financial institutions in that the former has expanded scope, including taking deposits from the general public and are linked to the national payment system.

CFIs, and the numbers have declined. The most stringent requirement that is affecting CFI formation is the capital and membership requirements. Informal SGs from which these CFIs are expected to grow have small numbers and very flexible contributions.

Moreover, those that have already been formed are failing at alarming rates (Mushonga, Marwa & Arun 2017). South African CFIs also perform poorly in terms of borrowers per member when compared to peer groups in the rest of Africa (Bauman 2009). Anecdotal evidence suggests that other challenges such as high loan delinquency, low membership, low savings growth, low asset growth, low contributions to capital, amongst others have been cited. If these problems persist, CFIs cannot contribute much to the transformation agenda. In view of this, the study seeks to provide empirical evidence that reviews the performance of the CFIs between 2010 and 2016. Furthermore, the determinants of such performance are investigated.

■ Empirical analysis: Materials and methods

The study utilised financial statements-based data for all registered CFIs in South Africa between 2010 and 2016. The data include an unbalanced panel with a maximum of 31 CFIs and a minimum of 21. First, the study presents descriptive statistics. This is followed by a discussion of transition matrices to see how CFIs are moving between different stages of performance. Finally, a seemingly unrelated regression model is estimated to investigate the factors that affect the social performance of CFIs. The variables used in the analysis and their descriptions are summarised in Table 11.1.

■ Descriptive statistics

A summary of all the variables is presented in Table 11.2. On average, individuals hold loans valued at between R0 and R151 000, with an average of R10 318 (approximately US\$700) per year, which can be considered microloan. One of the measures of outreach used in the literature is the size of the loan. CFIs are expected to make most of their loans to the marginalised. Consequently, their loan size is expected to be small. The study uses the average loan to GNI per capita to measure this. In line with the literature, if the GNI per capita is less than 20%, the CFIs are deemed to serve the poor. The statistics also show that, on average, the CFIs are serving the poorest, given the mean depth of 0.17 (an average loan is approximately 17% < 20% of GNI per capita). The reach of CFIs is in line with the general mission and purpose of such organisations and therefore can be expected to contribute to poverty alleviation (Banks et al. 2015). However, the numbers of members and growth prospects of the CFIs indicate that they are not performing well. On average, each member

TABLE 11.1: Key indicators to measure performance in CFIs.

Variable	Indicator/proxy	Description
Social performance	Outreach (depth)	The nature of members and clients serviced by the CFI. This measure helps to assess whether a CFI is reaching the poor clients as per the primary goal and mission. It is computed as an average loan as a percentage of Gross National Income- a value of 20% or less means the CFI is serving the poorest. This proxies' depth of social performance. With the same members, an increase in this ratio over time means enhancement of the welfare of the members of CFI- therefore, a CFI is socially successful.
	Capital per capita (breath)	This is the net worth of each member based on ownership proportion (computed as total capital divided by the total number of members). A higher value means increasing claim/ownership on the CFI, to which any future benefits will accrue. This captures breath, so as the indicators below: <ul style="list-style-type: none"> • Average loan size: total loan portfolio divided by the total number of members indicates whether the loans are sizeable (small) or not as per CFI goals. Smaller loans are construed to indicated serving the poor, who would possibly not get such small loans from the mainstream financial institutions. • Average savings: total savings divided by the total number of members, indicates the net worth of everyone. • Number of credit clients: over and above the members of a CFI, there are other clients (non-members) - the total of clients and members indicate the reach of CFI - more people exposed to CFIs. • Women/youth participation: these are mostly the marginalised groups in society, and the higher their proportion within the CFI sector, the better for fighting poverty and other social ills. Data permitting the portion of those in rural areas compared to the urban-based counterparts would also serve the same purpose.
Loan quality	Delinquent loans	The proportion of delinquent (bad) loans to total loan book. The higher the value, the weaker the social capital, which is touted to be the enabler for complete and timely repayment.
Financial sustainability	Operational self-sustainability (OSS)	How well positioned a CFI is to be able to cover all operational costs from operating income (i.e., without reliance on donations and other forms of support).
	Return on equity (ROE)	Ratio measures the profitability of the institution. This is more important for for-profit institutions. For non-profit institutions as CFIs, it can be used as a measure of commercial viability.
	Return on assets (ROA)	A measure of profitability, reflecting both the profit margin and the efficiency of the institution, as can be seen from the following identity.
Efficiency	Operating expense ratio (OER)	Measures the institutional cost of delivering a loan and other services. The ratio is influenced by loan size and portfolio size and characteristics of CFIs such as rural vs urban location
The scale of the size of institution		<ul style="list-style-type: none"> • Log of total assets • Log of total loans • Number of members
Cost of issuing a loan	Cost per borrower (CpB) Ratio	Operating expenses/period average number of borrowers. This measures the cost of maintaining an active borrower.
Cost of the funding loan portfolio	Funding expenses ratio (FeR)	Interest and fee expenses/ period average gross portfolio. This ratio measures the total interest expense incurred by the institution to fund its loan portfolio.

DeR, debt-to-equity ratio; MFI, microfinance institution; CFI, cooperative financial institution.

Table 11.1 continues on the next page→

TABLE 11.1 (Continues...): Key indicators to measure performance in CFIs.

Variable	Indicator/proxy	Description
Cost of funds proportion	Cost of funds ratio (CoF)	Interest and fee expenses/ period average funding liabilities. This measures the average cost of the company's borrowed funds and shows whether it has access to low-cost funding sources, such as savings
Risk leveraging	Debt-to-equity ratio (DeR)	The relative proportion of shareholders' equity and debt is used to finance a company's assets. This indicates the safety net to enable absorption of losses before creditors are at risk.
Average income receipt	Portfolio yield (yield)	Interest and fee income/period average gross portfolio. This measures how much money the MFI collected from its clients.
Lending rate	Cost credit	The lower the rate, the more affordable are the loans. CFIs are thought to be offering affordable rates to increase reach.
Productivity	The inverse of operating costs	Higher operational costs mean using more financial resources to deliver on the goals of the institution; lower costs indicate higher productivity – good use of available resources to produce more output.
Profit margin		The proportion of profit to total assets of the CFI, measuring the profitability of the institution.
Yield		Measure average income received from lending (loans), calculated as interest plus fee income from loans divided by average gross loan portfolio.

DeR, debt-to-equity ratio; MFI, microfinance institution; CFI, cooperative financial institution.

TABLE 11.2: Descriptive statistics.

Variable	Observations	Mean	Std. Dev.	Min	Max
Gross loan PC	179	10318.149	25458.293	0	151001.36
Depth	179	0.17	0.462	0	3.327
Reach quant (number of clients)	180	1908.667	2637.155	17	18738
Savings PC	179	13621.476	32716.038	0	206022.3
Total Assets PC	179	12745.172	31944.66	-10.998	244741.47
ROE	175	-0.2	5.415	-39.207	32.331
ROA	175	46.375	131.111	-19.412	996.373
OER	164	0.895	1.814	0	13.686
CpB	179	529.109	720.012	0	4609.941
FeR	164	0.048	0.096	0	0.961
CoF	174	0.028	0.044	0	0.456
DeR	179	19.629	152.2	-284.583	1732.215
Total capital PC	179	992.859	2615.594	-16812.471	16339.059
Net loan income PC	179	1362.61	2903.364	-1.94	16218.805
Del per loan (delinquency loans)	88	-0.308	3.766	-32.128	9.795
Women participation	97	0.365	0.272	0	0.899
Men participation	97	0.305	0.251	0	0.845
Size loan (log of loan portfolio)	164	13.86	2.137	7.298	17.938
Size total asset (log of total assets)	176	14.252	2.111	5.268	17.902
Gross margin ratio	177	0.799	0.288	-1.251	1
OSS	176	149.714	168.045	0	1522.056
Yield	164	0.323	0.367	-0.013	2.41

PC, Per Capita; ROE, Return on equity; ROA, Return on assets; OER, Operating Expenses Ratio; CpB, Cost per Borrower Ratio, FeR, Funding expenses Ratio; CoF, Cost of Funds Ratio; DeR, Debt-to-Equity Ratio; Del, delinquency; OSS, Operational self-sustainability. Obs- observations

saves R13 621 per year, approximately R1135 per month (US\$71).⁹¹ The highest saving member saves R206 022 (approximately US\$14 050) per annum. Another way of assessing the net worth of each member is through average total assets, which is an average of R12 745 per year, which is in line with the savings figure.

Women participation as a percentage of total clients is higher than that of men. It is on average more than that of male counterparts (36.5% > 30.5%) in relation to the total number of clients. This suggests that the CFIs are reaching out to the marginalised groups within communities. The data do not contain the number of youths serviced by these CFIs, which is another dimension worth monitoring. Table 11.2 provides the summary statistics of all the other variables.

Key outreach indicators are shown in Table 11.3. The first one shows the loan size, which has been declining over time. It is captured as the GNI per capita. As indicated, this measure shows compliance with the social goal if it falls below 20% of the GNI. Table 11.3 shows that other than 2010, the mean has been below 20% throughout the start period and has been declining. This suggests that the CFIs are offering services to the expected population groups.

TABLE 11.3: Mean of outreach and sustainability indicators over the study period.

Indicators	Year	N	Man	SD	Min	Max
Average loan size as a percentage of GNI (depth)	2010	21	0.394	0.958	0	3.327
	2011	31	0.187	0.48	0	1.931
	2012	27	0.171	0.407	0	1.723
	2013	21	0.135	0.307	0	1.148
	2014	23	0.103	0.221	0	0.727
	2015	28	0.105	0.236	0	1.005
	2016	28	0.128	0.314	0	1.384
Operational self-sustainability	2010	21	138.461	134.531	15.486	491.332
	2011	30	127.116	124.513	9.733	560.431
	2012	27	123.735	119.245	0.247	531.215
	2013	20	213.211	325.561	2.713	1522.056
	2014	23	152.905	172.972	0	671.989
	2015	27	154.925	115.31	16.193	465.352
	2016	28	154.414	152.074	0.956	595.168
Portfolio yield	2010	20	0.513	0.65	0	2.027
	2011	27	0.304	0.197	0	0.783
	2012	26	0.313	0.243	-0.013	1.149
	2013	20	0.395	0.43	0.02	1.693
	2014	21	0.227	0.186	0	0.588
	2015	26	0.293	0.455	0	2.41
	2016	24	0.257	0.193	0.08	0.842

GNI, Gross national income.

91. As of January 2021, the average exchange rate is at R15.90/US\$.

Similarly, the OSS indicators are above 100%. Therefore, the CFIs are operationally self-sustainable. The highest OSS was 213% in 2013. This means the CFIs are generating enough revenue from operations to keep CFIs running and are less reliant on donor and government support for day-to-day operations. Literature argues that once an institution is operationally self-sustained, it is possible to achieve social goals such as eradicating poverty, reducing inequality, amongst others (Abrar 2019; Hasan & Batra 2018).

An additional indicator is the portfolio yield that has been declining over the years, from an average of 51.3% to a low of 25.7% (almost 50% drop) between 2010 and 2016. Yield measures the overall performance of a loan portfolio. To what extent are loans generating income for the CFI. This implies that when there is high loan delinquency, there is a low yield. The declines indicate that over the years, the loan book of CFIs has been deteriorating, supporting the notion that CFIs need alternative sources of income to diversify. In addition to the traditional and basic banking services that CFIs offer to their members, they can also have other services, such as foreign exchange services; however, they must apply for authorisation from the central bank, but none in South Africa has done so to date as the regulations do not currently allow them to transact as such (Coelho et al. 2019).

■ Transitions of CFIs

The study also investigated transitioning by CFIs from one state (level of performance) to another as a way of understanding the dynamics within the sector. CFIs can transition between different states, which include high loan delinquency, low membership, low contributions to capital and low income, amongst others. We investigate how CFIs have transitioned on these indicators across the years under study. To enable this, each of the key indicators was categorised into four quartiles (depth as measured by average loan to GNI per capita; size as measured by the number of clients; OSS). The transition probabilities reported representing transitions from each observation to the next once the observations have been put in t (year) order within i (CFI). The computation does not normalise for missing periods and does not count transitions from non-missing to missing or from missing too non-missing. However, it does pay attention to missing values of the variable being tabulated.

Table 11.4 presents a summary of how many members defined each quartile. The lowest quartile represents those with an average of 251 members, quartile 2 averaging 503 members, quartile three averaging 1064 members, whilst quartile four averages 3370 members. This implies that the CFIs are generally small, with few members.

Over the study period, 64% of the two CFIs continued to serve clients in the lower quartile of depth as can be seen from Table 11.5, 25% moved to serve

those in the second quartile, 3.57% into the third quartile and 7.14% are now serving the richest clients. There is significant persistence in servicing the same nature of clients as the values on the diagonal are all above 50%. More remarkable persistence is observed at the end of the quartiles. Given the overall performance of CFIs (and their primary goal), the transitioning may not mean a change of membership and clientele base, but rather that the CFIs are affording their members and clients higher-value loans in relation to the GNI, which would reflect an increase in the welfare of the target groups as per CFI mission.

Table 11.6 shows that the first three quartiles represent those CFIs reaching the very poorest (depth is less than 1% for the first two at 0.1% and 0.9%, respectively, and 3.1% for the third quartile). There is a significant jump, with the fourth quartile CFI serving clients that have loans averaging at 64.9% of GNI per capita, which considered rich clientele as the proportion is significantly higher than the 20% benchmark.⁹² Overall, this implies that 75% of the CFIs are servicing the very poor members of society, which is in line with the goal and mission. The CFIs are therefore achieving the poor reach agenda.

TABLE 11.4: Total members per quartile.

Numbers	N	Mean	SD	Min	Max
1	45	250.644	85.93	17	355
2	45	502.356	110.256	356	735
3	45	1063.178	249.162	740	1599
4	44	3370.25	2245.502	1715	18 738

SD, Standard deviation.

TABLE 11.5: CFIs transitioning in terms of nature of clients (depth as measured by average loan to GNI per capita).

Quartiles of depth	Quartiles depth				Total
	1	2	3	4	
1	64.29	25	3.57	7.14	100
2	14.29	60	22.86	2.86	100
3	0	11.76	79.41	8.82	100
4	0	0	11.43	88.57	100
Total	17.42	24.24	30.3	28.03	100

CFI, Cooperative financial institutions.

TABLE 11.6: Summary statistics indicating quartile reached by the depth.

Quartile of poor reached	N	Mean	SD	Min	Max
1	45	0.001	0.001	0	0.003
2	45	0.009	0.004	0.004	0.016
3	45	0.031	0.012	0.016	0.056
4	44	0.649	0.757	0.056	3.327

SD, Standard deviation.

92. Recall average loan to GNI per capita of more than 20% means the clients served are well to do as they can afford large loans, on average.

The study shows that CFIs falling in the lower quartiles have shown some growth over the study period, given the high proportion transitioning into the next higher-level quantile (left of the diagonal line). For example, those with the least number of clients (quartile 1), 66.67% remain in that state (no growth) and 30% moved up to the next quartile and 3.33% moving to the third quartile; in contrast, those in quartile 2, had 78.13% remaining and 21.88% moving to quartile 3. As the quartile ranges get higher, the non-mover's proportion is higher, implying that it is more likely to have more members joining than withdrawing. It shows that once one joins a CFI, they are likely to remain as members than deregistering; therefore, it is vital to ensure that each CFI performs according to expectations to help alleviate poverty. The common bond can be considered sticky enough for members to stay on (and even have more) than losing. Therefore, the common bonds appear to have a lock-in effect, which can be explained by the contribution made (share ownership) to the CFI and of the SC that exists.

Table 11.7 shows that there is a great swing in terms of categories of OSS as in most cases, the values on the diagonal, which represent persistence in a state, are below 50%. The movement is more in the lower categories (quartiles) as can be seen with quartile 2, where 29.41% dropped to a lower OSS category, with only 17.66 improving; at third quartile, 14.29% and 17.14% dropped to first and second quartiles, respectively, whilst only 20% moved a step higher. Although there is higher persistence for those who are highly OSS (quartile 4), 8.82% dropped to quartile one over the study period.

The levels of sustainability are highlighted by quartiles in Table 11.8. As mentioned above, an OSS value of less than 100 means a lack of operational

TABLE 11.7: CFIs transitioning in terms of a number of members (a proxy for size).

Quantiles of total number of members	Quantiles of total number of members				Total
	1	2	3	4	
1	66.67	30.00	3.33	0.00	100.00
2	0.00	78.13	21.88	0.00	100.00
3	3.03	9.09	84.85	3.03	100.00
4	0.00	2.70	10.81	86.49	100.00
Total	15.91	28.79	30.30	25.00	100.00

CFI, Cooperative financial institutions.

TABLE 11.8: CFIs transition in OSS.

Quantiles of OSS	Quantiles of OSS				Total
	1	2	3	4	
1	41.67	25.00	20.83	12.50	100.00
2	29.41	52.94	17.65	0.00	100.00
3	14.29	17.14	48.57	20.00	100.00
4	8.82	2.94	11.76	76.47	100.00
Total	22.05	24.41	25.20	28.35	100.00

CFI, Cooperative financial institutions; OSS, Operational self-sustainability

self-sustainability. On average, the first two quartiles represent unsustainable operations as the means values are below the 100% mark: with the higher-order quartiles showing OSS, with the fourth quarter securely at 255% above the benchmark. In relation to the above transition Table 11. 8, the next table, Table 11.9 show that the CFIs that dropped from the fourth quartile to the first quartile had a very significant drop in OSS over the seven years, dropping from an average 356% to averaging 37%.

As mentioned earlier, OSS (institutional welfare improvement) is important for enabling the CFIs to achieve individual member welfare improvement based on social performance literature. The results show that, in general, we have well-performing CFIs (well above 100) and poorly performing CFIs (well below the 100 mark) in terms of OSS.

The transition results show that as CFIs become more profitable (higher return on assets [ROA]), they tend to focus more on the poor (provide smaller sized loans), which is in line with the primary goal of extending affordable credit to the poor and marginalised. In contrast, OSS tends to result in servicing richer and richer clients (issuing higher volume loans on average). Profitability may enable sustainability, which is then translated to increased welfare of clients. Self-sustainability is therefore critical for the emancipation of CFI members and clients. Given the social bond nature of the CFIs, greater wealth creation is expected to accumulate to the members.

■ Regression analysis

For CFIs to achieve their social performance goals, which involve providing financial services to marginalised clients at affordable interest rates, the institutions need to be sustainable. The performance of CFIs is highly dependent on OSS, which involves the interplay of interest rates, growth and loan delinquency. The achievement of sustainability allows them to provide financial services affordably without recourse to donor or government funding. The third dependency between sustainability and social performance results in a nested relationship. Accordingly, a nested model was used in the study. The structure of the data is a cross-section based unbalanced panel as cross-sections are more and vary from year to year (N ranges 21–31) and the T is small (7). To estimate the determinants of social performance, we used a panel

TABLE 11.9: OSS summary statistics by quartile.

Quartile of OSS	<i>N</i>	Mean	SD	Min	Max
1	44	36.539	21.989	0	64.171
2	44	82.995	11.394	64.835	102.296
3	44	123.466	13.64	102.718	147.372
4	44	355.854	228.646	147.413	1522.056

SD, Standard deviation; OSS, Operational self-sustainability.

seeming unrelated regression (Abel et al. 2019; Cameron & Trivedi 2010). The following models were estimated jointly:

$$Sp_{it} = \alpha + \beta_1 FP_{it} + \beta_2 X_{it} + \varepsilon_{it} \quad [\text{Eqn 11.1}]$$

Where:

SP= social performance

FP = vector of financial performance indicators (financial sustainability)

X= is a vector of controls

The second equation in the SUR setup is:

$$OSS_{it} = \alpha + \beta_3 \text{ other } FP_{it} + \beta_4 X_{it} + \varepsilon_{it} \quad [\text{Eqn 11.2}]$$

Where OSS is operational self-sustainability, another FP vector of other financial performance indicators, X is a vector of controls.

In line with the nested nature of the equations, social performance depends on OSS, and the errors of that model are expected to be correlated to the errors of the OSS specification. For this reason, the study used Panel SUR. Seemingly unrelated regression models derive their name from being joint estimates from several (two in this case) regression models, each with its error term. The regressions are related because the contemporaneous errors associated with the dependent variables may be correlated (Cameron & Trivedi 2010). This assumption is made because of the double-bottom line approach discussed earlier. The model was fit using random effect estimators in the context of unbalanced panel data. A stepwise algorithm is constructed using generalised least squares and the maximum likelihood procedures as developed originally by Biorn (2004). The results are shown in Table 11.10 (for depth) and Table 11.11 (for breadth).

The determinants of OSS, ROE, ROA, size, TA, CpB, CoF, DeR and Yield are all statistically significant. The results show that profitability, as measured by ROE and ROA, has a positive effect on OSS with a unit increase in ROE increase self-sustainability by over 7%, whilst a 1.019% increase comes from a unit increase in ROA. Larger CFIs (based on the log of total assets) are more sustainable than smaller ones (see Table A2 with more summary statistics by the size of CFI).

The study investigated the determinants of social performance using total capital per capita as a proxy (see Table 11.13). Overall, more loan delinquency per loan issue (Del_per loan) entails more poor loan quality. The coefficient is positive, suggesting that it tends to increase social performance. This may reflect the self-sacrificing nature of CFIs, that despite some increasing loan delinquency, by its formation, goals and mission, a CFI must continue issuing loans, especially to members. Without loans, there is no business, and each

TABLE 11.10: Seemingly unrelated regression: Depth of social performance and sustainability.

Depth	Indicator/ proxy	Coef.	SE	z	P > z	95% Conf. Interval	
						Min	Max
Social performance	Del_perloan_	-3.906	2.923	-1.340	0.181	-9.634	1.822
	ROE	7.719	4.816	1.600	0.109	-1.720	17.158
	ROA	-1.579	0.538	-2.940	0.003	-2.633	-0.526
	OSS	0.476	0.067	7.140	0.000	0.345	0.606
	OER	4.134	18.303	0.230	0.821	-31.740	40.007
	size_TA	-43.205	7.840	-5.510	0.000	-58.571	-27.840
	CpB	0.012	0.034	-0.340	0.731	-0.079	0.056
	FeR	62.596	209.505	0.300	0.765	-348.025	473.218
	CoF	-1122.392	548.226	-2.050	0.041	-2196.895	-47.889
	DeR	0.253	0.704	0.360	0.719	-1.127	1.634
	Yield	-416.696	53.470	-7.790	0.000	-521.496	-311.896
	OSS						
Sustainability	Del_perloan_	-0.821	1.893	-0.430	0.665	-4.531	2.889
	ROE	7.210	2.797	2.580	0.010	1.729	12.691
	ROA	1.019	0.350	2.910	0.004	0.332	1.706
	OER	-5.774	10.778	-0.540	0.592	-26.898	15.350
	size_TA	45.253	7.710	5.870	0.000	30.141	60.365
	CpB	-0.114	0.022	-5.090	0.000	-0.158	-0.070
	FeR	-140.145	126.876	-1.100	0.269	-388.817	108.526
	CoF	2863.147	309.791	9.240	0.000	2255.968	3470.326
	DeR	2.283	0.413	5.530	0.000	1.474	3.092
	Yield	669.789	24.414	27.430	0.000	621.939	717.639

Del_perloan, Delinquent loans; ROE, Return on equity; ROA, Return on assets; OER, Operating Expenses Ratio; size_TA, Size of Total Assets; CpB, Cost per Borrower Ratio; FeR, Funding expenses Ratio; CoF, Cost of Funds Ratio; DeR, Debt-to-Equity Ratio; Del, delinquency; OSS, Operational self-sustainability; SE, Standard Error.

CFI has to lend to its members (which is one of the intangible benefits of membership). Therefore, lending continues despite the loan delinquency. The role of a common bond in ensuring repayment is overstated. It also lends support to the assertion that the group bond does not improve credit worth. As the performance of CFIs is better assessed through outcomes, continued lending leads to more social performance. However, without sustainability, CFIs may only be able to deliver on their mandate partially. As the business becomes more profitable, members tend to reduce their capital, as shown by the negative effect of ROA on total capital per capita.

In contrast, more operationally self-sustainable CFIs have a higher social performance (total capital per member). The size of the CFI is positively related to social performance; the whole DoE ratio, portfolio yield and gross margin ratio has a negative effect. Higher capital is costly to financial institutions and, in the long term, will reduce profitability (Osborne, Fueters & Milne 2012). This is in line with corporate finance theory that posits that a financial institution aims to hold an optimal level of private capital in the equilibrium state. However, regulators may set requirements above the privately desired level, reducing profitability (Miller 1995).

TABLE 11.11: Seemingly unrelated regression: Breadth of social performance and sustainability.

Breadth	Indicator/proxy	Coef.	SE	z	P > z	95% Conf. Interval	
						Min	Max
totalcapital_ pc	Del_perloan_	287.808	78.446	3.670	0.000	134.056	441.560
	ROE	108.847	140.312	0.780	0.438	-166.159	383.854
	ROA	-25.254	14.692	-1.720	0.086	-54.051	3.542
	OSS	5.022	2.207	2.280	0.023	0.696	9.348
	OER	110.686	524.427	0.210	0.833	-917.172	1138.544
	size_TA	772.226	200.290	3.860	0.000	379.666	1164.787
	CpB	-1.714	1.344	-1.280	0.202	-4.348	0.920
	FeR	-2819.693	6038.531	-0.470	0.641	-14655.000	9015.610
	CoF	-13100.000	15290.560	-0.850	0.393	-43000.000	16896.630
	DeR	-50.207	20.417	-2.460	0.014	-90.224	-10.190
	Yield	-3119.014	1874.311	-1.660	0.096	-6792.597	554.568
gross_margin_ ratio	-9440.085	2822.170	3.340	0.001	-15000.000	-3908.734	
OSS	Del_perloan_	-0.325	2.669	-0.120	0.903	-5.556	4.907
	ROE	9.912	4.660	2.130	0.033	0.778	19.046
	ROA	3.716	0.489	7.600	0.000	2.757	4.674
	OER	-7.153	16.643	-0.430	0.667	-39.772	25.466
	size_TA	69.452	5.914	-11.740	0.000	57.862	81.042
	CpB	-0.105	0.037	-2.840	0.005	-0.032	0.177
	FeR	-1.753	193.940	-0.010	0.993	-381.868	378.362
	CoF	-7227.675	440.347	-16.410	0.000	-8090.739	-6364.611
	DeR	6.588	0.686	9.610	0.000	5.244	7.932
	Yield	423.752	43.474	9.750	0.000	338.544	508.959
	gross_margin_ ratio	826.677	81.434	10.150	0.000	667.069	986.284

Del_perloan, Delinquent loans; ROE, Return on equity; ROA, Return on assets; OER, Operating Expenses Ratio; size_TA, Size of Total Assets; CpB, Cost per Borrower Ratio, FeR, Funding expenses Ratio; CoF, Cost of Funds Ratio; DeR, Debt-to-Equity Ratio; OSS, Operational self-sustainability; SE, Standard Error.

■ Conclusion

The study sought to measure the social performance of alternative financial institutions, namely CFIs in South Africa, and investigate the drivers of such performance departing from the general focus of investigating financial performance. The innovation in this paper is that it measures social performance from financial statements data in contrast to survey-based data that are prone to reporting biases and also relates the performance measurement to GNI levels. In that way, it is possible to ascertain how financial inclusion contributes to the wellbeing of alternative finance beneficiaries – a confirmation that offers lacks in many studies.

Based on the descriptive analysis, social performance measured by average loan as a percentage of GNI per capita, capital per member, number of clients (especially the marginalised, proxied by the number of women as a ratio of total clients) was found to be increasing in aggregate over the study period;

however, with variation within CFIs. Moreover, operation self-sustainability was found to be increasing over the years; in contrast, loan portfolio yield has been deteriorating over the years, which is in line with increasing loan delinquency. In the same vein, the transition matrices show that over time, CFI members are getting wealthier, CFI membership is increasing, OSS is increasing, but the yield is decreasing.

The SURE regression showed that the main determinants of social performance are financial performance as measured by ROA, ROE and OSS, as well as the size of CFI and portfolio yield. The estimation considered the correlation in the error terms of social performance and OSS, a principle emanating and explained by the 'double bottom line approach' where a CFI needs to be self-sustainable (institutional welfare improvement) to be able to meet its own objectives (providing affordable credit to the poor and marginalised) and individual welfare improvement. The study further shows that CFIs in South Africa are focused on serving the poor and marginalised and, in the process, improving their welfare, although the results vary depending on the size of the CFI.

The study notes the regulatory burden, with the regulatory framework having a possibility of creating confusion. Compared to other countries, CFIs in South Africa are supposed to be registered as a cooperative under the Department of Trade and Industry (the Dti) and meet the requirements. Therefore, noting that the Dti has no competence in banking model management. Moreover, the CFIs are supposed to meet the requirements under the twin peak financial sector management framework (which on its own is a burden and a grey area for established big banks because of inevitable overlaps) (Godwin 2017). A review of the regulatory framework needs to be done in relation to international best practices to unlock the full potential of the sector, which has already proved to be conducting itself in line with the general mission and goals of such institutions (Čepinskis, Žirgūtis & Žirgūtienė 2013).

Training on loan book management and public relations (for membership recruitment and retention) are some of the interventions that the relevant authorities such as CBDA and BankSeta can embark on. It is of interest to conduct a comprehensive evaluation of the capacity building programmes – as the study notes the significance of SC, which is the bedrock of CFIs, it is worth applying techniques as randomised control trials to understand and systematically intervene within the sector. Such approaches have enabled other countries to better understand the sector and best support it for improved impact. Behavioural insights are crucial to unlocking that potential (see the works of Banerjee & Duflo 2011; Banerjee et al. 2015). Future studies need to explore such avenues.

The alternative banking institutions have shown that they can increase financial inclusion; however, that inclusion can only be sustainable and yield

intended results if the institutions are themselves sustainable. Financial inclusion in this context goes beyond just having a bank account, but also financial access and consistent interaction with the financial sector. It is therefore important for the operational environment to be devoid of any blockages such as overlaps and ambiguities in legislation. Moreover, alternative financial institutions are encouraged to diversify activities to provide a better return for members – this means those who are financially included through this vehicle can grow their wealth. Skills and competency audit of alternative financial institutions management are required to ensure better recruitment strategies, better management of the loan book and thus enable the institutions to grow and reach many that may still be financially excluded or not yielding many benefits from other forms of inclusion (e.g., by merely having a bank account with conventional banks) as this sector enables ownership and inclusion at the same time. Moreover, counterproductive factors such as high fees need to be carefully monitored because they can be a threat to the whole framework.

Although important for sustainability and sanity in the sector, some regulations require review and alignment with realities on the ground: for example, requirements such as minimum membership and membership share capital contribution of 200 and R100 000 for a CFI to be registered as one of the causes of the reduction in number by 79% of CFIs from 121 in 2011 to 26 in 2015. Those that have been financially included by being part of institutions that could not be registered may have their contributions and confidence in the sector eroded, derailing the drive for sustainable financial inclusion. Legislative frameworks need to support alternative financial institutions to enable their growth and sustainability. Financial inclusion through the CFIs that may not be linked to the national payment system is limited as functionality in the financial sector and the benefits derived are restricted. Policymakers should work on how the financial sector can be transformed to link this alternative sector to the national payment system so that the inclusion has enhanced value and can attract more members and clients – for their own sustainability and driving social goals. The sector holds prospects of achieving sustainable goals of zero hunger, poverty reduction and enabling businesses. Also, imperative to note that, in the drive to increase financial inclusion, the alternative banking institutions are competing with the conventional banks; yet all CFIs are supposed to bank with the conventional banks (their competitors that with a central bank or a government bank), creating a paradox within the sector – conventional banks are set in a position to help develop their competitors.

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Appendix

Table 11A-1: Summary statistics: (quart_size_TA).

Quantile	size_TA	N	Mean	SD	Min	Max
1	TotalNumberOfMembers	44	607.295	833.775	34	4845
	size TA	44	11.558	1.862	5.268	13.207
	depth	44	0.006	0.007	0	0.029
	women participation	18	0.411	0.263	0	0.899
	OSS	43	76.157	65.869	0	313.029
	gross margin ratio	43	0.858	0.381	-1.251	1
	Del perloan	10	1.147	3.057	0	9.795
	NetIncom loss pc	44	4.293	409.267	936.441	1879.677
	totalcapital pc	44	951.647	3076.382	3726.289	16339.059
	Savings pc	44	845.1	1286.15	0	6662.767
	grossloan pc	44	340.666	492.996	0	2340.088
2	TotalNumberOfMembers	44	1129.136	1299.928	160	7760
	size TA	44	13.852	0.411	13.208	14.512
	depth	44	0.023	0.029	0	0.109
	women participation	29	0.358	0.27	0	0.724
	OSS	43	96.972	71.666	0	474.17
	gross margin ratio	44	0.913	0.11	0.639	1
	Del perloan	29	0.117	0.185	0	0.678
	NetIncom loss pc	44	-19.673	380.644	-998.97	1614.551
	totalcapital pc	44	625.715	1225.296	1499.229	5348.611
	Savings pc	44	2216.537	2103.04	248.509	8814.797
	grossloan pc	44	1613.862	2060.048	0	7740.724
3	TotalNumberOfMembers	44	1398.364	1149.444	17	4536
	size TA	44	15	0.328	14.539	15.588
	depth	44	0.168	0.572	0	3.327
	women participation	25	0.326	0.316	0	0.883
	OSS	44	176.248	245.712	42.476	1522.056
	gross margin ratio	44	0.832	0.156	0.385	1
	Del perloan	24	0.056	0.126	0	0.595
	NetIncom loss pc	44	-274.386	4483.751	-28066.383	7904
	totalcapital pc	44	1038.367	3606.73	-16812.471	7792.967
	Savings pc	44	12522.465	37848.884	774.659	206022.3
	grossloan pc	44	9080.941	28144.187	9	151001.36
4	TotalNumberOfMembers	44	2056.636	2552.366	200	12469
	size TA	44	16.599	0.769	15.615	17.902
	depth	44	0.494	0.631	0	2.713
	women participation	23	0.35	0.222	0	0.754
	OSS	43	256.201	157.519	57.141	607.842
	gross margin ratio	43	0.577	0.307	0.076	1
	Del perloan	24	-1.713	6.815	-32.128	.525
	NetIncom loss pc	44	28.186	551.752	1645.557	1721.871
	totalcapital pc	44	1411.366	1993.747	-427.49	9961.435
	Savings pc	44	39830.137	44440.116	937.61	141652.95
	grossloan pc	44	30940.591	35535.789	23.523	123125.59

OSS, Operational self-sustainability.

Financial inclusion in Africa: Lessons and implications

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■ Introduction

The debate around the importance of financial inclusion is a major point in policy and development discourse. Research has established that access to finance for both small businesses and households can improve BP as well as overall household outcomes. High-level commitments and agendas, whilst good and necessary, can sometimes drown out the essential and basic tenets of an important agenda such as financial inclusion. For instance, the Maya declaration has 71 commitments with 837 targets for each national financial inclusion agenda (AFI 2021). Such programs run the risk of attracting policy discourses and formulations that treat financial inclusion as if it were an end in itself.

The contribution of this book is to provide an opportunity to step back and consider why financial inclusion is important by reflecting on how the access to finance that policies are pushing for will ultimately impact those who are excluded from the financial sector and who are ultimately the beneficiaries of

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such policies. Therefore, this book provides a theoretical review of the transmission mechanisms of finance to poverty. We show that finance can indirectly affect poverty through economic growth. Financial markets promote growth by gathering information, risk pooling, resource allocation, easing of trade and monitoring. Economic growth, in turn, improves job creation, reduces wage differentials, provides better labour market conditions and improves livelihood outcomes for the poor. Moreover, we show that direct access to financial services allows for asset accumulation and building, as well as mitigation and management of risk. Moreover, improved payment systems reduce the costs of transacting and increase income through faster and more efficient remittance flows. This can improve the conditions of the poor through improved social outcomes such as education and health, which are highly correlated with financial exclusion.

The theoretical review is complemented by a discussion of the financial services that are used by the poor in Africa. The review shows that they are still largely excluded from formal financial markets despite significant improvements in the availability of financial services, the most popular of which were informal. Whilst these services are useful and circumvent most of the agency problems found in financial markets, the benefits of these services are limited. For example, asset accumulation through savings is limited because of a lack of interest payments. In the same vein, informal credit can often be unreliable and inadequate for business expansion. The persistence of structural rigidities in most African financial infrastructures calls for a reconsideration of financial development policies towards informal finance. Governments need to think beyond sanitising informal financial markets to consider the possibility of hybrid systems that can learn from the benefits of informal financial markets but still provide the security and advantages derived from formal financial markets. For instance, informal lenders tend to have better informational advantages in small business markets as well as amongst those with lower incomes. Technological developments in financial markets provide an opportunity for governments to develop regulatory environments that could enable the innovation of hybrid systems that could harness such advantages. The lack of appropriate regulations is a specific area that calls for immediate attention as it threatens to throttle the benefits of technological advancement. For instance, whilst mobile lending and savings products have emerged, many countries lack relevant regulatory frameworks. As a result, emerging literature shows that indebtedness and vulnerability are increasing, threatening to stifle the gains of financial inclusion efforts.

The second part of the book has eight chapters that provide empirical evidence on various aspects of financial inclusion in selected African countries. Digital finance has been posited as one of the key instruments in increasing access to formal financial services, especially in Africa. However, the literature does not provide a clear discussion of the transmission mechanisms between

finance and poverty. The first empirical study investigates the different channels through which digital finance is transmitted to poverty. The chapter shows that the important channels of transmission are through remittances, the cost of doing business and the cost of providing finance. Remittance inflows into Africa are the lowest amongst all regions in the world. Nevertheless, they are a significant source of financial flows. Ratha (2021) shows that the level of remittances in African countries in 2019 exceeded the level of FDI. The COVID-19 pandemic has highlighted the importance of digital remittances from the African Diaspora. Increased remittances can be encouraged through lower costs of remittances. Moreover, digital finance reduces the cost of doing business. The use of digital payments, for instance, decreases transaction costs for firms and allows gains by reducing rent-seeking behaviour. Furthermore, digital finance complements traditional financial services by reducing the cost of their provision.

■ Lessons learnt

In view of these results, African policymakers need to make concerted efforts to encourage the continued flow of remittances. Such policies are relevant to both domestic and international remittances. One policy option highlighted in the literature for increasing international remittances is the promotion of diaspora bonds. Diaspora bonds have been discussed in the literature. However, very few African countries have taken this on board. By 2018, only six African countries had issued diaspora bonds (Enders 2020). We find that the main benefit of remittances is associated with significant reductions in the cost of remittances. Therefore, an obvious policy consideration is the identification of channels and policy actions that can reduce the cost of digital finance. This can be achieved in various ways. The first is the reduction of taxes and surcharges on digital finance service providers. The Ugandan case has shown that such efforts can yield significant improvements in access to financial services. Another policy option is to increase the level of competition within the financial sector and complementary services. Most African countries have very high concentrations in the MNO markets. Most of these network operators have also formed subsidiaries that provide MM services, further limiting competition and increasing costs for consumers. The absence of interoperability agreements in most countries compounded the effect of this concentration in markets. Therefore, the active promotion of competition and the enabling of interoperability regulations can go a long way in reducing transaction costs.

Similarly, the Ugandan case shows that deliberate efforts by governments to use cost curbing in promoting the use of digital finance can increase financial inclusion and enhance welfare. The many benefits of digital finance largely rely on the existence of affordable connectivity. For instance, as already

alluded to, low remittance costs are likely to have a significant impact on international remittances and their attendant benefits. According to De (2015), the low cost of MM can allow households in developing countries to save up to \$20 billion per year. Large proportions of the population in Africa remain disconnected, mainly because of high connectivity costs. By 2019, 1 GB of data in sub-Saharan Africa accounted for approximately 9% of the average monthly income (Canares & Thakur 2019). Worryingly, an increasing number of African countries have imposed social media and MM taxes in addition to existing surcharges by service providers, further increasing the cost of connectivity. The Ugandan case shows that the demand for digital finance is price elastic. As a result, MM taxes are likely to reduce the use of digital finance. Kipkemboi and Bahia (2019) suggest that one in 10 adults in sub-Saharan Africa is completely reliant on MM. Consequently, MM tax is likely to reduce financial inclusion. Through the Addis Ababa Action Agenda in 2015, African countries committed to reducing the cost of remittances to below 3% by 2030. Increasing taxes counters any actions taken towards such commitments. Whilst the need to increase the tax base is significant in most African countries, this needs to be balanced against financial inclusion commitments and the need to address various other social economic goals that are strongly dependent on access to finance.

In addition to the promotion of competition and enactment of the relevant regulations mentioned above, private–public partnerships with stakeholders in the digital finance markets can be beneficial. The Ugandan government partnered with various MNOs as well as financial institutions to reduce the cost of MM and provide relevant support services because of the COVID-19 pandemic. MMSPs targeted lower tiers to reduce surcharges. In this way, the main beneficiaries were consumers at the bottom tiers who were more likely to be excluded at higher costs. Moreover, this approach would have the least negative effect on tax revenues, which is a concern. These interventions resulted in reduced disruption to the economy, especially the impacts on small businesses that disproportionately affect the marginalised.

We also confirm the commonly held view that the poor mainly rely on informal and semi-formal financial services. The disadvantages of informal financial services of such services are noted. Examples include limited growth of savings because of a lack of competitive interest rates, unreliable credit and short-term debt maturity. Despite these disadvantages, informal finance seems to be growing as the main source of inclusion in the financial sector for marginalised populations. SHGs, in particular, emerged as important providers of savings and credit services for the poor. The Zambian case shows that SHGs particularly benefit women and those with unstable incomes. Moreover, SHGs address agency problems encountered in mainstream finance by lower-income and marginalised consumers. In the Eswathini case, for example, lenders leverage local chieftdom committees to evaluate applications and

collect repayments. In cases where a borrower is not able to make a payment, the same committees provide an insurance buffer by making payments on behalf of the defaulting member. The popularity of informal financial services has continued to grow despite the simultaneous growth in the availability of formal financial services. One reason for this is the flexibility and adaptive nature of informal financial services. Moreover, they are open, with very few qualifying characteristics for membership, and they adapt to members' needs, such as repayment terms for loans as well as deposit amounts and frequency. For example, SHGs may provide social insurance by allowing resources to be provided to a needy member of the group. Similarly, information in these groups is gathered at a very low cost because of its reliance on networks.

Despite the benefits of informal finance, most African government financial sector policies focus on the formal sector. However, the importance of informal financial services for financial inclusion suggests that there is also a need to pay attention to the informal sector. Two possible policy options that have been cited in the literature include mainstream informal financial institutions and/or linking them to formal institutions. Various models of mainstreaming and linking already exist in several parts of the world, including some African countries (Aliber et al. 2015; Aryeetey 2008; Ghosh & Kumar 2015). Examples of mainstreaming include the incorporation of daily collections by mainstream banks, as is done in most informal finance institutions, agency banking, village banking and MFIs. Furthermore, linkages between formal and informal financial institutions have been successfully implemented, including the provision of accounts for SGs as well as the sourcing of capital outlay for informal lenders (Aliber et al. 2015; Aryeetey 2008). However, these efforts are fragmented and lack the required incentive and regulatory environment to have the required impact. More deliberate policy efforts need to be made to foster complementary relationships between the formal and informal sectors. Seibel (2001) argues that such efforts have succeeded, especially in Asia, where policy frameworks are supportive of formal innovation, cost recovery interest rates and institutional viability. The viability of such options therefore requires African country governments to formally recognise the importance of the informal financial sector and take proactive steps to incorporate it into their financial sector development frameworks.

Finally, we confirm that access to funding by small businesses is important. The majority of small businesses still struggle to access external financing and rely largely on retained earnings and savings. The discussions in the preceding chapters indicate that whilst this is true, the barriers to funding and its effective use are probably more pressing issues in resolving credit rationing for small businesses in African countries than direct access to finance itself. These barriers represent small businesses as highly risky borrowers. Poor planning and management skills, lack of understanding of market conditions and poor business planning result in inappropriate use of funding even when small

businesses can access it, as illustrated by the Zimbabwean case. Consequently, attrition levels are extremely high, and businesses that expand and mature eventually decline because of lack of innovation and poor productivity.

A common solution in many countries is to establish special-purpose DFIs to directly provide funding to small businesses. For example, in South Africa, at least 10 direct funding interventions have been put in place since 1996. The results of the study, however, suggest that direct intervention does not really result in improved access to finance by small businesses. This was also confirmed in the Zimbabwean case. Because the characteristics of small businesses remain the same and market constraints are not resolved, DFIs face the same risks as mainstream lenders. As a result, the assessment criteria used by DFIs and MFIs are similar to those of mainstream lenders. Consequently, the credit rationing of small businesses persists. Possible solutions have been suggested; for instance, the Eswathini case suggests that correcting for market failures may do more to address credit rationing than direct intervention in financial markets. In particular, the provision of functioning complementary markets can help reduce the reticence of lenders towards small businesses. Government institutions can focus on the provision of management and business skills, supporting and strengthening innovative technologies such as MM and the enacting of appropriate regulations.

Social capital has also emerged as an important factor in improving access to financial services for both households and small businesses. The Cameroonian case establishes the fact that having strong social networks increases opportunities to access funding. Networks can tap into the wisdom of crowds, allowing small business owners to exhibit their skills to those that would make decisions about funding as well as learning from other small businesses within their networks. Mollick and Nanda (2016) suggest that in the case of crowdfunding, for example, crowds may fund projects rejected by finance experts without compromising the quality of the resultant projects. Similarly, Lin, Prabhala and Viswanathan (2013) indicate that in peer-to-peer lending, friendships increase the probability of successful funding. Similarly, social interactions are likely to increase the stock of skills that small business owners can acquire, as well as the probability of exhibiting the ideas and skills of microlenders. The combined delivery of training and network opportunities through long-term support centres rather than once-off training sessions, for example, could go a long way to develop better access to finance for small businesses.

■ What are the takeaways?

1. Digital finance is a very potent instrument for achieving financial inclusion in the African context. Its importance has been underlined by the role it has played during the COVID-19-related lockdowns when consumers have been unable to interact directly with mainstream financial institutions.

2. Support policies to enhance the impact of digital finance are required. Most importantly, reductions in the cost of digital finance can increase access to and use of financial services through both digital and traditional channels. This can be achieved by rethinking MM charges, introducing regulations that promote competition and incentivising providers.
3. Informal and semi-formal financial institutions are more likely to be effective in reaching the poor financially, and policy designs that take this into account are more likely to be effective. Governments need to consider formally recognising these institutions and their contributions by incorporating them into national financial sector development policies. These regulations can address ways in which mainstreaming and linking of the formal and informal financial sectors can be done.
4. The creation and support of complementary markets to financial markets are likely to have a more effective impact on reducing credit rationing than the direct provision of funding to small businesses. Long-term training and networking centres can provide networking opportunities and a chance to learn from crowd wisdom, which cannot be garnered in the once-off training often accompanied by government and donor funding.

■ Conclusion

Financial inclusion is fundamental to accessing productive assets and lifting people out of poverty. Many African country financial systems are bank-based and heavily rely on information transparency. The poor, however, are informationally opaque and lack the resources to participate in a system with high transaction costs. This chapter has drawn lessons from the seven case studies in the book to show how digital finance and informal sector financial institutions can be leveraged to increase formal financial inclusion. Furthermore, the importance of digital finance and the creation of complementary markets as vehicles of increase financial inclusion are highlighted.

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Chapter 4

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Financial inclusion has been noted as a key driver of poverty alleviation and growth. Yet, most of the scholarly work that exists lacks a comprehensive discussion of how the poor interact with financial services and the channels through which such services can affect their livelihoods. This book offers researchers who focus on financial inclusion and African economies a one-stop resource for understanding the channels of transmission for financial inclusion, as well as an application of these channels through original, country-specific empirical papers. The book provides a back-to-basics presentation of the transmission of financial services to growth and poverty. This theoretical discussion is complemented by an empirical presentation of the various services used by the poor, with a focus on Africa. Case studies of financial inclusion in six African countries cover a broad range of topics most important to African countries and highlight the unique African setting. These empirical papers provide important learning points. Firstly, hybrid financial institutions such as cooperative financial institutions and financial social entrepreneurs are a creditable way to increase financial inclusion in Africa. They provide important vehicles to circumventing the restrictive and exclusive bank-based financial markets typical of African economies. Secondly, digital finance is a potent tool in improving financial access and usage in Africa, and its impact on poverty operates through both traditional and non-traditional financial instruments. Thirdly, investment in infrastructure that supports complementary markets is critical and is likely to have a greater effect on credit rationing than direct provision of credit to small businesses.

The level of financial inclusion in Sub-Saharan Africa has grown quite significantly since the turn of the new millennium, with a significant increase coming from digital financial services. Yet the number of unbanked, mainly poor people is still high, representing untapped potential and resulting in lost economic momentum. Better understanding the patterns of financial inclusion and the need for financial services is vital as the region faces a demographic transformation, and the African Continental Free Trade Area has been getting ready to make the region more vibrant in economic and commercial terms. This book, *Financial inclusion: Basic theories and empirical evidence from African countries*, shows us a clear picture on the financial inclusion in various African countries by pointing to the most important challenges and bottlenecks. The authors bring perspective and the nexus between financial inclusion and economic momentum is thoroughly studied in the cases of Eswatini, Zambia, Zimbabwe, Cameroon, South Africa, and Uganda. However, the observations can also apply to a number of other countries. After putting the pieces of theory and the country level patterns together, one can better understand the achievements and challenges of financial inclusion in contemporary Sub-Saharan Africa. As the authors brilliantly unearth how much potential there is in providing financial services for the poor and unbanked, while at the same time pointing to the most pressing issues, it becomes clear that we have to closely follow the financial transformation in the region. This book, by being an outstanding guide, helps us enormously and the library bookshelves dedicated to finance in Africa must have it.

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