
**UNIVERSITY OF THE WESTERN CAPE**

DEPARTMENT OF ECONOMICS

# The impact of spatial inequality on financial inclusion in South Africa

**By**

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**at the University of the Western Cape**

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# DECLARATION

I declare that **"The impact of spatial inequality on financial inclusion in South Africa"** is my work, that it has not been submitted for any degree or examination in any university, and that all the sources that I have used or quoted have been indicated and acknowledged by complete references.

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Date: 03/ 03/ 2021

# ABSTRACT

Inequality in South Africa has long been recognised as one of the most salient features of our society. Despite many efforts by the government to reduce inequality since our democratic transition in 1994, progress has been limited. The historic patterns of accumulation and economic concentration have continued to feed into South Africa's patterns of uneven and combined development. Moreover, financial markets in many countries are undeniably incomplete, segmented, and inefficient. This is largely attributed by high transaction costs for both institutions and clients as well as biases against certain parts of the market. Therefore, people will continue to transact outside the formal financial system if they lack easy access and use of formal financial institutions. Private resources are often used in formal areas that provide better access and higher return on investment for private institutions. As a result, the development of the poorest areas remains relatively neglected.

Given this background, the aim of this study was to assess the impact of apartheid spatial planning on financial inclusion in South Africa. A quantitative method was employed to address the research question, "What is the impact of apartheid spatial planning on financial inclusion in South Africa?" This was answered by using FinScope data from 2015 to 2017. There is a paucity of research that empirically investigates the existence and relative importance of spatial mismatch and its role in expanding financial inclusion in South Africa. As such a multinomial logistic regression model was implemented in response to the lack of hard evidence on spatial mismatch in South Africa and to what extent this impacts on financial inclusion. The study found that location was a significant determinant among adults with access to credit. Considering the spatial mismatch across tribal and farm areas compared to urban areas, it was evident that people living in more developed areas may have greater uptake of credit options as opposed to funeral cover. Further, the study found more than 50% of adults reported having access to funeral cover, the most popular insurance among vulnerable groups. Also illuminated was poor usage trends of financial products as more than 50% of consumers withdraw their monies immediately after it has been deposited into their account. The study concludes by suggesting that spatial mismatch does drive exclusion; whether a person resides in an underdeveloped province or vulnerable community are factors likely to infringe on a person's capability of being financially included when taking a look at each of the basic financial services offered by financial institutions. As such, the process of investigating which

factors contribute to formal inclusion across specific products, allows for more targeted interventions and monitoring of products where individuals are least included, particularly for vulnerable people.

**KEYWORDS:** Financial development, financial inclusion, social networks, spatial inequality

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*Intaka yakha ngoboya benye*

*(A bird builds with the fur of others).*

*– (unknown)*

# DEDICATION

This study is dedicated to Nanasie for inspiring me to pursue my dreams.

Your strength will always live on in me.

May your soul rest in eternal peace.

# LIST OF ABBREVIATIONS

| | |
|---|---|
| AA | Affirmative Action |
| AFI | Alliance for Financial Inclusion |
| App | Application |
| ATM | Automated Teller Machine |
| B-BBEE | Broad-Based Black Economic Empowerment |
| BCG | Boston Consulting Group |
| CSG | Child Support Grant |
| DED | Department of Economic Development |
| DTI | Department of Trade and Industry |
| FATF | Financial Action Task Force |
| FE | Financial Exclusion |
| FI | Financial Inclusion |
| FNB | First National Bank |
| FSC | Financial Services Commission |
| FSP | Financial Service Provider |
| GDP | Gross Domestic Product |
| GMM | Generalised Method of Moments |
| GSMA | Global System for Mobile Communications Association |
| HRS | Health and Retirement Study |
| ICT | Information and Communication Technologies |
| IT | Information Technology |
| LSMS | Living Standards Measure Survey |
| MLR | Multinomial Logistic Regression |
| MNC | Multi-National Companies |
| MTN | Mobile Telephone Network |
| NCA | National Communication Authority |

| | |
|---|---|
| NDP | National Development Plan |
| NPC | National Planning Committee |
| OECD | Organization for Economic Co-operation and Development |
| OLS | Ordinary Least Squares |
| OTC | Over the Counter |
| PIT | Personal Income Tax |
| PPS | Probability proportional to size |
| PSU | Primary Sampling Unit |
| PWC | Price Waterhouse Coopers |
| RCT | Randomised Controlled Trial |
| RDP | Reconstruction and Development Programme |
| RRR | Relative Risk Ratio |
| RSA | Republic of South Africa |
| SADC | Southern African Development Community |
| SASSA | South African Social Security Agency |
| SME | Small and Medium Enterprise |
| SSA | Sub-Saharan Africa |
| UN | United Nations |
| USA | United States of America |
| USSD | Unstructured Supplementary Service Data |

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# CHAPTER 1
# INTRODUCTION

*"Inequality hardens society into a class system. Inequality divides us from one another. Inequality undermines democracy".*

– George Packer (n.d.)

## 1.1 Introduction

The spatial organisation of any society and economy matters. Dense, well-connected areas can advance social cohesion and prosperity, whereas dispersed locations reinforce social divisions and tend to exclude people from opportunities. Spatial planning is useful in terms of urban planning and design since it is utilised as the public sector's strategy for influencing the distribution of people and activities in areas of various scales in order to improve communities built, economic, and social environments (Republic of South Africa, 2001). However, when spatial planning is primarily influenced and, in most cases, moulded by racial laws and regulations, as it was during the apartheid era, it leads to spatial inequality, as it did in South Africa. As such, the geography of inequality in South Africa continues to remain neglected over the past two decades, regardless of the centrality of racial segregation to colonialism and apartheid (Turok, 2018). The government's indecisive approach to spatial divides means that the scars of history remain largely intact, enhancing spatial inequality. Undeniably, the tendency to disregard the spatial dimension of inequality and poverty means that the publics own efforts to erode the geography of apartheid are neglected and unrecognised. This contradicts the spirit of the country's Constitution and discourages social and economic transformation (Turok, 2018).

According to a recent World Bank (2018) report, South Africa is considered one of the most unequal countries in the world by any measure. Spatial gaps in subjective and physical welfare are stark and deeply etched in South Africa. For instance, within every town and city, upmarket suburbs with the best amenities and exclusive business precincts are juxtaposed with squalid shack settlements and overcrowded townships. Remote rural areas with mud schools and no piped water contrast with affluent country estates and luxurious game lodges. Such obvious spatial divides create perceptions of resentment and injustice (Turok, 2018). Growing up in

different worlds with incomparable social infrastructure and opportunities of all kinds, shapes life chances profoundly and corrodes trust across society (Turok, 2018). Hence, countless communities that are poor feel left behind with no interest in the country's success. Entrenched geographical inequalities also create inefficiencies and dampen aggregate growth. They cause wasteful use of land, impose costs on the movement of people and goods between areas, and raise barriers to business interaction and trade (Turok, 2017). The existence of extreme spatial disparities is partly a legacy of racial segregation enforced under colonialism and apartheid through various regimes of land dispossession, forced removals, influx controls, residential segregation, vastly unequal education systems, and so on. Other factors are responsible for the persistence of these patterns, including concentrated economic power, sluggishness in the built environment, and continuing unevenness in institutional capabilities across the country (Todes & Turok, 2018). Geographical divisions persist despite important constitutional rights, a welter of legislation, common institutional structures, sizeable fiscal transfers from leading to lagging regions, and many programmes and projects intended to promote social justice, rural development, and land restitution. Spatial inequalities have multiple dimensions which are difficult to overcome. Undoing the damage of apartheid to normalise spatial forms will require greater vision, coordination, and sustained commitment across government.

Alternatively, to provide stimulating inclusive growth and eradicate inequalities, financial inclusion (FI) can be used as a strategic role in this regard. The location of where people live greatly impacts their life choices and influences their financial decisions. Thus, the role of banks and other financial services providers (FSPs) providing products that holistically meet the needs of those at the bottom of the pyramid is key to fostering sustainable FI. The highly uneven use and access of financial services that is so prevalent was created by a historical bias towards extending access of financial services to high- and upper-middle-income earners. In addition, the level of concentration in the provision of financial services by banks is a matter of concern from a market conduct perspective, as it erodes the efforts made towards increasing financial inclusion mechanisms for the country.

Given this background, financial markets in many parts of the world are undeniably segmented, incomplete, and inefficient. This is largely attributed to high transaction costs for both consumers and institutions as well as biases against certain parts of the market (Imboden, 2005). Therefore, Ansong et al., (2015) indicated that individuals will continue to transact outside the formal financial system if they do not receive the ease of access in using formal

financial services. Also, growth is discouraged in situations in which poor people have limited access to credit, as financial institutions commonly use physical capital instead of human capital as collateral against loans (Madsen et al., 2018). As such, Zimbalist (2017) suggested that private and public resources are more likely to be directed to urban areas, as they afford some combination of better political capital, physical access, and higher returns on investment. Thus, neglecting the development of rural areas and townships.

On the other hand, the constant interactions during social activities can impact on a person's behaviour as a result of financial advice on various financial decisions, hence, FI. Therefore, the study argues that for FI to be achieved as an overall outcome, consumers are required to have skills and financial knowledge. These could be obtained from social interactions and are essential in making financial decisions, consequently affecting consumer financial behaviour. Ultimately, a consumer's choice of financial products or services, whether informal or formal, is influenced by social networks and the degree to which a person efficiently utilises their resource endowments that the networks have to encourage their financial behaviour, and consequently, FI. This is consistent with Zhou et al., (2009) who found a positive significant relationship between households' choice of FSPs and social networks.

## 1.2 Historical Background



This section presents a historical background of inequality, more especially, spatial inequality in the South African context. Attention is first given to the apartheid financial system, followed by a review of the post-apartheid financial sector reforms.

### 1.2.1 The apartheid financial system

The system of racial segregation in South Africa termed 'apartheid' referred to a state of being apart, which was enforced through various Acts and laws from 1948 until the early 1900s. The enforcement of apartheid led to racial prejudice across various basic services, including financial services. In addition, only white people had access to quality services while the rest of the population, particularly black people, were restricted to underdeveloped rural areas characterised by poor infrastructure support and limited access to amenities (Nanziri, 2016). For instance, these disadvantaged groups developed numerous ways to meet their financial demands for savings, investments, credit, and other risk mitigation strategies. A particular

method that acquired prominence was the *stokvel*1, which is a type of an informal savings mechanism (Nanziri, 2016). Regardless, the country is characterised by a highly complex financial sector that still serves the interests of the elite, alongside an equally growing informal sector that serves the financial needs of the excluded majority.

The access and use of formal financial services were restricted by several regulations in the sector which included the Credit Agreements Act, Act 75 of 1980, and the Usury Act, Act 73 of 1968. The former covered credit of approximately R500,000, followed by capped interest rates. However, the legislation had inadvertently discriminated against many low-income households in obtaining credit. This is because FSPs reduced the supply of financial services to low-income persons as they were more likely to default on their loan repayments. In an attempt to reduce stringent credit procedures, the 1992 Exemption Notice was enacted to uncap interest rate fees on these loans and exempt loans below R6,000 from the provisions of the Usury Act (Nanziri, 2016). Nonetheless, this led to increased high-costs and unregulated micro-loans, particularly for low-income consumers who remained unable to access formal credit. The price of credit was exorbitant, reaching rates of 360% per annum. This contributed to high default rates, complemented by unregulated debt collection schemes by lenders, including seizing of personal identification numbers and borrowers' bank cards to make direct deductions from the debtor's account. Additionally, regulation involved the removal of the Alienation of Land Act2, Act 68 of 1981.



The 1981 Land Act prohibited the accumulation of assets by Black people since the government acquired exclusive ownership of the land by relocating and evacuated Black people to unproductive low-market areas, often without adequate reparation (Nanziri, 2016). Ultimately, this led to the long-term effects of limiting access to formal credit where collateral is required for lenders.

1 A 'stokvel' is an invention only club consisting of members who contribute a fixed amount towards a rotating saving or credit scheme on an agreed upon basis.

2 The Native Land Act of 1913 and the Native Land and Trust Act of 1936 introduced areas that were only occupied by White farmers and relocated Black people to overcrowded underdeveloped areas. (For more information, see the South African Government newsroom at https://www.gov.za/1913-natives-land-act-centenary).

### 1.2.2 Post-apartheid financial sector reforms

The dawn of the democratic system in 1994 led to the abolishment of apartheid laws where the democratic government carried out economic reforms to reverse apartheid injustices. One of these policies included the Reconstruction and Development Programme (RDP), to transform the country from one that serves the rich and excludes the poor, to one that takes full advantage of people living in the country and resource potential. Another key strategy was the introduction of the Broad-Based Black Economic Empowerment3 (B-BBEE) Act, Act 53 of 2003, which also steered the development of the Financial Sector Charter4 in 2003. Consequently, affordable financial products and services were extended to marginalised groups, particularly through the low-cost transactional Mzansi account. The latter can be loosely defined as a low-cost bank account targeting low-income people to extend formal bank access to the poor.

South Africa boasts a generous social welfare programme which substantially increased the number of recipients from 12,015,059 in 2006/2007 to approximately 18 million in 2018/19 with the government spending close to 163 billion in 2018/19 (South African Social Security Agency [SASSA], 2018). The 2018 General Household Survey results reported that an estimated 45.5% of households in South Africa had at least one person receiving one or more social grants, with the highest percentage of grant recipients residing in former homelands in the Eastern Cape at 61.1%, followed by Limpopo at 59% (Statistics South Africa [StatsSA], 2019b). In 2012, all grant beneficiaries were obliged to obtain their funds through SASSA accounts, this improved the formal financial sector participation of low-income segments and enhanced the security and efficiency of grant payments. As supported by Cole et al., (2011), small subsidies significantly improved demand for financial products and services.



3 BBBEE is a policy that aims to ensure the participation of previously disadvantaged groups in the formal economy through initiatives such as employment equity. For more information, see the Department of Economic Development in South Africa. (2016). Broad-based Black Economic Empowerment. http://www.economic.gov.za/about-us/programmes/economic-policy-development/b-bbee.

4 The FSC is a transformation policy that came into effect in January 2004 based on BBBEE terms. See the Banking Association of South Africa. (2019). https://www.banking.org.za/consumer-information/consumer-information-legislation/financial-sector-charter-code/#:~:text=The%20Financial%20Sector%20Charter%20(FSC,to%20the%20financial%20services%20sector for more information.

The transformation process improved access to credit, which was accompanied by Affirmative Action (AA)5, encouraged borrowing that led many consumers into debt (Nanziri, 2016). Ultimately, the 1980 Credit Agreement Act and Usury Act were withdrawn and replaced by the National Credit Act (NCA), Act 34 of 2005, which was highly influenced by legislative reforms on the credit industry in the European Union, United Kingdom, and New Zealand. Essentially, the NCA was intended to regulate the formal credit industry; however, it had already been characterised by exploitation and abuse of customers resulting from liberation in credit access. Moreover, a relatable bill that covers all formal financial transactions, such as insurance, investments, and savings, as well as credit, was enacted in 2008 by the Consumer Protection Bill. However, by 2004, financial services usage was closely connected with persons in formal employment and middle to higher income households (Ardington & Leibbrandt, 2004). The 2017 FinScope survey found credit access penetration levels to be relatively small at 45% of the population and about 51% of South African adults did not borrow at all. Since credit had now become fairly accessible, those who borrowed from the formal FSPs were deeply indebted, with household debt-to-disposable income skyrocketing to almost 80%, while household savings dropped as low as -0.2% (Nanziri, 2016).

The inequalities of the past were still reflected in South Africa's financial sector. The country's highly developed formal financial system continued to serve large corporations and the elite, while small and medium enterprises (SMEs) and previously disadvantaged groups were primarily catered for by the informal financial system made up of loan sharks and micro-lenders for credit, while savings mechanisms involved stokvels and insurance policies with burial societies, funeral parlours, and undertakers. These informal mechanisms led to further abuses, and additional standard setting bodies were created to ensure that both FSPs and consumers were protected. These included the Credit Ombudsman, the National Credit Regulator (NCR), Credit Bureau and Long and Short-term Insurance Ombudsman, to name a few.

5 Affirmative Action (AA) allowed the previously disadvantaged groups to take up positions in public/private services, increasing their income, which allows them to use financial services.

## 1.3 Problem Statement

Inequalities in South Africa are known to have strong spatial dimensions, usually regarded as a simple rural-urban divide. This is limiting because it ignores the relationships between rural and urban areas, and it obscures the enormous differences across both urban and rural localities. The challenges facing commercial farming areas differ greatly from the former homelands, and big cities have little in common with small towns. Given South Africa's large and wide territory, spatial gaps should be understood and tackled at various distinct scales, such as traditional/tribal lands, farms, urban, or township areas. This is because disparity is accentuated across different locations, educational levels, income, and race, as such reflecting the persistent post-apartheid inequalities. Additionally, while distinguishing between the different features of financial products and services, a number of consumers view their accounts as constraints instead of enablers. This is because account usage is relatively low amongst cardholders, as more than one quarter of cardholders withdraw their money immediately once it is deposited (Boston Consulting Group [BCG], 2017). Thus, the informal sector will continue to thrive in offering financial services to disadvantaged communities as formal institutions are not actively meeting the needs, particularly of those at the bottom of the pyramid. On the other hand, current approaches for measuring FI are either too rigid or simple, according to existing knowledge at the time of writing. Current studies hardly uncover the root of different components of financial services in determining the level of FI, which prevents a complete view of inclusion from occurring.



Moreover, since 1994, the issues of place, space, and territory have not received the attention they deserve. For instance, the government has been indecisive around internal changes for people, despite growing evidence that this can support to lift people out of poverty and promote income mobility. Housing policies have failed to accommodate most migrant households and have compounded hardship and exclusion by dispersing poor communities to the outskirts of cities, far from economic opportunities, good schools, and other facilities. This means that persons residing in poor and underdeveloped areas are even more likely to become financially excluded as the majority of their income goes to financing transport costs, which leaves people discouraged in saving and having the lack of money to access and use other basic financial products. For example, in order to obtain insurance or credit, financial institutions require physical assets as collateral and a good credit rating; however, for persons residing in poor

communities, they are often unable to meet these requirements, making it harder to obtain insurance as they are more likely to be considered high risk by insurers and not having credible credit ratings in order for them to access formal insurance and/or credit. As such, more explicit initiatives are required to reduce spatial disparities and have more integrated and sustained communities that will offer equal life opportunities for all in order to realise sustainable economic activity and reduce inequalities, and ultimately, foster greater FI.

Turok (2018) supports that advance in spatial development are attributed to the distribution of jobs and population. The colonial and apartheid government tended to force black people apart from economic opportunities, at great cost to individuals, families, and communities. Two-and-a-half decades after apartheid, there continues to be a difference among where many people live and where resources and jobs are concentrated. This aggravates unemployment and poverty for individuals residing in poor underdeveloped areas and imposes additional costs on their mobility. The exceptional transport expenditures are like a residual burden on the poor lingering long after apartheid. The physical disconnection, or formally known as 'spatial mismatch' (Turok et al., 2017), applies at both the regional scale (between cities and isolated rural areas) and the metropolitan scale (between the core centres of employment and the main townships). Contemporary forces of economic clusters tend to reproduce this pattern, as wealth reinforces business confidence in affluent areas, and the creation of capital and income generates further resources that get reinvested locally in other businesses, up-market properties, FSPs, private schools, hospitals, and all kinds of amenities. In the absence of countervailing policies, such as a requirement on private developers to provide inclusionary housing for low-income groups and small enterprises, as they can easily get squeezed out of productive places through the operations of the land and housing market. Ultimately, this cumulative process of uneven development has extensive consequences for well-being, employment, and human progress in various areas, which may unintentionally exacerbate financial exclusion (FE) for people residing in disadvantaged communities.

## 1.4 Research Question

The research question guiding this study was formulated as follows:

> "What is the impact of apartheid spatial planning on financial inclusion in South Africa?"

## 1.5 Aim & Objectives of the Study

The aim of this study was to understand the impact of spatial inequality on financial inclusiveness in South Africa.

The objectives of this study were to:

1) Identify whether apartheid spatial planning legacies (as represented by various provinces6 and locations) continue to hamper financial inclusiveness.
2) Determine whether spatial planning (as represented by farm, tribal and urban areas) drives financial services uptake and usage.
3) Explore how inequality has manifested through spatial planning in accessing financial services and products.

## 1.6 Significance of the Study

Sharp spatial divides continue despite the existence of several national programmes, such as a unitary system of provincial and municipal government and universal social protections. Turok (2017), for example, claims that comparatively wealthy areas have stronger economic infrastructure, better education and healthcare facilities, more reliable energy and sanitation networks, more appealing public places, and a broader selection of recreational options. Ultimately, these 'positive externalities' boost people's living conditions and their prospects of achieving success in life. Equally, poorer communities tend to extend fewer livelihood prospects, substandard public infrastructure, and more inferior services. These areas tend to experience much more crime and violence, greater insecurity, health hazards, worse social ills, as well as higher risks of disaster. Growing up in harsh and inhospitable environments makes it harder for people to realise their potential, access formal financial instruments, and are more likely to acquire informal financial services (Turok, 2017). Their restricted prospects for social advancement also hamper their contribution to the economy as workers and consumers.

6 Certain provinces such as the Eastern Cape, North West, Mpumalanga, and Limpopo were affected more by apartheid as majority of the 'homelands' were situated in those provinces, whilst the Western Cape and Northern Cape had no former homelands. For more information, see M. Alexander. (2018). *The provinces and 'homelands' of South Africa before 1996.* South African Gateway. https://southafrica-info.com/history/provinces-homelands-south-africa-1996/

Moreover, there are dangers in South Africa's uniform policy and regulatory framework, in that people with low incomes are forced to reside in areas where it is cheap and easy to build, instead of places with more jobs and stronger economies. Within cities, this is because housing subsidies are skewed towards low-cost land and poor households can only afford marginal sites. Estate regulations and environmental restrictions are also more lenient further away from affluent communities and business precincts. This is because poorer municipalities are more desperate for development, needs-driven government funding pushes housing and social infrastructure towards lagging areas, and housing is one of the few tangibles that government can deliver to struggling communities experiencing de-industrialisation and mining closures. But does it make sense to invest scarce public resources to build houses in isolated locations with uncertain economic futures, especially when many people's aspirations seem to lie in the towns and cities where they stand a better chance of getting a job? The Constitution enabled the state to intervene in the urban land market to reverse the effects of apartheid, but the political will to use existing legal powers has been lacking (Turok, 2018). The state has not even used its surplus land holdings to boost housebuilding in well-located areas. A recent surge in urban land occupations and invasions suggests that people's tolerance of apartheid's cruel geography is diminishing (Turok, 2018).

The current literature on FI in South Africa has neglected attributes like spatial planning, financial service, or product usage, and social networks as predictors of access, which can have momentous explanatory power on FI from the individual level from an emerging market perspective. Moreover, aggregate statistics, such as South Africa having the highest percentage of banked adults as compared to other African countries, masks the financial inequality between the poor and the rich, and urban and rural residents as well as men and women. Furthermore, while credit to consumers is fairly prevalent, micro-and-small businesses have low access to funding, the absence of microfinance institutions, and gaps in the regulatory environment all pose challenges to FI, while the highly developed technology infrastructure of the financial sector offers promising opportunities (World Bank, 2018). Consequently, in order to reach sustainable and meaningful levels of FI, it is important to consider the location, access, and usage of financial services as well as an individual's societal capabilities. Sahrawat (2010) emphasises that the use of financial products and services by households for welfare enhancement and economic improvement is what drives FI, not the simple ownership of financial products. Yet, this has been a crucial limitation among academics that have tried to measure FI in different countries. Thus, any effort to measure FI requires several conditions

that clearly define the level of FI, including the extent to which other factors affect financial exclusion. Moreover, to the best of the researcher's knowledge at the time of writing, no studies have thus far used a multinomial logistic regression to interrogate financial inclusion using a demand-side survey in South Africa. However, the study does complement emerging research exploring the extent of FI in emerging markets using advanced economic techniques such as the Multinominal Logistic Model (MLR) (Soumare et al., 2016; Ketema et al., 2020; Mohammed et al., 2020). Given this background, the study aims to measure FI from a financial needs perspective which holistically considers the otherwise neglected aspects from past studies, such as financial services product usage, the influence of social networks, as well as consumers' capabilities with respect to the various geographical locations they reside in.

## 1.7 Methodology

This study employed a quantitative approach whereby secondary data from the South African FinScope survey was utilised, which looked at financial needs and awareness from a demand-side perspective. Thus, descriptive, and econometric analysis formed part of the quantitative analysis undertaken in this study. The purpose of the quantitative analysis was to explain the relationship between specific variables, such as banking penetration and usage to geographic areas. As such, this study aimed to determine whether taking geographical differences is significant in expanding FI, particularly to reach the needs of consumers, especially those from the bottom of the pyramid.



## 1.8 Thesis Outline

In pursuit of exploring and establishing the degree of correlation between spatial inequality and FI, the thesis is segmented into five chapters, outlined as follows:

**Chapter 1: Introduction**

The first chapter introduces the study and provides a brief background of spatial inequality in the South African context. It also presents the problem statement, research question, aim and objectives, and explains the relevance of the study. Finally, the forthcoming chapters are outlined under their respective headings.

**Chapter 2: Literature Review**

In addition to analysing theoretical literature relevant to the study, Chapter 2 also defines the key concepts used throughout the thesis and reviews past empirical studies.

**Chapter 3: Data Analysis & Methodology**

Chapter 3 outlines the methodology employed in the study; describes the nature of the research; and focuses on the process of data collection and analysis.

**Chapter 4: Discussion of Findings**

Arriving at the heart of the thesis are the findings, Chapter 4 explores the descriptive statistics and econometric regressions.

**Chapter 5: Summary, Recommendations & Conclusion**

The final chapter provides a summary of the main findings, delineates the key contributions of the study, and provides recommendations directed at various target audiences, including academia for future research.

# CHAPTER 2
# LITERATURE REVIEW

## 2.1 Introduction

This chapter reviews relevant theoretical and empirical literature on FI and inequality. The influence of various factors on spatial inequality has been intensively examined. Attention has mostly been focused on the level of economic development, trade liberalisation, political and fiscal decentralisation, or the quality of government (Ezcurra & Rodriguez-Pose, 2017). However, the influence of FI on the population has received less attention. Thus, only a handful of studies have explored the factors of spatial inequality until now, albeit indirectly, with FE as an aspect behind rising regional polarisation (Ezcurra & Rodriguez-Pose, 2017). Besides, the main player in the supply side of FI in South Africa is the banking system. Bank branches are the focal points for urban FI. These either take banking to the masses or restrict it to the affluent areas. Moreover, the foremost economic purpose of ensuring FI is to efficiently include the otherwise excluded groups into the realm of formal financial services by providing opportunities for secure credit, safe saving and investment practices, and other financial services. This will ensure overall economic growth, narrow inequality and deprivation gaps, and promote equity and transparency. In addition, it helps to prevent exploitative financial institutions from benefiting at the expense of the poor and vulnerable, and financial illiteracy. Despite this, South Africa has made significant policy efforts and there has been an increase in formal FSPs, but the level of FI remains relatively low, particularly in rural areas.

The outline of this chapter is as follows. After a brief introduction (section 2.1), attention is given to the conceptualisation of spatial inequality and financial inclusion, the core issue in this thesis (section 2.2). Thereafter, several economic theories (section 2.3) relevant to the discussion are explored. The study highlights, from the existing literature, key concepts, themes, and the link between space in the post-apartheid era and FI, thus producing the hypothesis of this study. Subsequently, followed by an empirical review of financial inclusion and inequality from regional and international studies (section 2.4). Finally, the conclusion reflects on the content of the chapter, providing a few closing remarks (section 2.5).

## 2.2 Conceptualisation of Space and Financial Inclusion

The literature views 'space' as an explanatory principle for social theory through analysing the interplay within society and various localities. This study recognises that social interactions are formed, restricted, and facilitated through space and that social space is built through the constant interaction between the economic, social, and political spheres (Alves, 2016). As such, space is considered a social product, that can shape social practices (Alves, 2016). Furthermore, the spatial organisation of cities reflects their economic, cultural, social, and political patterns, which are in constant motion when viewed through the lens of time. The latter characteristics reflect modern urban spatial structure because of a complex system that reacts to forces that are concurrently complementary and competitive. These developments have changed the conversion of land use and urban infrastructure, transforming the urban footprint (Cavalcante et al., 2016). Alternatively, the urban spatial structure and its functions are interpreted as a result of social practices at the local level. On this matter, the (Rex and Pahl's, in Saunders 1985) 'urban sociology' concept attracts attention to the role of public and private local gatekeepers, commonly referred to as estate agents, municipal officials, just to name a few, who provide strategic 'urban' resources and shape the unequal allocation of resources within cities (Saunders, 1985). In recent decades, the role of local and public organisations, along with capitalists' market economies and consumer demand, play a significant role in explaining the social production of space (Alves, 2016).



Young (2001) advises on the importance of focusing on contextual issues at a societal level that provides distinct life chances, arguing that the fundamental structure of social inequality is about how large social institutions distribute rights and fundamental responsibilities, claiming that conception of justice should begin with the concept of governance. Young (2001) notes how socio-economic factors often produce political inequality or the exclusion of influential political discussions that can reproduce new inequalities within cities. For instance, literature confirms that in both developing and developed economies, local governments tend to respond more quickly to neighbours in affluent white communities than to neighbours in high-density black communities, which does not ensure equity, equal opportunity, and political inclusion (Young, 2001). Further, Alves (2016) noted, that despite discussion on equality, the foundations of inequality are most common and rooted in daily economic systems or some form of public life, such as culture, ideology, and culture.

Unequal geographical development is deeply rooted in the economy, and the spatial economic differences of the apartheid era continue to this day (Rogerson & Nel, 2016). It has been well documented those geographical economic disparities between regions rarely disappear. Observing the persistent uneven regional development and the reality that unequal spatial developments perpetuate and reinforces the phenomenon of "lagging regions" in geographical areas (Pallares-Barbera et al., 2012; Harvey, 2014). Further, Pike et al., (2014, p. 25) remind us that the presence of spatially imbalanced geographical concentrations of economic development and urbanisation "raises difficult questions for public authorities across the world".

Burgess and Pande (2005) argued that at a micro level, bank branches tend to be far from rural areas, and by increasing savings mobilisation and bank lending, rural poverty can be significantly reduced, and their well-being improved through the resource allocation process. It is particularly important to reach the population in informal markets because all families, however poor, are said to be involved in some form of economic activity, as well as financial strategies for asset building, planning for social events and emergencies, and fulfilling their daily survival operations (Cohen & Sebstad, 2005). Moreover, rural families engaged in informal financial relations may not be guaranteed to be safe and reliable. Furthermore, Schindler (2010) believes that there is a need to integrate informal and formal financial markets, as informal activities are much larger than organised FI. Perhaps this integration can essentially improve participation, thereby improving poverty in these rural sectors and providing them with broader, efficient, secure, and reliable financial services to improve their financial strategies and overall well-being. However, this integration cannot be fully achieved without a review of the individual's capabilities, which not only enables them to transition from the informal system to the formal system, but also enables them to appreciate the formal institutional model with confidence. To measure whether formal FSPs are an efficient tool for FI, the individual capabilities of different market segments must be considered.

### 2.2.1 Defining spatial inequality

'Spatial inequality' can be defined as the unequal access of people to public facilities and/or services, such as schools, hospitals, cultural centres, jobs, or amenities, measured in distance, causing unequal abilities in skill accumulation and exclusion to opportunities and more. More sophisticatedly defined, spatial inequality is unequal access to one's choice of all of the above,

meaning, citizens have a choice as to what kinds of jobs they can reach, which schools they send their children to, or which hospitals they can go to. The spatial organisation of cities reflects socio-economic and political patterns, which viewed through these lenses of time, are constantly moving (Cavalcante et al., 2016). Socio-economic and political changes in recent decades have exacerbated social inequalities in most countries and the differences in living conditions between social groups and urban areas. Equally, Andersen and Van Kempen (2003) revealed that as social polarisation increases, there are clear signs of a spatial aspect in the process. Cities serve as a territory for attracting people and activities, while concentrating opportunities (e.g., employment, consumption, and recreation) and unemployment, lack of affordable housing, and crime (Alves, 2016). Thus, they can be seen as complex social systems that, to some extent, are characterised by inequality and are the root cause of it (Alves, 2016). The argument is that, in the overall search integration, the policy debate is redefined from spatial positioning and the application of alternative policy tools, which may, but not necessarily, include spatial positioning.

Furthermore, in South Africa, these debates on spatial positioning involve the impact of explicit space policy interventions, rather than implicit space policies, including sectoral policies, which have strong (and sometimes unintentional) geographical consequences (Rogerson & Nel, 2016). This can be said to be due to the country's long-distorting and geographically unbalanced development structure, which requires a space-based approach to address persistent poverty and inequality (Rogerson & Nel, 2016; Turok, 2018). The Department of Economic Development (DED) highlights "the stark realities of a South African geography of extreme wealth disparity, spatially rooted poverty and unequal access to opportunity and amenity" (DED, 2013, p. 5). Restating the case for targeted interventions, the objectives for spatial development, as highlighted in the increasingly influential National Development Plan (NDP), concentrate on redressing inherited geographical inequalities (Rogerson & Nel, 2016).

The section above defined the core concept of 'spatial inequality'. The next section defines the concept of 'financial inclusion'. Both concepts are central to this study.

### 2.2.2 Defining financial inclusion

There is no single, well-accepted definition of 'financial inclusion'. This is because it is a multifaceted concept that depends on country-specific agendas. Nevertheless, it is often used

interchangeably with 'financial exclusion', which is the opposite of FI. Lahcen and Gomis-Porqueras (2018) maintained that FI is a complex notion which can be influenced by the cost of financial access, degree of liquidity insurance offered by banks, monetary policy, and the response of producers to changes in aggregate demand. Similarly, Shem, Misati, & Njoroge, (2012) alluded that FI can be defined differently to appropriately correspond to the social-economic and geographic challenges unique to a country or region. Furthermore, Dasgupta (2009) proffered FI as the remedy of financial exclusion, whereby formal financial services are made accessible and affordable for all. Moreover, financial access is accompanied by an enabling environment for access to financial products and services, such as providing affordable quality financial products, empowering consumers to become financially literate, and greater proximity to branches (Allen et al., 2016). A central part of FI is the availability of formal financial services, particularly to marginalised and low-income groups (Ansong et al., 2015). Consequently, Fomum and Jesse (2017) inferred that FI encourages individuals to accumulate assets. It considers both access and usage, since one does not necessitate the other, and it is believed to encourage growth and development.

Broadly defined, FI refers to universal access to a wide range of financial services at reasonable cost. Families need access to multi-purpose financial products, most importantly, contingency planning and risk mitigation. Households build buffer savings, allocate savings for retirement (e.g., through pension schemes), buy insurance and hedge products for emergencies. Once these needs are met, households often need credit to create jobs and to finance consumption and crises (if they do not have savings/insurance to finance them). Finally, wealth creation is another area in which financial services are needed. Individuals need a range of investment and savings products to create wealth, depending on their level of financial knowledge and risk perception. Specific channels for growth caused by FI remain to be discussed. Evidence suggests that this may not be through credit, but through the trickle-down effect of increased demand for labour. This is because literature supports that FI may provide a pathway for poor and distressed households through using credit facilities for generating income-earning activities, hence increasing labour force participation. However, as a result of the divided spatial form of South African cities, economic mechanisms transmitted through the labour and land markets have replaced administrative controls on racial segregation as the primary drivers of spatial division. Many poor black households live in peripheral townships and informal settlements, with substandard services and long-distance commuting to jobs, colleges, and other facilities. This is supported by Turok et al., (2017) who indicated that the majority of

townships have not changed much beyond poor settlements lacking diverse consumer services, formal business activities, and employment. This ultimately suggests that merely advancing FI through credit enhancing mechanisms is inefficient, particularly because of the spatial divide and the bias of banks extending a wide range of financial services towards affluent consumers.

The strengthening of the focus has been reflected by a better understanding of the importance of FI for socio-economic development. The interest also comes from the increasing recognition of large gaps in access to credit by the world's population, where 47% of the world's population in 2017 had borrowed money in the past 12 months, with developing countries having 44% of individuals access formal borrowing (Demirgüc-Kunt et al., 2017a). This fact depends both on a lack of demand, and, most importantly, on barriers deriving from cultural, political, and social factors. Having access to finance plays a major role in reducing poverty and promoting growth in developing countries, possibly allowing the poor to save and borrow, making it possible for them to build assets. As a consequence of an increase in available assets, for example, individuals can invest in education, or small and medium-sized firms can benefit of promising growth opportunities. In short, the ability to have access to financial products and services helps the promotion of growth and welfare. The boost on growth and reduction of poverty and inequality through the mobilisation of saving and easier access to resources, functions as insurance against economic shocks. Besides, fighting exclusion can promote labour and firm formalisation, helping enhance government revenues and strengthen social safety nets. Recently, around 50 of the World Bank clients, each client representing a country of the world, have set up policies and strategies for FI.

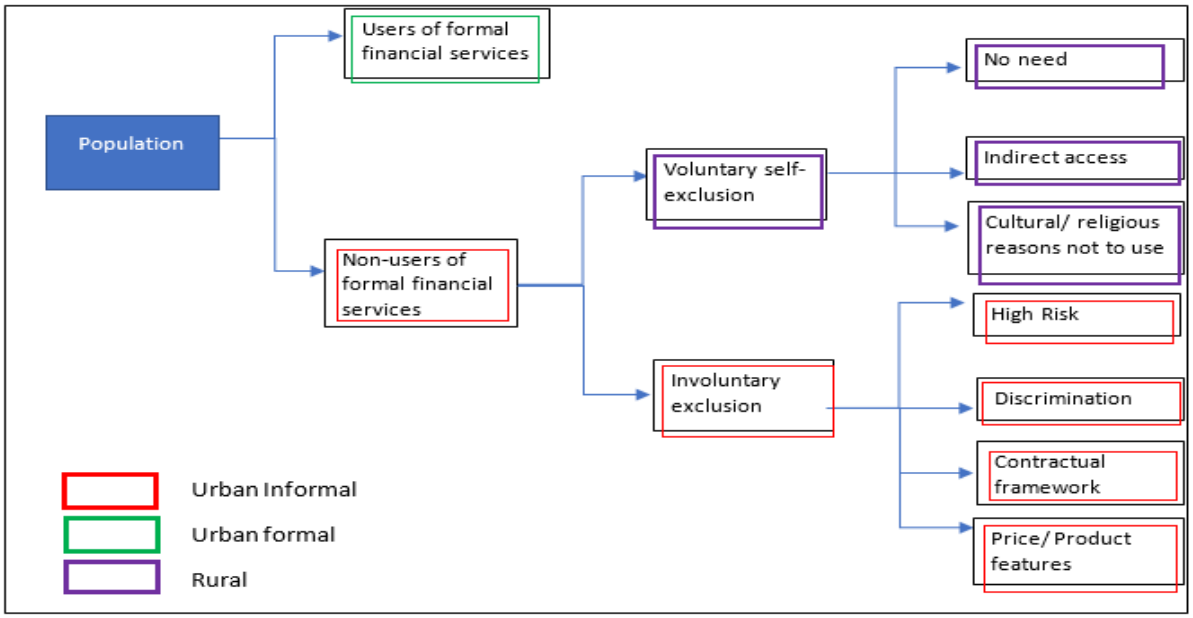


Figure 2.1: Use of and access to financial services

(Source: Adapted from the World Bank, 2008)

As shown in Figure 2.1 above, those who do not use financial services can be divided into *voluntary excluded* and *involuntary excluded*. The group of individuals that voluntarily do not make use of financial services are mainly poor and distressed people living in remote/rural areas. Their reasons for abstaining from using financial services include, either: (1) they do not need these services, or (2) they may have cultural and religious reasons. Nevertheless, they may have indirect access by using the bank account of someone else. Conversely, the other group of individuals are those involuntarily excluded from the use of financial services, mainly because they have insufficient income and carry a high risk of repaying any amount of money borrowed, as they do not have enough collateral to grant them access to wider financial services. The historical bias extending to poor people, particularly previously disadvantaged people, was created by the Native Land Act of 1913, which led to the deprivation of black Africans' right to own land. Consequently, they were confined to only 13% of the land (Todes & Turok, 2018). Moreover, the Group Areas Act enacted in 1950 enforced racial segregation in the economy and the forced displacement of blacks in rural areas which were referred as 'homelands' and townships within urban areas. Although the laws adopted in 1987 had been repealed, a century of such policies and restrictions on migration led to dense settlements in homelands and townships, and circular migration between urban and rural areas, which continue to endure the legacies of apartheid (NPC, 2012). In effect, many Blacks have been

and still are restricted to living in areas that are far from urban centres and jobs (David et al., 2018).

In this case, the lack of use is not caused by the inefficiencies of markets and governments. Others do not have access because of discrimination, lack of information, poor environment, and price barriers. After describing this situation, FE is worth policy action if it is driven by barriers to individual access to financial services, otherwise the marginal benefits of individual use of financial services will outweigh the marginal cost of providing services.

Ultimately, non-users of formal financial services are constrained to using informal markets as they are considered high risk by financial institutions due to their lack of appropriate documentation and collateral. The existence of informality is both a symptom of hardship and exclusion and a cause of further disadvantage and insecurity amongst previously disadvantaged households. Turok et al., (2017) inferred that informality mirrored the unplanned efforts of previously disadvantaged people to overcome the harsh environments they reside in and improve their lives by participating in simple income-generating activities and limiting their cost on shelter by living in poor squalled conditions. Hence, informality is a sign of 'underdevelopment' resultant from low investment in physical and human capital, reflecting limited forms of human organisation and fragmented social relationships. The spatial dislocation between informal activities, on the one hand, and more affluent consumer markets, employment centres, and formal enterprises, on the other hand, is one of the obstacles to their growth and development (Turok et al., 2017).

Thus, while FI in the narrow sense may, to some extent, be achieved by offering any one of these services, the goal of 'comprehensive FI' is to provide a wide-ranging set of services, as illustrated in Figure 2.2 below.


Figure 2.2: Comprehensive financial inclusion

(Source: Findev Gateway, 2008)

From a macroeconomic point of view, the objective to build an inclusive financial system should be the limitation of the percentage of individuals belonging to the involuntary exclusion group of the figure presented above.



To unpack the concept of 'financial inclusion' further, the following sub-sub-sections look at the categories of FI; factors influencing FI; the status of FI in South Africa; as well as policies and strategies, respectively.

#### *2.2.2.1 Categories of financial inclusion*

Kodan and Chhikara (2013) identified the following three main dimensions of FI. The first dimension comprises all *transmission services*. This enables people to use general banking services, such as transferring cash and cheques. The second dimension comprises *protective services,* which refers to medium- and long-term financial security as well as protection towards fluctuations in income and expenditure, for instance, the former is commonly in the form of life assurance covers, private pension provisions, savings, and so forth. The third dimension consists of *promotional services*, and it facilitates independence as households may

have sufficient access to loans for starting up business initiatives (Kodan & Chhikara, 2013). The latter suggests that transmission and protective services are essential for households to contribute to the economy as it may induce good health in addition to overall well-being, whereas promotional services do not apply to excluded individuals as they may pose high risks and costs accompanied with starting a business (Fisher et al., 1999, cited in Kodan & Chhikara, 2013). Financial development can promote growth and reduce inequality in financial friction, as transaction and information costs are particularly binding on the poor who lack collateral and credit records, so relaxing these restrictions would disproportionately benefit the poor, increase the efficiency of capital allocation (growth), and reduce income inequality by facilitating the financing of the talented poor (Aghion & Bolton, 1997; Galor & Moav, 2004; Aslan et al., 2017). In sum, inequality created by historical biases and further exacerbated by discriminatory financial access may affect income inequality both directly and indirectly**.** They could affect spatial inequality directly through enabling economic participation, providing access to productivity tools, and helping to improve economies of scale. Thus, affecting inequality both directly and indirectly through the impact on labour force participation (Aslan et al., 2017).

#### *2.2.2.2 Factors influencing financial inclusion*

The existence of extreme spatial disparities is, of course, a legacy of racial segregation under colonialism which was then strengthened by systems of all-encompassing segregation, immigration control, forced evictions, separate public administration, and differentiated education systems. However, a range of other factors is also responsible for persistent unequal development, including strong economic forces; the uneven distribution of resources; and persistent gaps in institutional capacity, basic infrastructure, and public services. This is reflected in the perpetuation of geographical divisions post-apartheid, which is further widening in some respects (Turok et al., 2017). Polarisation persists despite a welter of universal legislation, uniform policy frameworks, common institutions, inter-regional fiscal transfers, and national programmes intended to promote social justice, urban integration, rural development, and township upliftment. Spatial gaps also continue despite many constitutional rights, including freedom of movement within the country. This suggests that spatial inequalities have multiple dimensions which are socio-economic, institutional, and psychosocial, and that these defy simple solutions. It also indicates that undoing the distortions of apartheid to reconfigure spatial patterns is likely to be a long-term endeavour requiring greater creativity, coordination, and sustained commitment by financial institutions and other

important sectors. There are many dilemmas and trade-offs involved that require difficult choices to be made, and that necessitate a much stronger evidence base to inform such decisions (Turok et al., 2017).

Furthermore, current literature has shown that less equal income distributions are associated with spatial sprawls which foster spatial poverty traps through lower average growth and shorter growth spells (UN, 2020). Thus, financial systems play a fundamental role in sustaining growth and development. Thus, making it important to first consider the factors which induce a relatively inclusive system. Moreover, Demirgüç-Kunt and Klapper (2012) highlighted four main issues impeding on FI, namely:

1. *Distance* – as one moves down the income level of countries, the number of answers citing distance sharply increases. The shortage of physical points where financial services is performed mostly harms those who live in rural areas, but for some countries, this includes people living in urban areas.
2. *Lack of necessary documentation* – most of the time, documents that are required for opening an account may exclude workers in the rural and/or informal sector who are less likely to have wages slips or formal proof of residence. There is a significant relationship between subjective and objective measures of documentation requirements as a barrier to account use that holds even after one considers Gross Domestic Product (GDP) per capita. The Financial Action Task Force (FATF) that was formed in 1989, aims is to combat threats to the financial system, stated that safeguarding money laundering and terrorist financing would exclude some legitimate businesses and consumers from financial systems, stressing, consequently, also safeguards that support FI (Alexander, 2001).
3. *Lack of trust in banks* – this is one of the most difficult barriers to address in the short term because it can stem from cultural norms, discrimination against certain segments of the society, past episodes of government expropriation of banks, or economic crises and uncertainty.
4. *Lack of financial literacy* – financial segregation of the poor usually stems from a lack of understanding, leading to a further detachment from the idea of financial institutions. Studies show that although banks had developed some products perfectly suitable for the needs of the poor, the latter did not know about them, so they would have been reluctant to use them. Poor financial literacy limits people's opportunities to take effective action to improve their financial well-being.

*2.2.2.3 Status of financial inclusion in South Africa*

The Financial Service Commission (FSC) negotiations led to the launch of the Mzantsi account in 2005 which represented a momentous event for South Africa's banking industry, as the account was offered by all major banks. In 2010, approximately six million Mzantsi accounts were opened, with the majority of holders (72%) being previously unbanked adults (Kruger, 2015). However, 42% of the accounts were dormant by 2012, consequently failing to bring people into the formal financial system (Kruger, 2015). Alternatively, even active Mzantsi accounts were not profitable for banks, with the majority of customers using their accounts as mailboxes, as people would withdraw all their monies as soon as they had received it. This meant that institutions were unable to make any money through interest income or transaction fees from lazy deposits7. Interestingly, the accounts poor performance was attributed to the bad image of being perceived as a "the poor man's bank account" (Donnelly, 2012), as customers were not prepared to accept a separate banking product purely targeted at poor people. Thereafter, banks decided to recall the Mzantsi account due to financial losses and low account usage (Kruger, 2015).

The failure of Mzantsi account came at a period when banks were facing a series of difficulties. Internally, the banks were experiencing cost pressures and diminishing revenues. Additional pressure on banks' profit margins came from the South African Competition Commission to lower banking service fees (Kruger, 2015). Externally, the rise of competitors from the banking and telecommunications sectors was starting to move customers away as competition for the stagnant pool of 20 million already banked customers intensified (Clark, 2012). The primary external threats came from the second-tier banks that always had a focus on lower-income consumers. The biggest of these were African Bank, Capitec, and Postbank. However, African Bank, which reeled in high levels of borrowers' debt, was the cause of the recent failure of African Bank, the largest lender to low-income individuals in South Africa (Bonorchis & Spillane, 2014).

Further competition emerged when Net1, a distributor of cash-based social grants, won a tender from the Department of Social Development (DSD) for the provision of a card system to distribute the grants. These grant payments would be done through a modified system, with

7 Lazy deposits refer to money left idle in an account that can be used by banks to extend loans to other customers.

minimal links to the existing banking system, effectively excluding all retail banks from nine million new account holders. Thereafter, ABSA, First National Bank (FNB) and Standard Bank, launched new divisions in 2010 that would cater for low-income consumers that earned below R8,000 monthly. The focus of this new business model was to encourage low-cost consumer servicing and acquisition and offer lower-cost transactions at high volumes. These institutions planned to use a combination of innovations to channel solutions in their products, which was done primarily through partnerships with mobile service providers and retailers to ensure affordability and sustainability of these low-cost accounts These accounts include, ABSAs Flexi, FNBs Easy and Smart Zero, and Standard Bank's Access accounts (Kruger, 2015). As such, these accounts offered low transaction costs and no management fees, involved new banking channels where a combination of low-cost branch infrastructure, consumers' mobile phones, and specialised over the counter (OTC) devices supplied to retail partners. Illustrations of these channel innovations include ABSAs Cash Send through which customers could send money electronically through any mobile phone by simply dialling the banks code, the banks app or via the Internet banking channel to anyone in the country, both banked and unbanked (Kruger, 2015). Similarly, FNBs e-Wallet allows FNB account holders to make payments to other customers irrespective of which bank they used, as the FNB account holder only requires the recipient's cell phone number (FNB, 2020). On the other hand, Standard Bank opted for a combination of agent and mobile banking through retailers based in the townships (French, 2011), as well as mobile payments similar to ABSA and money transfer service in collaboration with one of South Africa's largest retailer, Spar (Kruger, 2015). By offering these services to their existing customers, the banks were now indirectly providing banking services to unbanked customers.



#### *2.2.2.4 Policies and strategies*

FI policies have been directed towards encouraging the use of financial services, particularly the adoption of credit and saving mechanisms. The intention for that is markets with suitable credit and insurance mechanisms households are better able to wither shocks since savings and borrowing can smooth away the risk (Nasr, 2017).

Alternatively, with respect to various housing policies and regulation, inclusive and better regulation is required to curb the persistent spatial divides across the country. The existence of extreme spatial disparities stems from the legacy of the apartheid regime that reinforced racial segregation, yet spatial gaps continue despite post-apartheid policies. This suggests that spatial

disparities cannot be solved by simple solutions, greater commitment and coordination is required across all stakeholders (Turok et al., 2017). Moreover, rules and measures relating to the environment, building regulations, land-use planning, public procurement, business licensing and housing hamper progress towards economic prosperity through spatial disparities (Turok et al, 2017). They create difficulties through their complexity, rigidity, poor alignment, and associated costs. These are not the only obstacles to shared socio-economic improvements, and they do not operate in isolation. They are compounded by other economic, social, and institutional processes. Therefore, better regulation is required for sustainability and scale. For example, rules and procedures that are more consistent, less burdensome, more in line with socio-economic realities, and more developmental in orientation (Turok et al., 2017).

## 2.3 Theories

This section discusses various theories/economic approaches relevant to the discussion here. These include the capabilities approach; Friedman's advanced life cycle; behavioural finance theory; and location and urban growth theories. Each is discussed below under their respective headings.

### 2.3.1 Capabilities approach

The purpose of investigating these numerous economic approaches is to determine the view of space and time that is reflected in their premises. These help to highlight the often stark distinctions that occur when comparing different theoretical traditions (Corpataux & Crevoisier, 2007). While there may be no straightforward approach to defining FI, there are several unequivocal characteristics of the phenomenon from the literature (Kabakova & Plaksenkov, 2018), which are:

- uniform availability of financial services,
- regular usage,
- good quality of financial services, and
- potential for increased welfare.

Clearly, it is not enough to provide credit for increased consumption simply by opening accounts or bank branches. The ability of users to make meaningful use of financial services to enrich their lives is an important part of the process of FI. While the financial inclusiveness from the supplier side (i.e., the bank's perspective) relates to the number of bank branches and

bank accounts, the number of ATM outlets and the level of exposure revealed by the actual use of credit and deposits, it does not fully reflect the overall scope of FI. Also, when examining the spatial distribution of poverty and inequality in contemporary South Africa was characterised by significant regional differences in economic activity and welfare outcomes during the economic period before and after 1994 (David et al., 2018; Fedderke & Wollnik, 2011). This is due to the complexity of the delivery system and the high level of financial exclusion, which varies by region, category, and asset holding capacity, particularly land holding capacity. This has led to weak overall demand for assets and financial services. From a user's perspective, access to formal institutions also translates into access to a variety of resources that help reduce risk while providing market connections through information and physical structures. However, the consistent spatial disparities that continue to plague the country unintentionally spoil the efforts of financially inclusive initiatives as they tend to favour those already financially included. This is because FI supports in widening people's choice to lead better lives by increasing their capability through social and economic security. Hence, FI directly effects human development; however, the causality is multifaceted (Kuriakose & Iyer, 2014).

The persistence and existence of spatial disparities in economic development can be explained by a combination of numerous factors such as history, initial conditions, institutions, endowments, trade, and transaction costs, increasing returns to scale, and imperfect information (Kuriakose & Iyer, 2014). Financial development resulting from FI and human development strengthens each other in a direct and indirect manner. This is the discovery of some ground-breaking work in this field. It is clear that income inequality and poverty are obstacles to human development and, therefore, FI (Kuriakose & Iyer, 2014).

The capability approach is a theoretical framework that entails two core normative claims. Firstly, the realisation of the freedom of life is morally essential, and secondly, the realisation of the freedom of life is understood by people's ability to do what they really have the opportunity to do and become something they have reason to value. According to the capability theory advanced by Nussbaum and Sen (1993), an individual's abilities are a combination of an individual's abilities, including his/her cognitive abilities, personality traits, and external factors. However, it is well known that a lack of external support can inhibit an individual's financial performance, even if they have the relevant skills (Nanziri & Leibbrandt, 2018). The role of history is a common factor highlighted by different approaches to the interpretation of

regional development models. History is important, "both in terms of the initial conditions and accidental events that set-in motion particular patterns of industrial development over time and space and in terms of the subsequent 'locking in' of those patterns via self-reinforcing effects" (Martin & Sunley, 1996, p. 286). This cumulative causality means that shocks or adjustments are costly, difficult to reverse, and can have long-term effects, so economic activity and population tend to be more concentrated in a few locations.

Thus, Sen's capabilities approach (CA) is a multi-dimensional concept that focuses on people's abilities and enables them to achieve results that are valuable to their lives, such as being financially included, is discussed below.

#### *2.3.1.1 Personal capabilities*

Financial consumers' ability is fundamental to the choice and decision-making in the context of FI, especially financial behaviour. In this study, individual abilities are defined as a combination of financial attitudes and financial literacy owned by individuals that enable them to achieve FI. For instance, the ability of individual consumers to influence the extent to which they are financially integrated. On the other hand, Katoroogo (2016) claimed that the role of psychological influences, such as financial literacy, and financial attitude on financial decisions, cannot be ignored since they are considerably connected to what drives people to use financial services. When individuals have interconnected relationships, they are more likely to adopt and reflect the attitudes of those around them, which in turn may affect financial behaviour, thus leading to FI (Katoroogo, 2016).



Fishbein and Ajzen (2011) assert that the most basic assumptions behind attitude concepts are attitude guidance, impact, guidance, shaping, and predicting actual behaviour. It is therefore expected that through a deliberate process, financial consumers will assess and judge whether the use of financial services is important for improving their well-being. Livingston and Lunt (1992) and Norvilitis et al., (2006) found a positive and significant relationship between individual attitudes towards financial behaviour, particularly with regard to debt. They argue that attitudes and behaviours are necessary to make sound financial decisions, and ultimately, achieve personal financial well-being.

*2.3.1.2 Societal capabilities*

In theory, social networking helps solve the problem of information asymmetry (Akerlof, 1970), which is widespread in financial markets. Social networks in the form of strong and weak contacts are channels for information flow and sharing (Granovetter, 2004). In fact, strong and weak links and structural vulnerabilities in social networks enhance the flow of information between different clusters of poor households, thus increasing access to resources, markets, and new opportunities as the overlap of information is reduced (Burt, 2001). Stiglitz and Weiss (1981) claimed that lenders were always concerned with adverse choices and moral risks when providing credit. Social networks therefore help to distribute information to lenders about the credit and reputation of poor families (Bongomin et al., 2018). Further, Grootaert and Bastelaer (2002) inferred that, individual participation in local networks makes it easier for each group to take collective action because information can reduce transaction costs and opportunistic behaviour. Existing member networks have improved information on sources of financial services, such as credit and its providers (Okten & Osili, 2004).

However, information asymmetries that prevail in financial markets between lenders and borrowers, banks and other financial intermediaries may be reluctant to lend for fear of reverse selection and moral risk. However, Granovetter (2004) claims that an intensive network of personal contacts, ensuring trust and acting as a channel for the flow and sharing of useful information, is essential for such complex transactions. In addition, Bongomin et al., (2018) considered that the frequency of interaction was a feature of the network and reduced the cost of monitoring team members, since information on member behaviour was common sense. Floro (2019) notes that social connections and the possibility of resulting sanctions between poor families can help alleviate adverse choices and moral risks in joint liability loan contracts, especially when borrowers have social leverage over each other over loan contracts.

In fact, social networks between poor families are an important tool for screening loan applications and ensuring that contracts are executed (Karlan, 2007). Ahlin and Townsend (2007) revealed that through stronger social sanctions, social connections (measured through sharing among non-relatives, cooperation, kinship gathering and village-run savings and loan institutions) have increased repayment rates. In addition, Aryeetey (1997) suggested that the pressure to repay loans was directly related to peer monitoring mechanisms based on existing social networks, which could reduce defaults and thus increase access to financial services for poor families. Ghatak and Guinnane (1999) supported this, noting that the provision of

information through social networks helped to address issues related to the provision of loans and the improvement of the access of the poor to credit. For example, institutions can use local information networks to identify poor families who are unable to repay their loans (Bongomin, Ntayi et al., 2017). Additionally, social networks have increased their ability to access market information and reduced search costs, thereby strengthening links between credit stakeholders and establishing networks among members of the lending group (Bongomin, Ntayi et al., 2017). Thus, Grootaert (2001) believes that social networks provide poor families in rural areas with information on available sources of financial services.

#### *2.3.1.3 Financial capability*

Financial capability refers to the extent in which individuals have adequate financial knowledge to make informed financial decisions. For instance, turning knowledge into action, for example, by using financial products and services, or by managing a person's financial affairs. Supporting this approach, Sheraden and Johnson (2006) insisted that financial capacity is a combination of an individual's access to financial knowledge and skills and subsequent assessment of financial institutions and services.

Financial capability incorporates knowledge, skills, and behaviour, such that, households are able to make ends meet, select desirable financial products and services, and budget. It is clear that individuals should have the relevant financial skills to complement their decision making, as complex financial decisions require a high level of skill and skilled individuals or institutions (Bongomin, Munene et al., 2017). In order to accommodate the diversity and preferences of individuals, formal sources (such as FSPs) and informal sources from one's social network (such as friends or family), and the media (which consists of financial pages in newspapers or magazines, and television) are considered the main foundations of financial information.

### 2.3.2 Friedman's advanced life cycle

In the 1950s, Modigliani and Brumberg (1954) developed a microeconomic theory known as the 'life cycle hypothesis theory'. These authors indicated that people's spending decisions depend on the resources available through their lifetimes and current lives. The hypothesis of this theory is that people accumulate assets early in their work and spend them in retirement. The theory also assumes that consumption patterns change according to one's needs in life. In addition, it forecasts the economy based on observations of individual behaviour. Moreover, it shows that a country's total savings depend on the growth rate of national income, not income

levels. Critics argue that it's impossible to estimate so many variables, as the model suggests; consumers care more about the present than about the uncertain future; consumption depends on current income, not future income; expenditure depends on attitude, not available resources; individuals who do not have complete rationality and who do not fully understand their income and future lives; expenses are not directly related to assets as some assets are illiquid and the model adopted ignores mutual fund savings. Despite these weaknesses, many studies on consumer behaviour are based on this theory and on observations by Modigliani and Brumberg (1954). As a result, this study supports that people engaged in financial decision-making and the use of various financial products all their lives, have created and secured wealth through savings, loans, and insured against any possible losses. According to Friedman's (1957) extension of Modigliani and Brumberg (1954) who advanced the life cycle hypothesis based on consumption smoothing over periods, individuals can predict the economic environment, and subsequently, make complex financial decisions. However, rational behaviour is questionable, especially from the point of view of behavioural finance. Moreover, external factors, such as the economic environment, access to social welfare systems, and an individual's risk appetite have an impact on access to financial skills essential to financial decision-making (Nanziri & Leibbrandt, 2018).

### 2.3.3 Rational choice theory

The development of consumer choice theory is still ongoing. However, despite the improvements being made, the neoclassical basis of rational choice theory assumes that consumers make choices to maximise their well-being by consistently ranking alternatives (Grüne-Yanoff, 2012), so that when consumers compare different courses of action, the patterns they pick reflect cost-benefit analysis. For example, consumers want to use the most useful financial products at the lowest cost, then similar products from the same or alternative source. Similarly, consumers will choose to gain more financial knowledge at the lowest cost, but with the highest returns. The concept of environmental rationality involves the integrity of consumer preferences, the transition, and the independence of irrelevant alternatives (not changing orders as new products are introduced). The key assumption of this approach is that there is sufficient and perfect information about the existing choices and the results of the choices made. In addition, consumers are considered to have cognitive abilities and time to weigh one option against another. This ideal scenario is said to lead to equilibrium, which laid

the foundation for Markowitz's work in financial theory, and later Sharp's on diversification of currency and capital market risks (Fromlet, 2001).

### 2.3.4 Behavioural finance theory

This concept combines psychological and market phenomena and explains why and how individuals make seemingly unreasonable and illogical decisions to consume, save, invest, and borrow (Belsky & Gilovich, 1999). The reason is that psychology is important for financial analysis and decision-making. Herbert Simon pioneered this theory in 1955, rejecting the existence of rational consumers in the face of the realities of the investment world and the financial environment as a whole. Fromlet (2001) agrees that heuristics play a role in financial decision-making, so individual decisions do not necessarily reflect their tendencies, and that new information may not easily change an individual's financial decisions. In addition, information varies, and not all consumers have access to it, and they need the skills to use it appropriately. In addition, some consumers show a preference for certain types of information, with unpredictable and inconsistent financial decisions combined.

### 2.3.5 Urban and location growth theories

One of the clearest procedural facts in economics is the spatial concentration trend of people and productive activities (Cavalcante et al., 2016). Once the city centre is composed of the process of a clustering of productive activities, the city becomes the production capital, and its relative size embodies a clustered economy through the combination of sectors that form the basis of a country (Cavalcante et al., 2016). From an economic point of view, the clustering of an economy is the main driving force of urban existence. The three main factors that influence corporate and individual decision-making are:

a. *Economies of location* (Marshall, 1890), whereby firms can benefit from a local pool of specialised factors of production, such as skilled labour and technical information.
b. *Economies of urbanisation*, also known as Jacobian externalities, providing diversification and cross-fertilisation of concepts that firms need, and
c. *Economies of complex activities*, defined as connections among the economies' supply chains. 'Economies of complexity' refer to the sharing of different stages or processes of production by firms (Cavalcante et al., 2016).

## 2.4 Past Review of Empirical Studies

This section summarises the key empirical works that allude to the spatial mismatch of opportunities and how that may impact on FI within an economy. Thus, exploring regional and international studies relating to the impact of FI on inequality as well as racial differences.

### 2.4.1 Financial inclusion and inequality

Although early evidence of FI having reduced poverty and income inequality is still in its infancy (Beck et al., 2007), a limited number of empirical studies have observed the impact of FI on income inequality. Outreville (1999) established a positive correlation between FI measures and human capital development measures. However, limited empirical studies have examined the impact of microfinance on income inequality in Africa (Copestake, 2002; Kay & Hamory, 2009; Chuasi, 2011). The traditional belief of the donor community is that microfinance can reduce market distortions and, in turn, income inequality by improving access to finance for the poor.

#### *2.4.1.1 Sub-Saharan Africa regional studies*

Nevertheless, microfinance can reduce and increase income inequality as a result of the pursuit of financial sustainability. Based on this argument, Copestake (2002) developed a collective lending model to examine the different impacts of the Zambia Christian Enterprise Trust Microcredit Programme on income distribution in Zambia's copper belt. The results showed that access to credit had a much greater impact on people below the poverty line than for those above the poverty line. In addition, general evidence suggests that the impact of microcredit varies depending on who gets the loan, who gets the bigger loan, who leaves the project, and the dynamics of the group. This means that microfinance has a polarising impact on income inequality. Further, lack of access to financial services, such as basic bank accounts experienced by the rural poor, has been identified as a major constraint on asset accumulation, softening consumption and investment, and the education of children. This has led to increased income inequality between the rich and the poor. Allen et al., (2013) used household surveys and regional bank penetration data in 2006 and 2009 to explore the impact of equity bank branch expansion in rural Kenya using Ordinary Least Squares (OLS), Ordered Probit, and Gaussian Mixture Models to control endogeneity. The findings illustrate that the expansion of Equity Bank branches into neglected rural areas has the highest impact on low-income families without formal employment, those with low levels of educational attainment, and those without

families. Dupas and Robinson (2013) also noted that using savings account increased women's average daily investment in the treatment group by 38% to 56% compared to women without a committed savings account. Evidence also suggests that electronic platforms created by M-Pesa through mobile transfers have an indirect impact on income inequality. This is transmitted through national and international remittances, job creation, risk allocation and management, and subsidiaries developed to use the platform (Aker & Mbiti, 2010; Buku & Meredith, 2012; Jack & Suri, 2014).

Tchouassi (2011) observed the impact of microfinance on income inequality and vulnerability in 11 Central African countries. The author used the degree of microfinance to capture the impact of microfinance on inequality, using OLS and random effects. The findings illustrate that dense microcredit networks reduce income inequality. This conclusion confirms the results of Kai and Hamori (2009), which adopted the same approach to 61 developing countries, including African countries, to examine the impact of microfinance on income inequality. These two studies have shown that a dense network of microfinance institutions can reduce income inequality. In addition, in South Africa, Karlan and Zinman (2009) established that access to credit for previously excluded households had significantly improved well-being. Compared to the control group, families in the treatment group were more likely to increase their incomes, keep their jobs, and improve the quality and quantity of food consumption.



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*2.4.1.2 International studies*

Country-specific studies outside Africa have produced similar results, particularly on the extension of financial services and physical access, such as rural bank branch expansion into rural areas. For instance, Burgess and Pande (2005) found that the expansion of saving

institutes in rural areas led to increased average savings of low-income workers using evidence from an Indian social banking experiment. They employed regression analysis using two dependent variables, namely, *headcount poverty* and *rural agricultural wages*. The results showed a 4.10 percentage point reduction in the number of people helping people in the bank's new branches in rural areas. There is evidence that easy access to credit stimulates long-term investment, which in turn raises wages for rural agricultural workers.

In a cross-country study, Honohan (2008) used information from commercial banks and microfinance institutions to examine differences in household access to financial services through the development of new access indicators. A new access indicator was then piloted to study its impact on inequality. The results of the financial analysis system evaluation show that access to services is highly related to the level of inequality measured by the Gini coefficient, indicating lower levels of inequality in countries with better financial access. Similarly, Beck et al., (2007) and Bae et al., (2012) found that easing domestic restrictions on bank branches reduced inequality. More specifically, deregulation of bank branches reduces inequality by increasing the incomes of low-income workers, because deregulation increases the efficiency of the banking system, which in turn increases the per capita income growth rate in the US.

Similarly, a cross-country study by Mookerjee and Kalpioni (2010) found that more bank branches reduced inequality for every 100,000 adults. In addition, Park and Mercado (2015) and Garcia-Herrero and Touregano (2018) observed whether FI helped reduce inequality. The former established a FI index, which they used to study the association between poverty and income inequality in Asia. Their findings confirms that FI reduces poverty and income inequality. At the same time, the latter used the Honohan's access indicator (2008) and the Sama's inclusion index (2012) to measure FI at all levels, including adult and SME credit in bank accounts. After controlling for other factors, the results also showed that FI reduces income inequality, while private sector credit to GDP does not, after controlling the effects of fiscal policy and economic development. On the other hand, random control testing (RCT) does not support the positive effects of FI. For example, the increase in suicide attempts in India is related to excessive debt of microfinance providers (Duflo et al., 2013). Specifically, empirical updates from the Hedra Bas Pandana study in India showed no improvement in participants' welfare. Approximately 18 months after obtaining access, adults are less likely to be entrepreneurs, however they prefer to invest in existing businesses (Duflo et al., 2013). Additionally, average profit increased only for bigger businesses with an existing reputation

prior to the launch of the microcredit programme which resulted in widening income inequality (Duflo et al., 2013).

This section shows that, first, there was limited emerald evidence among countries at the African macro level on the relationship between FI and spatial inequality, although there were some studies at the micro level. Secondly, existing studies on access to specific countries and countries have shown that greater access to financial services, such as savings and bank branches in rural areas, can reduce income inequality. However, the results from RCTs, which focused on microfinance, questioned these results. Therefore, there is a considerable gap between spatial inequalities at the macro and micro levels of FI and spatial inequality, which is of concern in Sub-Saharan Africa (SSA) due to the increasing levels of spatial inequality, particularly in South Africa.

Development literature is explored next, with specific attention given to regional differences and FI.

### 2.4.2 Regional and racial differences in financial inclusion

Banerjee and Newman (1998) highlighted the role of information in interregional migration and consumption of financial products and services. Urban areas with sound infrastructure tend to be densely populated and active in business, partly because of the high level of information dissemination. From this view, any local difference in FI would be due to the readily available financial information provided by financial or economic institutions so that it could be easily accessed and shared through various mechanisms, such as through technology, word-of-mouth, and the media. Thus, institutional arrangements that discriminate against access to services throughout the geographical or ethnic spectrum may also lead to bias in the exchange of information. The study found that an individual's source of financial information plays a role in the level of financial competence of consumers of financial products and services (Xu & Zia, 2012). As a result, low urbanisation rates in many developing countries, mainly in Africa, Asia, and Latin America, may lead to low financial literacy among their populations, in part because of limited access to financial services (Xu & Zia, 2012).

Alternatively, it is imperative to note that numerous empirical works on financial access have been conducted over time, particularly when cross-sectional data is used. The limitation of this

method is that it is impossible to determine whether a person has acquired additional literacy skills or not during the survey. Lastly, the lack of standardisation of the definition of financial knowledge and the subsequent differences in measurements and concepts have caused problems in comparisons between countries. South Africa presented an interesting case study, partly because of its dual economy and the lack of rigorous empirical work on spatial inequality and FI.

A brief conclusion follows next, highlighting the main points of the chapter.

## 2.5 Conclusion

This chapter presented a discussion of current literature on FI, showing that changes are being made to find comprehensive and robust indicators of FI. Additionally, FI helps prevent exploitative informal and formal financial markets from thriving at the expense of the poor and financially illiterate. Yet, the current literature on financial inclusiveness ignores the attributes of financial attitude, financial literacy, social networks, subjective norms on financial inclusiveness. However, Sen's approach shifts from focusing on an individual's income, to estimating individual well-being and quality of life, is therefore a combination of capabilities that illustrate that FI not only contributes to theoretical building, but also helps to understand South Africa's distinct communities. Further, the empirical review highlighted those barriers to physical access are important and, if reduced, can help the financial system mitigate inequality. However, other obstacles may need to be addressed at the same time in order to realise the benefits of greater FI. These include discriminatory policies, pricing barriers which could have a negative impact on outreach to the expanded financial system. Moreover, government needs to be more strategic in allocating resources and not simply passively follow past trends. It needs to embark on the difficult task of formulating a spatial vision and framework to encourage development into suitable locations for human settlement, considering economic realities as well as pressing social needs and no-go areas for the natural environment. Greater coordination across silos and deliberate engagement with the private sector are also essential for this to be effective. There is no reason why the government should not require all new developments to include a share of low-income housing.

The next chapter describes the methodology employed in this study. Attention is also given to data collection and data analysis.

# CHAPTER 3
# DATA ANALYSIS AND METHODOLOGY

## 3.1 Introduction

This chapter discusses the methodology that was employed in this study. The specific focus is on the quantitative approach that was used to investigate the impact of apartheid spatial planning on FI, particularly in the South African context. The analysis of this study uses sources from the FinScope Consumer Survey Data, Statistics South Africa, newspapers, and various policy publications where necessary.

The structure of this chapter is as follows. After a brief introduction (section 3.1), the research philosophy (section 3.2) and nature of the research (section 3.3) are described. This is followed by a lengthy section describing the research methodology (section 3.4) employed in this study. Subsequently, a multinomial logistic regression model is explained (section 3.5). After reviewing the data and limitations that may affect the quality of the study, a brief conclusion is provided to wrap up the chapter (section 3.6).

The research philosophy applied in this study, namely, positivism, is described next.



## 3.2 Research Philosophy

This study uses the positivist paradigm, which falls within the framework of a positivist theory. Positivist approach aims to explain and predict what is happening in the social community and reveal common relationships between its features or criteria (Crotty, 1998; Babbie, 2012). The theory applies to research, and its overall goal is to record, measure and predict facts through a set of parameters and buildings. It has been argued that those scientifically assume that truth in the social world seems and that it means it can be documented, calculated, and tested in natural science (Babbie, 2013; Sanders et al., 2009; Sanders et al., 2011).

Thus, the study is set in objective ontology and assumed that there is only one fact in the social world that human behaviour is measured 'from the outside' without using individuals to make

sense of their measurable behaviour (Sarantakos, 2005). In this regard, in view of the prospect of scientific anthology and objective theory, volume research techniques and the vast majority of sample sizes are used. This method can determine the fundamental correlation between the explanatory variables and FI.

Having reflected on the positivist paradigm above, the next section focuses on the nature of the research. Thereafter, the methodology is unpacked in great detail.

## 3.3 Nature of the Research

The nature of the research in this study is exploratory, explanatory, and descriptive. The primary motivation for the study was to understand the impact of spatial inequality on financial inclusiveness in South Africa. Much of the research is therefore explanatory. The descriptive aspect of the study includes examining financial access trends by geographical areas and comparing main finance variables with relevant demographic variables that will be described in detail in the forthcoming chapter.

## 3.4 Research Methodology

The study followed a quantitative approach whereby secondary data sources were utilised for the study. The secondary data were sourced from FinMark Trust. Other secondary data sources utilised for the purpose of this study included: academic literature; government policy documents; and research reports.

In the sections below, attention is given to the quantitative approach employed in this study, followed by a discussion of the data; sampling procedure; limitations of the data; quantitative data analysis; and robustness checks.

### 3.4.1 Quantitative approach

Both spatial descriptive and spatial econometric analysis formed part of the quantitative analysis undertaken in this study. The purpose of the quantitative analysis was to explain the relationship between specific variables, for example, banking penetration within geographic areas. This type of research methodology was particularly useful in answering the research question regarding how the impact of apartheid spatial planning influences FE in the South

African context. The literature discussed in the previous chapter alluded to the importance of measuring FI from a financial needs perspective to better inform policies and business models. However, this study aims to go one step further by highlighting the importance of considering the difference in geographical aspect within FI to reach the needs of consumers, especially those from the bottom of the pyramid. Therefore, as described by Makuvaza et al., (2018), 'financial needs' encompass the following:

- 'Transfer of value' – as a core functional need – enables people to live their economic lives by allowing for consumption, payments, gifting, and receipt of income. More importantly, it is also a prerequisite for accessing credit, insurance, and savings.
- 'Liquidity' refers to consumers' ability to manage day-to-day expenses to meet their financial obligations. It is considered an important tool for maintaining productive capacity.
- 'Resilience' speaks to the ability to deal with unexpected shocks that will have a significant financial impact.
- 'Meeting goals' is having the capacity to utilise financial services to meet desired life objectives, or to even grow one's economic or financial position to reach some fulfilment.

The literature has largely inferred that mobile banking has been able to reach more segments of the population by being able to remove the distance or proximity barrier. Thus, this study further provides spatial descriptive statistics of the mobile banking penetration by looking at cell phone usage, which network provider, and which financial activities are prominent within different geographical segments of the economy. This will shed light on the study's first two objectives by identifying *whether geographical space determines financial inclusion* (Objective 1) and *whether geographical space drives financial services uptake and usage* (Objective 2).

The study also unpacks the latter concept through spatial descriptive statistics by exploring the receipt of income, which is done by looking at how people receive money; which banks receive their sources of income; and with which service provider for different geographical areas. This will assist in determining which FSP has penetrated the various areas. For instance, studies have found that Capitec is predominantly found in peri-urban areas, as their business model is to reach people at the bottom of the pyramid. Ultimately, this will also assist in addressing the

study's third objective, namely: *to explore how inequality is manifested in social spaces in terms of access to financial services and products* (Objective 3).

The research was designed to allow the researcher to infer key study variables (Saunders et al., 2011). Specifically, the statistical relationship between individual skills, societal capabilities and FI were examined. As mentioned earlier, most FI studies focus on a supply-side perspective, assuming that financial products and services providers independently influence FI. While the supply-side point of view is important, it should also be noted that the supply side itself cannot fully explain the occurrence of FI. In order to achieve balanced results and a more complete FI process, it is important to recognise that consumers use the services and products that are available. Thus, in this study, the analysis units were adult consumers of individual financial services represented by residents of different geographical regions of South Africa.

### 3.4.2 Data

The study used a nationally representative survey to obtain and utilise information on financial services from the FinScope Consumer Survey (FinScope). FinScope is an initiative by FinMark Trust, an independent organisation based in South Africa, Johannesburg. To date, 23 surveys have been conducted across various African countries (14 from the Southern African Development Community (SADC) countries and 9 non-SADC countries). Unlike other consumer surveys studies, such as the Living Standards Measure Survey (LSMS), FinScope's data is broader and contains important details about financial products and service awareness and usage. However, since FinScope collects data from a consumer perspective, it only reveals the demand side of FI and does not help to understand specific supply-side factors. There is evidence that, in order to strengthen welfare analysis, data should be collected at the household level rather than at the individual level. Households are important users of financial services, affecting the size and portfolio of financial services (Honohan, 2008). However, because FinScope collects data from individual members of the family, it is sometimes difficult to distinguish whether some of the indicators collected are applicable at the individual or household level, especially variables such as income. The situation is even worse when total household income data are not available.

However, for the purposes of this study, the FinScope survey in South Africa was used. Surveys are conducted at the individual level, with a focus on financial needs and opportunities, overview of users of financial products and services, and the financial institutions from which they obtain these products. Products are divided into formal, semi-formal, and informal financial products. The data include terminology used in each sub-sector, as well as information on the characteristics of the respondents, such as their location, age, education level, source of income, occupational and economic welfare indicators as well as their feelings and thoughts towards various financial indicators. These questions are used to determine the respondent's financial attitude; their view on financial services; and their psychological information. These surveys are cross-sectional surveys conducted annually, since 2003 with an average sample size of 3,900 nationally representative observations.

The structure of the questions was the same for 2003 and 2004, for 2005 through to 2009, and for 2010 to 2016, however the survey was changed between 2004 and 2005 and from 2009 and 2010. These differences limited the researcher's ability to use the full dataset as questions relevant to this study were replaced or dropped. Thus, to ensure that consistency in questions was maintained across surveys, the descriptive overview and analysis for the chapter was done on a pooled cross-section for the period 2015 and 2017.

The basic assumption of the pooled surveys is that different people were interviewed at each survey so that the average change reflected changes in individual behaviour or demographic changes over time. According to Woodridge (2010), these pooled cross-sections produce independent but unevenly distributed observations over time, i.e., any recurrence is considered coincidental and therefore negligible. Such datasets are useful for policy analysis. The data are weighted to be nationally representative. As mentioned above, FinScope has changed over the years. As such, the most important sections that will shed light on the study's research questions and overall objective are in section M. Section M gives details about the individual's general attitudes and demographics. These include specific questions such as: "What is your highest level of education?"; "Which of these, if any, best describe your personal working status?"; "Which of these bests describe your total monthly household income?" These questions help in defining the spatial inequality concept, as the literature states that the difference between urban and rural township areas have country-specific definitions. Thus, these questions help to determine the geographical area that people reside in. Thereby, being able to determine spatial inequality is important as it is the focus of the study. Thereafter, questions relating to people's

social networks, which is another important aspect, is found in Section L, as this will better inform the study on how they use their connections through family, friends, colleagues, customers, or clients to better inform their financial decisions. The survey asked the respondents the following questions: “Who do you ask if you need financial advice?”

Moreover, the ability for people to make payments, such as sending and receiving money (remittances), is important for individuals from a transfer of value perspective. Thus, as mentioned previously, the transfer of value underlines all the other financial needs. This can be illustrated through various sections from the survey, such as Section D which focus on remittances. This section asks respondents questions about how they send and receive, and which FSPs and retailers they use. However, the study specifically focuses on the question: “How do you usually receive money from people outside of your household?” and which service provider the respondent receives money from was asked, respectively.

The evolution of mobile banking is a significant factor in the literature as it is regarded as an innovative model in advancing FI. Thus, Section E is also investigated as it focuses on cell phone usage for financial services and technology. Moreover, this is a significant section to be used in this study as it sheds light on banking penetration of financial products and services as well as providing how the community contributes to people using such services. For instance, Section F4 asked the respondent why they chose a particular bank to have their income paid into. Responses included: “they are easily accessible/found everywhere”; “recommended by family/friend (word of mouth)”, and so forth. In addition, they were asked which organisations they have various financial products with and with which FSP. F10 explains why people do not have a bank account or bank cards, which respondents would respond with the following: “the bank is too far from where I live, work or travel to”; “I do not have proof of address”; “I use someone else’s bank account”, and so forth.

### 3.4.3 Sampling procedure

FinScope draws its primary sampling unit (PSU) using the probability proportional to sample size method. A *multi-stage sampling methodology* was used in which the first stage included the selection of specific enumeration areas based on the Probability proportional to size (PPS) method, using census data. From the enumeration areas selected, households are selected randomly. Individual adults were randomly selected from the households using the Kish Grid. Figure 3.1 below illustrates the FinScope sampling methodology (FinMark Trust, 2016, p. 4).

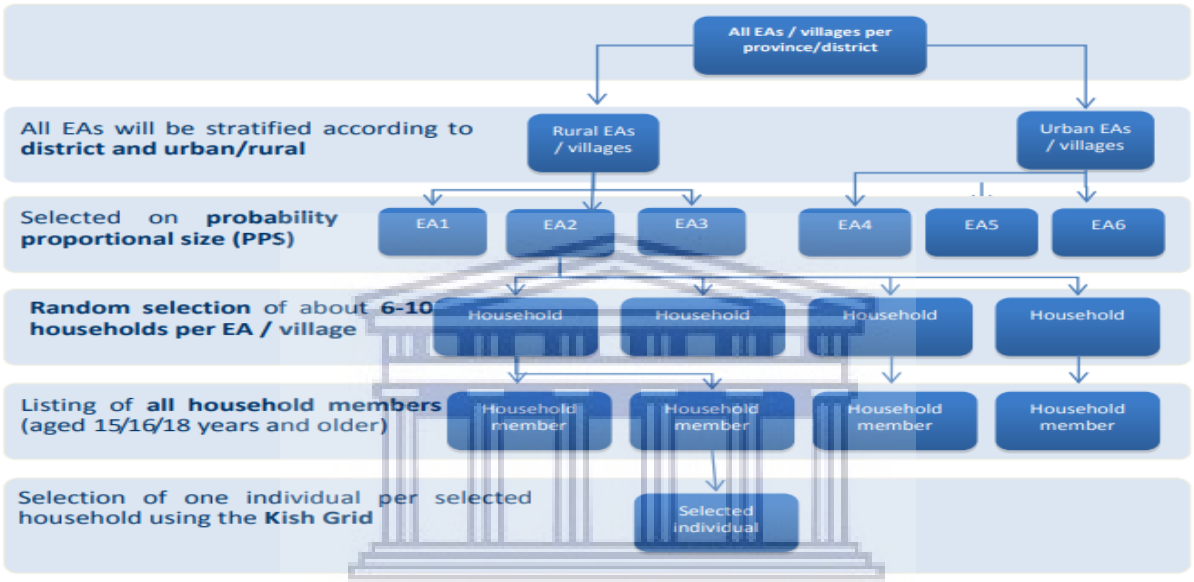



Figure 3.1: FinScope data sampling methodology

(Source: FinMark Trust, 2016)



FinScope data was selected to meet the demand-side data needs of the study because the data includes questions on savings/investments, remittances, and borrowing. Moreover, the survey asks study participants questions regarding banking penetration and their general attitude towards FSPs This provides valuable information on emerging data sources that could be availed for FSPs to analyse. The data also provides opportunities for researchers to link specific banks to the banking experience of an individual. For example, if a study respondent feels that the bank borrowing rates are too high, we can link this information to their bank. This provides input into the qualitative aspect of the study where semi-structured interviews were conducted. The interviewer can go to Bank A, knowing that there are customers at that bank who feel discouraged from borrowing due to the high cost of borrowing. This may lead to a more dynamic discussion on what is being done in terms of product-fit for lower-income segments, as well as challenges the banks may have in serving this underserved customer segment.

### 3.4.4 Limitations of the study

Over the years, the FinScope Consumer Survey has transformed and become shorter while including more questions related to technology. In 2010 and 2011, the FinScope Consumer Survey included far too many headings, some of which were ambiguous. These included: The bigger picture; Employment/income and expenditure; Financial decision-making and knowledge of financial products; Banking penetration; Transaction channels; Mzansi Account; Borrowing (credit/loans); Insurance; Funeral cover; Savings; Household conditions; Access to services; Natural capacities/capabilities; Vulnerabilities; Lifestyle indicators; and Demographics. In 2012, a very clear change can be seen in the structure of the FinScope Consumer Survey. This revised structure has been carried through until present. The 2013 questionnaire includes questions on whether the financial situation of the household had improved. This was not included previously but became a feature of the FinScope Consumer Surveys in subsequent years. In 2015, Section L14 had few responses on the time spent to travel to different FSPs as compared to 2014, which not only indicated responses available for the respondents to travel to different FSPs, but also considered the distance from place to access public transport, supermarkets, petrol stations, and social grant ID points. The reason for the removal of other points is currently unclear. Section A was renamed in 2012 to 'Household structure, Services and Community' from 'Household structure, Services, Community and Cell phone Usage'. This change was made to reflect the removal of the questions on cell phone usage from the section. Cell phone usage questions were moved to Section E (financial providers and using cell phones for financial services). Another interesting dissimilarity can be found in the 2015 FinScope Consumer Survey which does not have a Section B, as in the previous years. Instead, Section M is added. The reason for this change is unclear. Since not only the structure of the FinScope Consumer Survey has changed, but the questions as well, it becomes difficult to interrogate the data cross-sectionally over all the waves of FinScope. Consequently, it may be more helpful to interrogate the waves that include similar questions. Overall, dissimilarities among the FinScope waves necessitate that either there is a focus on one year or several years are assessed, but this must be done systematically and with justification. This study made use of more than one year as FI is dynamic, and therefore included the years 2015 to 2017 in its analysis.

Cell phone use is important to look at as banks are currently moving towards employing advanced technologies, such that bank branches are closing and becoming smaller, whilst encouraging individuals to use their mobile phones to transact any of the financial needs through their application (app) or Internet banking. This could be a large barrier for adults without mobile phones, particularly smartphones, in addition to South African data prices being inaccessible. As such, in exploring the cell phone variable, unfortunately the data does not describe the extent to which people have smartphones. However, a proxy can be used as inter activities explore the numerous activities that people are able to do, but this does not confirm whether adults commonly use Unstructured Supplementary Service Data (USSD), or banking apps.

Moreover, it is well documented that South African cities may be as fragmented and segregated as they were at the start of the democratic era (Pieterse, 2004). As such, variables that are used in exploring the incidence of spatial inequality are geographical areas such as urban, traditional, and farmlands. Even though these locations explore the different functionalities of rural areas by separating residents residing in traditional or farm areas, urban areas still provide a misleading representation of the challenges that are faced by persons residing in the outskirts of urban areas, such as townships, as compared to those residing in urban centres (suburbs) which provide better economic opportunities for individuals to thrive and receive greater well-being.



### 3.4.5 Quantitative data analysis

FI has become part of the social policy vocabulary of both developed and developing countries, and it is essential that people participate in social activities to improve their well-being. Despite this significance, Hannig and Johnson (2010) argue that there is still a lack of comprehensive measures to assess the level of FI. Measuring FI is important to gain insight into FI-related factors and the impact of policies and benefits for financial services consumers.

If an individual has access to financial services and unable to use the services or products, FI is incomplete, the process is not only incomplete, but also useless from now on. This is in the same way that Sahrawat (2010) highlighted that the use of financial products or services by individuals to improve and enhance well-being is the result of ownership and usage of financial instruments, not just ownership. This is a key limitation for academics trying to measure FI in

different economies. Therefore, any effort to measure FI requires careful consideration of the multiple variables or metrics that affect or clearly define the degree of FI, as well as the extent to which other factors affect access. In earlier studies, the data used as the benchmark for FI calculations were outdated. As a result, the robustness of the index is limited and does not fully reflect the level or extent of FI (Gupte et al., 2012). The general limitation of previously developed indices is that they are not used in the calculation of indices in sample data at the individual or household level. It is therefore important to note that meaningful and sustainable measurement of financial and financial consumption requires consideration of the individual capacity of financial consumers, i.e., their capacity and social capacity. At present, the literature on FI ignores the attributes of financial attitude, financial knowledge, social networking, etcetera, which are the proponents of FI, which, from the context of developing countries, have important explanatory power to FI at the individual level. It is therefore important to note that meaningful and sustainable measurement of financial and financial consumption requires consideration of the individual capacities of financial consumers, including their individual and social capacities.

The descriptive and econometric data analysis was conducted using Stata 14. The descriptive analysis describes trends in savings, credit, remittance, and insurance uptake, as well as characterises financial access by socioeconomic status in comparison to various provinces to determine if there are geographical differences in the banked population. Much of the analysis compares 2015 to 2017 to reveal the differences and similarities in FI between the two time periods.

The econometric analysis seeks to assess the relationship between spatial gaps and the quality of FI. More specifically, the study investigates how factors such as location, barriers to saving and banking, Internet access, and social networks impact on savings uptake and usage. The focus is particularly on savings as the literature strongly suggests that savings can lift households out of poverty and curb inequality as individuals can gather assets and improve their livelihood.

Pairwise correlation analysis was employed to assess whether the various financial products are independent of each other or whether perfect/high multicollinearity exists. There would be a need to investigate each financial product if they were independent of each other. The formula below was employed in assessing the correlation coefficient of the variables.

$$r = \frac{\sum(Y_i - \bar{Y})(X_i - \bar{X})}{\sqrt{\sum(Y_i - \bar{Y})^2 \sum(X_i - \bar{X})^2}}$$

The pairwise correlation table below (Tables 3.1 and 3.2) indicates that there is not a strong correlation between the savings, credit, remittance, and insurance strands. This means that the variables needed to be investigated independently of each other. This was found to be a consistent finding in both 2015 and 2017.

Table 3.1: Pairwise correlations on financial product strands in 2015

| Variables | Savings | Credit | Remittances | Insurance |
|---|---|---|---|---|
| 1. Savings | 1.0000 | | | |
| 2. Credit | 0.3684* | 1.0000 | | |
| 3. Remittances | 0.1430* | 0.1371* | 1.0000 | |
| 4. Insurance | 0.3563* | 0.3314* | 0.0789* | 1.0000 |

*shows significance at the .01 level

(Source: Researcher's calculations using FinScope data)

Table 3.2: Pairwise correlations on financial product strands in 2017

| Variables | Savings | Credit | Remittances | Insurance | Funeral Cover |
|---|---|---|---|---|---|
| 1. Savings | 1.0000 | | | | |
| 2. Credit | 0.3404* | 1.0000 | | | |
| 3. Insurance | 0.3401* | 0.3382* | 1.0000 | | |
| 4. Remittance | 0.0712* | 0.0910* | 0.0736* | 1.0000 | |
| 5. Funeral Cover | 0.2499* | 0.2392* | 0.8506* | 0.0787* | 1.0000 |

(Source: Researcher's calculations using FinScope data)

The descriptive analysis of the study included assessing the three aspects, beginning with uptake rates. This consisted of reviewing the various financial access strands over the periods 2015 to 2017 to understand the type of financial uptake that was taking place and the degree of success South Africa has attained in achieving FI. Next, FI needed to be assessed by income categories to ascertain which groups were most vulnerable to financial exclusion. More cross-tabulations by gender and geographical area type were performed to understand the profile of

a financially excluded South African. A huge part of the study focuses on the location aspect. From a descriptive point of view, an analysis was done on the usage of several financial products across various financial institutions that people use and why; and Internet access and cell phone capabilities to inform how these factors correlate with the vulnerable individual's chance of being financially included. Savings insurance, credit, and funeral cover uptake strands were also assessed descriptively as it is important to look beyond account ownership to gain a more holistic overview of FI.

### 3.4.6 Robustness checks

This section determines whether excluding individuals who do not use any form of financial product can result in sample selection bias. According to Heckman (1979), the use of sub samples for regression analysis from the lack of data leads to specification bias. In this study, people may willingly exclude themselves from the use of any form of financial product or service for a variety of reasons. This is a case of self-selecting from a non-user category. Excluding these individuals from the analysis means that picking sub-templates is incomplete. This can result in a loss of efficiency if an ordinary minimum square (OLS) estimate is made.

To continue with the in-depth exploration, the multinomial logistic regression (MLR) model that was applied in this study is described next.



## 3.5 Multinomial Logistic Regression Model

The multinomial (polytomous) logistic regression model is a straightforward expansion of the binomial model. When the dependent variable has more than two nominal or unordered categories, it is typical to utilise dummy[8] coding for the independent variables. This study implemented a MLR model to determine socioeconomic and demographic factors affecting the decision of the consumer to access and use various financial services and products. Since the dependent variable of the model has five categories for formal FI, and three categories for formal savings, it is appropriate to use a MLR as it allows for more than two categories of the dependent variable, and there is no natural ordering of the dependent variable, as the order does not matter (Cameron & Trivedi, 2009). With these models, only one category is selected as the base category, and the probability of belonging to the other categories is

8 Dummy coding is a method of incorporating categorical predictor variables into various estimate models. Dummy coding conveys all of the essential information about group membership using only ones and zeros.

estimated relative to it. For this study, the 'funeral cover' and 'not saving' were selected as the base[9] categories for the formal FI and savings model, respectively. Therefore, factors affecting inclusion in the non-base category are estimated relative to the base category. One hypothesis of MLR is that in any case an independent variable cannot predict dependent variables perfectly because it is an extension of the binomial logit model (Cameron & Trivedi, 2009). Further, exploring the assumptions of the MLR include:

1. Either a nominal or ordinal dependent variable should be used.
2. The dependent variables and observations must both be mutually exclusive and exhaustive.
3. There should be no Multicollinearity between Independent variables.
4. For the scale/continuous variables, there should be no outliers, high leverage values, or extremely impactful spots.

Moreover, an advantage of using the MLR is that it does not assume linearity, homoscedasticity, or normality (Mohammed et al., 2020).

Consider the probability that individual i is a member of category j:

$$\pi_{ij} = Pr\{Y_i = j\}$$

where j comprises the five formal FI categories – savings, credit, remittances, insurance, and funeral cover – when $Y_i$ = 0, 1, 2, 3, and 4, respectively. For example, $\pi_{i1}$ is the probability that individual i is in the savings inclusion category for formal FI. The probability of individual i being included in one of the non-baselines FI categories ($j \neq j^*$) can be shown as (Greene, 2011):



$$\pi_{ij} = \frac{e^{x_i'\beta_j}}{1 + \sum_{j \neq j^*} e^{x_i'\beta_j}}$$

where X is a vector of individual and demographic explanatory variables, β is a vector of regression coefficients, and j* is the baseline FI category funeral cover. Similarly, the probability of individual i being included in the baseline FI category *funeral cover* ($j^*$) can be shown as:

$$\pi_{ij^*} = \frac{1}{1 + \sum_{j \neq j^*} e^{x_i'\beta_j}}$$

To estimate the correlation between FI categories and individual demographic variables, the logged odds of being in a FI category relative to the baseline category is specified as:

9 The base categories in the study 'funeral cover' and 'not saving', where variables identified as having the highest concentration across their respective financial instruments.

$$log\left(\frac{\pi_{ij}}{\pi_{ij*}}\right) = x_i'\beta_j, \ \ j \neq j^*$$

The vector of regression coefficients β provides insight into the impact that individual factors have on the probability of falling into each of the five FI categories. While this is useful, it is difficult to interpret the impact of individual's factors, not just the negative or positive effects on the probability of being included in one of the five FI categories. A solution to this is to calculate the relative risk ratio (RRR)10 by taking the exponent of the multinomial logit coefficients of each non-baseline model:

$$RRR_{\beta_j} = \exp(\beta_j)$$

The RRR determines the risk of events occurring and identifies all independent variables for each category of the factor variable, except for the omitted reference category, as compared to the risk of events that occur without this factor. As such, the analysis of the model uses two performance measures:

1. P value: This is a significance test. It is usually tested at a threshold value of 10%, 5% or 1%. If the p-value is equal to or less than the threshold value, we reject the null hypothesis. Alternatively, if the p-value is greater than the threshold value, we do not reject the hypothesis.

2. RRR value: This value gives us the relative risk ratio for the independent variables. The RRR shows the change in risk of the dependent variable being in a category compared to the reference category, corresponding to unit change in the independent variable. An RRR > 1 indicates that the risk of the outcome falling in the comparison group relative to the risk of the outcome falling in the referent group increases as the variable increases. So, it is more likely to fall in the comparison group. An RRR < 1 indicates that the risk of the outcome falling in the comparison group relative to the risk of the outcome falling in the referent group decreases as the variable increases. In general, if the odds RRR < 1, the outcome is more likely to be in the referent group.

### 3.5.1 Dependant variable

The study uses a multinomial logistic model as the dependent variable allows for more than two categories. Thus, this section will focus on how the variable was derived as mentioned

10 The relative risk will be more informative and succinct since it is usually invariant and closely tied to the model. The marginal effect varies depending on the values of one or more independent variables that corresponds to the evaluation point. Further, it has been difficult to obtain the marginal effects for this model and thus have not used the analysis. Thus, with the general question being which financial products are influential RRR's are more relevant whereas if the objective was to determine the specific values, then the marginal effect provides the most direct response.

previously financial inclusion in this study has been explored from a financial needs perspective which focuses on various aspects beyond bank account ownership.

In this study, factors contributing to financial inclusion illustrated in the dependent variable were derived through a combination of financial access strands (see table 3.3 below), where respondents depicted that they have the respective products from formal institutions. For instance, the credit access strand showcases whether respondents have bank credit products; other formal non-bank products; informal products; from family and friends or not borrowing. Since the focuses on financial inclusion from a formal inclusion perspective across various financial products, the study assumed respondents that indicated they have formal accounts from a bank or formal non-bank products were considered as included and those with informal; used family/ friends or were not borrowing, saving, insured, remitting and funeral cover in this study are described as having no access.

Table 3.3: Dependent variable classified by four categories

| Category | Description |
|---|---|
| 1 | Savings (0= Not saving, 1 = Formal saving) |
| 2 | Credit (0= Not borrowing, 1= Formal credit) |
| 3 | Remittances (0= Not remitting, 1= Formal remit) |
| 4 | Insurance (0= Not insured, 1 = insured) |
| 5 | Funeral cover (0= No funeral cover, 1= Formal funeral cover) |



### 3.5.2 Explanatory variables

The focus of the study is to investigate the impact of spatial inequality on FI in South Africa. Therefore, the demographic variables listed below are based on the various studies which infer the usefulness of them in answering the research question and achieving the study's objectives.

***Location – Urban, farm and traditional areas***

Outside the cities, the population is unevenly distributed across the rural areas. The distinction between the former homelands and commercial farming areas is vital. Under apartheid, the original population of the homelands was inflated by forced removals from the cities and towns, and by restrictions on out-migration. In contrast, the commercial farming areas experienced

de-population following the mechanisation of agriculture and farm evictions. These historic differences remain important sources of social and economic contrast today, although there are some signs that the gaps are declining as people move from impoverished areas and resettle closer to economic centres (urban areas). This is because labour market conditions are better in urban areas, where a much higher proportion of adults are in employment and adding to family incomes. Suggesting that the perils of apartheid spatial planning continue to hinder the long-term development of the economy. Nevertheless, there has been little sign of any narrowing of the gap in economic circumstances between the different settlement types over the last two decades (World Bank, 2018). As such, this study finds it appropriate to use urban, farm, and traditional areas to inform the level of spatial segregation within the country.

Defining 'urban' and 'rural' areas is an important step in determining a country's population distribution. In trying to create a universal definition for rural and urban areas, complications arise in the literature. Universally, a common definition of rural and urban areas has not yet been established. Definitions differ by country, and in some cases the same country changes their definition over time. According to the United Nations (UN) (2014), it is difficult to apply a single definition to all countries because of the national differences in the characteristics of the urban-rural distinction. They therefore recommended that each country identify its own rural and urban areas in accordance with its own needs. The Population Division of the United Nations Department of Economic and Social Affairs (2017) found that the basis for determining urban areas is one or more characteristics, such as administrative criteria that classify municipalities as urban, population density, availability of basic services such as energy and water, healthcare, and educational facilities to name a few.

As such, this study defines 'space' in terms of three locations, namely: *urban, farms*, and *traditional areas*. In order to provide a more accurate representation of location – rural areas – the term 'rural' is classified by two distinct areas, namely: *farm* and *traditional* areas, which are further classified as *low population densities, low levels of infrastructure* and, most importantly, *low levels of economic activity* due to past legacy exclusions (StatsSA, 2010; 2011). According to StatsSA (2010), 'traditional areas' are communally owned land under the jurisdiction of a traditional leader. In addition, residences in traditional areas are commonly made from mud, clay, reeds, and/or other locally available materials that people can source. 'Urban areas', on the other hand, are classified as formal cities and towns characterised by higher population densities, higher levels of infrastructure and economic activities (StatsSA, 2010).

***Provinces***

The National Planning Commission (NPC) (2015) identified the spatial challenge of continuing to marginalise the poor as one of the key cross-cutting issues affecting South Africa's long-term development. The NPC further believes that, although the space heritage of apartheid was identified as a particularly noteworthy area of concern prior to 1994, the situation may have become more serious since then. Following, the National Development Plan 2030 (NDP) it was recognised that the density had increased in some parts of the country and that some provinces had achieved partial regeneration. However, limited progress has been made in reversing the geography of apartheid (NPC, 2015). As such, exploring the extent of FI is important in determining whether targeted plans are required to advance inclusion, particularly in underdeveloped areas such as the Eastern Cape, Mpumalanga, KZN, Free State, and Limpopo, which were amongst the former homelands during apartheid.

***Social networks***

Social networks are a channel for information flow and sharing among participants. There is plenty empirical evidence that social networks have a significant impact on the access and use of financial products by financial intermediaries, particularly poor rural families in Uganda (Bongomin, Ntayi et al., 2017).



Although little empirical research is carried out, mainly at the organisational level (Baker & Faulkner, 2004; Black, 2013; Dzhokhar & Rammohan, 2011; Rowley et al., 2012), working to understand the impact of social networking on financial behaviour, found that social networking has a significant impact on financial ability to obtain financial information through familiarity with individuals and organisations (Black, 2013; Conroy, 2005; Fatoki, 2011). Ranta et al., (2020) believe that social relations are a vital source of financial capacity. Social networks help improve a person's understanding of existing financial products and services and possibly how to use them to enable FI. Continuous interaction through meetings and other social activities may affect individual behaviour by building advice and awareness on various financial decisions, and therefore FI.

Therefore, the study argues that in order to achieve financial information, the possession of financial knowledge and skills, possibly through social interaction, is essential for making financial decisions that affect consumers' financial behaviour. Possibly a person's choice of

financial products or services, formal or informal, is the result of social competence and the individual's ability to effectively use the resources available to the network to influence their financial behaviour and, in turn, financial information. This agrees with the likes of Bongomin (2018), who found a positive significant relationship between social networking and mobile money usage and effective FI in SSA.

***Mobile phone ownership***

The advances in technology and the rapidly increasing penetration of mobile phones globally, have become essential in broadening access. Mobile phones allow individuals to use financial services from the comfort of their homes through mobile money/banking. Mobile money is a recent trend in the provision of financial services. In SSA, mobile-money usage is leading globally and bringing previously excluded segments of society into the formal financial sector (Demirgüç-Kunt et al., 2017).

***Gender***

Studies by Demirgüç-Kunt et al., (2013) and Sanderson et al., (2018) argue that gender is a determinant of FI. Women are less likely to have access to financial products because of social and economic barriers.

***Employment status***

Employment status is an important factor in determining FI, which has been widely supporting by literature (Yu & Matsebula, 2020; Sanderson et al., 2018; Allen et al., 2016; Aga & Peria, 2014; Beck et al., 2008). Sanderson et al., (2018) found that employment is the most significant factor in determining FI, as a person's employment status contributes to individual's income and expect employed salaried persons are required to have bank accounts leading to FI.

***Social grant recipient***

Approximately 26% of South Africans relied on social grant as compared to SSA average of seven percent World Bank Group (2019). The grants allow millions of adults to access formal financial services. According to a report by the World Bank Group (2019), social grant recipients received their payments through mobile money or at a financial institution by owning a SASSA MasterCard that allows them to mobilise their money.

### 3.5.3 Empirical estimation strategy

The prevalence of transaction accounts, access to credit and the willingness to save and buy insurance products are positive signs of economic and social improvement. Household wealth, GDP growth and poverty reduction are closely related to them. On the other hand, too much credit, high fees and unsuitable insurance products are counterproductive. For illustration, credit can lead to personal bankruptcy and even financial crises, such as the global financial crisis of 2007/08. Proper evaluation of FI requires balancing extremes (BCG, 2017).

This section seeks to outline the estimation approach used to examine the differential impact of spatial inequality along with sustainable FI. The MLR addresses one ('access') of the three critical dimensions of inclusion, whilst the other two ('usage' and 'quality') are investigated within the descriptive statistics. The formal financial model uncovers the full range of basic financial products and/ or services, including *remittances, credit, funeral cover, insurance,* and *savings.* These features are essential to household and national prosperity, as all these services can encourage financial security, economic activity, and well-being.

***Formal*** FI $= \beta_0 + \beta_1 Location + \beta_2 Province + \beta_3\ Race + \beta_4 Gender + \beta_5\ Education\ level + \beta_6 Employment\ status + \beta_7 Income + \beta_8 Social\ grant\ recipient + \beta_9 Social\ Network + \beta_{10} Internet\ access + \beta_{11} Cell\ phone\ ownership + \mu$



***Savings*** $= \beta_0 + \beta_1 Location + \beta_2 Province + \beta_3\ Race + \beta_4 Gender + \beta_5\ Education\ level + \beta_6 Employment\ status + \beta_7 Income + \beta_8 Social\ grant\ recipient + \beta_9 Social\ Network + \beta_{10} Internet\ access + \beta_{11} Cell\ phone\ ownership + \mu$

### 3.5.4 Outcome variable: Formal financial inclusion and savings

As stated in the previous chapters, several scholars have developed indices for measuring FI. However, they did not cover the full extent of the basic financial products/services, such as credit, insurance, savings, and funeral cover. Instead, they only explored how a particular financial service, such as savings or credit, is able to improve inclusiveness, without considering other basic financial services, and/or combining various services into a FI index without identifying how each segment contributes to one's financial inclusiveness. As such, to measure FI, this study developed a formal FI variable which incorporated the full range of basic financial products/services, such as *formal access to credit, insurance, funeral cover,*

*remittances*, and *savings*. According to Ikdal et al., (2017), which explored the state of FI in South Africa using a holistic framework to explore all the basic financial services as identified in this study. Their framework showed that savings have the lowest levels in the world, as consumers barely realise that their gains on saving are not inclusive. Thus, this study aims to explore 'savings and the extent to which people access formal savings', 'informal savings', and 'are not saving at all' to assess the level of exclusion and what factors contribute to this.

Table 3.4 below describes the variables that will be used to conduct the analysis of this study.

Table 4.4: Description of variables

| **Name** | **Type** | **Description** |
|---|---|---|
| **Geographical area** | Categorical variable | Urban (reference group)<br>Farms<br>Traditional |
| **Province** | Categorical variable | Eastern Cape (reference group)<br>Free State<br>Kwa-Zulu Natal<br>Limpopo<br>Mpumalanga<br>North West<br>Northern Cape<br>Western Cape |
| Race | Categorial variable | Black (reference group)<br>Coloured<br>Asian<br>White |
| Gender | Dummy variable | Male (reference group) =0<br>Female = 1 |
| Education level | Categorical variable | Less than high school (reference group)<br>Highschool<br>Degree |

| | | |
|---|---|---|
| Employment status | Categorical variable | Employed (reference group) = 1<br>Unemployed = 2<br>Inactive = 3<br>Discouraged = 4 |
| Income | Categorical variable | No income (reference group) = 1<br>1 – 2999 = 2<br>3000 – 5999 = 3<br>6000 – 11999 = 4<br>12000 – 14999 = 5<br>15000 and above = 6 |
| Social grant recipient | Dummy variable | No social grant (reference group) = 0<br>Social grant = 1 |
| Cell phone ownership | Dummy variable | No (reference group) = 0<br>Yes = 1 |
| Internet access | Dummy variable | No (reference group) = 0<br>Yes = 1 |
| Social Network | Dummy variable | No (reference group) = 0<br>Yes = 1 |
| Formal financial inclusion | Categorical variable | Savings = 1<br>Credit = 2<br>Remit= 3<br>Insurance = 4<br>Funeral cover = 5 (Base outcome) |
| Savings | Categorical variable | Formal saving = 1<br>Informal saving = 2<br>Not saving = 3 (Base outcome) |

Some concluding remarks follow next to wrap up the chapter.

## 3.6 Conclusion

This chapter described the methodology of the study. A quantitative approach in which a demand-side survey, namely, FinScope South Africa, was used to conduct spatial descriptive analysis and a logistic multinomial econometric analysis. The chapter concluded by detailing the variables to be used as well as the limitations of the study.

The next chapter presents a discussion of the quantitative findings of the study.

# CHAPTER 4
# DISCUSSION OF FINDINGS

## 4.1 Introduction

This chapter presents a discussion of the study's findings with the aim of meeting the research objectives as set out in Chapter 1. The chapter begins by exploring the financial landscape of the economy by recognising the salient features of financial adoption across the country (section 4.2). This is followed by a discussion on the various financial product strands by the different locations they are situated in to assess whether financial inclusiveness reaches those at the grassroots level and is not geographically biased (section 4.3). Thereafter, the chapter highlights the usage of various financial service products and services (section 4.4). Lastly, the results of the economic analysis are explored, bringing together a holistic view of FI within the country (section 4.5). A brief conclusion summarises the content of the chapter (section 4.6).

Attention now shifts to a discussion of the study's findings in terms of geographical space and the influence thereof on financial inclusiveness.

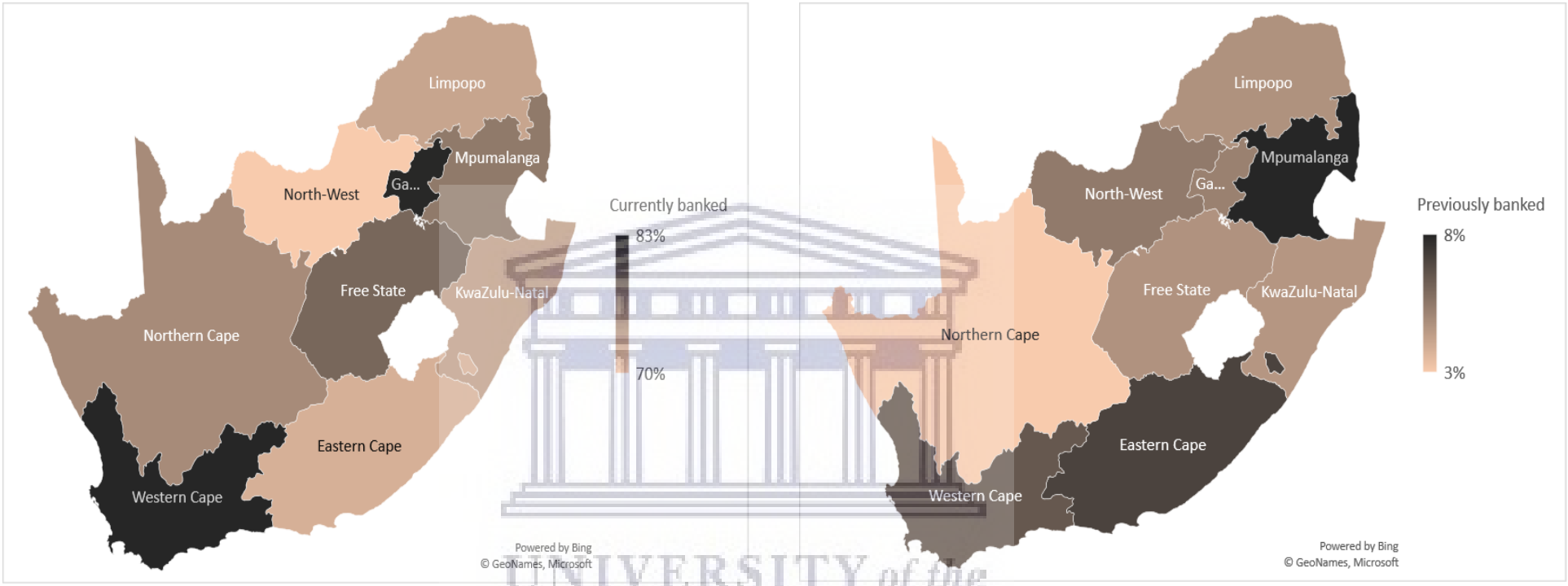
## 4.2 Geographical Space in Determining Financial Inclusiveness



Throughout the literature and across the political landscape, South Africa's transition to democracy has been acknowledged and commended. While much has been done to bring the formerly excluded to the mainstream economy through dismantling apartheid laws and widening developmental initiatives, economic exclusion is still the reality for a large proportion of South Africans. Notably, broadening access to financial services is one of the key steppingstones on the path to sustainable economic development Alliance for Financial Inclusion (AFI) 2014. Thus, a clear governmental policy objective remains to address the skewed development of the past. As such, mounting pressure was cast on FSPs to improve usage and actively extend access to financial services. This section draws on a holistic assessment of FI in South Africa.

**a) Currently banked**

**b) Previously banked**



**c) Never banked**

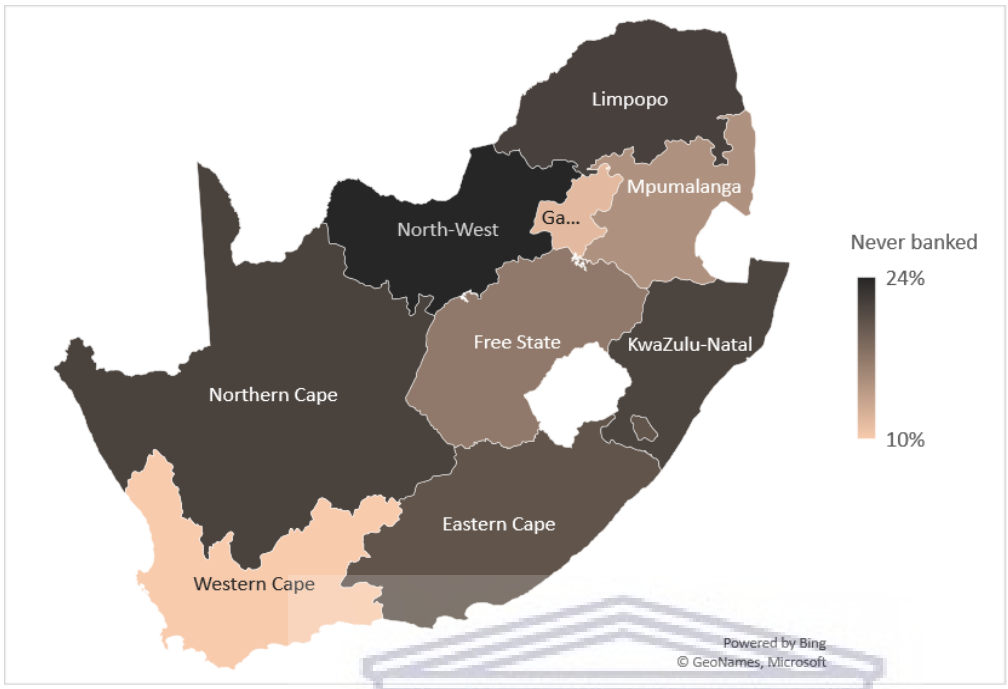



**Figure 4.1: Mappings of South Africa's banked population in 2017**

(Source: Researcher's calculations using FinScope 2017)

The maps in Figure 4.1 portray the extent of formally banked adults within the economy in 2017, meaning that they have a bank account or not. The banked population has seen significant strides post 1994 with the expansion of social grants to the wider population. The most vital feature of having a bank account is security, keeping money safe and being able to withdraw money at any time is much better than finding yourself far from home and unable to withdraw money in a financial emergency. Modern fast-paced lifestyles make it difficult, if not unsafe, to pay in cash. Instead using a bank account provides more flexibility and security when conducting transactions as compared to keeping cash at home or carrying it on your person.

To explain the different shades of colour, as the colour becomes darker, it indicates a higher percentage rate of banked individuals. Conversely, as the colour becomes lighter, it portrays lower levels of penetration. Formally, the darker the colour in Figure 4.1 (a), the more progressive, as more than 70% of the country has a bank account. This is particularly true for adults living in Gauteng and the Western Cape, as they have the highest rate of bank accounts at 83% and 82%, respectively, as compared to the rest of the country, which highlights the

heavily skewed development of South Africa. Previously banked adults referred to people who had no bank account during the survey period. Overall, there are less than 8% of adults who indicated they previously owned an account, with the highest rate being in Mpumalanga and the Eastern Cape. The top three most cited reasons for previously banked adults not having a bank account were because they were either unemployed, do not receive regular income, and not having enough money. On the other hand, Figure 4.1 (c) proves that regardless of the rest of the economy having relatively low proportions of unbanked adults, access is still centred around areas with the highest economic activity, as majority of unbanked persons reside in less developed provinces such as North West, Northern Cape, Limpopo, KZN, and the Eastern Cape.

**a) Internet access** **b) No Internet access**

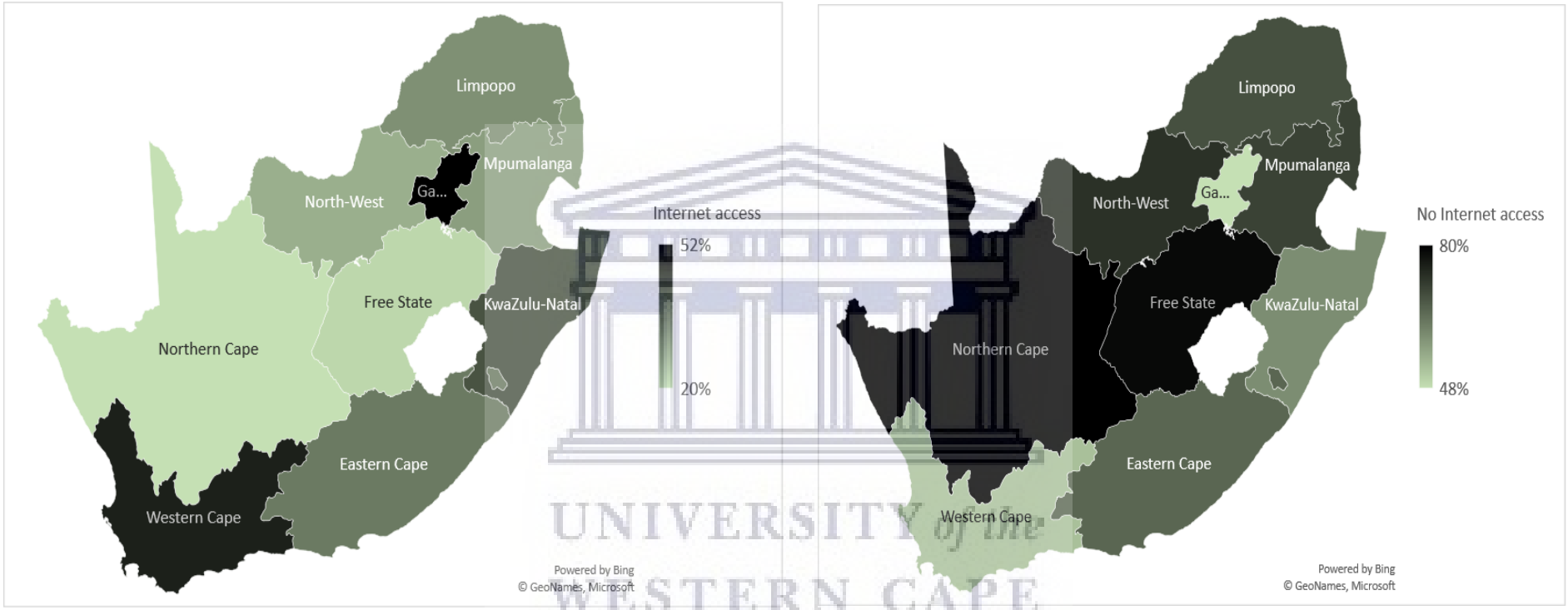



**Figure 4.2: Provincial share of households' Internet access in 2017**

(Source: Researcher's calculation using FinScope 2017)

The development of South Africa's financial services industry is constrained by the high cost of providing and accessing financial services. As a result, micro and small enterprises and low-income families face high transaction costs, as these challenges require access to service points and meeting documentation requirements. Alternatively, in terms of providers, financial services transactions lack economies of scale and are difficult to obtain reliable information about such customers, resulting in high operating costs. These higher costs may weaken the profitability of serving lower economic segments, thereby reducing competition. However, with the use of the Internet, which uses broadband applications to provide financial services, these cost factors are likely to be addressed, particularly for customers living in the periphery were connectivity is low or non-existent. At the same time, the predictable growth of data to support mobile phones will significantly weaken mobile operators' control over the services they provide.

In Figure 4.2 above, the maps illustrate low Internet penetration levels at 52% within the country in 2017. The majority of people living in urban townships and rural areas, represent less developed and poor areas of the country, which face challenges in accessing information technology due to poor infrastructure. This apparent difference in access to technology in the nine provinces can be seen from Figure 4.2(a). For instance, as mentioned earlier, the perils of apartheid spatial planning continue to persist, which has an impact on the digitisation and availability of infrastructure, as rural conditions are higher in some provinces than in others. This resulted in low penetration levels across provinces that were previously home to homelands as compared to those that were not. Alternatively, with regards to no Internet access, Figure 4.2 (b) illustrates that the darker the colour, the less progressive the economy is, in adults accessing Internet. The provincial share of households with the highest penetration of Internet access (see figure 4.2 (a)) is unsurprisingly Gauteng at 52%, followed by the Western Cape at 48%. These provinces are commonly referred to as the economic hub of the country; whilst also being the most densely populated province, it is no surprise that is also exhibits the lowest level of respondents with no Internet access (see figure 4.2(b)) at 48% and 52%, respectively. This illustrates the spatial mismatch within the province, as certain segments of the population experience a stealth of opportunities due to being located in high economic activity areas within the province which provides ease of access to amenities and infrastructure, leaving those residing in the periphery with poor access, which unintentionally impedes their ability to access the Internet. Whilst provinces that are considered relatively more rural as they have poor infrastructure, experience low Internet penetration levels (see figure 4.2(a)) at 20% in the

Northern Cape, followed by the Free State and North West provinces at 22% and 27%, respectively. Now more than ever, it is the responsibility of the FI community to ensure that technology is an enabler and not a new barrier to economic success, particularly for those residing in rural and disadvantaged areas. As digital capability increasingly becomes tied to economic activity, the digital divide will widen and further exclude the world's poorest citizens, if those residing in rural areas and at the periphery continue to be left behind.

As mentioned earlier, the proliferation of Internet may bridge the gap in providing access to otherwise excluded segments of the population as they may be residing in hard-to-reach areas, as well as factors such as low-income earners, to name a few. As a result, new mobile and online financial services, such as e-banking, mobile money, and online/mobile payments, have the potential to provide financially excluded people with access to basic financial products and services (Bongomin et al., 2018). Digital technology has generated new market participants and solutions from adjacent industries that are actively engaged in shaping the digital economy. Digital payment technology, for example, has disrupted traditional business models by blurring the boundaries of previously disconnected industries such as banking, telecommunications, and retail, while enabling FI (Osafo-Kwaako et al., 2018; Etim, 2014).

Figure 4.3 below delves into exploring the various activities that households mainly use the Internet for. This will better inform the rate at which advancements in technology are being adopted. It is imperative to note that the role internet penetration plays in the development of any economy is also largely determined by the way it is used. As highlighted throughout the study, access does not imply usage; therefore, it cannot fully be concluded that by expanding access, greater FI or Internet penetration will be achieved. Thus, those households able to access the Internet use it for numerous reasons, such as entertainment and social media; e-commerce platforms, such as e-hailing services, for example, Taxify; online banking services; academic platforms; and ICT through general browsing and accessing emails.

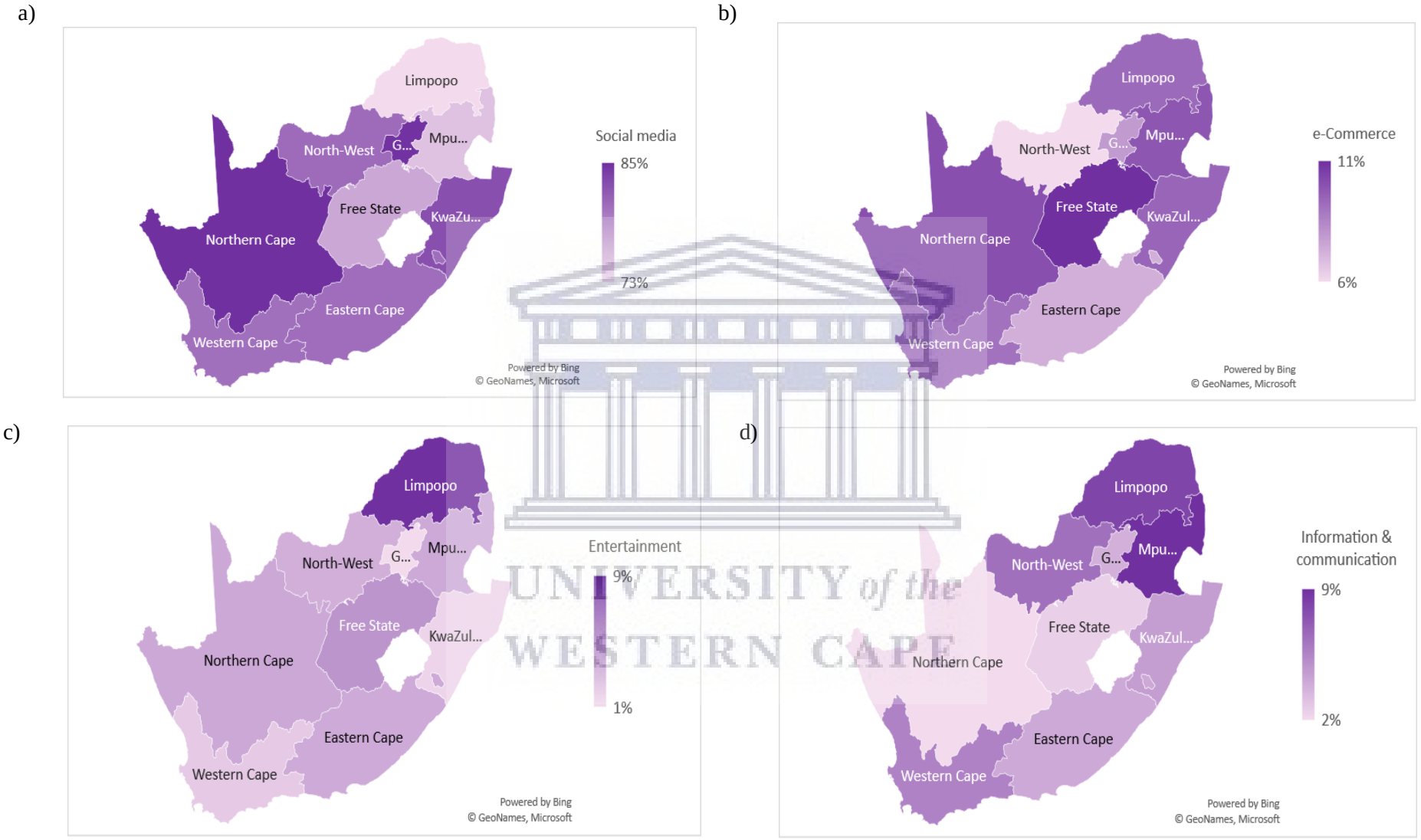



**Figure 4.3: Internet activities by province in 2017**

(Source: Researcher's calculations using FinScope 2017 data)

Surprisingly, the Free State has the highest use of e-commerce (see figure 4.3(b)), even though usage is still relatively low throughout the country as compared to the rest of the provinces at 11%. In contrast, North West reports the lowest rate of usage of e-commerce platforms at 6%, followed by the Eastern Cape at 7%. Moreover, the use of entertainment, and IC activities exhibit the lowest rates (less than 10%) of overall use across all three activities. This is unsurprising as the access to Internet is primarily low across the country.

On the other hand, social media provides an interesting picture as it has proliferated in the country. More than 70% of adults have access to social media platforms across all provinces, such as Twitter and WhatsApp. This is not surprising considering Maslow's[11] hierarchy of needs, which has love and belonging as one of its core components, suggesting that the need to belong and communicate with others is essential in broadening one's network. In addition, social media has created a network for people to conduct their businesses online; it has also enabled financial services to generate industry insights as well as reach and build brand awareness whilst strengthening relationships with existing customers. However, even though such networks are able to provide platforms for prospective and current users to reach those regarded as unreachable, pyramid schemes and fraudulent services are also on the rise. This, however, could lead to slow penetration, as disadvantaged and illiterate persons may distrust digital financial services.



To display the backdrop of financial inclusiveness it is important to consider the different aspects of inclusiveness – *credit, savings, insurance, funeral cover,* and *access to remittances* – by different geographical areas to account for spatial differences. Subsequently, without the injections of capital needed for the development of spatial value, the farm and traditional areas are likely to improve at a far slower rate than urban areas. Exacerbating this situation even further is the reality that sound investments attract more investments. Hence, the areas that institutions feel will most likely generate more return receive more capital, such as urban areas and metros, whilst those that appear less desirable fall by the wayside, further intensifying inequality.

11 Maslow's hierarchy consists of six stages of human needs starting from the bottom with physiological needs (food, water, rest) being the basic need followed by safety, feeling of love and belonging, esteem (accomplishments), self-actualisation and the last stage being self-transcendence which speaks to a person's sense of meaning. For more information, see J. Christian (2018). *The New Hierarchy of Needs - Maslow's lost apex.* https://medium.com/coachilla-hq/the-new-hierarchy-of-needs-maslows-lost-apex-5e51031ce3fb

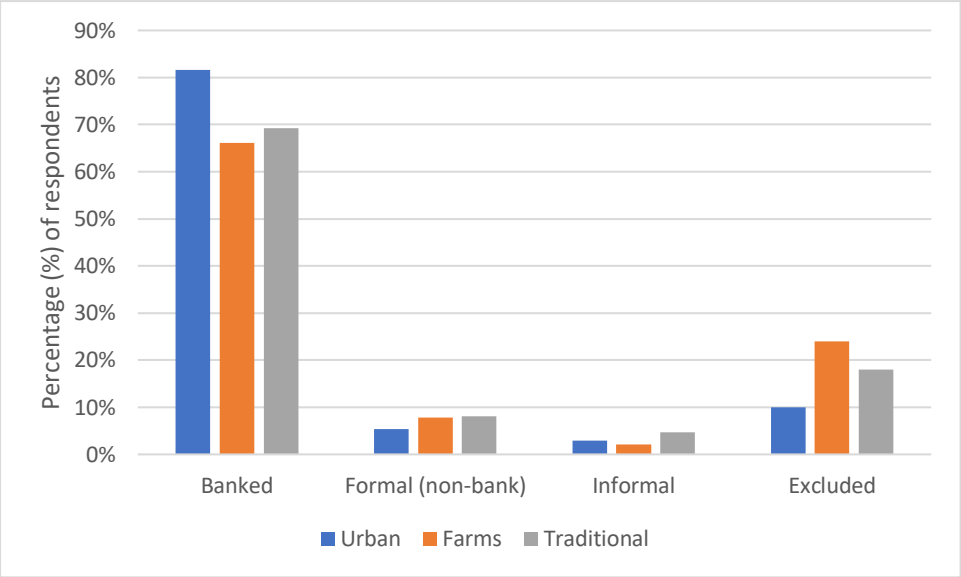



**Figure 4.4: 2015 Financial access strand by geographical areas in 2015**

(Source: Researcher's calculations using FinScope 2015 data)

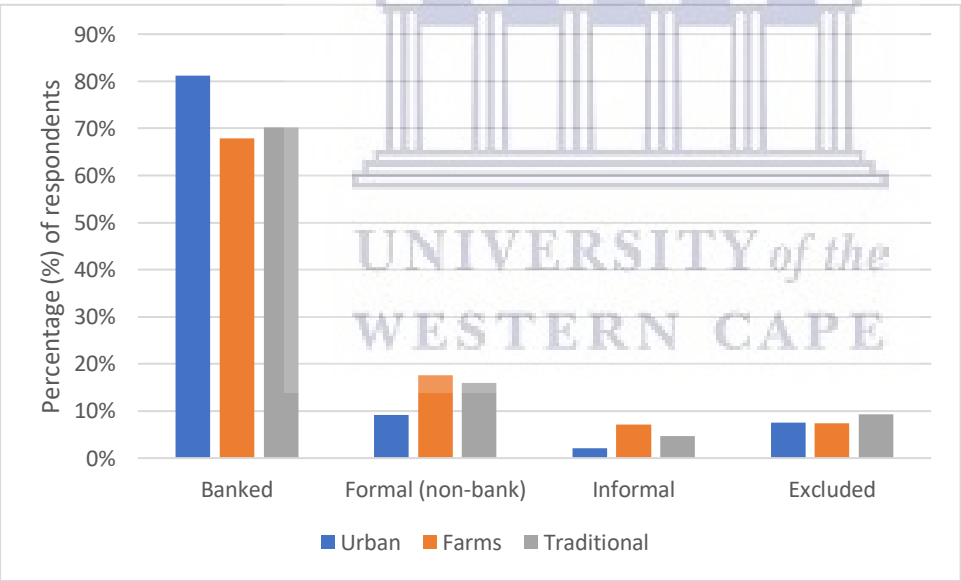





**Figure 4.5: Financial access strand by geographical areas in 2017**

(Source: Researcher's calculations using FinScope 2017 data)

South African cities are facing overarching issues, which include dysfunctional and skewed urban forms, rapid urbanisation, and population growth, resulting in constantly inequality and other socio-economic ills. These issues impede efforts to enhance FI, particularly for those at the bottom of the pyramid. Figures 4.4 and 4.5 above illustrate that people residing in urban

areas are more formally financially included than those residing in traditional and farm areas for both years. Overall, financial access has slightly improved as those residing in urban areas are relatively more banked at 82% and 81% in 2015 and 2017, respectively, as compared to those residing in farms at 66% in 2015, improved to 68% in 2017, and tribal areas at 69% with a slight increase to 70% in 2017. Overall, in 2015, 77% of respondents were formally banked, which remained the same in 2017. The various reasons for the low inclusion rates in the traditional areas and farmlands include that there is low population density in the areas, which was triggered by better employment prospects and infrastructure in urban centres.

The explanation on why some individuals do not have a bank account was influenced by employment prospects. For instance, 20% of people claimed to not have an account in 2017 because they did not have a job, 21% stated they had no regular income, and 14% indicated that it was because they were a student.

Next, the research will discuss some of the existing trends in terms of FI and geographical area. This is done by exploring the financial strands across 2015 and 2017. The data is illustrated by means of figures under relevant captions, together with comparisons or discussions.

## 4.3 Uptake



South Africa has made significant strides in developing a more financially inclusive society. However, a clear trend exists, evident in the spatial displacement of inclusiveness amongst geographical areas. This will be discussed in more detail below by exploring the financial strands across 2015 and 2017. The credit access strand portrays the degree to which adults have reported being financially included and completely financially excluded, indicating that they have no use or access to various financial services and products.

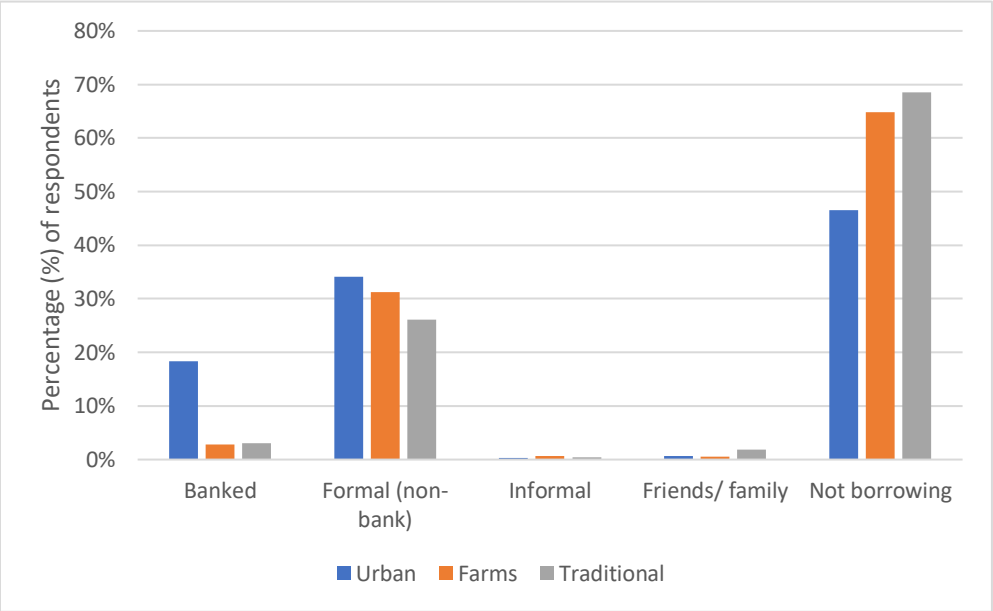



**Figure 4.6: Credit access strand by geographical area in 2015**

(Source: Researcher's own calculations using FinScope data)

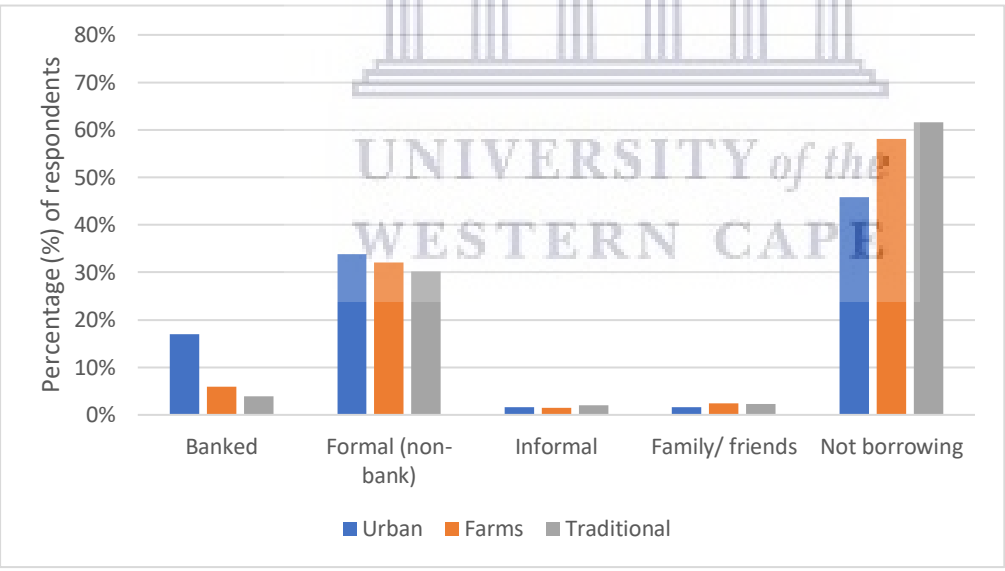



**Figure 4.7: Credit access strand by geographical area in 2017**

(Source: Researcher's own calculations using FinScope data)

Figures 4.6 and 4.7 above indicate that respondents residing in urban areas reported to have the highest formal access through bank and non-bank formal mechanisms in obtaining credit in

South Africa in both 2015 and 2017 at 18%, 34%, and 17%, and 34%, respectively. Whilst respondents residing in the farm areas reported having the least access (less than 6%) in both 2015 and 2017 to formal mechanisms of obtaining credit through commercial banks. Interestingly, urban areas showed the highest formal (non-bank) borrowing activity rate at 34% in 2015 and 2017, followed by farmlands at 31% to 32% in 2015 (see Figure 9) and 2017 (see Figure 10), respectively. However, not much borrowing can be seen amongst informal mechanisms, such as family and friends across both years, with reported borrowing activity at 2% and less. Moreover, residents residing across all locations experienced a decline in borrowing activity from 2015 to 2017 at roughly 47% down to 46% in urban areas. Followed by sharp declines across farm and tribal areas at 65% to 58% and 68% to 62% in 2015 and 2017, respectively.

Overall, there has been a slight decline in people accessing commercial bank credit as it has declined from 13% in 2015 to 12% in 2017. However, there is an indication of a high propensity for borrowing among South Africans as credit is easily accessible, as there has been a general decline in people not borrowing from 54% in 2015 to 51% in 2017. This suggests that more people are accessing credit, particularly through various sources, such as family and friends, and other formal (non-bank institutions) and informal lenders, as these sources have all reported increased rates of borrowing activities between 2015 to 2017. Formal non-bank borrowing access rose from 31.73% in 2015 to 32.68% in 2017, followed by informal lending which plummeted from 0.36% in 2015 to 1.74% in 2017, and through family and friends at 1.04% in 2015 to a rate of 1.9% in 2017. The respondents indicated that the main reasons they accessed credit was for food, clothes, and transport fees. Whilst the majority of those who did not access credit facilities, reporting at roughly 22%, stated that it was because they were unemployed and could not afford it.

On the other hand, credit access, particularly for disadvantaged people, has only been considered to lead to adverse inclusion. This is a situation in which, once people are "financially included", they end up worse off than before. Access to credit is a particular concern that many authors have tackled in their critiques of microfinance in different parts of the world, as it leaves borrowers in an even weaker financial position once they start the borrowing cycle (Westover, 2008; Bateman, 2010; Taylor, 2011; Mader, 2018). Borrowers are eventually so deeply indebted that they cannot repay their loans. Further, in South Africa Net1 was found by the Financial Services Board in 2014 to be abusing its position as a distributor of

social grants by selling other financial products, such as loans and funeral plans at distribution points (Breckenridge, 2019). Despite these challenges, the mainstream discourses around FI continue to appear overwhelmingly positive and optimistic, perpetuating the assumption that ultimately such innovations are for the benefit of the unbanked.

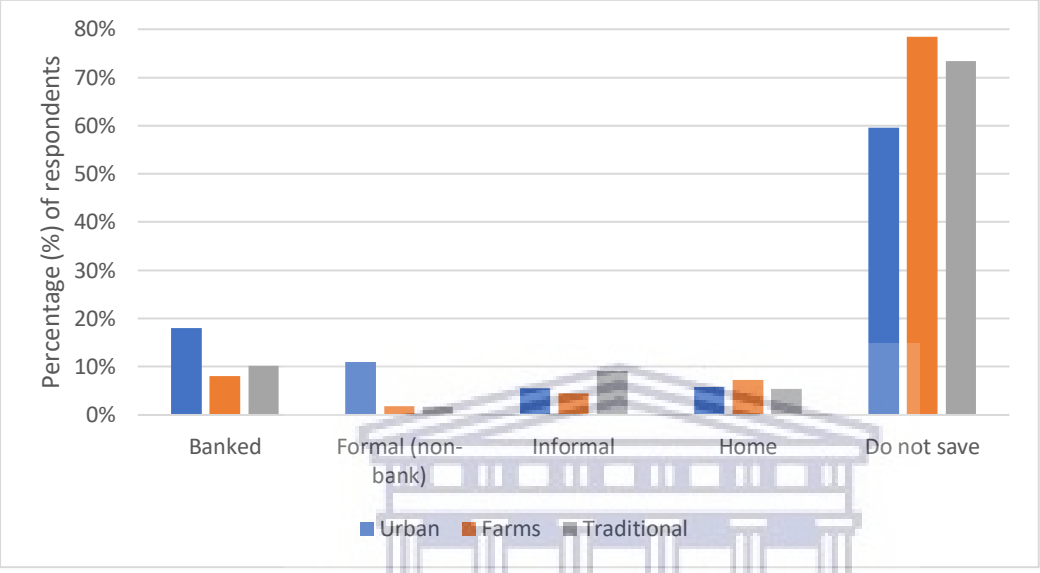



**Figure 4.8: Savings access strand by geographical area in 2015**

(Source: Researcher's own calculations using FinScope data)



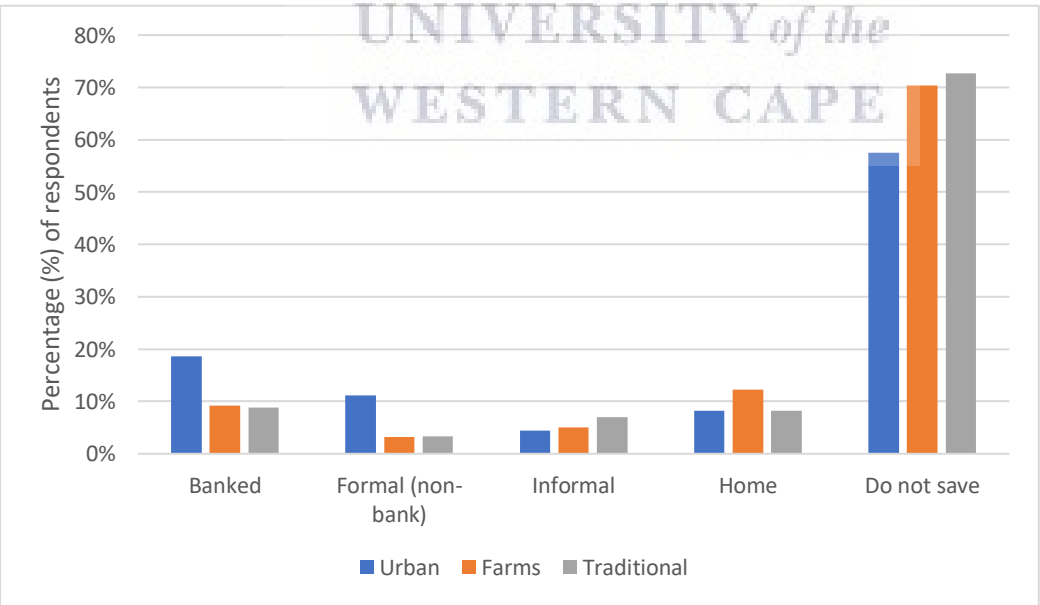



**Figure 4.9: Savings access strand by geographical area in 2017**

(Source: Researcher's own calculations using FinScope data)

In Figures 4.8 and 4.9, adults residing in urban regions reported the highest commercial bank saving product access for both years at roughly 18% and 19%, respectively. This was followed by traditional areas at 10% and 9%, and the farmlands at 8% to 9% in 2015 (see Figure 4.8) and 2017 (see Figure 4.9), respectively. On the other hand, only 63% of adults did not save in 2017, a slight decline from 64% in 2015. Surprisingly, in Figure 4.9, adults reported to save more at home, as compared to other savings mechanisms, as it revealed the highest increase from 2015 to 2017 across all locations at 6% to 8% in urban areas, 7% to 12% in farmlands, and 5% to 8% in tribal areas. This is largely attributed by the increasing levels of unemployment as respondents further indicated that their primary reasons for not saving is that they "do not have a job", "never thought about it", "do not have money to save", and "it's too expensive". Overall, 8% of respondents kept all their savings at home, indicating that they did not use or have any form of formal or informal saving mechanism in 2017. This is an increase from 2015, where only 6% of adults reported to have saved at home. In 2017, only 5% relied on informal mechanisms, such as savings groups, whilst they might have also saved at home. However, they do not make use of any formal savings products. This is a subsequent decline from 2015, where 7% of adults relied on informal mechanisms. On the other hand, adults relying on formal non-bank savings products have remained unchanged at 11% in both 2015 and 2017, respectively, for persons residing in urban areas. Nevertheless, the use of non-bank formal savings may also indicate that respondents save their money at home, but they do not use or have saving mechanisms from a commercial bank. Similarly, in general, adults who have or use saving products from commercial banks have remained constant in both 2015 and 2017 at 15%, even though they might also use other informal and formal mechanisms or save at home.

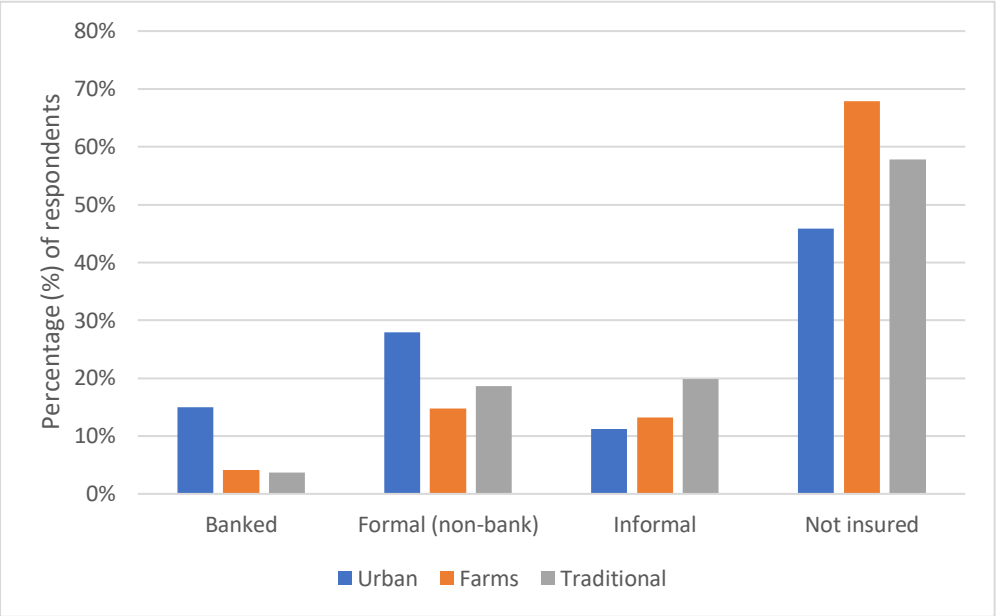



**Figure 4.10: Insurance access strand by geographical area in 2015**

(Source: Researcher's calculations using 2015 FinScope data)

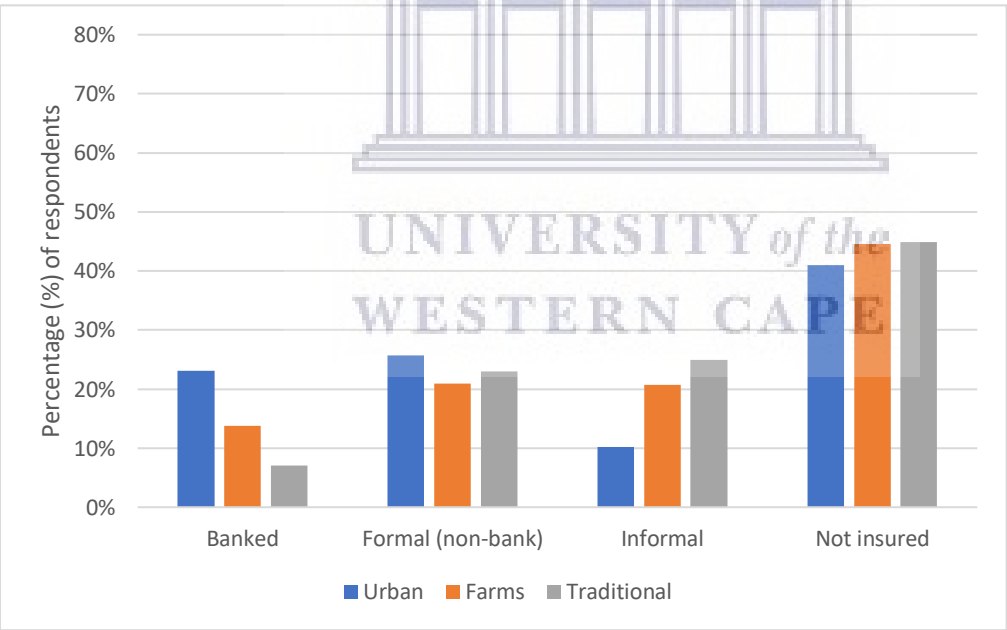



**Figure 4.11: Insurance access strand by geographical area in 2017**

(Source: Researcher's own calculations using 2017 FinScope data)

In Figures 4.10 and 4.11, urban areas continue to lead as the region that has the highest rate of adults obtaining formal insurance. For instance, the highest rate of formal insurance uptake from 15% to 23% obtaining formal insurance through commercial banks, and a slight decline

from formal non-bank insurance products from 28% to 26% in 2015 and 2017 in Figures 4.10 and 4.11, respectively. Interestingly, those residing in traditional areas portray a higher rate of adults relying on informal insurance products and services in both years at roughly 20% in 2015 (see Figure 4.10) and 25% in 2017 (see Figure 4.11) as compared to the other regions.

Overall, insurance experienced significant improvements in uptake across all locations from 2015 to 2017 in Figures 4.10 and 4.11, respectively. This has brought about significant declines in the share of people not having insurance. For instance, in 2015 (see Figure 4.10) adults residing in farm areas had the least access to insurance at 68% compared to those residing in traditional (58%) and urban (46%) areas. However, in 2017 (see Figure 4.11) this dropped significantly for those residing in farm and tribal areas, while only 45% and 41% residing in urban areas were not insured in 2017. This suggests that significant strides had been made in broadening insurance markets to vulnerable segments of society. As such, vulnerable people often take microinsurance, which includes funeral cover as the backbone of the microinsurance market. Thus, since vulnerable people are largely located in tribal and farm areas, insurance markets are gradually becoming more inclusive and increasing the aptitude of adults to take up risk protection instruments such as these.

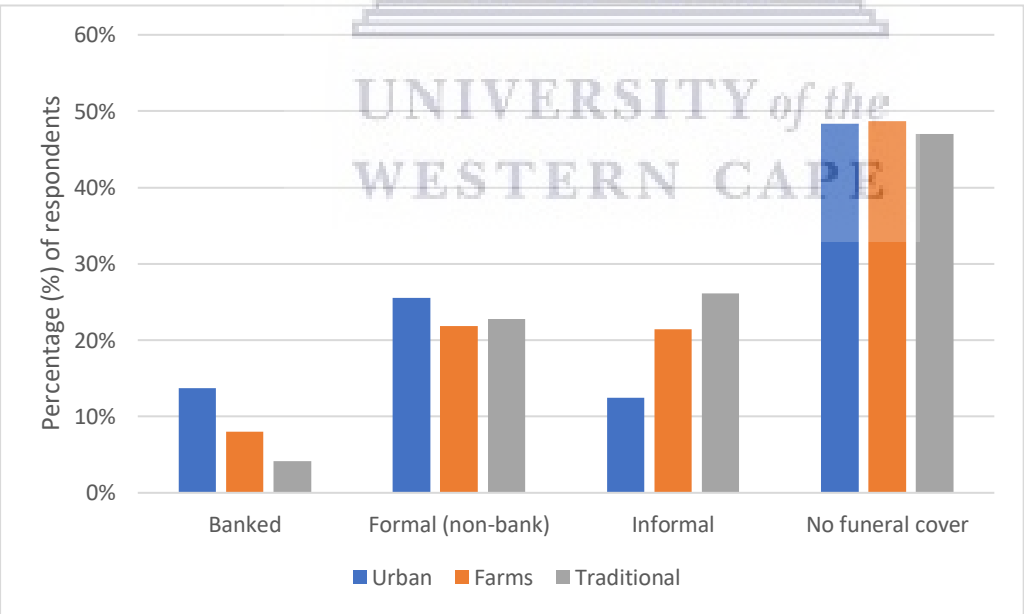



**Figure 4.12: Funeral cover access strand by geographical area in 2017**

(Source: Researchers own calculations using 2017 FinScope data)

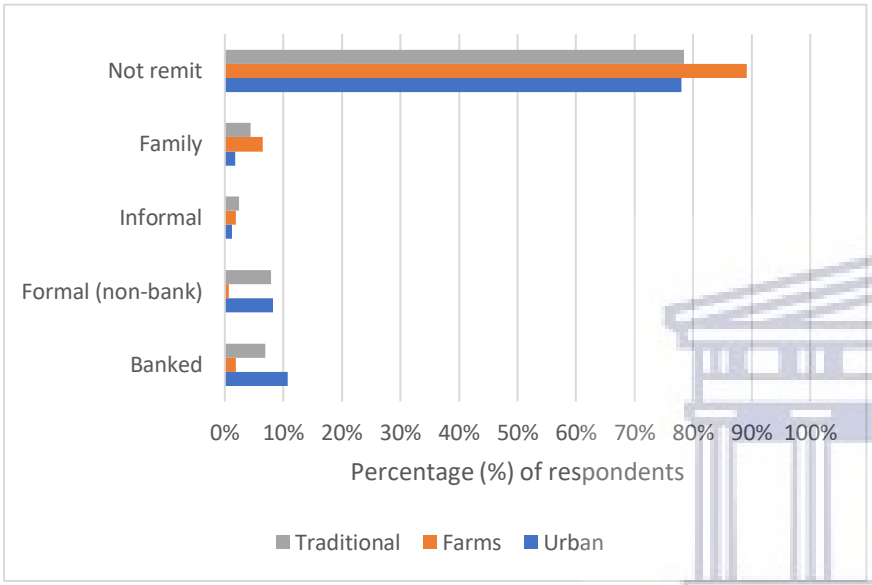
Funeral cover[12] is a crucial mechanism to protect people's income and livelihoods. Thus, making it the most popular insurance amongst vulnerable groups. This is because a death in the family or funeral expense is seen as the main threat to livelihood.

The findings in Figure 4.12 suggest that funeral cover penetration remains strong as more than 50% of adults have funeral cover across both formal and informal mechanisms (on average, 48% of respondents across all locations have no funeral cover). Formal non-bank and informal mechanisms are the most used form of funeral cover. Respondents residing in urban areas have the highest uptake of non-bank formal funeral cover at 26%, followed by tribal areas (23%) and farm areas at 22%. Whereas the most commonly used informal mechanism, such as having a burial society with your stokvel members in one's respective community, has the highest penetration and will be explored further in more detail later. Although funeral cover penetration is relatively high amongst vulnerable groups residing in underdeveloped areas, a lot still needs to be done in advancing the market to be more inclusive. This is because people will continue to transact outside the formal economy when they feel their needs are not being met.



12 The popularity of funeral cover, led to the funeral cover access strand, which data was unavailable for in 2015.

**a)**




**b)**

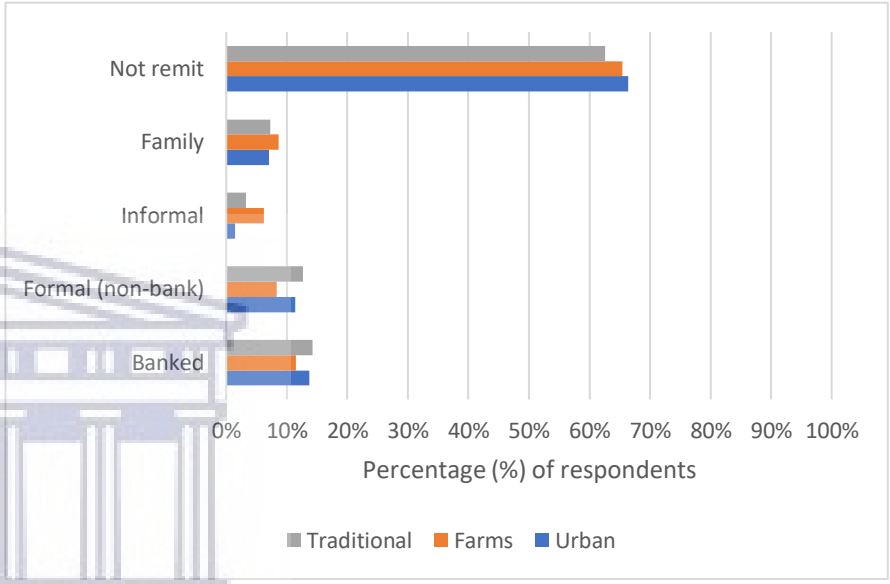



**Figure 4.13: Remittance access strands by geographical area in 2015 (a) and 2017 (b)**

(Source: Researcher's calculations using 2015 and 2017 FinScope data)

As shown above in Figure 4.13 (a) and (b), the use of adults remitting has improved across all regions from 2015 to 2017. This can be explained by the expanding efforts of mobile money through retailers and mobile network operators. Also, remitting through formal mechanisms has improved significantly as compared to informal mechanisms. For instance, commercial banks increased from 11% to 14% for adults residing in urban areas, traditional areas from 7% to 14%, and farmlands from 2% to 11% in 2015 and 2017, respectively. Moreover, remitting via formal non-bank institutions has also improved from 8% to 11% for adults residing in urban areas, traditional areas from 8% to 13%, and farmlands from 1% to 8% in 2015 and 2017, respectively. Ultimately, adults who claimed to not remit have declined from 79% in 2015 to 65% in 2017. This decline can be explained by advancements mainly through mobile money, as remittances are increasingly digitising as the ownership of mobile phones increases. The remittance overview in Figure 4.14 provides a more nuanced explanation of the remittance landscape by describing the mechanisms people use to send money to dependents outside their household.

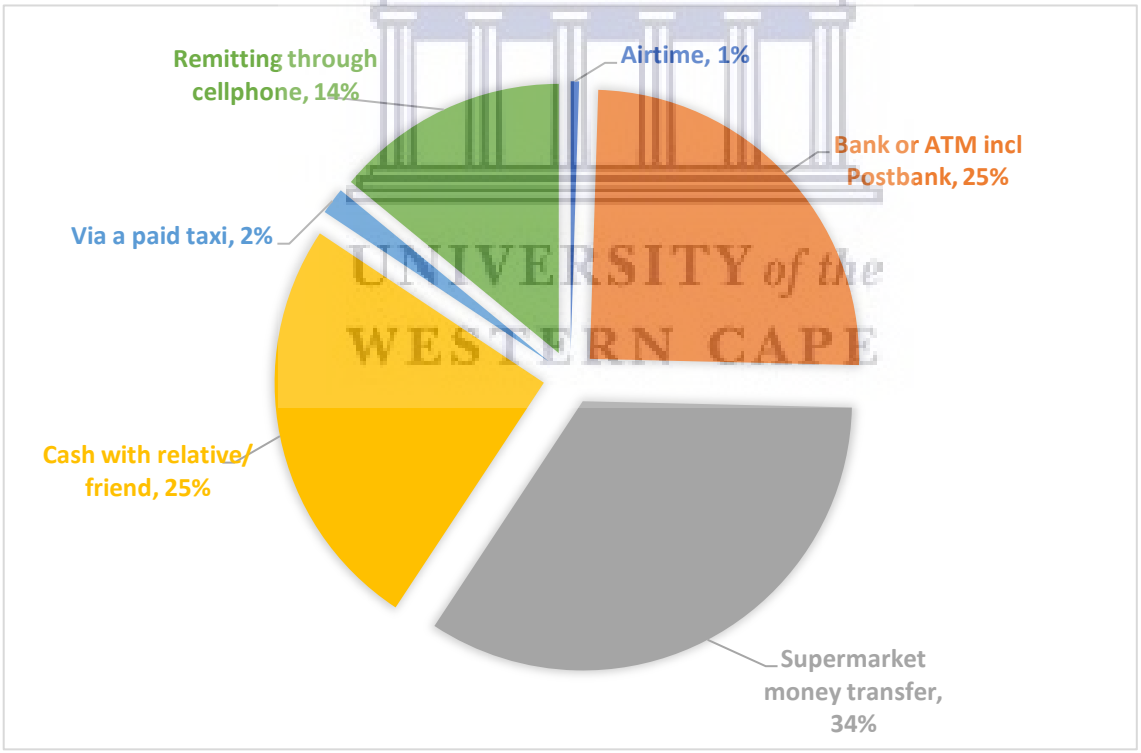



**Figure 4.14: Remittance overview in 2017**

(Source: Researcher's calculations using FinScope data)

According to the FinMark Trust (2017) report on Mobile Money in South Africa, retailers in South Africa appear to be meeting the demand for successful remittances. This service is mainly offered through many leading retails such as Shoprite, Checkers, Spar, and Pep. Remittances from these retailers are considered safe because money is taken from consumers and put into a system, where they receive a code in order to access their funds. The retailers' systems ensure security and privacy, whilst also being convenient for consumers as these retailers have a national footprint, even in hard-to-reach areas in the periphery. Moreover, the fees charged are easily understandable as receivers receive one free withdrawal; however, the fees of subsequent withdrawals depend on the rates offered by the providers.

Retailers in South Africa have strong channels in and around communities as well as OTC, while banks dominate online, mobile banking, USSD, SMS and ATM channels, as well as have strong OTC influence in branch networks. Lastly, retailers offer easy on-boarding, as users only require to be Regulation of Interception of Communication Act (RICA)13 to use this service (FinMark Trust, 2017).

FE rates follow socioeconomic strata. Lower-income individuals are more likely to be financially excluded compared to high-income individuals. Interestingly, there are more similarities in FI rates for lower-income, middle-income, and high-income adults. The largest dissimilarity exists between adults who have an income and those who do not. This is a crucial point to consider because, based on FinScope data FE results, the most cited barrier to FI in South Africa is a lack of an adequate income. To further investigate whether employment opportunities are spatially missed, exploring the various sources of income across the different regions aids in examining the extent of inequality exhibited in the economy.

13 Providing South African identification and cell phone number needs.

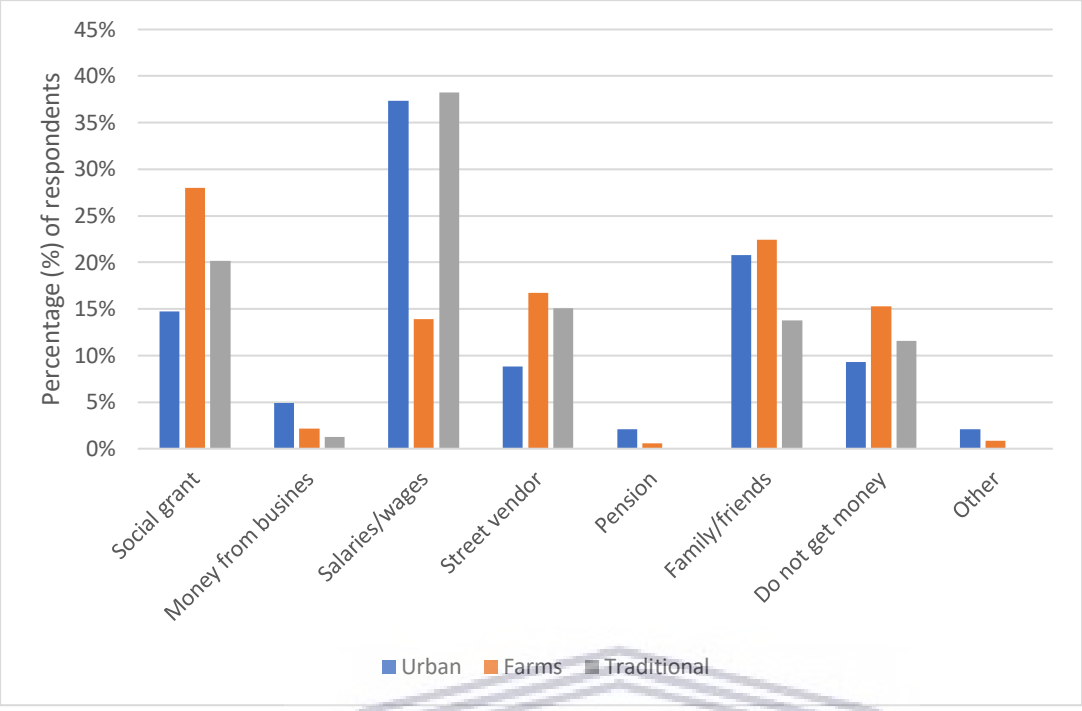



**Figure 4.15: Sources of income by geographical area in 2015**

(Source: Researcher's calculations using 2015 FinScope data)

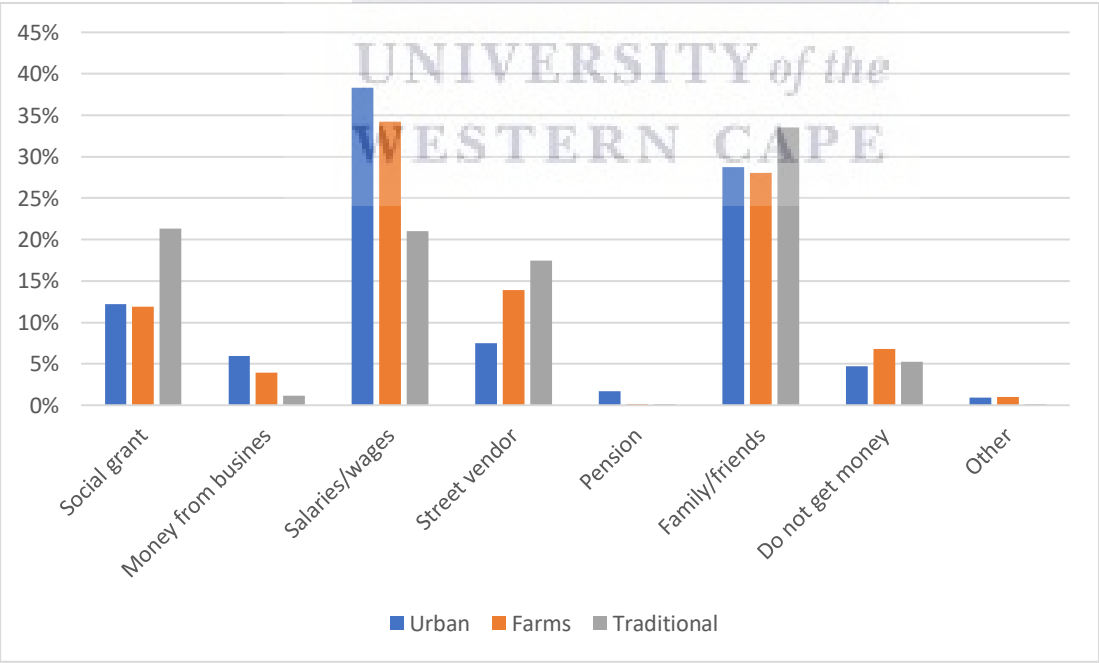



**Figure 4.16: Sources of income by geographical area in 2017**

(Source: Researcher's calculations using FinScope 2017 data)

Overall, Figures 4.15 and 4.16 suggest that grant holders have reported a steady decline from 2015 (see Figure 4.15) to 2017 (see Figure 4.16) across all regions, except for individuals residing in urban areas who were receiving the war veterans grant, who showed little response rate at 0.01% to 0.02% in 2015 and 2017, respectively. However, no respondents indicated to receive the war veterans grant in both years across all regions, except for those residing in urban areas who reported a slight increase from 0.02% in 2015 to 0.04% in 2017. Traditional areas showed the highest response amongst individuals who received the child support grant (CSG), the old-age pension grant, and the disability grant for both years.

Surprisingly, salaries or wages as sources of income showed the highest rate (38.24%) amongst respondents residing in farmlands in 2015, falling to 34.24% in 2017. Those residing in urban areas reported higher rates as compared to other regions at 38.34% in 2017. On the other hand, rental income for those residing in traditional areas declined from 0.33% to 0% in 2017. Similarly, those residing in farm areas experienced no rental income (0%) for both years. Whilst those from urban areas reported a slight increase from 1.21% to 1.69% in 2015 and 2017, respectively.

Individuals who reported to have received their sources of income from family showed the highest improvement rates from 2015 to 2017 across all regions with traditional areas leading at 14.84% in 2015 to 25.97% in 2017. Those residing in urban areas following behind at 12.27% in 2015. Similarly, adults living in farm regions in 2017 rose to 19.36%, whilst those in urban areas only slightly increased to 18.2%.

Figures 4.15 and 4.16 ultimately suggest that there is a spatial mismatch between sources of income. This is evident by individuals residing in urban areas as having reported the least in receiving grant subsidies as compared to those residing in traditional and farm regions, as there are also low formal employment prospects.

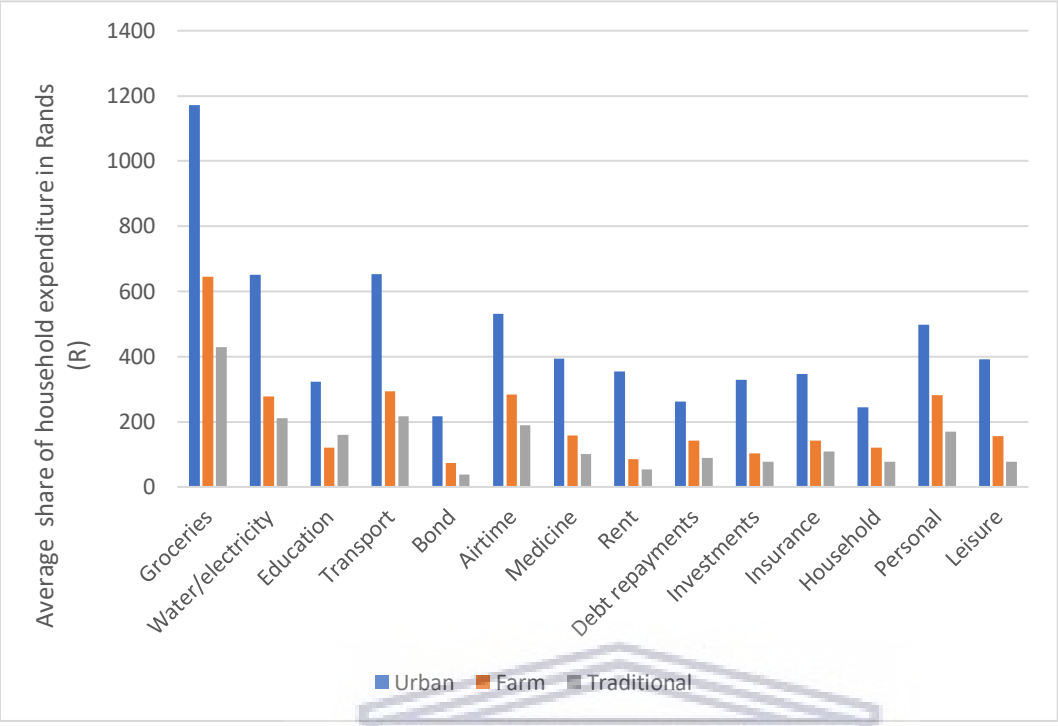



**Figure 4.17: Share of household expenditure by geographical area in 2017**

(Source: Researcher's calculations using 2017 FinScope data)

Although money cannot buy happiness, it is an important means to achieve a higher standard of living. This is because income provides people with the means to meet their financial goals and affords them the means to consume goods and services that will satisfy their wants and needs. Thus, by exploring the average share of household expenditure (see Figure 4.17), this aids in determining consumers' consumption baskets and the extent to which they consume financial products across different geographical areas. As such, the share of household expenditure is primarily greater in urban settings. This is explained by urban areas providing more economic opportunities, such as employment, and other income-generating activities, which sees more inward migration to places that people know will provide income-earning opportunities. Interestingly, people residing in farm areas follow behind those living in urban areas, except for education. People living in traditional areas spend their household expenditure more on education as compared to those residing in farm areas. This can be motivated by people wanting to pursue more skilled labour in order to migrate to urban centres in search of income-earning opportunities. Notably, an average household spends less than R400 a month on investments and insurance. This may be attributed to various factors, such as low uptake of such financial products, which will be investigated further in the sections below.

## 4.4 Usage

Uptake matters! However, it does not suffice in describing the real value of FI. This is because uptake does not necessarily translate to usage. A closer look at the extent to which financial services and products are used provides a better indicator required for effective targets. To grapple with the extent to which financial products are used and the behaviour that prompts their usage, it is important to first consider respondents' capabilities. For instance, as stipulated throughout the study, income is a significant factor that contributes to the extent to which persons can participate in the formal economy and exercise the use of formal financial products and services. In addition, the prominent income gaps across various social levels, and the gender gaps that were also reinforced in South Africa's past, continue to derail the country's efforts to foster sustainable FI for all.

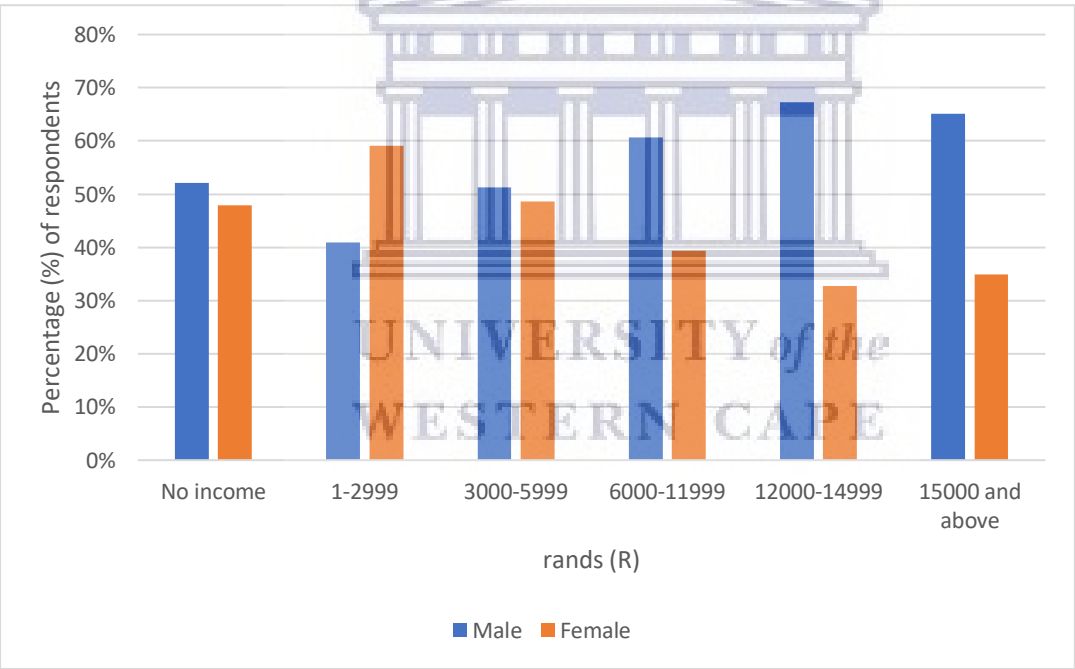



**Figure 4.18: Share of monthly income by gender**

(Source: Researcher's calculations using 2017 FinScope data)

Figure 4.18 suggests that males earn more than females. This is consistent with the literature, as it highlights significant gender gaps in income levels, leaving women particularly vulnerable. This is because, when considering South Africa's demographics, the majority of the households are female headed. As such, with women earning considerably less than men, this widens the vulnerability amongst women, and limits their prospects of fully engaging in

the formal economy, and thus, utilising financial services efficiently. As indicated in Figure 21, more than 60% of males earn R15,000 and above monthly, compared to females who earn only 35% of that. Surprisingly, there are more males (52%) relative to females (48%) with no income.

On the other hand, as the study identifies, the location of economic activities is spatially mismatched, as productive economic activities are commonly situated in urban areas. This, of course, has been brought about by the uneven development that continues to be concentrated in specific areas and not spread evenly across throughout the country.

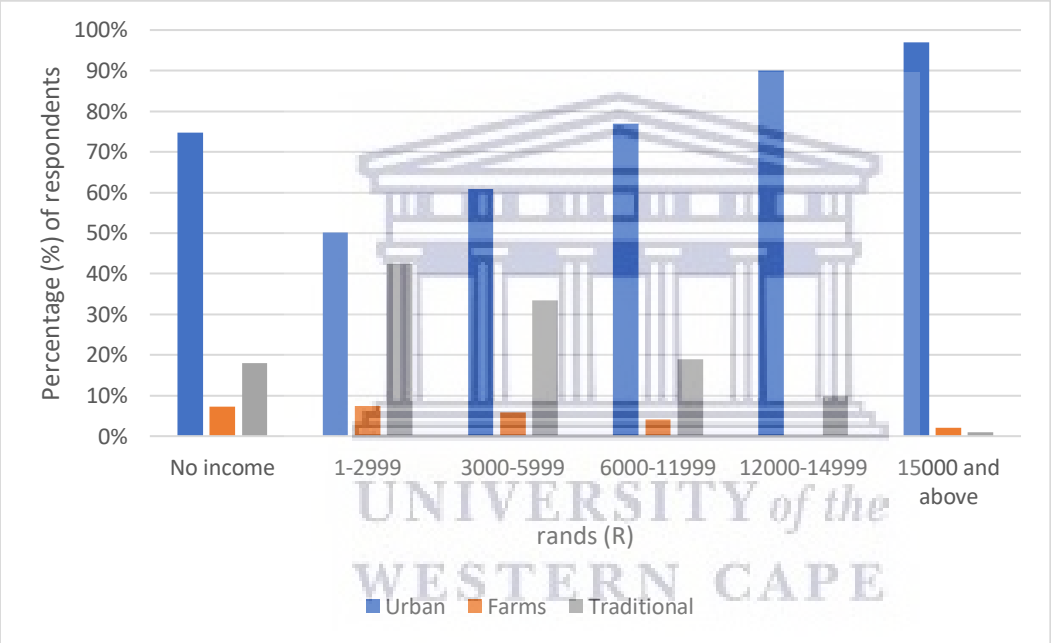



**Figure 4.19: Share of monthly income by location**

(Source: Researcher's calculations using 2017 FinScope data)

Overall, spatial disparities continue to hinder progress that has been made to advance inclusion, as those that are meant to be reached, unintendedly fall behind because they are situated in localities that have poor economic prospects. As illustrated in Figure 4.19 above, people residing in urban areas are more likely to participate in formal economic activities, and thus, are exposed to greater income earning opportunities as compared to those residing in tribal and farm areas, where institutional development is low, and unemployment is rife. Notably, with South Africa's unique past, unemployment in urban areas is also rife, accounting for the highest percentage of persons not receiving income.

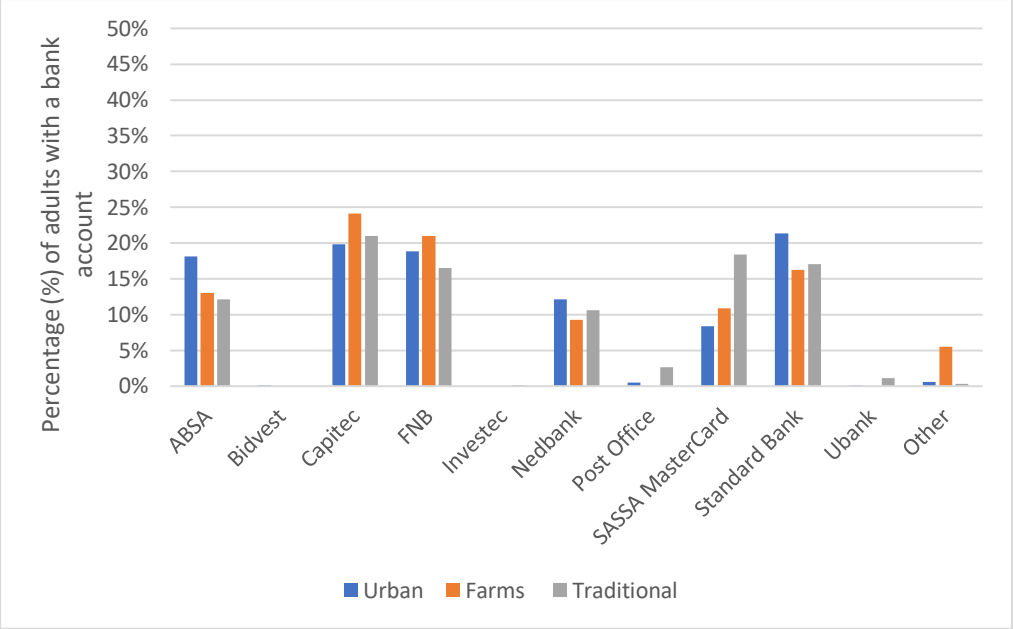



**Figure 4.20: Banks that receive sources of income by geographical area in 2015**

(Source: Researcher's calculations using 2015 FinScope data)

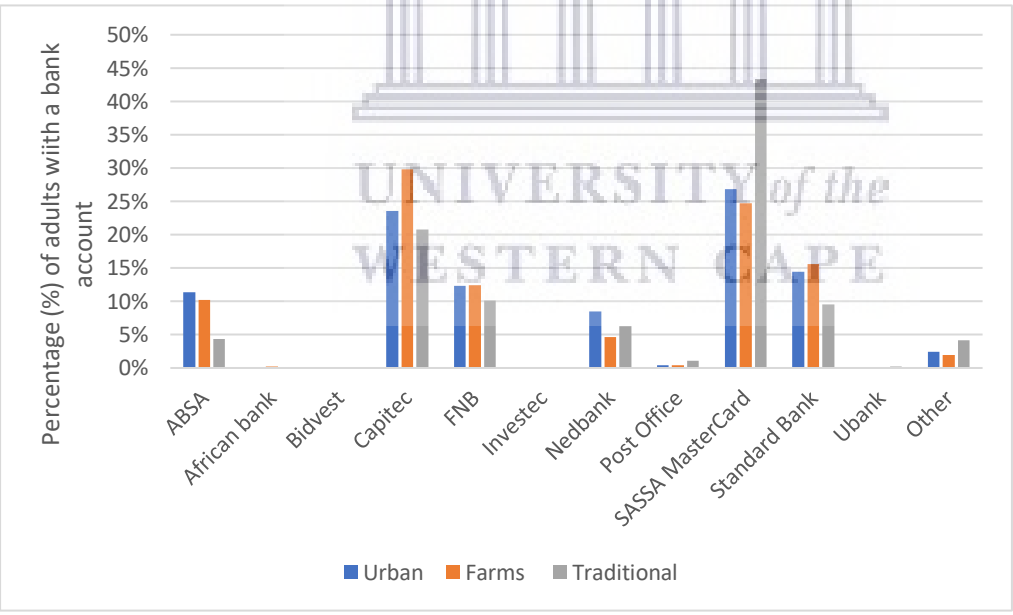



**Figure 4.21: Banks that receive sources of income by geographical area in 2017**

(Source: Researcher's calculations using 2017 FinScope data)

As mentioned earlier, African Bank failed in 2014, hence it was not accounted for in 2015 (see Figure 4.20. Nevertheless, as indicated in the literature, the four major leading banks in 2015 were: Standard Bank, Capitec, FNB, and ABSA at 20.20%, 20.27%, 18.43%, and 16.62%, respectively. However, the tide turned in 2017 (see Figure 4.21) with the SASSA MasterCard leading in the forefront at 31%, followed by Capitec, Standard Bank, and FNB behind at 23.15%, 13.13%, and 11.72%, respectively. Individuals expressed that their bank choice is largely based on the bank's reputation (40%), proximity (15%), and affordable monthly fees (12%) as illustrated in Figure 4.22 below.

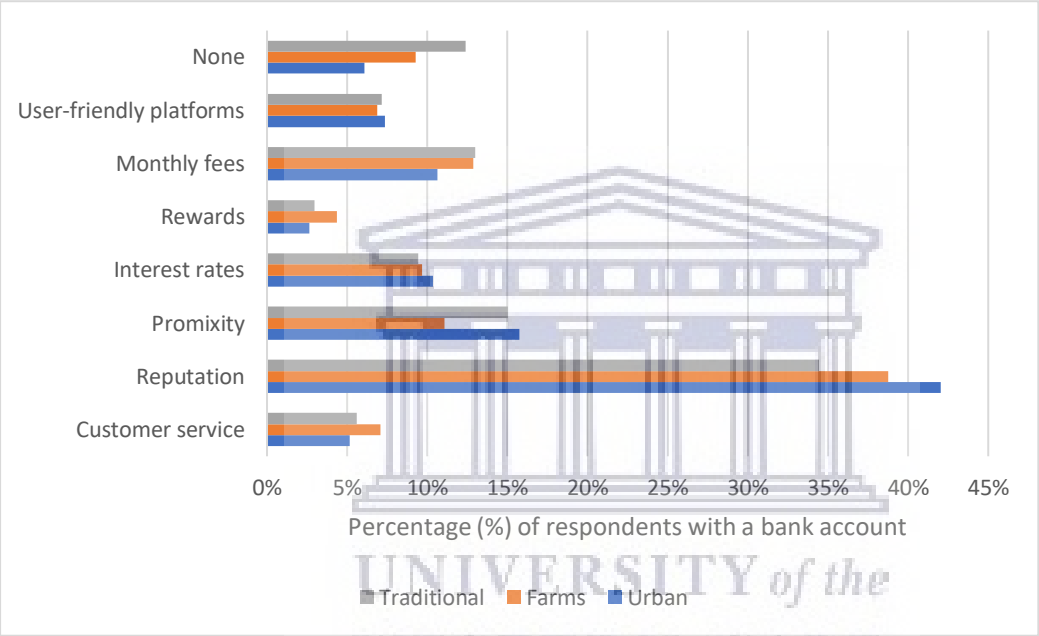


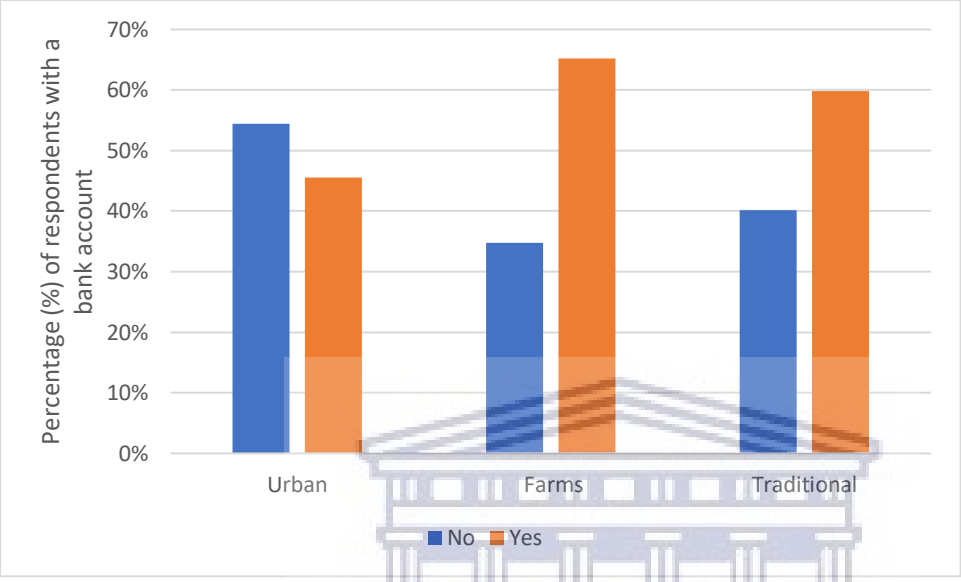

**Figure 4.22: Reason for choosing bank by geographical area in 2017**

(Source: Researcher's calculations using 2017 FinScope data)

Capitec is largely dominated in the farm areas in both years, having reported at 24% and 30% in 2015 (see Figure 4.20) and 2017 (see Figure 4.21), respectively. This was followed by FNB in 2015, whilst in 2017, an improvement was seen in more people residing in farm areas accessing Standard Bank. The prominent use of Capitec in vulnerable areas, such as farm areas, is because Capitec has a reputation of being the most affordable bank as its target market is geared towards the vulnerable segment of the society, making it attractive amongst low income and vulnerable members of the economy. The lowest penetration is in the urban areas in 2015 (see Figure 4.20) at 20%; however, this increased to 24% in 2017. Surprisingly, Investec, even with its low penetration, was only concentrated in traditional areas in 2015, whilst other regions

reported 0% rates for using the institution for receiving their income. However, in 2017 (see Figure 4.21) Investec declined to 0% in traditional regions and slightly rose to 0.02% in urban areas, whilst remaining at 0% in farm areas.

**a) 2015**




**b) 2017**

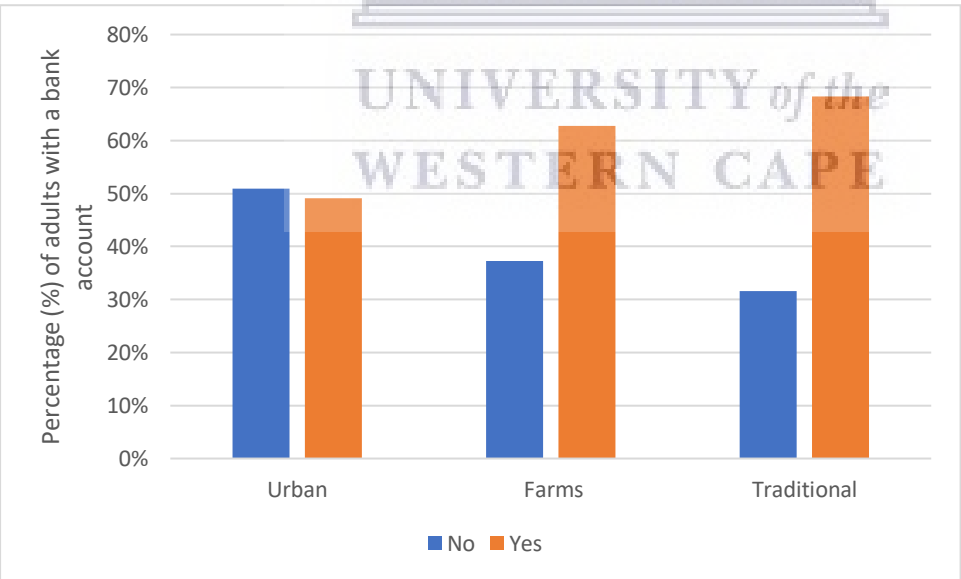
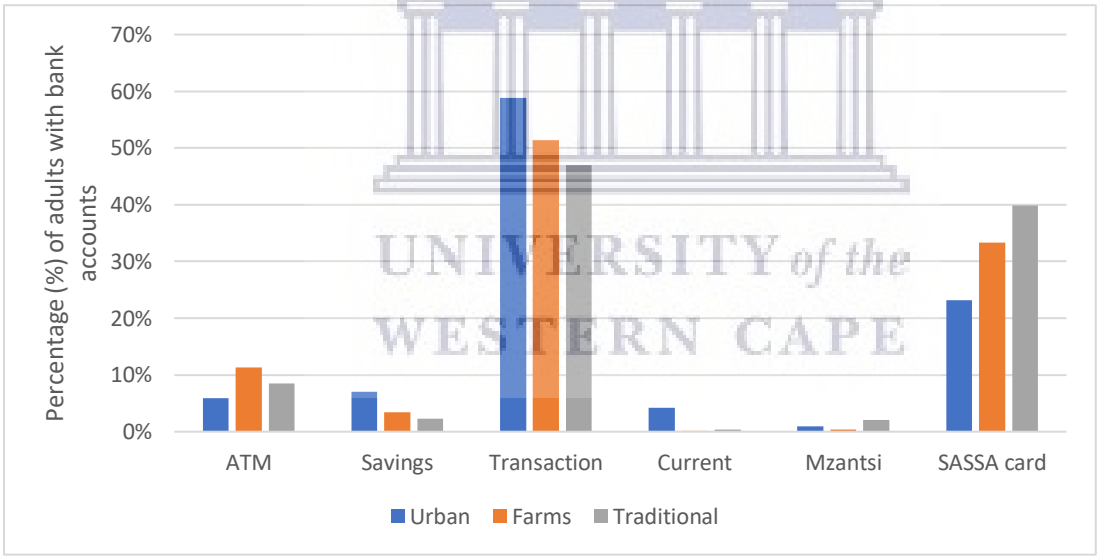



**Figure 4.23: Withdrawing all money once it is deposited by area in a) 2015 and b) 2017**

(Source: Researcher's calculations using 2015 and 2017 FinScope data)

Figure 4.23 displays an increase in individuals withdrawing their income as soon as it is deposited in their account. In 2015 (see Figure 4.23a), approximately 60% of individuals residing in farm areas had claimed that they withdrew their income all at once; similarly, 65% of adults living in traditional areas also reported to have withdrawn all their income, whilst only 46% of those residing in urban areas reported to do so. A similar trend is experienced in 2017 (see Figure 4.23b), as all regions experienced increased rates of individuals withdrawing their income once they receive it; however, those residing in urban areas reported less than 50%, compared to those in farms and traditional areas, which have rates scorching at 62.75% and 68.37%, respectively. In South Africa, the majority of deposits are withdrawn by individuals almost immediately after remuneration (FinMark Trust, 2017). This practice is more common among individuals residing in the periphery in disadvantaged communities. Therefore, the benefits of being financially included are thus not experienced by these individuals.

**a) 2015**




**b) 2017**

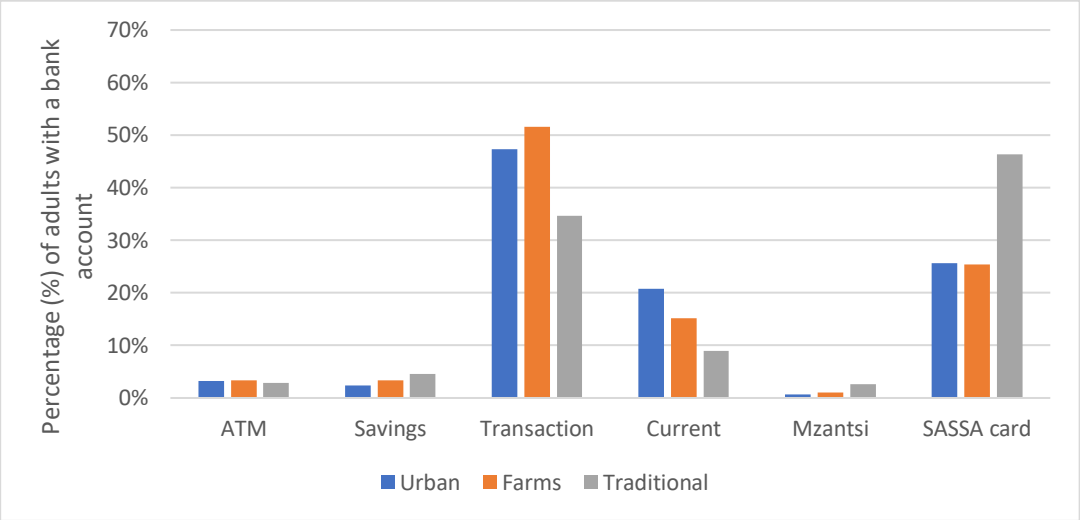



**Figure 4.24: Bank product account usage across geographical areas in a) 2015 and b) 2017**

(Source: Researcher's calculations using 2015 and 2017 FinScope data)

ATM usage has significantly declined across all regions as illustrated in Figure 4.24. The decline can be attributed to the rise in use of mobile banking over the intermediate years which results in respondents using ATMs less frequently. For instance, of those residing in urban areas, 6% reported to have used ATMs, the lowest rate across the locations, followed by traditional areas at 8%. The highest percent of people using ATMs at 11% were those residing in farmlands in 2015 (see Figure 4.27a). However, a sharp decline appeared in 2017 (see Figure 4.27b), as people residing across all locations there were no more than 5% using ATMs.

A current account is ideal if you earn a monthly fixed income or regularly pay accounts such as rent or bonds, car repayments, funeral insurance, or telephone contracts. Such an account allows you to use your bank branch, ATM, internet, or mobile phone to conduct transactions and manage your finances. Other features include overdraft loans that can be managed through monthly account statements[14]. Overall, current account usage has received mounting attention from individuals across all regions since 2017. In 2015, across all locations, only 3% of adults had a current account (see Figure 4.27a). On the other hand, this improved to 17% in 2017 (see Figure 4.27b), with adults residing in urban areas reporting the highest usage at 21%, followed

14 The overdraft tool is a loan tool provided through a personal bank account that allows cardholders to continue to use their account to withdraw money, even if they do not have funds.

by those residing in farm areas at 15%, and last, tribal lands at 9%. This improvement was mainly attributed to addition of funeral accounts that could also be added on the account. However, there is still relatively low usage of the product and other financial services caused by an array of possibilities, such as high unemployment rates within the country, making this account undesirable and inaccessible for vulnerable people with no or irregular incomes.

The transactional account appeared to be relatively popular as compared to other accounts in 2015, yet this declined in 2017. This is because a transaction account bridges the gap between a current account and the low-cost Mzantsi accounts. A transaction account has very low fees, but it does not offer access to credit. However, possibly due to poor economic climate and advances in mobile banking, the account relatively declined from 2015 to 2017 across all areas, except for farmlands. Urban areas have the highest usage of the account from 59% in 2015, declining to 47% in 2017. With farms falling behind at 51% in 2015 and improving to 52% in 2017, whilst those residing in traditional areas used the account the least at 47% in 2015, dropping to 35% in 2017. Interestingly, the Mzantsi account was an initiative by the four major banks to provide low-cost entry accounts for vulnerable segments of the society, yet it has not been doing well. Overall, adults accessing these Mzantsi accounts are 1% across both years across all areas, suggesting that the initiative has failed as it has not received much traction.

On the other hand, the SASSA card, which is for adults receiving social security from the government, has received a steady increase. This is troubling, as it suggests that more and more people rely on social grants and are not in employment, or they may not have had provisions to cushion them against shocks or old age. According to StatsSA (2016), 41% is made up from old-age pension and 42% goes to family and children recipients. Interestingly, adults residing in farm areas reported a decline from 33% in 2015 to 25% in 2017, whilst those residing in urban and tribal lands report increases, suggesting more people are receiving and using social grants.

Ultimately, South African's can be seen to have a poor savings culture as they have relatively low savings rates, less than 10% across all regions in both years. Unsurprisingly, the use of a savings account has seldomly received high usage from those residing in traditional and farm areas as individuals are relatively discouraged to save, as they reside in low-income communities. In addition, adults residing in urban areas have also reduced their savings with a slight decrease from 7% in 2015 to 2% in 2017. As mentioned, this may be attributed to a

declined economy and increased levels of unemployment in the country which discourages people to save.

**a) 2015**


**b) 2017**

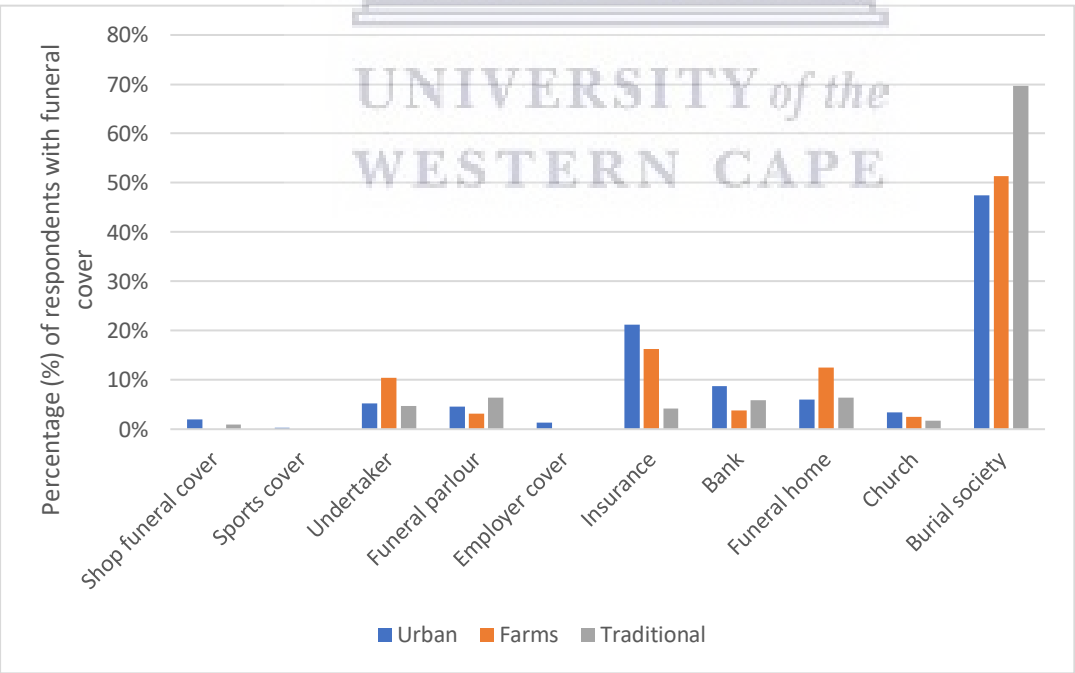
**Figure 4.25: Insurance product usage across geographical areas in a) 2015 and b) 2017**

(Source: Authors calculations using 2015 and 2017 FinScope data)

The most striking aspects of South Africa's spatial economy is the concentration of activity in urban areas. The location generates most of the economic output, despite having only limited land area. In addition, urban areas have the highest GDP per capita and average income of all the locations (Turok et al., 2017). Relatively high productivity helps to explain why its jobs growth has outpaced other provinces since the 1990s. This reflects the region's economic scale and density, which reduces transport costs, promotes business efficiency and specialisation, and improves face-to-face communication, knowledge spill overs, and localised learning. Concentrated opportunities have made the region a magnet for in-migration from the rest of the country and other parts of southern Africa (Turok, 2018). In short, there is an economic and social dynamism in most urban areas that is not apparent in traditional and farm areas.

Overall, Figure 4.25 illustrates that insurance usage has been relatively scant across all the different insurance types, with usage being less than 50%. The most prevalent insurance type is health insurance followed by life insurance and income protection. Car insurance has declined from 2015 (see Figure 4.25a) to 2017 (see Figure 4.25b) across all locations. As illustrated, those residing in urban areas have reported a decline from 4% to 2%, farms stayed the same at 0%, and adults in farms significantly dropped from 7% to 0% from 2015 to 2017, respectively. Moreover, property insurance also experienced large declines across all locations from 2015 to 2017 with those residing in farm areas down the lowest from 12% to 1%. A slight decline in urban areas from 4% to 3% was observed in 2015 and 2017, respectively, and surprisingly, a slight improvement in traditional areas from 1% to 5%. As such, it is expected that insurance penetration in South Africa appears to be relatively high and concentrated at the high end of the urban market. A report by Price Waterhouse Coopers (PWC) illustrated that approximately 65% of South African household assets are not insured, and consumers are not expected to purchase new assets because of economic uncertainties. The effect of this is that it is expected that policyholders are unlikely to takeout insurance and prefer to spend their income on other items they deem necessary (PWC, 2016).

**a) 2015**



**b) 2017**

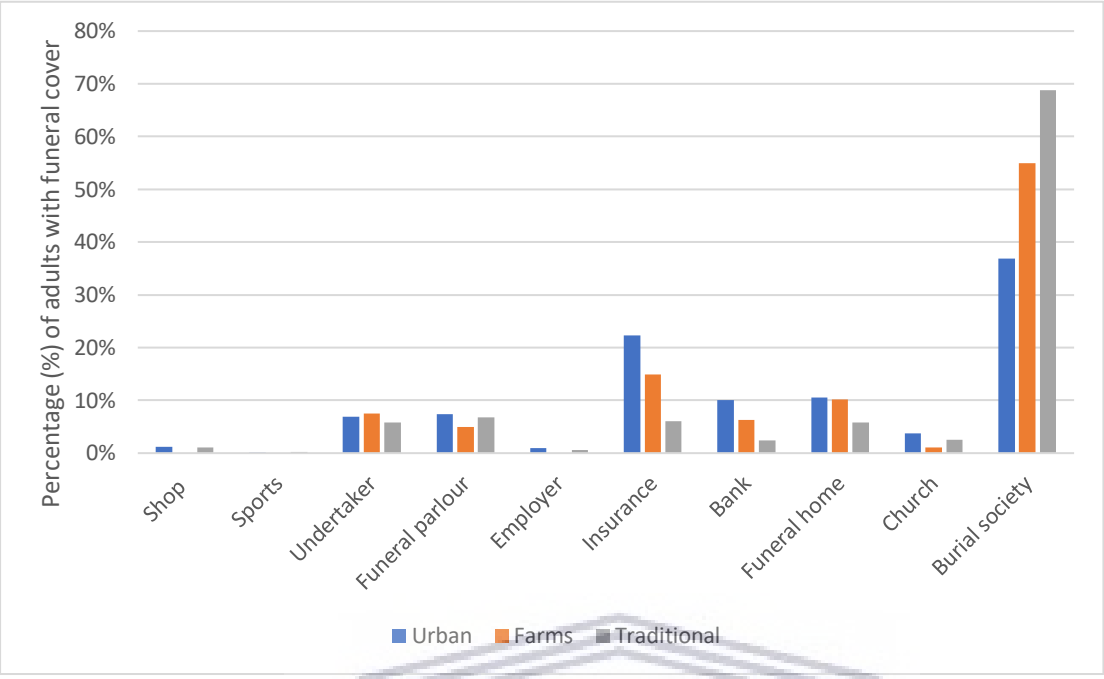



**Figure 4.26: Funeral cover usage across geographical areas in a) 2015 and b) 2017**

(Source: Researcher's calculations using 2015 and 2017 FinScope data)

As in the rest of the world, burials are a major expense for poor families in South Africa. There are two main types of insurance plans. The first type runs for profit. This type of program is usually run by the owner of the funeral parlour or financial institutions, such as banks, who sell insurance as a means of selling their relatively expensive products to lower-income households. These institutions administrate their own informal insurance products. The second type is an informal insurance scheme; depending on the scheme, it can either be for-profit or not. However, these schemes have many characteristics of rotating credit and savings associations, such as burial associations. These clubs are usually made up of people who live in the same neighbourhoods or social networks. They operate according to rules agreed upon by members, and funds are not automatically rotated, instead they are allocated based on specific unforeseen events, such as the death of a family member. As illustrated in Figure 4.26, burial societies dominate funeral coverage usage across all locations for both years. This is because burial societies are typically informal insurance schemes formed by people who generally live in the same area and/or by trusted people in one's social network. As such, this makes burial societies common amongst vulnerable people as they have low or irregular incomes. The results support this, as adults residing in urban areas use burial societies the least as compared to other people

residing in different areas. Even though there was a slight decline from 2015 (see Figure 4.26a) at 53% to 48% in 2017 (see Figure 4.26b), burial societies are the most used form of funeral cover. Expectedly, funeral insurance is a relatively formal funeral cover product that is largely dominated by those who reside in urban areas.

Having reflected on the descriptive statistics of the study, the next section will unpack the regression analysis by further exploring significant factors that contribute to formal FI.

## 4.5 Regression Analysis

While the descriptive statistics have provided an understanding of banking behaviour of adults across different geographical areas, we use regression analysis to determine which factors are significant determinants of formal FI, as well as how significant these factors are across all financial services.

Table 4.1 below investigates the factors that determine the relative probability of adults being financially included across various financial access strands, such as savings/investments, credit, remittances, and insurance, relative to the base component, funeral cover. The year 2017 was used as it was the latest data available at the time of this study (see the appendix 2 for further information relating to the results of the model analysis). Moreover, the location and province variables explored the crux of this study by answering two research objectives, namely: *whether apartheid spatial planning legacies (as represented by various provinces and locations) continue to hamper financial inclusiveness* (Objective 1), and *whether spatial planning (as represented by farm, tribal, and urban areas) drives financial services uptake* (Objective 2).

**Table 4.1: MLR indicating the relative risk ratio of formal FI amongst adults**

Number of observations: 3 527

| | Savings | | Credit | | Remittances | | Insurance | |
|---|---|---|---|---|---|---|---|---|
| **Explanatory variables** | RRR | | RRR | | RRR | | RRR | |
| **Location** | | | | | | | | |
| Farms | 2.03 | (1.07) | 1.71** | (0.45) | 1.08 | (0.34) | 0.91 | (0.33) |
| Traditional | 1.62 | (0.90) | 1.42* | (0.27) | 1.33 | (0.25) | 1.13 | (0.33) |
| **Province** | | | | | | | | |
| Free State | 7.56*** | (6.00) | 1.11 | (0.35) | 0.72 | (0.22) | 1.52 | (0.50) |
| Gauteng | 5.43** | (4.38) | 1.32 | (0.34) | 1.05 | (0.28) | 1.39 | (0.35) |
| Kwa-Zulu Natal | 3.70 | (2.99) | 1.74** | (0.47) | 1.43 | (0.36) | 2.08*** | (0.57) |
| Limpopo | 3.04 | (2.68) | 1.82* | (0.59) | 2.19*** | (0.62) | 1.32 | (0.51) |
| Mpumalanga | 2.11 | (1.88) | 2.43*** | (0.72) | 2.09*** | (0.57) | 1.72* | (0.57) |
| North West | 4.22* | (3.37) | 0.98 | (0.31) | 1.11 | (0.32) | 1.04 | (0.35) |
| Northern Cape | 2.56 | (2.41) | 0.99 | (0.31) | 0.52* | (0.19) | 0.58 | (0.25) |
| Western Cape | 6.33** | (5.20) | 1.68** | (0.45) | 1.27 | (0.37) | 1.75** | (0.47) |
| **Race** | | | | | | | | |
| Coloured | 1.02 | (0.50) | 0.89 | (0.20) | 0.10*** | (0.03) | 1.26*** | (0.33) |
| Asian | 2.14 | (1.54) | 0.85 | (0.25) | 0.18*** | (0.09) | 2.86*** | (0.79) |
| White | 0.97 | (0.50) | 0.64** | (0.14) | 0.19*** | (0.06) | 3.27*** | (0.62) |
| **Gender** | | | | | | | | |
| Female | 1.08 | (0.33) | 0.77* | (0.11) | 0.64*** | (0.09) | 0.94 | (0.14) |
| **Education Level** | | | | | | | | |
| Highschool | 0.97 | (0.65) | 1.63* | (0.49) | 1.37 | (0.52) | 1.92 | (0.89) |
| Degree | 0.80 | (0.66) | 0.66 | (0.25) | 0.69 | (0.31) | 2.34* | (1.15) |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Employment status** | | | | | | | | |
| Unemployed | 7.11*** | (2.68) | 1.19 | (0.30) | 5.78*** | (1.15) | 1.25 | (0.42) |
| Inactive | 1.10 | (0.58) | 2.67*** | (0.55) | 3.85*** | (0.78) | 0.93 | (0.19) |
| Discouraged | 0.49 | (0.56) | 0.44 | (0.45) | 5.28*** | (3.07) | 1.06 | (0.78) |
| **Income** | | | | | | | | |
| 1 – 2999 | 0.86 | (0.36) | 1.20 | (0.23) | 1.48** | (0.27) | 0.67 | (0.18) |
| 3000 - 5999 | 0.92 | (0.45) | 0.88 | (0.18) | 0.76 | (0.17) | 0.79 | (0.19) |
| 6000 - 11999 | 1.08 | (0.69) | 0.62* | (0.16) | 0.37*** | (0.13) | 1.02 | (0.24) |
| 12000 - 14999 | 0.28 | (0.30) | 0.01*** | (0.01) | 0.57 | (0.45) | 0.68 | (0.28) |
| 15000 and above | 0.34 | (0.28) | 0.34*** | (0.13) | 0.40** | (0.18) | 0.93 | (0.22) |
| **Social grant** | | | | | | | | |
| Yes | 1.38 | (0.63) | 0.47*** | (0.12) | 0.12*** | (0.03) | 0.57 | (0.20) |
| **Social Network** | | | | | | | | |
| Yes | 0.40** | (0.15) | 0.35*** | (0.06) | 0.46*** | (0.07) | 0.62*** | (0.12) |
| **Internet Access** | | | | | | | | |
| Yes | 1.17 | (0.37) | 1.26* | (0.18) | 1.19 | (0.18) | 1.01 | (0.16) |
| **Cell phone Ownership** | | | | | | | | |
| Yes | 0.99 | (0.64) | 1.55 | (0.45) | 0.81 | (0.31) | 0.97 | (0.35) |
| | | | | | | | | |
| Constant | 0.01*** | (0.01) | 0.12*** | (0.06) | 0.31** | (0.18) | 0.07*** | (0.04) |



Notes:

1. Reference category for the equation is Funeral Cover.[15]
2. Robust standard errors in parenthesis

15 As mentioned previously, funeral cover has gained high popularity amongst adults, and is often the financial instrument of choice for many poor people. Thus, with the financial product having, the highest penetration, the author found it suitable to use funeral cover as the base variable for formal financial inclusion.

3. ***Significant at 1% **Significant at 5% *Significant at 10%

(Source: Researcher's calculations using 2017 FinScope data)

As such, location was found to be a significant determinant among adults with access to credit. In short, persons residing in farm and traditional areas relative to people living in urban areas are more likely to obtain credit relative to funeral cover. Considering the spatial mismatch across tribal and farm areas compared to urban areas, it is evident that people living in more developed areas may have greater uptake of credit options as opposed to funeral cover. In addition, provinces that were former homelands were found to be significant determinates of FI across all financial segments. For instance, when taking a look at financial inclusiveness with respect to credit and remittances, the results show that across both financial products, adults living in Limpopo, Mpumalanga, and the Northern Cape (as well as KZN and the Western Cape for those with access to credit) significantly determines their level of financial inclusiveness. This shows that persons residing in the latter provinces are more likely to access credit and remittances over funeral cover as compared to those living in the Eastern Cape. Interestingly, when exploring the financial inclusiveness of those with access to savings relative to funeral cover, Free State, Gauteng, North West, and the Western Cape play a significant role and have a RRR greater than 1 at 7.56, 5.43, 4.22, and 6.33, respectively. This indicates that the relative probability of falling into the savings category relative to the risk of falling into the 'funeral cover' group increases (more than doubles) relative to the Eastern Cape. In other words, those residing in the latter provinces are more likely to access savings over funeral cover as compared to those residing in the Eastern Cape. Extensive literature advocates and proves that there is significant correlation between one's employment status and FI, as employment provides income sources that form the basis of FI. Thus, it us unsurprising that there is a significant positive relationship between adult's employment status.

On the other hand, the lack of saving among South Africans is of great concern. This is because savings provide the means for households to be able to become resilient when faced with adverse income shocks, as they provide a cushion for many households for them to stand on in time of need. Thus, broadening sustainable inclusivity; however, South Africa's household savings rate as a percentage of GDP remains poor (World Bank, 2019). There are numerous factors that determine the reasons why people save. These are presented in Table 4.2 and are

discussed further below (see the appendix 3 for further information relating to the results of the model analysis.

**Table 4.2: MLR indicating the likelihood of savings uptake amongst adults**

Number of observations: 4 920

| | Formal Savings | | Informal Savings | |
|---|---|---|---|---|
| **Explanatory variables** | RRR | | RRR | |
| **Location** | | | | |
| Farms | 0.57** | (0.16) | 1.34 | (0.28) |
| Traditional | 1.00 | (0.17) | 2.06 | (0.16) |
| **Province** | | | | |
| Free State | 1.25 | (0.29) | 0.54** | (0.14) |
| Gauteng | 1.90*** | (0.36) | 1.24 | (0.25) |
| KwaZulu-Natal | 1.18 | (0.25) | 0.86 | (0.19) |
| Limpopo | 1.29 | (0.32) | 1.24 | (0.31) |
| Mpumalanga | 0.81 | (0.19) | 0.85 | (0.21) |
| North West | 0.56** | (0.14) | 0.94 | (0.23) |
| Northern Cape | 1.28 | (0.31) | 1.37 | (0.36) |
| Western Cape | 0.84 | (0.17) | 0.86 | (0.18) |
| **Race** | | | | |
| Coloured | 1.64*** | (0.32) | 0.52*** | (0.10) |
| Asian | 2.30*** | (0.58) | 1.49 | (0.42) |
| White | 2.14*** | (0.33) | 0.76 | (0.17) |
| **Gender** | | | | |
| Female | 1.01 | (0.11) | 1.53*** | (0.19) |
| **Education Level** | | | | |
| Highschool | 1.22 | (0.33) | 1.41 | (0.32) |
| Degree | 3.46*** | (1.04) | 1.45 | (0.46) |
| **Employment status** | | | | |

| | | | | |
|---|---|---|---|---|
| Unemployed | 0.25*** | (0.04) | 0.61*** | (0.10) |
| Inactive | 0.31*** | (0.05) | 1.06 | (0.17) |
| Discouraged | 0.14*** | (0.08) | 0.50 | (0.23) |
| **Income** | | | | |
| 1 - 2999 | 0.33** | (0.05) | 0.76* | (0.12) |
| 3000 - 5999 | 0.79 | (0.12) | 1.36* | (0.24) |
| 6000 - 11999 | 1.60*** | (0.31) | 0.96 | (0.25) |
| 12000 - 14999 | 3.10*** | (1.32) | 0.45 | (0.35) |
| 15000 and above | 2.37*** | (0.60) | 1.22 | (0.43) |
| **Social grant** | | | | |
| Yes | 1.97*** | (0.46) | 1.33* | (0.23) |
| **Social Network** | | | | |
| Yes | 1.48*** | (0.19) | 1.13 | (0.15) |
| **Internet Access** | | | | |
| Yes | 1.97*** | (0.22) | 1.38*** | (0.17) |
| **Cell phone Ownership** | | | | |
| Yes | 1.51** | (0.32) | 1.03 | (0.23) |
| | | | | |
| Constant | 0.16*** | (0.06) | 0.12*** | (0.04) |
| | | | | |



Notes:
1. Reference category for the equation is Not Saving.[16]
2. Standard errors in parenthesis
3. ***Significant at 1% **Significant at 5% *Significant at 10%

(Source: Researcher's calculations using 2017 FinScope data)

16 Similarly to funeral cover, the data revealed that when assessing the various types of savings categories, majority of adults in South Africa we found not to have savings, which is consistent with the literature discussed in the review in the earlier chapters.

Based on the regression output, persons residing in farm areas are more likely than those living in urban areas to prefer not saving over formal savings. Those in traditional areas have an RRR of one, which implies that there is no relationship between the risk of falling into formal savings or not saving, hence the result is insignificant. Ultimately, this suggests that vulnerable people, such as those living in farm areas, would rather not save then save their money formally. This indicates that people residing in farm areas have low to no income generating opportunities, and people are unable to save if they do not have any income. Thus, for them, saving is not a priority.

Across all the provinces, the relative risk is greater than one, except for Mpumalanga, North West, and the Western Cape. In other words, irrespective of which province a person resides in, except for Mpumalanga, North West, and the Western Cape, they are more likely to prefer formal savings over not saving as compared to those residing in the Eastern Cape. Whereas those residing in Mpumalanga, North West, and the Western Cape are more likely than the rest of the provinces to prefer not saving over informal savings. However, only Gauteng and the North West provide a significant effect for formal savings in comparison to not saving, whilst only the Free State provides a significant effect for informal savings compared to not saving. This reinforces the spatial mismatch within the country and can be explained by Gauteng being the heart of the economy as it has the highest economic activity as they contribute the highest percentage towards GDP in the country, hence, inward migration to the province is considerably high compared to other provinces which lag behind. Figure 4.27 below provided by StatsSA (2019a) confirms that Gauteng is South Africa's powerhouse as it portrays how much provinces contribute to the national economy in 2017. Other concentrations of economic activity are in the Western Cape (centred on Cape Town) and KZN (centred on eThekwini (Durban)). Secondary cities include Buffalo City (East London), Nelson Mandela Bay (Port Elizabeth), Mangaung (Bloemfontein), and Msunduzi (Pietermaritzburg). The economic performance of all these cities lags behind Gauteng, which reinforces spatial divides across the country.

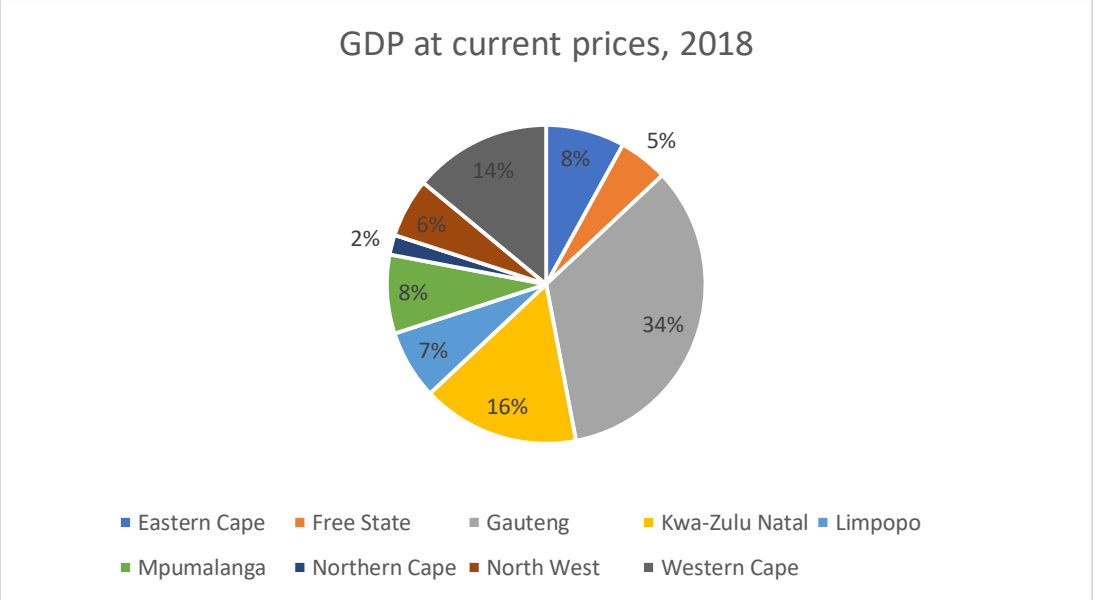



**Figure 4.27: Percentage of provinces contribution to the national economy**

(Source: StatsSA, 2019a)

Overcoming the challenges of the apartheid legacy also goes into the heart of eradicating racial prejudices, as they reinforce discrimination and drive inequality in all sectors of the economy. The RRR is significant and greater than 1 for all races. Ultimately, this suggests that for formal savings, adults who are White, Coloured, and Indian are more likely than Blacks to prefer formal savings over not saving. However, for informal savings, Coloured people are more likely than Blacks to prefer informal saving over not saving, whilst other racial groups proved to be insignificant.



The role apartheid played not only reinforced spatial divides, but it also engineered stark gender gaps in the economy. Women were subjected to domesticated work and financial decisions in the household were often made by men who were the breadwinners. However, the economy has become progressive in empowering women and ensuring that more women are in formal employment and various opportunities are offered to them, yet more still needs to be done as gender gaps are still prevalent, limiting women's financial access. As such, extensive literature has shown that women are more likely to be a part of social groups, such as stokvels, that offer rotating funds to members, credit, and give each other financial advice. Interestingly, the results show that females are more likely than males to prefer informal savings over not saving.

Having discussed the main findings of the study in the sections above, some concluding remarks follow next to round off the chapter.

## 4.6 Conclusion

This section provided nuances on the usage and access of formal financial services by investigating that FI goes beyond improved access to credit and includes enhanced access to savings and investments, as well as insurance products.

Overall, the findings from the analysis provide interesting results. Spatial mismatch does drive exclusion; whether a person resides in underdeveloped provinces or in vulnerable communities are factors likely to infringe on a person's capability in being financially included. On the other hand, governments efforts in expanding access to previously disadvantaged persons through widening social grants by offering electronic cards, has provided many low-income persons to access formal services. Simply put, the results suggest that South Africa's sector is fairly inclusive. This masks the financial inequality between those residing in less developed provinces; farm, traditional, and urban residents; rich and the poor; as well as women at different incidences of financial products. Moreover, when taking a look at each of the basic financial services offered by financial institutions, a slightly different picture is portrayed when determining the extent to which individuals are included. As such, the process of investigating which factors contribute to formal inclusion across specific products, allows for more targeted interventions and monitoring of products where individuals are least included, particularly for vulnerable people. Therefore, achieving sustainable FI is an important milestone on the road to achieving the Rainbow Nation commitments. However, South Africa needs to take a more innovative approach to FI. While government regulation can act as a catalyst, financial intermediaries should work with the private and public sectors. At the same time, stakeholders need to be aware of consumer preferences and unmet needs, as well as what they see as barriers to access to financial services.

The final chapter that follows next wraps up the study by summarising the main findings, providing recommendations, and a final conclusion.

# CHAPTER 5
# SUMMARY, RECOMMENDATIONS & CONCLUSION

## 5.1 Introduction

This study investigated the impact of apartheid spatial planning on FI in South Africa. To this end, the study made use of secondary data gathered from the 2015 and 2017 FinScope surveys.

The exploration undertaken in this study was guided by the following research question:

> "What is the impact of apartheid spatial planning on financial inclusion in South Africa?"

In short, the objectives of the study were to:

1) Identify whether apartheid spatial planning legacies (as represented by various provinces and locations) continue to hamper financial inclusiveness.
2) Determine whether spatial planning (as represented by farm, tribal and urban areas) drives financial services uptake and usage.
3) Explore how inequality has manifested through spatial planning in accessing financial services and products.



The discussion further below will indicate how the study's objectives were achieved and research question was answered. But first, the structure of the chapter is presented. After a brief introduction (section 5.1), a discussion of the research findings is provided (section 5.2), followed by key contributions to the body of literature (section 5.3). Thereafter, the penultimate section presents recommendations directed at various target audiences (section 5.4), and the final section ends with some concluding remarks (section 5.5).

## 5.2 Discussion of Findings

A natural question concerns why South Africa's apartheid cities still exist 27 years after apartheid ended, especially considering Government's commitment to change. Apart from the direct and indeed physical legacies of apartheid planning, spatial divides have been made

particularly difficult to undo because of the protection of private property guaranteed in South Africa's Constitution, two major causes for the permanence of apartheid cities are immediately evident. In addition, the analysis is based on a proxy of apartheid legacy and that the results should be interpreted with caution. Further, developers in the private sector are more willing to build housing and commercial development projects in established economic and social areas of activity, thereby making poorer areas underdeveloped and entrenching the existing spatial divides. In addressing Objective 1, which was *to determine whether apartheid spatial planning legacies (as represented by various provinces and locations) continue to hamper financial inclusiveness* was found to be true. This is because the study found that the overall financial ecosystem has become more financially inclusive for consumers living in more developed areas and urban precincts, creating a FI divide which is further exacerbated by a declining economy and rising unemployment.

The study began by introducing the background and rationale to inform this study undertaking. It further detailed and gave evidence of spatial inequality and FI determinants of individual characteristics by exploring the theoretical and empirical frameworks of the study. In addition to general characteristics, particular attention was given to three dimensions of FI, namely: *access, usage,* and *financial needs*. The importance of these characteristics was demonstrated by exploring the spatial mismatch of economic welfare through descriptive statistics and econometric analysis by using FinScope surveys from 2015 and 2017, which provided demand-side data level findings.



Key insights from the findings which addressed Objective 2, which was *to determine whether spatial planning (as represented by farm, tribal and urban areas) drives financial services uptake and usage* proved to be true. This was indicated by South Africa's relatively high access and uptake of financial products and services; however, usage of these services still remained poor, thus deteriorating the progress that has been made to broaden FI. Despite the fact that FI rates appear immensely high, the opportunity for further inclusion is limited as access is merely extending to serving particular segments of society, leaving the most vulnerable behind. This is because the country has been earmarked as one of the most unevenly and unequal developed economies in the world. This has largely been attributed to larger parts of the economy that were deliberately underdeveloped historically and entire communities that were forcibly removed from well-located urban areas to neglected areas on the outskirts. Consequently, much of the population was left with poor education, healthcare, and other public and private

services. Deep-rooted social and spatial inequalities put immense pressure on social redress and spatial rebalancing. They coincide with daunting barriers to change, such as the highly uneven institutional capabilities and infrastructure, particularly in rural areas as compared to urban localities. The most vulnerable include the economically excluded and consumers living in underdeveloped areas, such as low income or unemployed persons living in the rural areas and/or undeveloped regions, such as Mpumalanga, putting them at an increased risk of also being financially excluded. Interestingly, Internet access for consumers accessing credit and social networks for persons accessing formal savings had some positive effect on the resilience of this group despite being economically excluded. Regardless of mobile phone ownership being essential in accessing the Internet, owning a mobile phone possesses no significant explanatory power in broadening formal FI, as not having a mobile phone does not necessarily mean that consumers do not have access to the Internet. On the other hand, cell phone ownership plays a significant role in broadening formal savings when exploring consumer's inclusivity across formal and informal saving mechanisms compared to not saving.

Access measures have indicated that as follows, while uptake rates may be high, adults who fall out of the bank agency model struggle the most to access formal financial services, and therefore, are more likely to either be financially excluded or to make use of informal financial services. Thus, addressing objective 3 which was to *explore how inequality has manifested through spatial planning in accessing financial services and products.* The South African spatial and historical inequalities play a significant role in the ability of the banking agency model to effectively reach and service lower-income and poor households. Ultimately, financial institutions must consider fundamentally changing their business models in order to reach out to and retain low-income segments through a variety of financial products. South African financial institutions have proved that they need to be leaner to reach the bottom of the pyramid. In addition, governments can play a more constructive role in deregulation, encouraging use and promoting inclusiveness. It is clear that Governments cannot do this alone, but they alone can facilitate broader efforts by financial services companies, telecommunications operators, retailers, credit bureaus, technology companies and non-governmental organisations.

The usage trends indicate poor usage of financial service products as more than 50% of consumers immediately withdraw their money once it has been deposited into their account. This indicates that there is high adoption of various accounts, yet usage, which remains low,

can be explained by the cost of financial services, thus hindering the convenience of inclusion. As such, the country's relatively strong adoption of transaction accounts must be marked with an asterisk. This is because the reality of these accounts is often a condition of employment or receipt of social grant, and countless people see them as constraints rather than drivers. As such, it should come as no surprise that sustainability and usage are weak. Transaction accounts are too expensive, as 40% of consumers without an account say fees are too high, whilst others indicate that bank branches are too far away. This mistrust of alternative channels leads to the unsustainable proposition that the least profitable consumers are drawn to the most expensive channel, brick-and-mortar branches. Financial institutions clearly have a tall advertising, marketing, and educational means. Thus, they require an alternative operating model to reach consumers from the lower income spectrum. Nearly one-half of consumers earn the monthly minimum wage as a share of disposable income, current bank fees are highly inaccessible, at a level four times higher than that of many developed markets, including emerging market such as India (BCG, 2017). Capitec Bank, founded in 2001, provides a good case study in which other financial institutions should learn from as they currently control about one-third of the low-income market with a no-frills offering (BCG, 2017). This offering is possible because the bank's operating costs per customer are extremely low, about one-fifth the level of traditional full-service banks in South Africa. Hence, Capitec has received vast traction and is leading together with the big four banks.



Moreover, there is a need for sustainable insurance products. The popularity of funeral covers means that when people die, their relatives may have the money to pay for a proper burial. However, their dependents may not have any proceeds left. Similarly, South Africans are not adequately protected against theft or damage. South African regulators have taken steps to reduce fees and hold insurance providers responsible for honest marketing. Nonetheless, the results indicate, insurers still need to do more to lower costs, improve flexibility, and increase consumers' trust. Nevertheless, there are some general lessons to be learned from these informal insurance providers. The strong demand for local knowledge is evident. For example, formal insurance companies tend to design their policies based on assumptions about the structure of the family that are simply not accurate. Market researchers need to obtain detailed socio-economic data before formulating policies. Transaction simplicity is crucial, transacting with informal insurance providers is a relatively simple process. Where formal education and literacy rates are low, there is a need for few conditions and exclusions. Terms and conditions need to be kept short and simple and explain the customer's own words. In addition,

technology, particularly through the use of data analytics, mobile phones and social media, is an important driver of increasing opportunities for businesses to reduce costs and analysing behavioural data to design new and more appropriate products to meet the needs of consumers, especially for vulnerable groups.

The study illuminates the existing spatial disparities that persist, which are hampering attempts to broaden FI, although other economic factors are also at play such as poor infrastructure in rural areas, increasing unemployment, and gender gaps. These further impede the sustainability of FI that could lead to improvements in consumer welfare. The solution requires a multifaceted approach that will not only encourage spatial-based policies, but also consists of a combination of economic, digital, and financial inclusive efforts to holistically improve the well-being of vulnerable people.

## 5.3 Key Contributions

The study makes a key contribution to the body of literature on FI by providing new insights into the theory and practice of FI by exploring evidence from different contexts beyond access to bank accounts and exploring a more holistic and financial needs driven level of inclusion in South Africa. This study not only provides unique insights from FinScope regarding some of the financial behaviour of adults, but also addresses the gap by explaining the level of FI from a financial needs' perspective, which considers the level of inclusion across various segments of products such as savings, credit, remittances, insurance, and funeral cover. Previous research provided limited nuances on the extent of inclusion across various financial segments; however, this study provides advanced econometric analysis using MLR to explore FI from a more holistic approach. Furthermore, this study provides dimensions that could be used to assess the quality of FI across countries. In order to have quality and sustainable FI in South Africa, financial products need to make the lives of consumers easier as well as improve their welfare over time. This means that financial institutions should be providing financial products that are affordable, meeting the needs of all consumers whilst ensuring that the gains and reputation in terms of its value proposition of providers remain a core element. Without balancing the two, providers will continue to focus on the most profitable and easily accessible markets to serve in affluent markets as is evident throughout South Africa. For lower-income consumers in less affluent areas that have consumed products that were designed for middle to

high-income consumers in developed areas, the usage rates have not matched the take-up rates as the costs of continued use have been unaffordable and unsustainable. This shows that the quality and sustainability of FI in South Africa is lacking. While the groundwork has been laid through strong consumer protection and transparency and sophisticated financial services that provide more convenience are being developed, the day-to-day economic experience of the lower-income consumer, particularly in undeveloped areas, remains poor.

The specifics of policy recommendations still need to be developed. They need to be based on understanding and quantifying the importance of all the microeconomic factors – to do with endowments, institutions, and also spill overs and linkages between economic agents – that make some locations more attractive destinations for investment than others. As enhanced local institutions involving the private sector and community stakeholders are also essential for spatial policies to respond to the specific challenges and opportunities encountered in each place. These notions all stress the influence of geography on economic performance. The issues at stake are multi-dimensional and cut across established academic disciplines and policy silos.

In light of the study's findings, the following recommendations are made, directed at specific target audiences.

## 5.4 Recommendations



The recommendations of this study are:

### 5.4.1 Recommendations for government

- Governments should focus on spatial targeting policies, as there is growth potential in many areas besides large cities. These opportunities cannot be achieved by private companies and markets due to lack of information, risk aversion, inertia, or other failures. Collective action by government and civil society can improve spatial divides by creating an enabling environment to guide private investment decisions and support productive activities. Government can and should do more, rather than passively responding to business location choices and family migration patterns, as inefficient forms of urban development can be locked in. Policies should be sensitive to potential local assets and underutilised resources and should address binding constraints that impede investment and growth, such as weak institutions.

- Financial education should be a priority that is taught in the education system to encourage a more financially literate population.

### 5.4.2 Recommendations for policy

- Reform regulation to promote competition and disruption in the banking industry. The financial sector in South Africa has been stable due to the fact that there have been very few new entrants. Ironically, the limitation to the stability achieved has been that it has disadvantaged lower-income consumers in less affluent areas who have not had their needs adequately met.
- Using geospatial data, pro-poor policies should be implemented by reducing data and other connectivity costs in rural and poorly developed areas in order to bridge the digital divide.

### 5.4.3 Recommendations for the financial sector

- Reconsider the use of required documentation such as proof of address as a Know Your Customer (KYC) requirement when opening an account. The use of biometric technology can help to authenticate identification. The vulnerable groups most often than not are excluded from opening and accessing an account because they are from underdeveloped areas and/or informal sector workers who are less likely to have wage slips and/or formal proof of address.
- FSPs should create more awareness and marketing of various products other than credit and funeral cover, by promoting savings and investment opportunities and making them more attractive and affordable, particularly for lower income consumers.



### 5.4.4 Recommendations for future research

- Further research should be undertaken to unpack the nuances that poor service delivery in access to basic services, such as energy provision, can play in curtailing sustainable FI. Particularly, with the poor quality of energy provision in the country's poorest regions, with the increasing use of digital financial services, further research in exploring the extent of these challenges across various municipalities on prohibiting sustainable FI should be accounted for.
- Irrespective of uptake being high for particular financial services, usage is extremely low as majority of accounts are used as mailboxes. Studies could improve on this

research by further grappling the behavioural dynamics that lead to poor usage of financial services.

- The prevalence of high mobile phone penetration within the country has been used to leverage the reach of financial services through mobile money. Future studies can investigate the role of mobile money across various product types, such as insurance, credit, investment, and savings mechanisms to investigate the extent to which mobile services have truly reached consumers, especially those at the bottom of the pyramid.

Some concluding remarks follow next.

## 5.5 Conclusion

This concluding chapter provided a summation of the key findings of the study, discussed the contribution of this study to the broader body of knowledge on FI and spatial inequality, and suggested recommendations directed at various target audiences. In conclusion, the aim of the study was achieved, in that the researcher successfully investigated the impact of apartheid spatial planning on FI in South Africa. In addition, as indicated in the discussion above, the three objectives as set out in Chapter 1, were achieved.

To close, the researcher would like to leave you with the following words, which, although originally written for the American context, has significant relevance for the people of (South) Africa:

> "*Now, as a nation, we don't promise equal outcomes, but we were founded on the idea everybody should have an equal opportunity to succeed. No matter who you are, what you look like, where you come from, you can make it... Where you start should not determine where you end up.*"
>
> – Barak Obama (n.d)

# REFERENCES


AFI, 2014. *Global partnership for financial inclusion (GPFI) country case studies: Volume 1*. https://www.afi-global.org/sites/default/files/publications/gpfi_country_case_studies_volumn_1_-_the_use_of_financial_inclusion_data.pdf

Aga, G. A., & Peria, M. S. (2014). *International remittances and financial inclusion in Sub-Saharan Africa.* World Bank.

Aghion, P., & Bolton, P. (1997). A theory of trickle-down growth and development. *The Review of Economic Studies, 64*(2), 151-172.

Agnes, P. (2000). The "end of geography" in financial services? Local embeddedness and territorialization in the interest rate swaps industry. *Economic geography, 76*(4), 347-366.

Agyei-Mensah, S., & Owusu, G. (2010). Segregated by neighbourhoods? A portrait of ethnic diversity in the neighbourhoods of the Accra Metropolitan Area, Ghana. *Population, Space and Place, 16*(6), 499-516.

Ahlin, C., & Townsend, R. M. (2007). Using repayment data to test across models of joint liability lending. The Economic Journal, 117(517), F11-F51.

Aker, J. C., & Mbiti, I. M. (2010). Mobile phones and economic development in Africa. *Journal of Economic Perspectives, 24*(3), 207-232.

Akerlof, G. A. (1970). The market for lemons: Quality uncertainty and the market mechanism. *The Quarterly Journal of Economics, 89*, 488-500.

Alexander, K. (2001). The international anti-money-laundering regime: the role of the financial action task force. *Journal of Money Laundering Control, 4*(3), 231-248.

Alexander, M. (2018). The provinces and 'homelands' of South Africa before 1996. South African Gateway. https://southafrica-info.com/history/provinces-homelands-south-africa-1996/

Aliber, M., Maswana, N., Nikelo, N., Mbantsa, B., & Bank, L. (2016). *Economic development in South Africa's former homelands and rural-urban linkages.* REDI 3x3 Working Paper.

Allen, F., Carletti, E., Cull, R., Qian, J., Senbet, L., & Valenzuela, P. (2013). *Improving access to banking: evidence from Kenya.* Washington: World Bank.

Allen, F., Demirguc-Kunt, A., Klapper, L., & Peria, M. S. (2016). The foundations of financial inclusion: Understanding ownership and use of formal accounts. *Journal of Financial Intermediation, 27,* 1–30.

Alves, S. (2016). Spaces of inequality: It's not differentiation, it is inequality! A socio-spatial analysis of the City of Porto. *Portuguese Journal of Social Science*, *15*(3), 409-431. doi: 10.1386/pjss.15.3.409_1

Anderson, H. T., & Van Kempen, R. (2003). New trends in urban policies in Europe: evidence from the Netherlands and Denmark. *Cities, 20*(2), 77-86.

Andersson, R., & Musterd, S. (2005). Area-based policies: a critical appraisal. *96*(4), 377-389. doi:https://doi.org/10.1111/j.1467-9663.2005.00470.x

Ansong, D., Chowa, G., & Adjabeng, B. (2015). Spatial analysis of the distribution and determinants of bank branch presence in Ghana. *International Journal of Bank Marketing, 33*(3), 201-222. doi: 10.1108/ijbm-09-2013-0103

Aoyama, Y., Berndt, C., Glückler, J., & Leslie, D. (2011). Emerging themes in economic geography: outcomes of the economic geography 2010 workshop. *Economic Geography, 87*(2), 111-126.

Ardington, C., & Leibbrandt, M. (2004). *Financial services and the informal economy.* University of Cape Town, Centre for Social Science Research. Cape Town: CSSR and SALDRU.

Aryeetey, E. (1997). Rural finance in Africa: Institutional developments and access for the poor. In *Proc. of the Annual World Bank Conference on Development Economics.* Washington DC (pp. 149-154).

Aslan, G., Deléchat, C., Newiak, M., & Yang, F. (2017). *Inequality in financial inclusion and income inequality.* International Monetary Fund.

Babbie, E. R. (2012). *The practice of social research* (13th ed.). Wadsworth.

Babbie, E. R. (2013). *The Practice of Social Research.* Thomson Learning Inc.

Bae, K., Han, D., & Sohn, H. (2012). Importance of access to finance in reducing income inequality and poverty level. *International Review of Public Administration, 17*(1), 55-77.

Baker, W. E., & Faulkner, R. (2004). Social networks and loss of capital. *Social Networks, 26*(2), 91-111.

Banerjee, A. V., & Newman, A. F. (1998). Information, the dual economy, and development. *The Review of Economic Studies, 65*(4), 631-653.

Banking Association South Africa. (2019). https://www.banking.org.za/consumer-information/consumer-information-legislation/financial-sector-charter-code/#:~:text=The%20Financial%20Sector%20Charter%20(FSC,to%20the%20financial%20services%20sector

Bateman, M. (2010). *Why Doesn't Microfinance work?: The Destructive Rise of Local Neolibrism.* Zed Books Ltd.

BCG. (2017). How to Create and Sustain Financial Inclusion. https://www.bcg.com/publications/2017/globalization-how-create-sustain-financial-inclusion

Beck, T., & Demirgüç-Kunt, A. (2008). Access to finance: An unfinished agenda. *The World Bank Economic Review,* 383-396. https://doi.org/10.1093/wber/lhn021

Beck, T., Demirgüç-Kunt, A., & Honohan, P. (2009). Access to financial services: measurement, impact, and policies. *The World Bank Research Observer, 24*(1), 119-145.

Beck, T., Demirgüç-Kunt, A., & Levine, R. (2007). Finance, inequality and the poor. *Journal of Economic Growth, 12*(1), 27-49.

Betancur, J. (2014). Gentrification in Latin America: Overview and critical analysis. *Urban Studies Research, 2014*(3), 1-14. doi: 10.1155/2014/986961

Belsky, G., & Gilovich, T. (1999). *Why Smart people make big money mistakes – and how to correct them.* New York: Simon and Schuster.

Black, J. (2013). Reconceiving Financial markets—from the economic to the social. *Journal of Corporate Law Studies, 13*(2), 401-442.

Bongomin, G. O. C., Munene, J. C., Ntayi, J. M., & Malinga, C. A. (2017). Financial literacy in emerging economies: Do all components matter for financial inclusion of poor households in rural Uganda? *Managerial Finance, 43*(4). doi:10.1108/MF-04-2017-0117

Bongomin, G. O. C., Ntayi, J. M., Munene, J. C., & Akol, C. M. (2017). Financial intermediation and financial inclusion of poor households: Mediating role of social networks in rural Uganda. *Cogent Economics & Finance, 5*(1), 1-16.

Bongomin, G. O. C, Ntayi, J. M., Munene, J. C., & Malinga, C. A. (2018). Mobile money and financial inclusion in sub-Saharan Africa: the moderating role of social networks. *Journal of African Business, 19*(3), 361-384.

Bonorchis, R., & Spillane, C. (2014, August 27). In Africa a bright idea in banking leaves a trail of ruin [online]. *Bloomberg News.*

Bosker, M., & Krugell, W. (2008). Regional income evolution in South Africa after apartheid. *Journal of Regional Science, 48*(3), 493-523.

Breckenridge, K. (2019). he global ambitions of the biometric anti-bank: Net1, lockin and the technologies of African financialisation. *International Review of Applied Economics, 33*(1), 93-118.

Bruhn, M., & Love, I. (2013). The economic impact of expanding access to finance in Mexico. In R. Cull, A. Demirgüç-Kunt, & J. Morduch (Eds.), *Banking the World: Empirical Foundations of Financial Inclusion* (pp. 137-156). Cambridge, MA: The MIT Press.

Brülhart, M., & Sbergami, F. (2009). Agglomeration and growth: Cross-country evidence. *Journal of Urban Economics, 65*(1), 48-63.

Buku, M. W., & Meredith, M. W. (2012). Safaricom and M-Pesa in Kenya: financial inclusion and financial integrity. *Washington Journal of Law, Technology & Arts, 8*(3), 375-400.

Burger, R., Van der Berg, S., Van Der Walt, S., & Yu, D. (2017). The long walk: Considering the enduring spatial and racial dimensions of deprivation two decades after the fall of apartheid. *Social Indicators Research, 130*(3), 1101-1123.

Burgess, R., & Pande, R. (2005). Do rural banks matter? Evidence from the Indian social banking experiment. *American Economic Review, 95*(3), 780-795.

Burt, R. S. (2001). Closure as social capital. *Social capital: Theory and research*, 31-55.

Cameron, A. C., & Trivedi, P. K. (2005). *Microeconometrics: methods and applications*. New York, NY: Cambridge University Press.

Carpenter, M. A., Mingxiang, L., & Jiang, H. (2012). Social network research in organizational contexts: A systematic review of methodological issues and choices. *Journal of Management, 38*(4), 1328-1361.

Cavalcante, A., Almeida, R., & Baker, N. (2016). The urban dynamics of financial services: centralities in the metropolis. *Nova Economia, 26*, 1245-1286. doi: 10.1590/0103-6351/3986

Chibba, M. (2009). Financial inclusion, poverty reduction and the millennium development goals. *The European Journal of Development Research, 21*(2), 213-230.

Christian, J. (2018). The New Hierarchy of Needs - Maslow's lost apex. https://medium.com/coachilla-hq/the-new-hierarchy-of-needs-maslows-lost-apex-5e51031ce3fb

Christopher, A. J. (2001). Urban segregation in post-apartheid South Africa. *Urban Studies, 38*(3), 449-466.

Claessens, S. (2006). Access to financial services: A review of the issues and public policy objectives. *The World Bank Research Observer, 21*(2), 207-240.

Clark, J. (2012). Standard Bank's low-cost model. *Moneyweb*. https://www.moneyweb.co.za/archive/standard-banks-lowcost-model/

Cohen, M., & Sebstad, J. (2005). Reducing vulnerability: The demand for microinsurance. *Journal of International Development: The Journal of the Development Studies Association, 17*(3), 397-474.

Cole, S., Sampson, T., & Zia, B. (2011). Prices or knowledge? What drives demand for financial services in emerging markets? *The Journal of Finance, 66*(6), 1933-1967.

Conroy, J. (2005). APEC and financial exclusion: missed opportunities for collective action? *Asia Pacific Development Journal, 12*(1), 53-80.

Consumer Protection Bill. (2008).

Copestake, J. (2002). Inequality and the polarizing impact of microcredit: evidence from Zambia's copperbelt. *Journal of International Development, 14*(6), 743-755.

Corpataux, J., & Crevoisier, O. (2007). Economic theories and spatial transformations clarifying the space-time premises and outcomes of economic theories. *Journal of Economic Geography*, 7(3), 285-309.

Crotty, M. (1998). *The foundations of social research; Meaning and perspective in the research process.* London: Sage.

Dasgupta, R. (2009). Two approaches to financial inclusion. *Economic and Political Weekly, 44*(26/27), 41-44.

David, A., Guilbert, N., Hamaguchi, N., Higashi, Y., Hino, H., Leibbrandt M., Shifa, M. (2018). Spatial poverty and inequality in South Africa: A municipality level analysis. Cape Town: SALDRU, UCT. (SALDRU Working Paper Number 221).

Demirgüç-Kunt, A., & Klapper, L. (2012). *Measuring Financial Inclusion: The Global Findex Database.* World Bank.

Demirgüç-Kunt, A., & Klapper, L. (2013). Measuring financial inclusion: Explaining variation in use of financial services across and within countries. *Brookings Papers on Economic Activity,* (1), 279-340.

Demirgüç-Kunt, A., Klapper, L. F., & Singer, D. (2013). *Financial inclusion and legal discrimination against women: evidence from developing countries.* World Bank Policy Research Working Paper. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2254240

Demirgüc-Kunt, A., Klapper, L., Singer, D., Ansar, S., & Hess, J. (2017). *The Global Findex Database 2017: Measuring Financial Inclusion and the Fintech Revolution.* World Bank Group.

Demirgüc-Kunt, A., Klapper, L., & Singer, D. (2017). *Financial inclusion and inclusive growth: A review of recent empirical evidence.* World Bank. https://openknowledge.worldbank.org/bitstream/handle/10986/26479/WPS8040.pdf?sequence=1&isAllowed=y

Department of Economic Development (DED). (2013). The Space Economy: An important consideration in spatial development planning. Paper prepared for the EDD-SACN Social Dialogue, 13 April.

Department of Economic Development. (2016). *Broad-based Black Economic Empowerment.* http://www.economic.gov.za/about-us/programmes/economic-policy-development/b-bbee

Donnelly, L. (2012, November 9). No interest in 'poor man's bank account'. *Mail and Guardian.* https://mg.co.za/article/2012-11-09-no-interest-in-poor-mans-account/

Dow, S. C., & Rodriguez-Fuentes, C. J. (1997). Regional finance: a survey. *Regional Studies, 31*(9), 903-920.

Duflo, E., Banerjee, A., Glennerster, R., & Kinnan, C. G. (2013). *The miracle of microfinance? Evidence from a randomized evaluation.* NBER Working paper.

Dupas, P., & Robinson, J. (2013). Savings constraints and microenterprise development: Evidence from a field experiment in Kenya. *American Economic Journal: Applied Economics, 5*(1), 163-92.

Du Plessis, D. J. (2014). A critical reflection on urban spatial planning practices and outcomes in post-apartheid South Africa. *Urban Forum, 25*(1), 69-88.

Esping-Andersen, G. (1999). *Social foundations of postindustrial economies.* Oxford: Oxford University Press.

Estanque, E. (2009). Labour, Social Inequalities and Trade Unionism. *RCCS Annual Review, 71*, 18-45.

Etim, A. S. (2014). Mobile banking and mobile money adoption for financial inclusion. *Research in Business and Economics Journal, 9*, 1-13.

Ezcurra, R., & Palacios, D. (2016). Terrorism and spatial disparities: Does interregional inequality matter? *European Journal of Political Economy, 42*, 60-74.

Ezcurra, R., & Rodríguez-Pose, A. (2017). Does ethnic segregation matter for spatial inequality? *Journal of Economic Geography, 17*(6), 1149-1178.

Fatoki, O. O. (2011). The impact of human, social and financial capital on the performance of small and medium-sized enterprises (SMEs) in South Africa. *Journal of Social Sciences, 29*(3), 193-204.

Fedderke, J. W., & Wollnik, A. (2011). The Spatial Distribution of Manufacturing in South Africa 1970-1996, its Determinants and Policy Implications. *SSRN*. doi:http://dx.doi.org/10.2139/ssrn.1812143

Findev Gateway. (2008). Report of the committee on financial inclusion. https://www.findevgateway.org/sites/default/files/publications/files/mfg-en-paper-report-of-the-committee-on-financial-inclusion-jan-2008.pdf

FinMark Trust. (2016). *Finscope methodology.* https://data.map.uncdf.org/api/views/b3m4-3cva/files/01f208ab-3689-40eb-a48c-13c3caa53b85?filename=FinScope%20Methodology.pdf

FinMark Trust. (2017). *Research Report on Mobile Money in South Africa.* FinMark Trust. https://finmark.org.za/system/documents/files/000/000/267/original/Final-Report-on-Mobile-Money-in-South-Africa.pdf?1603094540

Fishbein, M., & Ajzen, I. (2011). *Predicting and changing behavior: The reasoned action approach.* New York: Taylor & Francis.

Floro, S. (2019). *Informal credit markets and the new institutional economics: The case of Philippine agriculture.* New York: Routledge.

First National Bank (FNB). (2020). *Send Money Product Guidelines.* https://www.fnb.co.za/downloads/SendMoney/Product-Guidelines.pdf

Fomum, T. A., & Jesse, A. M. (2017). Exploring the relationship between financial inclusion and assets accumulation in South Africa. *International Journal of Social Economics, 44*(12), 2157-2172.

French, M. F. (2011, July 1). Banking on spaza shops [online]. *Mail and Guardian.*

Friedman, M. (1957). A Theory of the Consumption Function, Princeton, NJ: Princeton University Press.

Fromlet, H. (2001). Behavioral finance-theory and practical application: Systematic analysis of departures from the homo oeconomicus paradigm are essential for realistic financial research and analysis. *Business Economics*, 36(3), 63-69.

Gateway, S., (2018). *The provinces and 'homelands' of South Africa Before 1996 - South Africa Gateway*. [online] South Africa Gateway. https://southafrica-info.com/infographics/provinces-homelands-south-africa-1996

Galor, O., & Moav, O. (2004). From physical to human capital accumulation: Inequality and the process of development. *The Review of Economic Studies, 71*(4), 1001-1026.

Ghatak, M., & Guinnane, T. W. (1999). The economics of lending with joint liability: theory and practice. *Journal of Development Economics, 60*(1), 195-228.

Granovetter, M. (2004). Social structure and economic outcomes. *State and Market, 24*(3), 335-382.

Greene, W. H. (2011). *Econometric Analysis* (7th ed.). Prentice Hill.

Grootaert, C., & Van Bastelaer, T. (Eds.). (2002). *Understanding and measuring social capital: A multidisciplinary tool for practitioners* (Vol. 1). World Bank Publications.

Grüne-Yanoff, T. (2012). 19 Paradoxes of Rational Choice Theory. In S. Roeser, R. Hillerbrand, P. Sandin, & M. Peterson (Eds.), *Handbook of risk theory*: Epistemology, decision theory, ethics and social implications of risk (pp. 499-516). Dordrecht: Springer.

Gupte, R., Venkataramani, B., & Gupta, D. (2012). Computation of financial inclusion index for India. *Procedia - Social and Behavioral Sciences, 37*, 133-149. https://doi.org/10.1016/j.sbspro.2012.03.281

Hallen, B. L. (2008). The causes and consequences of the initial network positions of new organizations: from whom do entrepreneurs receive investments? *Administrative Science Quarterly, 53*(4), 685-718.

Hanning, A., & Jansen, S. (2010). Financial Inclusion and Financial Stability: Current Policy Issues. *ADBI Working Paper No. 259*.

Harrison, P., & Todes, A. (2013). Spatial considerations in the development of urban policy in South Africa: A research paper as input into the preparation of the Integrated Urban Development Framework (IUDF). *In IUDF Stakeholder Workshop, 26*.

Harvey, D. (2014). Cities or Urbanization? In N. Brenner (Ed). *Implosions/explosions: towards a study of planetary urbanization* (p. 576). Berlin.

Heckman, J. J. (1979). Sample selection bias as a specification error. *Econometrica: Journal of the Econometric Society*, 153-161.

Honohan, P. (2008). Cross-country variation in household access to financial services. *Journal of Banking & Finance, 32*(11), 2493-2500. https://doi.org/10.1016/j.jbankfin.2008.05.004

Horner, M. W. (2014). Spatial dimensions of urban commuting: a review of major issues and their implications for future geographic research. *The Professional Geographer, 56*(2), 160-173.

Huang, X., Zhou, H., & Zhu, H. (2009). "A framework for assessing the systemic risk of major financial institutions. *Journal of Banking & Finance, 33*(11), 2036-2049.

Ikdal, A., Naidoo, E., Portafaix, A., Hendrickson, J., Boje, A., Rabec, D., & Kessler, K. (2017). *Improving Financial Inclusion in South Africa.* Boston Consulting Group. https://www.bcg.com/publications/2017/globalization-improving-financial-inclusion-south-africa.

Imboden, K. (2005). Building inclusive financial sectors: The road to growth and poverty reduction. *Journal of International Affairs*, 58(2), 65-86.

Jack, W., & Suri, T. (2014). Risk sharing and transactions costs: Evidence from Kenya's mobile money revolution. *American Economic Review, 104*(1), 183-223.

Johar, M., & Rammohan, A. (2011). The role of family networks and gender on borrowing behavior in Indonesia. *The Journal of Developing Areas, 45*, 111-134.

John, L. (2012). Secondary cities in South Africa: The start of a conversation. *South African Cities Network*.

Kabakova, O., & Plaksenkov, E. (2018). Analysis of factors affecting financial inclusion: Ecosystem view. *Journal of Business Research*, 89, 198-205.

Kahneman, D., & Tversky, A. (1979). On the interpretation of intuitive probability: A reply to Jonathan Cohen. *Cognition, 7*, 409-411.

Kai, H., & Hamori, S. (2009). Globalization, financial depth and inequality in Sub-Saharan Africa. *Economics Bulletin, 29*(3), 2025-2037.

Kanbur, R., & Venables, A. J. (2005). *Rising spatial disparities and development.* United Nations University. http://collections.unu.edu/eserv/UNU:3099/spatial_inequality.pdf

Karlan, D. S. (2007). Social connections and group banking. *The Economic Journal, 117*(517), F52-F84.

Karlan, D., & Zinman, J. (2009). Observing unobservables: Identifying information asymmetries with a consumer credit field experiment. *Econometrica, 77*(6), 1993-2008.

Katoroogo, R. M. (2016). *Behavioural Determinants of Financial Inclusion in Uganda.* Wits Business School.

Kessler, K., Ikdal, A., Naidoo, E., Portafaix, A., Hendrickson, J., Boje, A., & Rabec, D. (2017a). *How to Create and Sustain Financial Inclusion.* http://image-src.bcg.com/Images/BCG-How-to-Create-and-Sustain-FinancialInclusion-Apr-2017_tcm23-146889.pdf

Kessler, K., Ikdal, A., Naidoo, E., Portafaix, A., Hendrickson, J., Boje, A., & Rabec, D. (2017b). *Improving financial inclusion in South Africa*. Boston Consulting Group.

https://www.bcg.com/publications/2017/globalization-improving-financial-inclusion-south-africa.aspx

Ketema, D., Tewolde, A., & Seyoum, S. (2020). Determinants of Financial Inclusion for Youth Entrepreneurs: Evidence from Addis Ababa City and Shirka Wereda, Ethopia. *Working paper: CBMS-2020-08*. https://portal.pep-net.org/document/download/34781

Khunou, S. K. (2009). Traditional leadership and independent Bantustans of South Africa: some milestones of transformative constitutionalism beyond Apartheid. *Potchefstroom Electronic Law Journal/Potchefstroomse Elektroniese Regsblad*, *12*(4), 81-122.

Kilduff, M., Tsai, W., & Hanke, R. (2006). A paradigm too far? A dynamic stability reconsideration of the social network research program. *Academy of Management Review, 31*(4), 1031-1048.

Klapper, L., & Singer, D. (2013). *Financial inclusion in Africa: The role of informality*. World Bank.

Kodan, A. S., & Chhikara, K. S. (2013). A theoretical and quantitative analysis of financial inclusion and economic growth. *Management and Labour Studies, 38*(1 & 2), 103-133.

Krugell, W. (2014). The spatial persistence of population and wealth during apartheid: Comparing the 1922 and 2011 census. *Economic History of Developing Regions, 29*(2), 336-352.

Kruger, G. (2015). *Turning on the townships: a study of discourses of financial inclusion in South Africa.* Wits Business School.

Kunc, N. (1992). *The need to belong: Rediscovering Maslow's hierarchy of needs.* https://psycnet.apa.org/record/1992-97650-001

Kuriakose, F., & Iyer, D. K. (2014). Understanding financial inclusion through deconstructing human development approach and capabilities theory. *SSRN, 1*(3), 13-31.

Lahcen, M. A., & Gomis-Porqueras, P. (2018). *A model of endogenous financial inclusion: Implications for inequality and monetary policy.* Working Paper, University of Zurich, Department of Economics.

Lall, S. V., Henderson, V. J., & Venables, A. J. (2017). *Africa's cities: Opening doors to the world.* World Bank.

Laulajainen, R. (2003). *Financial geography: a banker's view* (Vol. 25). Routledge.

Le Gales, P., & Therbon, G. (2010). Cities. In S. Immerfall, & G. Therborn (Eds.), *Handbook of European societies: Social Transformations in the 21st Century* (pp. 59-89). Springer.

Louis, L., & Chartier, F. (2017). Financial inclusion in South Africa: An integrated framework for financial inclusion of vulnerable communities in South Africa's regulatory system reform. *Journal of Comparative Urban Law and Policy, 1*(1), 13

Mabin, A. (1992). Comprehensive segregation: The origins of the Group Areas Act and its planning apparatuses. *Journal of Southern African Studies, 18*(2), 405-429.

Mader, P. (2018). Contesting financial inclusion. *Development and Change, 49*(2), 461-483.

Madsen, J. B., Islam, M. R., & Doucouliagos, H. (2018). Inequality, financial development and economic growth in the OECD, 1870–2011. *European Economic Review, 101*, 605-624.

Makuvaza, L., Gray, J., Hougaard, C., & Jourdan, B. (2018). *Means to an end: A conceptual framework for outcomes of financial service usage.* https://cenfri.org/wp-content/uploads/2018/08/A-conceptual-framework-for-outcomes-of-financial-service-usage_i2i_July-2018.pdf

Mariotti, M., & Fourie, J. (2014). The economics of apartheid: An introduction. *Economic History of Developing Regions, 29*(2), 113-125.

Martin, R., & Sunley, P. (1996). Paul Krugman's geographical economics and its implications for regional development theory: a critical assessment. *Economic Geography, 72*(3), 259-292.

Modigliani, F., & Brumberg, R. (1954). Utility analysis and the consumption function: An interpretation of cross-section data. Franco Modigliani, 1(1), 388-436.

Mohammed, F., Barrowclough, M. J., Kibler, M. L., & Boerngen, M. A. (2020). Measuring usage of formal financial services as a proxy for financial inclusion. *Agricultural Finance Review*. doi:10.1108/AFR-12-2019-0132

Mookerjee, R., & Kalipioni, P. (2010). Availability of financial services and income inequality: The evidence from many countries. *Emerging Markets Review, 11*(4), 404-408.

Nanziri, E. L. (2016). Financial inclusion and welfare in South Africa: is there a gender gap? *Journal of African Development, 18*(2), 109-134.

Nanziri, E. L., & Leibbrandt, M. (2018). Measuring and profiling financial literacy in South Africa. *Journal of Economic and Management Sciences, 21*(1), 1-17.

Nasr, A. (2017). *The interplay of credit, savings, and vulnerability: a study of financial inclusion in Kenya*. Cornell University.

National Planning Commission. (2012). *National Development Plan 2030: Our future-make it work.* The Presidency of the Republic of South Africa. https://www.gov.za/sites/default/files/gcis_document/201409/ndp-2030-our-future-make-it-workr.pdf

National Planning Commission. (2015). *National Planning Commission Diagnostic Overview.* The Presidency of the Republic of South Africa. https://nationalplanningcommission.files.wordpress.com/2015/02/diagnostic-overview.pdf

Nel, E., & Rogerson, C. M. (2009). Re-thinking spatial inequalities in South Africa: Lessons from international experience. *Urban Forum*, 20, 141–155.

Newton, C., & Schuermans, N. (2013). More than twenty years after the repeal of the Group Areas Act: Housing, spatial planning and urban development in post-apartheid South Africa. *Journal of Housing and the Built Environment, 28*, 579-587.

Norvilitis, J. M., Merwin, M. M., Osberg, T. M., Roehling, P. V., Young, P., & Kamas, M. M. (2006). Personality factors, money attitudes, financial knowledge, and credit-card debt in college students 1. *Journal of applied social psychology*, 36(6), 1395-1413.

Nussbaum, M., & Sen, A. (Eds.). (1993). *The quality of life*. Clarendon Press.

Obama, B. (n.d). BrainyQuote.com. https://www.brainyquote.com/citation/quotes/barack_obama_677271

O'Brien, R. (1992). *Global financial integration: the end of geography*. Royal Institute of International Affairs.

O'Brien, R., & Keith, A. (2009). The geography of finance: after the storm. *Cambridge Journal of Regions, Economy and Society, 2*(2), 245-265.

Okten, C., & Osili, U. O. (2004). Social networks and credit access in Indonesia. *World Development*, 32(7), 1225-1246.

Orthofer, A. (2016). Wealth inequality in South Africa: Evidence from survey and tax data. *Research Project on Employment, Income Distribution & Inclusive Growth*, *15*.

Osafo-Kwaako, P., Singer, M., White, O., & Zouaoui, Y. (2018). *Mobile money in emerging markets: The business case for financial inclusion.* McKinsey Global Institute. https://www.mckinsey.com/~/media/mckinsey/industries/financial%20services/our%20insights/mobile%20money%20in%20emerging%20markets%20the%20business%20case%20for%20financial%20inclusion/mobile-money-in-emerging-markets.pdf

Outreville, J. F. (1999). *Financial development, human capital and political stability*. United Nations Conference on Trade and Development.

Packer, G. (n.d). AZ Quotes. https://www.azquotes.com/quote/1336637

Pallares-Barbera, M., Suau-Sanchez, P., Le Heron, R., & Fromhold-Eisebith, M. (2012). Globalising economic spaces, uneven development and regional challenges. *Urbani izziv, 23*, 2-10.

Palma, J. (2009). The revenge of the market on the rentiers.: Why neo-liberal reports of the end of history turned out to be premature. *Cambridge Journal of Economics*, *33*(4), 829-869. doi: 10.1093/cje/bep037

Park, C.-Y., & Mercado, R. (2015). *Financial inclusion, poverty, and income inequality in developing Asia.* Asian Development Bank Economics Working Paper Series 426.

Parks, V. (2004). Access to work: The effects of spatial and social accessibility on unemployment for native-born black and immigrant women in Los Angeles. *Economic Geography*, *80*(2), 141-172.

Parr, J., & Budd, L. (2000). Financial services and the urban system: an exploration. *Urban Studies*, *37*(3), 593-610. doi: 10.1080/0042098002131

Pieterse, E. (2004). Untangling 'integration' in urban development policy debates. *Urban Forum*, *15*(1), 1-35.

Pike, A., Rodríguez-Pose, A., & Tomaney, J. (2014). Local and regional development in the Global North and South. *Progress in Development Studies*, *14*(1), 21-30.

Price Waterhouse Coopers (PWC). (2016). *Insurance through challenging times: Insurance Industry analysis.* PWC. https://www.pwc.co.za/en/assets/pdf/insurance-industry-analysis-apr-2016.pdf

Ramakrishnan, R. T., & Thakor, A. V. (1984). Information reliability and a theory of financial intermediation. *The Review of Economic Studies*, *51*(3), 415-432.

Ranta, M., Punamäki, R.-L., Chow, A., & Salmela-Aro, K. (2020). The economic stress model in emerging adulthood: The role of social relationships and financial capability. *Emerging Adulthood, 8*(6), 496-508.

Republic of South Africa: Department of Land Affairs (DLA). (2001). Wise Land Use: White Paper on Spatial Planning and Land Use Management. Pretoria: Government Printer

Republic of South Africa. (2003). Broad Based Black Economic Empowerment Act, Number 53 of 2003. Pretoria.

Republic of South Africa. (2005). National Credit Act 34 of 2005. Pretoria.

Republic of South Africa. (2012). Financial Sector Code for Black Economic Empowerment. Pretoria

Rogerson, C., & Nel, E. (2016). Redressing inequality in South Africa: The spatial targeting of distressed areas. *Local Economy, 31*(1-2), 28-41.

Rowley, M., Lown, J. M., & Piercy, K. (2012). Motivating women to adopt positive financial behaviors. *Journal of Financial Counseling and Planning*, *23*(1), 47-62.

Rolnik, R. (2013). Late Neoliberalism: The financialization of homeownership and housing rights. *International Journal of Urban and Regional Research*, 37(3), 1058–1066.

Roth, J. (2000). *Informal micro-finance schemes: The case of funeral insurance in South Africa* (No. 993448913402676). International Labour Organization.

Sahrawat, R. (2010). *Financial inclusion - from obligation to opportunity*. CII and BCG Report, pp. 24.

Sahrawat, R. (2019). *Financial inclusion from obligation to opportunity*. Tata Consultancy Service Ltd.

Sanderson, A., Mutandwa, L., & Le Roux, P. (2018). A review of determinants of financial inclusion. *International Journal of Economics and Financial Issues, 8*(3), 1-8.

Sarantakos, S. (2005). *Social research.* Macmillan International Higher Education.

Sarma, M. (2012). *Index of Financial Inclusion–A measure of financial sector inclusiveness.* School of International Studies Working Paper, Jawaharlal Nehru University, Centre for International Trade and Development, Delhi.

Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research methods for business students.* Pearson Education.

Saunders, M., Lewis, P., & Thornhill, A. (2011). *Research methods for business students* (4th ed.). Pearson Education.

Saunders, P. (1985). Space, the city and urban sociology. In *Social relations and spatial structures* (pp. 67-89). London: Palgrave.

Schindler, K. (2010). Credit for what? Informal credit as a coping strategy of market women in Northern Ghana. *The Journal of Development Studies, 46*(2), 234-253.

Shem, A. O., Misati, R., & Njoroge, L. (2012). Factors driving usage of financial services from different financial access strands in Kenya. *Savings and Development, 36*(1), 71-89.

Sherraden, M., Johnson, L., Elliott, W., Porterfield, S., & Rainford, W. (2006). The I Can Save Program: School-based children's saving accounts for college.

Soumare, I., Tchana, F. T., & Kengne, T. M. (2016). Analysis of the determinants of financial inclusion in Central and West Africa. *Transnational Corporations Review Journal, 8*(4), 231-249. https://doi.org/10.1080/19186444.2016.1265763

South African Social Security Agency (SASSA). (2018). *Annual Report 2018-2019.* Government of South Africa. https://www.sassa.gov.za/annual%20reports/Documents/SASSA%20Annual%20Report%202018-2019.pdf

Statistics South Africa (StatsSA). (2010). Concepts & Definitions for Statistics South Africa: Version 3. *3*. Pretoria. http://www.statssa.gov.za/standardisation/Concepts_and_Definitions_%20StatsSAV3.pdf

Statistics South Africa (StatsSA). (2011). *Census 2011*. Statistics South Africa. http://www.statssa.gov.za/census/census_2011/documents/Census%20200mm%20x%20200mm%2015%20April%20FIN%20%E2%80%A2%20CMYK_lowres.pdf

Statistics South Africa (StatsSA). (2016). Facts you might not know about social grants. *Statistics South Africa Data Stories: Expenditure and Income*. http://www.statssa.gov.za/?p=7756

Statistics South Africa (StatsSA). (2019a). *Four Facts About Our Provincial Economies | Statistics South Africa*. [online] Statssa.gov.za. <http://www.statssa.gov.za/?p=12056#:~:text=Not%20only%20is%20Gauteng%20the,Mid%2Dyear%20population%20estimates%20report.

Statistics South Africa (StatsSA). (2019b). *General Household Survey.* StatsSA.

Stiglitz, J. E., & Weiss, A. (1981). Credit rationing in markets with imperfect information. *The American Economic Review, 71*(3), 393-410.

Taylor, M. (2011). Freedom from poverty is not for free': Rural development and the microfinance crisis in Andhra Pradesh. *Journal of Agrarian Change, 11*(4), 484-504.

Tchouassi, G. (2011). Microfinance, inequality and vulnerability: Empirical analysis from Central African countries. *Journal of Development and Agricultural Economics, 3*(3), 150-156.

Tickell, A. (2000). Dangerous derivatives: controlling and creating risks in international money. *Geoforum, 31*(1), 87-99.

Todes, A., & Turok, I. (2018). Spatial inequalities and policies in South Africa: Place-based or people-centred? *Progress in Planning, 123*, 1-31.

Turegano, D. M., & Herrero, A. G. (2018). Financial inclusion, rather than size, is the key to tackling income inequality. *The Singapore Economic Review, 63*(01), 167-184.

Turok, I. (2011). *Spatial economic disparities in South Africa: Towards a new research and policy agenda*. Cape Town: Human Sciences Research Council.

Turok, I. (2018). *Worlds apart: spatial inequalities in South Africa. Confronting inequality: The South African crisis.* https://www.researchgate.net/profile/Ivan_Turok/publication/331024691_Worlds_Ap

art_Spatial_Inequalities_in_South_Africa/links/5c61e849299bf1d14cbf769d/Worlds-Apart-Spatial-Inequalities-in-South-Africa.pdf

Turok, I., Scheba, A., & Visagie, J. (2017). *Reducing spatial inequalities through better regulation.* Report to the High Level Panel on the assessment of key legislation and the acceleration of fundamental change. Cape Town: Human Science Research Council. https://www.parliament.gov.za/storage/app/media/Pages/2017/october/High_Level_Panel/Commissioned_reports_for_triple_challenges_of_poverty_unemployment_and_inequality/Diagnostic_Report_on_Spatial_Inequality.pdf

United Nations (UN). (2017). *United Nations Demographic and Social Statistics*. United Nations: Department of Economic and Social Affairs, Population Division. https://unstats.un.org/unsd/demographic/sconcerns/densurb/densurbmethods.htm

United Nations (UN). (2020). *World Social Report 2020: Inequality in a rapidly changing world.* Department of Economic and Social Affairs. United Nations.

Venter, Z., Shackleton, C. M., Van Staden, F., Selomane, O., & Materson, V. A. (2020). Green Apartheid: Urban green infrastructure remains unequally distributed across income and race geographies in South Africa. *Landscape and Urban Planning, 203*, 103889.

Visagie, J., & Turok, I. (2017). *Rural-urban migration as a means of getting ahead.* https://www.researchgate.net/profile/Ivan_Turok/publication/321159397_Rural-Urban_Migration_as_a_Means_of_Getting_Ahead/links/5a120bc4aca27287ce2a75a0/Rural-Urban-Migration-as-a-Means-of-Getting-Ahead.pdf

Walker, G., Kogut, B., & Shan, W. (1997). Social capital, structural holes and the formation of an industry network. *Organisation Science, 8*(2), 109-125.

Westover, J. (2008). The record of microfinance: The effectiveness/ineffectiveness of microfinance programs as a means of alleviating poverty. *Electronioc Journal of Sociology, 12*(1), 1-8.

Wooldridge, J. M. (2010). *Econometric analysis of cross section and panel data.* MIT Press.

World Bank. (2008). Finance for All? Polices and Pitfalls in Expanding Access. Policy Research Report. Washington, DC: World Bank.

World Bank. (2013). *South Africa Economic Update: Focus on Financial Inclusion*. South Africa economic update. Washington, DC: World Bank.

World Bank. (2018). *Overcoming Poverty and Inequality in South Africa: An Assessment of Drivers, Constraints and Opportunities.* http://documents1.worldbank.org/curated/en/530481521735906534/pdf/124521-REV-

OUO-South-Africa-Poverty-and-Inequality-Assessment-Report-2018-FINAL-WEB.pdf

World Bank. (2019). *World Bank Development Indicators*. https://data.worldbank.org/indicator/NY.GNS.ICTR.ZS?locations=ZA-ZG-1W

World Bank Group. (2019). *South Africa Digital Economy Diagnostic*. World Bank. https://elibrary.worldbank.org/doi/abs/10.1596/33786

Xu, L., & Zia, B. (2012). *Financial literacy around the world: an overview of the evidence with practical suggestions for the way forward.* World Bank.

Young, I. M. (2001). Equality of whom? Social groups and judgments of injustice. *Journal of Political Philosophy, 9*(1), 1-18.

Yu, D., & Matsebula, V. (2020). An Analysis of financial inclusion in South Africa. *African Review of Economics and Finance, 12*(1), 171-202.

Zhou, J., Shin, S. J., Brass, D. J., Choi, J., & Zhang, Z. X. (2009). Social networks, personal values, and creativity: Evidence for curvilinear and interaction effects. *Journal of Applied Psychology, 94*(6), 1544-1552.

Zimbalist, Z. (2017). Breaking down rural and urban bias and interrogating spatial inequality, evidence from South Africa. *Development Policy Review, 35,* 246-269. doi: 10.1111/dpr.12331

# APPENDICES

## APPENDIX 1: EDITOR'S LETTER

PROOF-READING

DR. LEE-ANNE ROUX

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21 February 2021

TO WHOM IT MAY CONCERN

**RE: LANGUAGE EDITING**



This letter serves to confirm that I have edited the thesis titled:

**The impact of spatial inequality on financial inclusion in South Africa.**

**By**

**Lelethu Lithakazi Bodlani**

**(3429757)**

Please feel free to contact me if you need any further information.

Yours sincerely,

Dr Lee-Anne Roux

# APPENDIX 2: FORMAL FINANCIAL MULTINOMIAL LOGISTIC REGRESSION

**Number of obs.** = 3 527

| Formal fininclusion | RRR | Std. Error | z | P>\|z\| | [95% | Conf.Interval] |
|---|---|---|---|---|---|---|
| Savings | | | | | | |
| **Location** | | | | | | |
| Farms | 2.03 | 1.07 | 1.34 | 0.18 | 0.72 | 5.69 |
| Traditional | 1.62 | 0.90 | 0.87 | 0.39 | 0.55 | 4.81 |
| **Province** | | | | | | |
| Free State | 7.56 | 6.00 | 2.55 | 0.01 | 1.60 | 35.77 |
| Gauteng | 5.43 | 4.38 | 2.10 | 0.04 | 1.12 | 26.34 |
| KwaZulu-Natal | 3.70 | 2.99 | 1.61 | 0.11 | 0.76 | 18.09 |
| Limpopo | 3.04 | 2.68 | 1.26 | 0.21 | 0.54 | 17.12 |
| Mpumalanga | 2.11 | 1.88 | 0.83 | 0.41 | 0.36 | 12.16 |
| North West | 4.22 | 3.37 | 1.80 | 0.07 | 0.88 | 20.20 |
| Northern Cape | 2.56 | 2.41 | 1.00 | 0.32 | 0.41 | 16.18 |
| Western Cape | 6.33 | 5.20 | 2.24 | 0.03 | 1.26 | 31.67 |
| **Race** | | | | | | |
| Coloured | 1.02 | 0.50 | 0.03 | 0.98 | 0.39 | 2.65 |
| Asian/Indian | 2.14 | 1.54 | 1.06 | 0.29 | 0.53 | 8.75 |
| White | 0.97 | 0.50 | -0.06 | 0.95 | 0.35 | 2.68 |
| **Female** | 1.08 | 0.33 | 0.26 | 0.80 | 0.59 | 1.98 |
| **Education** | | | | | | |
| Highschool | 0.97 | 0.65 | -0.05 | 0.96 | 0.26 | 3.63 |
| Degree | 0.80 | 0.66 | -0.27 | 0.79 | 0.16 | 4.02 |
| **Employment status** | | | | | | |
| Unemployed | 7.11 | 2.68 | 5.19 | 0.00 | 3.39 | 14.90 |
| Inactive | 1.10 | 0.58 | 0.17 | 0.86 | 0.39 | 3.10 |
| Discouraged | 0.49 | 0.56 | -0.63 | 0.53 | 0.05 | 4.51 |
| **Income** | | | | | | |
| 1-2999 | 0.86 | 0.36 | -0.36 | 0.72 | 0.38 | 1.95 |
| 3000-5999 | 0.92 | 0.45 | -0.17 | 0.86 | 0.35 | 2.40 |
| 6000-11999 | 1.08 | 0.69 | 0.13 | 0.90 | 0.31 | 3.77 |
| 12000-14999 | 0.28 | 0.30 | -1.19 | 0.24 | 0.03 | 2.29 |
| 15000 and above | 0.34 | 0.28 | -1.29 | 0.20 | 0.07 | 1.74 |
| **Social Grant** | 1.38 | 0.63 | 0.70 | 0.49 | 0.56 | 3.37 |
| **Internet Access** | 1.17 | 0.37 | 0.49 | 0.63 | 0.63 | 2.18 |
| **Social Network** | 0.40 | 0.15 | -2.37 | 0.02 | 0.19 | 0.85 |
| **Cell Ownership** | 0.99 | 0.64 | -0.01 | 0.99 | 0.28 | 3.55 |
| **Constant** | 0.01 | 0.01 | -4.31 | 0.00 | 0.00 | 0.07 |
| Credit | | | | | | |
| **Location** | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Farms | 1.71 | 0.45 | 2.05 | 0.04 | 1.02 | 2.87 |
| Traditional | 1.42 | 0.27 | 1.81 | 0.07 | 0.97 | 2.07 |
| **Province** | | | | | | |
| Free State | 1.11 | 0.35 | 0.33 | 0.74 | 0.60 | 2.05 |
| Gauteng | 1.32 | 0.34 | 1.09 | 0.27 | 0.80 | 2.19 |
| KwaZulu-Natal | 1.74 | 0.47 | 2.06 | 0.04 | 1.03 | 2.94 |
| Limpopo | 1.82 | 0.59 | 1.86 | 0.06 | 0.97 | 3.43 |
| Mpumalanga | 2.43 | 0.72 | 3.00 | 0.00 | 1.36 | 4.33 |
| North West | 0.98 | 0.31 | -0.07 | 0.95 | 0.52 | 1.83 |
| Northern Cape | 0.99 | 0.31 | -0.02 | 0.99 | 0.54 | 1.82 |
| Western Cape | 1.68 | 0.45 | 1.94 | 0.05 | 0.99 | 2.84 |
| **Race** | | | | | | |
| Coloured | 0.89 | 0.20 | -0.53 | 0.60 | 0.58 | 1.37 |
| Asian/Indian | 0.85 | 0.25 | -0.54 | 0.59 | 0.48 | 1.52 |
| White | 0.64 | 0.14 | -2.07 | 0.04 | 0.42 | 0.98 |
| **Female** | 0.77 | 0.11 | -1.85 | 0.06 | 0.59 | 1.01 |
| **Education** | | | | | | |
| Highschool | 1.63 | 0.49 | 1.65 | 0.10 | 0.91 | 2.93 |
| Degree | 0.66 | 0.25 | -1.12 | 0.26 | 0.32 | 1.37 |
| **Employment status** | | | | | | |
| Unemployed | 1.19 | 0.30 | 0.69 | 0.49 | 0.72 | 1.96 |
| Inactive | 2.67 | 0.55 | 4.77 | 0.00 | 1.78 | 3.99 |
| Discouraged | 0.44 | 0.45 | -0.80 | 0.43 | 0.06 | 3.33 |
| **Income** | | | | | | |
| 1-2999 | 1.20 | 0.23 | 0.94 | 0.35 | 0.82 | 1.76 |
| 3000-5999 | 0.88 | 0.18 | -0.63 | 0.53 | 0.59 | 1.31 |
| 6000-11999 | 0.62 | 0.16 | -1.88 | 0.06 | 0.38 | 1.02 |
| 12000-14999 | 0.01 | 0.01 | -4.30 | 0.00 | 0.00 | 0.09 |
| 15000 and above | 0.34 | 0.13 | -2.76 | 0.01 | 0.16 | 0.73 |
| **Social Grant** | 0.47 | 0.12 | -3.08 | 0.00 | 0.29 | 0.76 |
| **Internet Access** | 1.26 | 0.18 | 1.63 | 0.10 | 0.95 | 1.66 |
| **Social Network** | 0.35 | 0.06 | -6.19 | 0.00 | 0.26 | 0.49 |
| **Cell Ownership** | 1.55 | 0.45 | 1.49 | 0.14 | 0.87 | 2.75 |
| **Constant** | 0.12 | 0.06 | -4.37 | 0.00 | 0.05 | 0.32 |
| Remittances | | | | | | |
| **Location** | | | | | | |
| Farms | 1.08 | 0.34 | 0.25 | 0.80 | 0.58 | 2.00 |
| Traditional | 1.33 | 0.25 | 1.48 | 0.14 | 0.91 | 1.92 |
| **Province** | | | | | | |
| Free State | 0.72 | 0.22 | -1.05 | 0.30 | 0.39 | 1.33 |
| Gauteng | 1.05 | 0.28 | 0.20 | 0.85 | 0.63 | 1.76 |
| KwaZulu-Natal | 1.43 | 0.36 | 1.40 | 0.16 | 0.87 | 2.34 |
| Limpopo | 2.19 | 0.62 | 2.79 | 0.01 | 1.26 | 3.80 |
| Mpumalanga | 2.09 | 0.57 | 2.69 | 0.01 | 1.22 | 3.57 |
| North West | 1.11 | 0.32 | 0.36 | 0.72 | 0.63 | 1.97 |
| Northern Cape | 0.52 | 0.19 | -1.81 | 0.07 | 0.25 | 1.06 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Western Cape | 1.27 | 0.37 | 0.80 | 0.42 | 0.71 | 2.26 |
| **Race** | | | | | | |
| Coloured | 0.10 | 0.03 | -6.86 | 0.00 | 0.05 | 0.19 |
| Asian/Indian | 0.18 | 0.09 | -3.49 | 0.00 | 0.07 | 0.48 |
| White | 0.19 | 0.06 | -5.49 | 0.00 | 0.10 | 0.34 |
| **Female** | 0.64 | 0.09 | -2.99 | 0.00 | 0.48 | 0.86 |
| **Education** | | | | | | |
| Highschool | 1.37 | 0.52 | 0.83 | 0.41 | 0.65 | 2.87 |
| Degree | 0.69 | 0.31 | -0.82 | 0.41 | 0.29 | 1.65 |
| **Employment status** | | | | | | |
| Unemployed | 5.78 | 1.15 | 8.81 | 0.00 | 3.91 | 8.54 |
| Inactive | 3.85 | 0.78 | 6.64 | 0.00 | 2.58 | 5.73 |
| Discouraged | 5.28 | 3.07 | 2.85 | 0.00 | 1.68 | 16.53 |
| **Income** | | | | | | |
| 1-2999 | 1.48 | 0.27 | 2.17 | 0.03 | 1.04 | 2.12 |
| 3000-5999 | 0.76 | 0.17 | -1.26 | 0.21 | 0.49 | 1.17 |
| 6000-11999 | 0.37 | 0.13 | -2.85 | 0.00 | 0.19 | 0.73 |
| 12000-14999 | 0.57 | 0.45 | -0.72 | 0.47 | 0.12 | 2.66 |
| 15000 and above | 0.40 | 0.18 | -2.09 | 0.04 | 0.17 | 0.94 |
| **Social Grant** | 0.12 | 0.03 | -7.85 | 0.00 | 0.07 | 0.21 |
| **Internet Access** | 1.19 | 0.18 | 1.12 | 0.26 | 0.88 | 1.61 |
| **Social Network** | 0.46 | 0.07 | -4.83 | 0.00 | 0.34 | 0.63 |
| **Cell Ownership** | 0.81 | 0.31 | -0.54 | 0.59 | 0.39 | 1.71 |
| **Constant** | 0.31 | 0.18 | -2.07 | 0.04 | 0.10 | 0.94 |
| **Insurance** | | | | | | |
| **Location** | | | | | | |
| Farms | 0.91 | 0.33 | -0.27 | 0.79 | 0.44 | 1.86 |
| Traditional | 1.13 | 0.33 | 0.41 | 0.68 | 0.63 | 2.01 |
| **Province** | | | | | | |
| Free State | 1.52 | 0.50 | 1.27 | 0.21 | 0.80 | 2.89 |
| Gauteng | 1.39 | 0.35 | 1.27 | 0.20 | 0.84 | 2.29 |
| KwaZulu-Natal | 2.08 | 0.57 | 2.69 | 0.01 | 1.22 | 3.55 |
| Limpopo | 1.32 | 0.51 | 0.72 | 0.47 | 0.62 | 2.83 |
| Mpumalanga | 1.72 | 0.57 | 1.65 | 0.10 | 0.90 | 3.30 |
| North West | 1.04 | 0.35 | 0.12 | 0.91 | 0.54 | 2.01 |
| Northern Cape | 0.58 | 0.25 | -1.27 | 0.20 | 0.25 | 1.34 |
| Western Cape | 1.75 | 0.47 | 2.09 | 0.04 | 1.04 | 2.97 |
| **Race** | | | | | | |
| Coloured | 1.26 | 0.33 | 0.90 | 0.37 | 0.76 | 2.09 |
| Asian/Indian | 2.86 | 0.79 | 3.80 | 0.00 | 1.66 | 4.91 |
| White | 3.27 | 0.62 | 6.27 | 0.00 | 2.26 | 4.74 |
| **Female** | 0.94 | 0.14 | -0.44 | 0.66 | 0.71 | 1.25 |
| **Education** | | | | | | |
| Highschool | 1.92 | 0.89 | 1.40 | 0.16 | 0.77 | 4.76 |
| Degree | 2.34 | 1.15 | 1.73 | 0.08 | 0.89 | 6.16 |
| **Employment status** | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Unemployed | 1.25 | 0.42 | 0.67 | 0.50 | 0.65 | 2.42 |
| Inactive | 0.93 | 0.19 | -0.37 | 0.71 | 0.62 | 1.39 |
| Discouraged | 1.06 | 0.78 | 0.07 | 0.94 | 0.25 | 4.46 |
| **Income** | | | | | | |
| 1-2999 | 0.67 | 0.18 | -1.50 | 0.13 | 0.40 | 1.13 |
| 3000-5999 | 0.79 | 0.19 | -0.98 | 0.33 | 0.50 | 1.26 |
| 6000-11999 | 1.02 | 0.24 | 0.09 | 0.93 | 0.64 | 1.62 |
| 12000-14999 | 0.68 | 0.28 | -0.93 | 0.35 | 0.30 | 1.54 |
| 15000 and above | 0.93 | 0.22 | -0.31 | 0.75 | 0.59 | 1.47 |
| **Social Grant** | 0.57 | 0.20 | -1.62 | 0.11 | 0.29 | 1.12 |
| **Internet Access** | 1.01 | 0.16 | 0.05 | 0.96 | 0.74 | 1.36 |
| **Social Network** | 0.62 | 0.12 | -2.47 | 0.01 | 0.42 | 0.91 |
| **Cell Ownership** | 0.97 | 0.35 | -0.09 | 0.93 | 0.47 | 1.98 |
| **Constant** | 0.07 | 0.04 | -4.44 | 0.00 | 0.02 | 0.23 |
| **Funeral cover** | Base outcome | | | | | |

## Appendix 3: SAVINGS UPTAKE MULTINOMIAL LOGISTIC REGRESSION

**Number of obs. = 4,920**

| | RRR | Std. Error | z | P>\|z\| | [95% | Conf.Interval] |
|---|---|---|---|---|---|---|
| **Formal saving** | | | | | | |
| **Location** | | | | | | |
| Farms | 0.57 | 0.16 | -2.04 | 0.04 | 0.34 | 0.98 |
| Traditional | 1.00 | 0.17 | 0.02 | 0.98 | 0.72 | 1.40 |
| **Province** | | | | | | |
| Free State | 1.25 | 0.29 | 0.96 | 0.34 | 0.79 | 1.97 |
| Gauteng | 1.90 | 0.36 | 3.40 | 0.00 | 1.31 | 2.76 |
| KwaZulu-Natal | 1.18 | 0.25 | 0.79 | 0.43 | 0.78 | 1.77 |
| Limpopo | 1.29 | 0.32 | 1.03 | 0.30 | 0.80 | 2.09 |
| Mpumalanga | 0.81 | 0.19 | -0.90 | 0.37 | 0.52 | 1.27 |
| North West | 0.56 | 0.14 | -2.32 | 0.02 | 0.35 | 0.91 |
| Northern Cape | 1.28 | 0.31 | 1.00 | 0.32 | 0.79 | 2.07 |
| Western Cape | 0.84 | 0.17 | -0.84 | 0.40 | 0.56 | 1.26 |
| **Race** | | | | | | |
| Coloured | 1.64 | 0.32 | 2.56 | 0.01 | 1.12 | 2.41 |
| Asian/Indian | 2.30 | 0.58 | 3.27 | 0.00 | 1.40 | 3.78 |
| White | 2.14 | 0.33 | 4.93 | 0.00 | 1.58 | 2.89 |
| **Female** | 1.01 | 0.11 | 0.11 | 0.91 | 0.82 | 1.24 |
| **Education** | | | | | | |
| Highschool | 1.22 | 0.33 | 0.73 | 0.46 | 0.72 | 2.09 |
| Degree | 3.46 | 1.04 | 4.14 | 0.00 | 1.92 | 6.23 |
| **Employment status** | | | | | | |
| Unemployed | 0.25 | 0.04 | -7.69 | 0.00 | 0.17 | 0.35 |
| Inactive | 0.31 | 0.05 | -7.69 | 0.00 | 0.23 | 0.42 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Discouraged | 0.14 | 0.08 | -3.52 | 0.00 | 0.04 | 0.41 |
| **Income** | | | | | | |
| 1-2999 | 0.33 | 0.05 | -7.32 | 0.00 | 0.25 | 0.45 |
| 3000-5999 | 0.79 | 0.12 | -1.53 | 0.13 | 0.58 | 1.07 |
| 6000-11999 | 1.60 | 0.31 | 2.46 | 0.01 | 1.10 | 2.34 |
| 12000-14999 | 3.10 | 1.32 | 2.66 | 0.01 | 1.35 | 7.15 |
| 15000 and above | 2.37 | 0.60 | 3.40 | 0.00 | 1.44 | 3.90 |
| **Social Grant** | 1.97 | 0.46 | 2.90 | 0.00 | 1.25 | 3.11 |
| **Internet Access** | 1.97 | 0.22 | 6.19 | 0.00 | 1.59 | 2.44 |
| **Social Network** | 1.48 | 0.19 | 3.15 | 0.00 | 1.16 | 1.90 |
| **Cell Ownership** | 1.51 | 0.32 | 1.96 | 0.05 | 1.00 | 2.28 |
| **Constant** | 0.16 | 0.06 | -5.02 | 0.00 | 0.08 | 0.33 |
| **Informal saving** | | | | | | |
| **Location** | | | | | | |
| Farms | 1.34 | 0.28 | 1.39 | 0.16 | 0.89 | 2.02 |
| Traditional | 1.06 | 0.16 | 0.39 | 0.70 | 0.79 | 1.43 |
| **Province** | | | | | | |
| Free State | 0.54 | 0.14 | -2.42 | 0.02 | 0.33 | 0.89 |
| Gauteng | 1.24 | 0.25 | 1.07 | 0.28 | 0.84 | 1.85 |
| KwaZulu-Natal | 0.86 | 0.19 | -0.71 | 0.48 | 0.56 | 1.31 |
| Limpopo | 1.24 | 0.31 | 0.88 | 0.38 | 0.76 | 2.02 |
| Mpumalanga | 0.85 | 0.21 | -0.68 | 0.50 | 0.52 | 1.37 |
| North West | 0.94 | 0.23 | -0.28 | 0.78 | 0.58 | 1.50 |
| Northern Cape | 1.37 | 0.36 | 1.18 | 0.24 | 0.81 | 2.30 |
| Western Cape | 0.86 | 0.18 | -0.72 | 0.47 | 0.56 | 1.30 |
| **Race** | | | | | | |
| Coloured | 0.52 | 0.10 | -3.30 | 0.00 | 0.35 | 0.77 |
| Asian/Indian | 1.49 | 0.42 | 1.41 | 0.16 | 0.86 | 2.59 |
| White | 0.76 | 0.17 | -1.25 | 0.21 | 0.49 | 1.17 |
| **Female** | 1.53 | 0.19 | 3.54 | 0.00 | 1.21 | 1.95 |
| **Education** | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Highschool | 1.41 | 0.32 | 1.53 | 0.13 | 0.91 | 2.20 |
| Degree | 1.45 | 0.46 | 1.18 | 0.24 | 0.78 | 2.70 |
| **Employment status** | | | | | | |
| Unemployed | 0.61 | 0.10 | -2.98 | 0.00 | 0.44 | 0.84 |
| Inactive | 1.06 | 0.17 | 0.36 | 0.72 | 0.78 | 1.44 |
| Discouraged | 0.50 | 0.23 | -1.50 | 0.13 | 0.21 | 1.24 |
| **Income** | | | | | | |
| 1-2999 | 0.76 | 0.12 | -1.78 | 0.08 | 0.57 | 1.03 |
| 3000-5999 | 1.36 | 0.24 | 1.78 | 0.08 | 0.97 | 1.92 |
| 6000-11999 | 0.96 | 0.25 | -0.14 | 0.89 | 0.58 | 1.61 |
| 12000-14999 | 0.45 | 0.35 | -1.03 | 0.30 | 0.10 | 2.04 |
| 15000 and above | 1.22 | 0.43 | 0.56 | 0.57 | 0.61 | 2.42 |
| **Social Grant** | 1.33 | 0.23 | 1.64 | 0.10 | 0.95 | 1.88 |
| **Internet Access** | 1.38 | 0.17 | 2.56 | 0.01 | 1.08 | 1.76 |
| **Social Network** | 1.13 | 0.15 | 0.90 | 0.37 | 0.87 | 1.46 |
| **Cell Ownership** | 1.03 | 0.23 | 0.14 | 0.89 | 0.66 | 1.61 |
| **Constant** | 0.12 | 0.04 | -5.95 | 0.00 | 0.06 | 0.24 |
| **Not saving** | Base outcome | | | | | |