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**FORMAL AND INFORMAL FINANCE AND ITS EFFECTS ON POVERTY IN SOUTH
AFRICA**

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**A DISSERTATION SUBMITTED TO THE FACULTY OF MANAGEMENT
AND COMMERCE AT THE UNIVERSITY OF FORT HARE IN**

**FULFILMENT OF THE REQUIREMENT FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY IN ECONOMICS**

30 OCTOBER 2023

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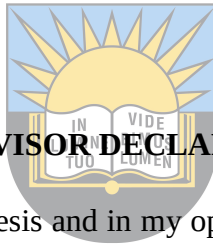
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DEDICATION

I would like to dedicate this to my parents, Mr and Mrs Mjacu who have always encouraged me to pursue my dreams. I also dedicate this to my wife Mihle Happiness Mfeketo, siblings and friends who supported me throughout this experience. Furthermore, would like to thank my supervisor, Prof Simatele for the opportunity to do research in the area of finance. Her expertise and consistent insightful comments and invaluable suggestions have contributed greatly to this work.



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ACKNOWLEDGEMENT

If it weren't for God, I wouldn't have been able to finish this work. He has been my rock during this testing period. I also want to express my gratitude to my academic supervisor Prof Munacinga Simatele. Her consistency has been outstanding. I have learnt a lot from her wisdom and intellect. I am inspired by her passion and knowledge in this area.



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ABSTRACT

The thesis focuses on formal and informal finance, and its effect on household poverty in South Africa by using primary data and secondary data. It seeks to examine the joint effect of formal and informal finance use on household poverty in South Africa.

This study adopts a mixed-methods approach in the form of exploratory sequential approach. This study was done in two stages. Firstly, interviews were conducted in three municipalities from the Eastern Cape Province. During the second stage, the quantitative research was conducted, using Finscope data for all provinces covering 2013 to 2016. To analyse qualitative data the thematic analysis used and multinomial regressions were used to analyse quantitative data.

The study discovered that households from the Eastern Cape municipalities use both formal and informal finance for precautionary motives, future consumption motives, and speculative motives, to meet basic needs, to save and invest, to access credit so that they can escape the trap of poverty. In addition, the study findings show that saving in both formal finance institutions and informal finance mechanism is important in spurring poverty reduction in South Africa. The study further found that credit from both formal finance institutions and informal finance mechanism is important but does not spur poverty reduction in South Africa. The study suggests that the financial institution should implement policies and schemes that encourages households to save. These policies and schemes should aim at providing an enabling environment for savings to provide financial services that are readily available and affordable to the public in order to benefit from the desired poverty reduction effect of finance.

Key Words: formal finance, informal finance, poverty, mixed methods, exploratory sequential approach.

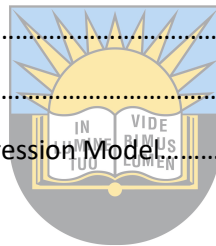
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List of Acronyms

B-BBEE: Broad Based Black Economic Empowerment

G2P: Government-to-People

GDP: Growth domestic product

IMF: International Monetary Fund

SARB: South African Reserve Bank

FSCA: Financial Sector Conduct Authority

PA: Prudential Authority

NASASA: National Stokvel Association of South Africa

USA: United States of America

UK: United Kingdom

GWP: gross written premiums

NCA: National Credit Act

IDs: Identity Documents



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CHAPTER ONE

INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 Introduction

The South African financial structure is regarded as well-built and sophisticated (Moyo, 2018). According to Schwab (2016) South African financial system is classified in the top 10 countries in the world on efficiency, trustworthiness and confidence, financial services availability, and the regulation of security exchanges. Financial sector remains important to make sure that there is access and inclusion to appropriate financial products, and additional employment equity opportunities that allow previously disadvantaged communities to benefit from sustainable economic growth (MicroFinance South Africa, 2017).

However, in South Africa poverty remains a persistent and severe challenge. Yelwa, Omoniyi, & Obansa (2017) define poverty as inability of individuals and households to meet survival basic necessities like food, clothing, and housing, as well as a basic education. Rural areas are characterised by higher poverty rates than urban areas in South Africa. In 2015, about 65.4 percent of rural households lived below Lower-Bound Poverty Line (LBPL), dropping from 74.9 percent in 2006 (World Bank, 2018). On the other hand, 25.2 percent of urban households lived in poverty, dropping from 34.3 percent in 2006. This resulted to an increase in overall poverty rate in South Africa from 36.4 percent in 2011 to 40 percent in 2015 (World Bank, 2018).

Access to financial systems allows individuals and households to participate in economic activities by making longer-term spending and saving decisions, make short and long term investments, and survive with unforeseen economic changes (Park & Mercado, 2015). It has therefore been hailed as a good driver of poverty reduction (Rewilak, 2017). Although the literature pays more attention to formal finance, research is emerging which shows the critical contribution of informal finance to poverty reduction. Diverse informal finance mechanisms are present everywhere, including organisations such as Rotating Savings and Credit Associations (ROSCAs), informal moneylending, loan brokers, and burial societies, to mention a few (Aliber, 2015). According to Bophela (2018) development of informal financial sector could alleviate poverty, reduce unemployment, increase equal access to capital accumulation and economic ownership. Similarly,

Matuku & Kaseke (2014) emphasised that the majority of black South Africans participate in stokvel groups to escape poverty.

Mashingo & Schoeman (2010) defined stokvel as an umbrella term used to define a saving and interest seeking groups whereby affiliates frequently pay a fixed amount of money and after they obtain a lump sum amount of payment. Through informal finance such as stokvel schemes both urban and rural households become empowered members. Van Wyk, (2017) asserted that stokvel scheme expands limited earnings by making the start-up investment available for innovative Small, Medium, and Micro Enterprises (SMMES). Furthermore, unforeseen circumstances beyond control force community members (especially women) to join and participate in stokvel schemes to escape poverty. Therefore, informal finance programmes have been promoted as a promising poverty alleviation strategies for international development (Steinert et al., 2017). Yelwa et al. (2017) argued that regulated and well-functioning informal finance systems are critical prerequisites to achieve sustainable growth hence alleviating poverty. Alleviating poverty is a complex and difficult task. It is therefore significant to use various tools of reducing poverty effectively. It is therefore on these basis that stokvel groups are formed to overcome the problems of poverty and income insecurities amongst community members (Matuku & Kaseke, 2014).

Formal financial system consists of regulated institutions that offer retail and commercial clients financial services. It is composed of banking institutions, capital funds, assurance firms and real estate. Formal finance institutions can play a significant role in improving money management, minimising risk, and accelerating investment thereby increasing access to finance by poor households (Gulli, 1998). Furthermore, Irobi (2008) argued that increased access to formal finance is positively correlated to individual's income. However, slow growth in income in the state leads to continuous high rates of poverty (De Sousa-Brown & Gebremedhin, 2004). According to Kalu & Nenbee, (2013) access to formal finance is an absolute source of raising funds for investment. Similarly, Karlan, Ratan, & Zinman (2014) asserted that financial inclusion promotes entrepreneurial and agricultural investments (Karlan et al., 2014).

Financial systems either formal or informal have a significant impact in the process of reducing poverty. Flory (2011) supports the above statement by arguing that communities that can easily access financial systems have a comprehensive understanding of financial systems that have a potential to smooth consumption and alleviate poverty. However, the current nature of interaction

between financial structures in South Africa remains an issue that has significant policy effects. It has effects for the effectiveness of monetary and credit policy in achieving stabilisation objectives and for the implications of financial liberalisation through eliminating limitations on the deposit rate of interest. Furthermore, it has implications for the formalisation of the informal financial sector as it expands in the long run. For instance, in South Africa it has been found by Mfeti (2017) that households who use formal finance also use informal finance.

The interaction effect of formal and informal finance on household poverty has not been sufficiently explained in relation to developed and developing economies. Existing research on finance and poverty by Matuku & Kaseke (2014); Kihwele & Gwahula (2015); Usman (2015); Samer et al. (2015); Van Wyk (2017); Lal (2018); and Nyandoro (2018) have not adequately answered whether the interaction between formal and informal finance enhances the impact of finance on poverty. This research seeks to investigate the interaction effect of formal and informal finance on household poverty. The ability to identify whether the interaction between formal and informal finance enhances the impact of finance on poverty will enable financial institutions and schemes to implement policies that encourages savings or credit, or both.

1.2 Problem statement

Financial systems enable growth for both entrepreneurial and agricultural investments and also provide opportunities for households to increase their incomes. However, some South Africans cannot access mainstream financial services and other essential services. These people learned how to manage their finances through informal systems like stokvels. As a result the Reconstruction and Development Programme of 1994 which produced the Financial Sector Charter of 2003 and the B-BBEE Act of 2003, the Broad Based Black Economic Empowerment (B-BBEE) policy was developed (The RDP,"1994).

The charter promised that banks and insurance companies would work together to create a financial industry that reflects South Africa's changing demographics. This meant that people who were previously excluded from the financial system can now get access to affordable services and goods, especially the low-cost Mzansi accounts. According to FinScope South Africa (2003) and FinScope South Africa (2012), 6 million new accounts were added, many of them for the first time. In 2012, most of the social grant recipients got their money through a South Africa Social Security Account, which is like a Government-to-People (G2P) payment system. This gave people

at the bottom of the income scale access to the official system. In addition, restaurants and shops started offering money transfer services.

In addition, introduction of the National Credit Act of 2005 enabled a lot of people to use credit due to the availability of installment credit repayments. Research by Ardington & Leibbrandt's (2004) show that in 2004 people at the higher end of the income distribution and formal employed were more strongly connected with the use of formal financial services in South Africa. Although this increase was not statistically significant, some people in South Africa had access to formal credit at a higher rate between 1993 and 2004.

Furthermore, according to FinScope South Africa (2012), only 26% of people have access to formal credit. Household debt-to-disposable-income ratios from formal and semi-formal loans nearly hit 80% between 2006 and 2012, while savings rates dropped as low as 0.2%. This has an effect on inequality and the welfare of households. In actuality, the country's Gini coefficient varied between 57.7 and 70.0 between the years of 2003 and 2012, which is high by global standards. On the other hand, informal financial systems are nevertheless quite effective. As an illustration, the South African informal banking sector had up to 12 million registered participants at the beginning of 2012, of whom 6 brought in up to R44 billion yearly. Additionally, stokvel groups included households earning more than R14 000 per month in 2016 (Mfeti, 2017). Additionally, in 2017, about 42% of high-income individuals who made R40 000 or more belonged to multiple stokvel groups. Finally, households' combined use of official and informal financial services increased from 34% to 36% in South Africa between 2014 and 2015 (FinScope South Africa, 2015).

Poverty remains a prevalent issue in South Africa, despite significant strides made towards economic growth in recent years. According to recent data, approximately 55% of the country's population lives below the poverty line (Francis & Webster, 2019). This figure is even more disconcerting when considering the vast inequality that exists in the country. One of the biggest disparities in the world exists between the rich and the poor., with a small percentage of the population controlling the majority of the country's wealth.

One of the main contributors to poverty trends in South Africa is the persisting high levels of unemployment (Matyana & Thusi, 2023). The country has one of the highest unemployment rates

globally, especially among the youth. The lack of job opportunities, coupled with a struggling education system that fails to adequately equip individuals with the necessary skills, perpetuates the cycle of poverty for many South Africans. Additionally, the legacy of apartheid still lingers, with marginalized groups, such as black South Africans and women, facing significant barriers in accessing equal economic opportunities.

Another factor exacerbating poverty trends in South Africa is the inadequate provision of social services. Many individuals lack access to basic amenities such as clean water, sanitation, and electricity. The state of housing is particularly dire, with millions of people residing in informal settlements characterized by overcrowding and substandard living conditions. Insufficient healthcare and education systems further entrench poverty, as the most vulnerable are unable to access quality services and break free from the cycle of poverty.

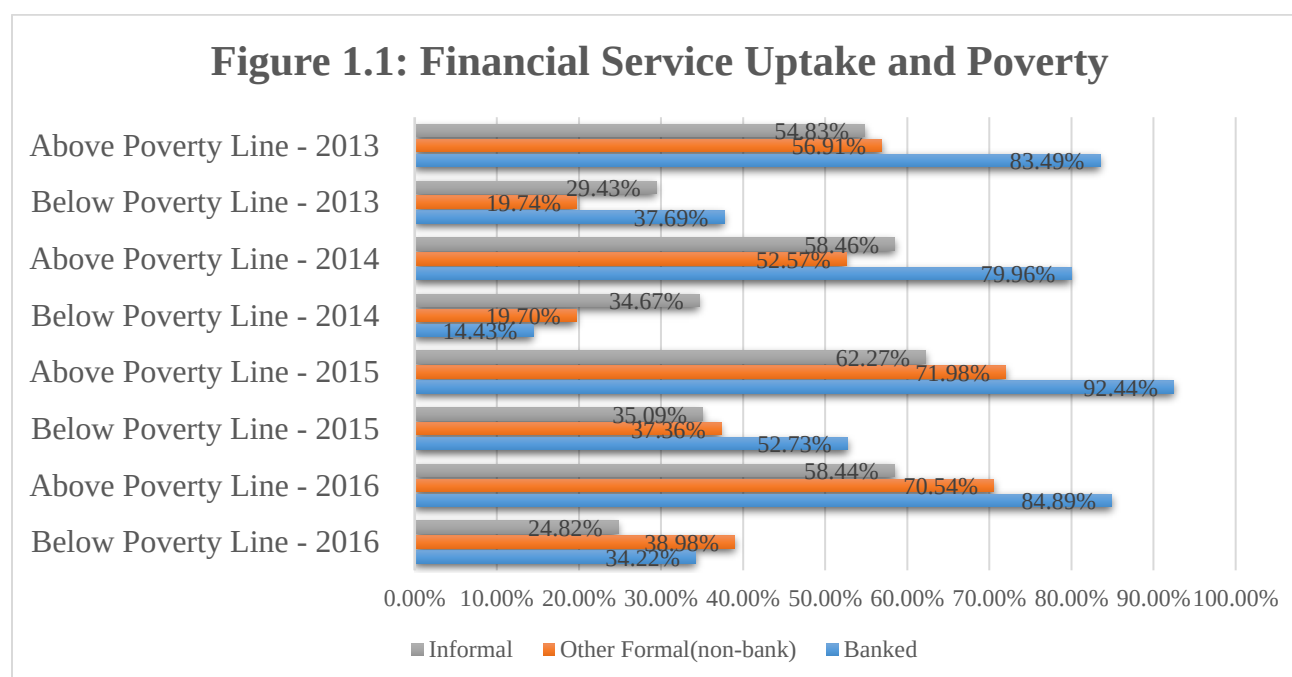


Figure 1.1: Financial service uptake and poverty
Own graph using Finscope data.

In order to address poverty, research on the combined impact of formal and informal financial services is crucial. To raise income levels and provide opportunities for those who were previously shut out of the financial system, financial inclusion is absolutely necessary. For low-income households, a more complete safety net can be produced through the interaction of formal

institutions like banks with informal systems like microfinance or community savings organizations. However, these financial services are only as good as the people who use them, if people are not properly engaged they will not effectively reduce poverty.

Financial service uptake in South Africa has played a crucial role in addressing the poverty trend in the country. Figure 1.1 shows that over the years, there has been a significant increase in the number of individuals and households accessing formal and informal financial services such as banking, insurance, and credit. This has provided them with opportunities to manage their finances more efficiently and reduce vulnerability to economic shocks. The inclusion of previously marginalized populations, such as low-income individuals and rural communities, has especially contributed to the reduction of poverty rates.

However, despite the progress made in financial service uptake, there are still challenges that need to be addressed in order to further eradicate poverty in South Africa. One significant challenge is the restricted availability of financial services in rural regions, where a large portion of the population resides. Efforts should be made to expand banking infrastructure, increase mobile banking services, and promote financial inclusion in these underserved communities. Additionally, more targeted and inclusive financial education programs should be implemented to ensure that all individuals, regardless of their socioeconomic status, have the knowledge and skills to make informed financial decisions.



1.3 Objectives of the study

The primary objective of the current study is to examine the effects of both formal and informal finance in South Africa and whether their joint use has a greater impact on poverty reduction.

The following are the study's specific goals:

1. To give a summary of the joint use of formal and informal financial services by households in South Africa.
2. To estimate the impact of formal and informal finance on household poverty in South Africa.
3. To investigate whether an interaction between formal and informal finance enhances the impact of finance on household poverty in South Africa.

1.4 Research questions

1. How extensive is the joint use of formal and informal finance in South Africa?
2. How do formal and informal finance practices influence the poverty levels of households in South Africa?
3. How does the interaction of formal and informal finance influence poverty levels of households in South Africa?

1.5 Hypotheses

1. **H_0 :** the use of formal finance does not have an impact on household poverty in South Africa.
 H_1 : the use of formal finance has an impact on household poverty in South Africa.
2. **H_0 :** the use of formal and informal finance does not have a joint impact on household poverty in South Africa
 H_1 : the use of formal and informal finance has a joint impact on South Africa's household Poverty
3. **H_0 :** the use of informal finance does not have an impact on household poverty in South Africa.



H_1 : the use of informal finance has an impact on household poverty in South Africa.

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1.6 Significance of the study

Investigating the interaction effect of formal and informal finance on household poverty has not been sufficiently explained in relation to developed and developing economies. Existing research on finance and poverty by Matuku & Kaseke (2014); Kihwele & Gwahula (2015); Usman (2015); Samer et al. (2015); Van Wyk (2017); Lal (2018); and Nyandoro (2018) has focused on the impact of each type of finance on household poverty reduction. However, the issue is whether the joint use of formal and informal finance enhances poverty reduction or not. Therefore, incorporating the joint effects of both formal and informal sources of finance in a model is essential since households' ability to reduce poverty depends on a combination of different financing sources rather than a single financing tool. Furthermore, the existing research in finance and poverty literature have shown a growing interest in using either qualitative approach or quantitative approach as a research design. For instance research by Kihwele & Gwahula (2015); Samer et al.

(2015); and Nanziri (2018) used quantitative method to investigate what impact does finance has on household poverty reduction. On the other hand, studies by Matuku & Kaseke (2014); Usman (2015); Samer et al. (2015); Van Wyk (2017); Nyandoro (2018); and Lal (2018) used qualitative research method to investigate the impact of finance on poverty reduction.

However, the questions whether the joint use of formal financial services and informal financial services enhance poverty reduction or not, how do people feel that the joint use of formal financial services and informal financial services make it better for them, and how do people feel that the joint use of formal financial services and informal financial services enhances poverty reduction cannot be answered by just using a quantitative research method. Also, people's perceptions on the joint use of formal and informal finance cannot be investigated by using a quantitative research approach. Incorporating both qualitative and quantitative approaches of research in one study is critical given the fact that research on households' use of financial services is influenced by a variety of research approaches rather than just one.

1.6.1 Contribution of the study

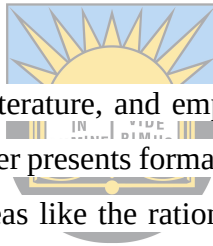
This research adds to the growing body of evidence supporting the theory that asset building helps low-income individuals and their families save modest sums of money, build up modest stocks of wealth, and employ those savings—typically for particular uses. The most fundamental of these goals, and a must for every impoverished family, is to have precautionary savings—amounts of money set aside to cover unforeseen changes in subsistence or almost subsistence wages as well as medical and other crises. Furthermore, asset building initiatives in both developed and developing nations make a concerted effort to encourage the poor to save for goals that go beyond preventive measures and instead focus on investments that will strengthen their steady incomes and, equally importantly, help them escape poverty. For instance, a lot of financial programs emphasize loans (typically based on demonstrated ability to save) in addition to saving to support small-scale entrepreneurial endeavours.

This research adds more evidence to the continuing discussion that stokvel group membership is facilitated by social and economic factors. When saving and borrowing are still options, people want their money to increase (Storchi, 2018). This enables people to borrow money for emergencies and other needs at a cheap interest rate while still preparing for medium-to-long-term investments by saving for a year. People are also encouraged to save because of the group

environment and the year-long ban on withdrawals. But this only works because people push themselves to pay back their loans as they save money, knowing that they may obtain credit in an emergency. By doing this, they create a reciprocal relationship in which they help the group and the group helps them. With formal financial institutions, this is not feasible because loans are harder to obtain, deposits are taxed, and interest rates are low. Because their money is sitting in a bank account doing nothing, vulnerable people believe they cannot afford to do so. To manage costs, buy time, and extend it to maximize alternatives, they must keep money flowing.

1.7 Organisation of the Study

There are seven chapters in the study, the first of which is the introduction, in which the study's purpose, research question, objectives, relevance, and major contributions are described. An overview of the joint use of formal and informal financial services by households in South Africa is provided in Chapter 2. Furthermore, the overview of the financial industry in South Africa is provided.



The conceptual literature, theoretical literature, and empirical results that support the study are presented in the third chapter. The chapter presents formal and informal money, as well as poverty, critically. Additionally, covered are ideas like the rational choice theory, imperfect information theory, as well as the theory of financial dualism. The chapter also presents empirical data on the relationship between formal and informal finance and poverty. The fourth chapter contains information about the study's methodology. This chapter discusses the study's conceptual underpinnings (mixed-methods methodological approach). The fourth chapter goes into further detail on the study's data and the estimation methods used to meet its goals. The empirical results on how each type of finance affects household poverty in South Africa are presented in Chapter 5. Additionally, it gives actual results on the combined effects of various financial instruments on household poverty in South Africa. The second and third goals of the study are accomplished in this chapter using multinomial estimating techniques. In the sixth chapter, financial service utilization by households is discussed. To learn more about South African households' borrowing and saving habits, as well as how these habits help the households and fight poverty, qualitative methodologies were used. The main conclusions and suggestions for action are presented in Chapter 7. The chapter also offers areas for additional investigation and the results of the study.

Chapter Two

Overview of the joint use of formal and informal financial services by households in South Africa

2.1 Introduction

An overview of the joint use of formal and informal financial services by households in South Africa is given in this chapter. The usage of financial services in South Africa is covered at the beginning of the chapter, in doing so, it discusses the joint use of formal and informal financial services by households. Then the South African financial sector overview is provided. The next section provides households' formal versus informal credit and saving behavior by individual gender, education, and income. The summary is provided in the last section.

2.2 Household usage of financing services in South Africa

Since 16 is the legal age in South Africa to create a bank account, everyone 16 years of age and older is considered to be part of the adult population. This section provides information on how households use finance services. It posits that all adult South Africans fit into one of three categories: formally included, informally served, or financially excluded. It focuses on the financial system in its broadest meaning. The current product usage indices, which range from those who are formally included to those who use informal products to those who use no products, are used to distinguish the various segments. The latter group was reclassified as the population that is financially excluded. The access strand is divided into three main segments, as seen in Figure 2.1.

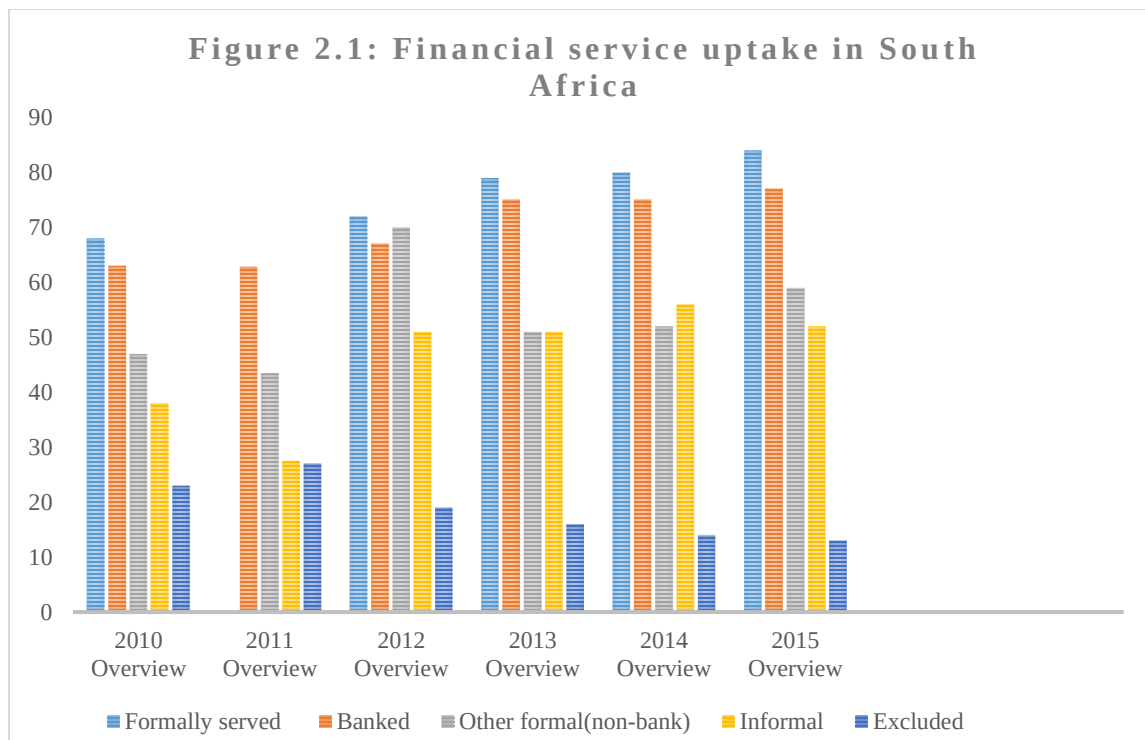


Figure 2.1: Financial service uptake in South Africa
Source: own graph using Finscope data from 2010 to 2015

In 2010, 25.1 million South African adults, or 77% of the adult population, were financially included, according to Figure 2.1. The remaining 23% of adults were financially excluded, meaning they did not use formal or informal financial products to manage their finances. Furthermore, 22.2 million people or 68% are officially included, and 20.5 million people or 63% are banked. Moreover, 46% of people make use of non-bank financial services and products. Of South African adults who live at home on a regular basis, only 13% of those with bank accounts rely solely on banking products; 87% of those with bank accounts use a combination of products and services to meet their financial needs; 9% of adults rely solely on informal services, but 38% of adults use the informal sector overall. Services falling under the informal category include burial societies, mashonisa, saving clubs, and stokvels.

About 62.8% of South African adults (21 184 871) had a bank account as of 2011. Of those, 43.5% used formal non-bank products or services, 27.5% used informal methods, and 27.0% used no financial products or services at all to manage their finances. Those who save, keep their money at home, and rely solely on friends and family for support are excluded. In 2012, just 72% of adults

were provided with formal banking services, which included both banked and other formal bank products or services; 67% of adults used commercial bank products, a significant increase of 4% from 2011; 70% of adults used other formal non-bank products or services; 51% of adults used informal financial management mechanisms; and 19% did not use any financial products or services.

According to Figure 2.1, in 2013 79% of adults (16 years of age and older) received formal services, which included both banked and other formal non-bank financial products or services. This represents an increase from 72% in 2012; 75% of adults (16 years of age and older) received banked services, which represents an additional increase from 67% in 2012; 51% of adults used other formal (non-bank) products or services, up from 42% in 2012; 51% used informal mechanisms, which remained unchanged from 2012; and 16% used no financial products or services to manage their finances, down from 19% in 2012. In terms of formal financial services, 84% of adults (16 years of age and older) received formal treatment in 2015. This includes both banked and other formal non-bank financial products or services; this represents an increase from 80% in 2014; 77% of adults were banked, up from 75% in 2014; 59% of adults used other formal (non-bank) products or services, up from 52% in 2014; 52% of adults used informal mechanisms to manage their finances, down from 56% in 2014; and 13% did not use any financial products or services. But if they borrow, they only turn to friends and family, and if they save, they keep their money at home; as a result, the percentage of people excluded fell from 14% in 2014.

2.2.1 Joint use of financial products or service

To satisfy their financial needs, households typically use a mix of financial services and products. For instance, an individual may be banked and receive pay through a bank account, but they may also be members of a savings group, which enables them to quickly access funds in case of emergency or unanticipated costs. As illustrated in figure 2.2, there was a 29% crossover in product usage in 2010 between formal and informal domains. Additionally, 19% of South African adults utilize all available financial services.

Figure 2.2: 2010 Overlaps

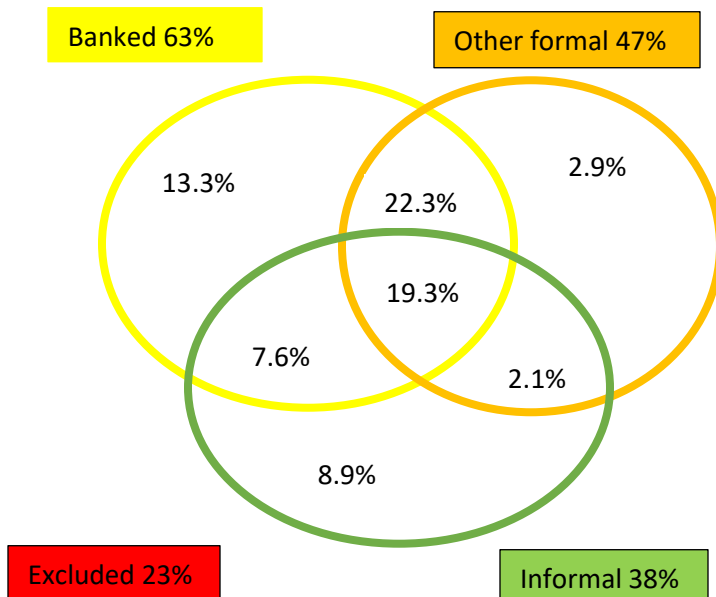


Figure 2.2: 2010 Overlaps

Figure 2.3: 2012 Overlaps

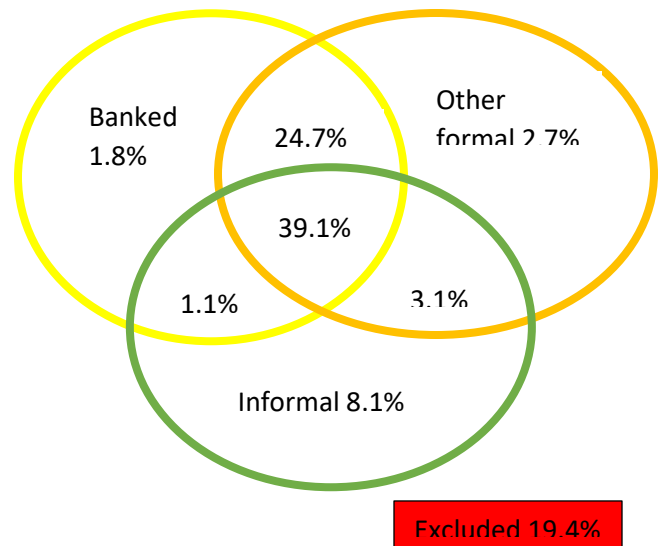


Figure 2.3: 2012 Overlaps

Source: own graph using Finscope data from 2010 to 2012

As illustrated in figure 2.3, in 2012, a mere 2% of adults relied solely on banking services; a mere 3% of adults relied exclusively on other formal services; and a mere 8% of adults relied exclusively on informal services. Furthermore, nearly 40% of people manage their financial needs through a combination of formal and informal mechanisms, suggesting that the formal sector is not meeting all of their needs.

Figure 2.4: 2013 Overlaps

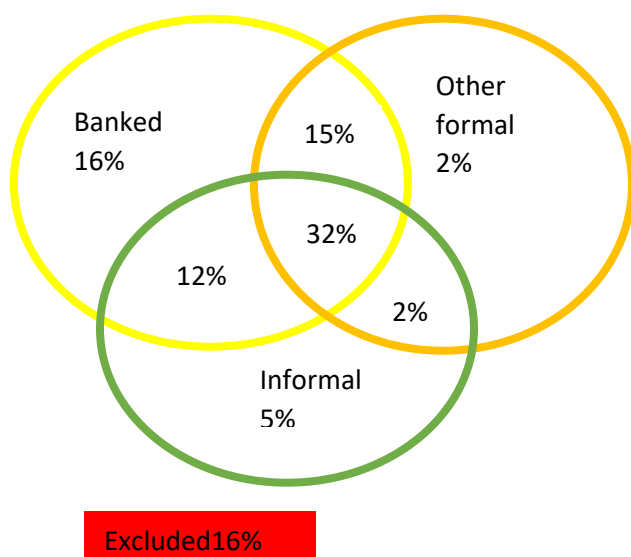


Figure 2.4: 2013 Overlaps

Source: own graph using Finscope data from 2013

According to Figure 2.4, 2% of adults exclusively rely on other informal financial services, 5% of adults exclusively rely on informal financial services, and 16% of adults exclusively use banking services. Furthermore, nearly 32% of people manage their financial needs through a combination of banked, other formal (non-bank), and informal mechanisms, suggesting that the formal sector is not the only source of their needs.

Figure 2.6: 2015 Overlaps

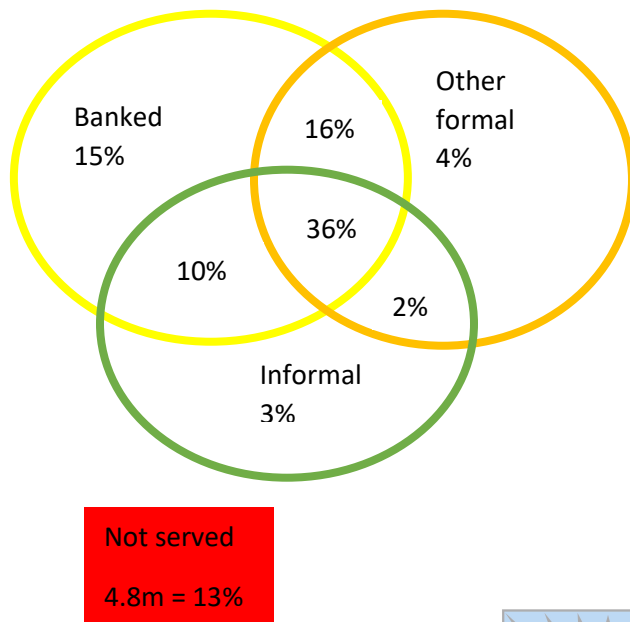


Figure 2.5: 2014 Overlaps

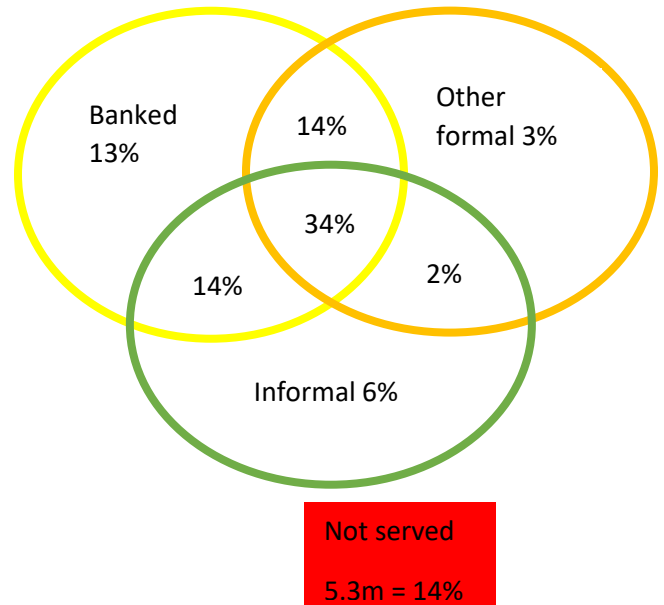


Figure 2.6: 2015 Overlaps

Figure 2.5: 2014 Overlaps

Source: own graph using Finscope data from 2014 and 2015

The data presented in Figures 2.5 and 2.6 indicates that 3% of adults manage their money solely through informal mechanisms, a decrease from 6% in 2014. Additionally, 15% of adults manage their money exclusively through banks, an increase from 13% in 2014, and 4% of adults manage their money exclusively through other formal mechanisms, an increase from 3% in 2014. Furthermore, nearly 36% of people manage their financial needs through a combination of banked, other formal (non-bank), and informal mechanisms; this represents an increase from 34% in 2014 and suggests that people's needs may not be fully met by the formal sector alone.

2.3 South African financial sector overview

Compared to most emerging markets, South Africa's financial sector is larger, more sophisticated, and has a higher asset to GDP ratio. The majority of these assets are held by the banking sector, although insurers and pension funds also have sizeable holdings (see figure 2.7). The World Bank (2020) reports that in terms of percentage of GDP, South Africa's domestic credit to the private sector was 129%, greater than that of other African countries such as Egypt (27%), Nigeria (12%), Kenya (33%) and Morocco (89%). The International Monetary Fund (IMF) praised South Africa for having a strong and well-developed financial sector in its 2019 Article IV Staff Consultations.

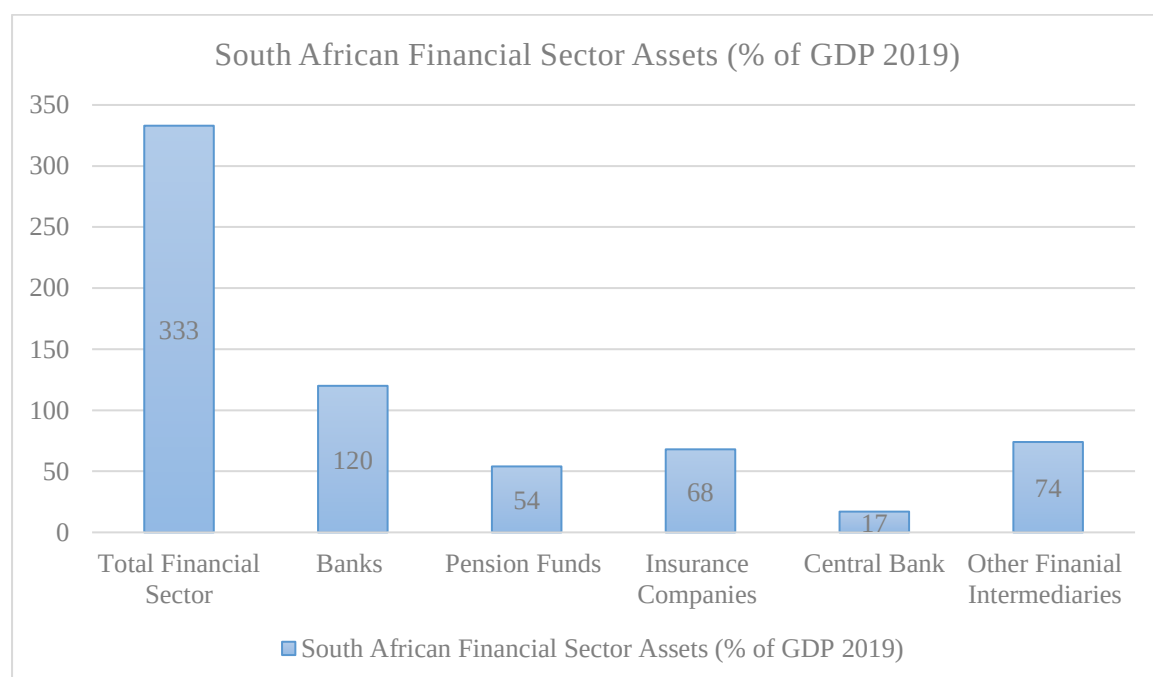


Figure 2.7: South African Financial Sector Assets

Source: World Bank, 2020.

With the biggest banks, insurers, and fund managers holding the largest share of assets, the industry is tightly knit and concentrated. The five biggest banks owned over 85% of the assets in the banking sector at the start of 2020, up from an average of roughly 80% between 1994 and 2002, according to the South African Reserve Bank (2017). The South African Reserve Bank (SARB), which keeps a close eye on the level of interconnectedness from the standpoint of financial stability, reports that the sector is still stable.

2.3.1 Formal Financial Sector

The formal finance sector in South Africa has grown to be very important to the national economy. Investment firms, insurance providers, and commercial banks make up South

Africa's formal finance industry. These organizations offer the government, companies, and people a broad range of financial services. Because of the industry's strict regulations, consumers are protected and the market is stable.

In South Africa, the formal finance sector is anchored by commercial banks. These banks provide a number of services, such as lending, foreign exchange, and deposit taking. Both domestic and foreign banks compete in the well-established and competitive banking industry of the nation. The banking industry in South Africa is renowned for its strict risk management procedures and robust regulatory framework, both of which have aided in the industry's resilience and stability.

The Financial Sector Conduct Authority (FSCA) and the Prudential Authority (PA) jointly oversee the 36 registered banking entities in South Africa, according to the South African Reserve Bank (2021). Out of the forty entities that are registered, eighteen are retail commercial banks, four are mutual banks, five are C-operative Banks, and thirteen are local branches of foreign banks. Additionally, there are 29 foreign bank offices in South Africa that are locally represented.

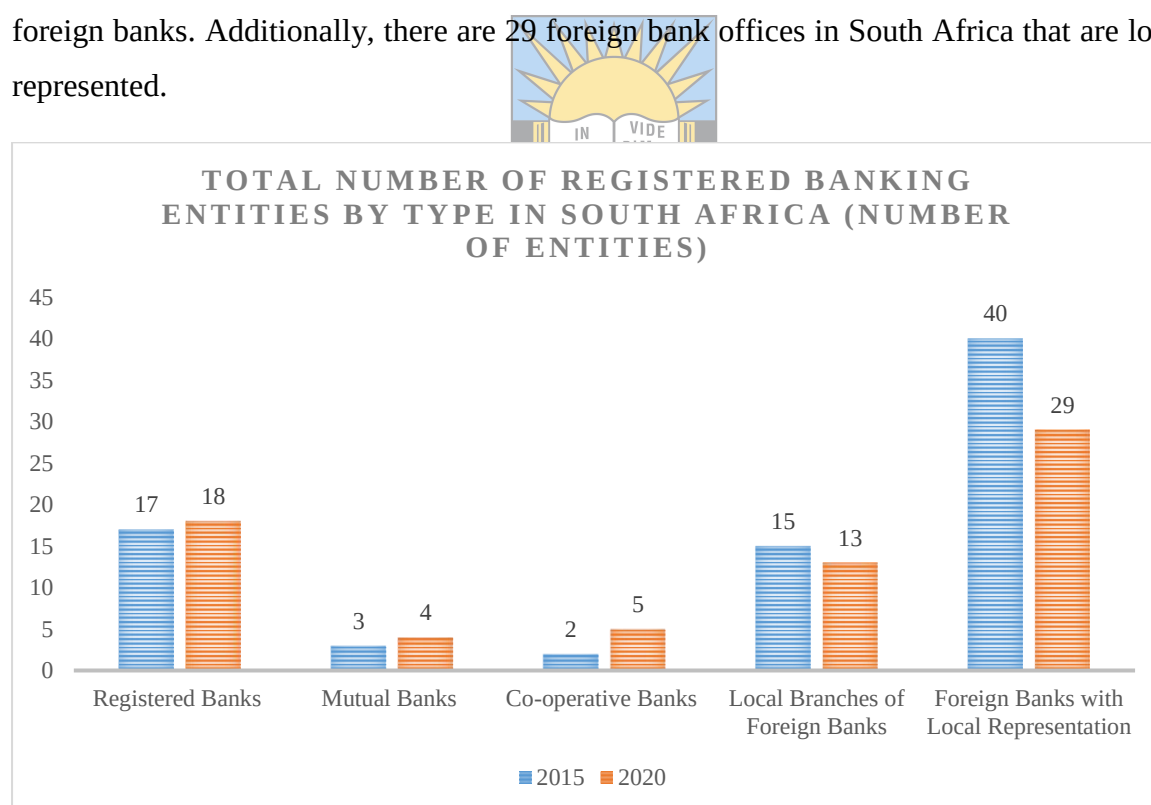


Figure 2.8: Number of banking entities by type in South Africa

Source: own diagram using data from South African Reserve Bank (2021)

The four biggest banks hold 83% of the industry's deposits, indicating a highly concentrated banking sector. The banking industry is, nevertheless, evolving as a result of the competition

that banks are facing from recently formed banks, technologically advanced start-ups, and an expanding number of merchants that provide financial services, including credit products. Because of this, established banks are under pressure to focus more on gaining new clients by introducing more cutting-edge products that will appeal to those with lower incomes. Numerous people are also looking into ways to work together with new tech products.

2.3.2 Customer banking activity and behavior

In South Africa, bank account accessibility has increased dramatically during the last ten years. Because bank accounts can be used to make payments, retail banking is typically the first point of contact for most South Africans with the financial industry. With over 81% of adults over 16 having a bank account in 2021—a notable increase from 63% in 2010—access has increased dramatically in the nation (South African Reserve Bank, 2021). The introduction of reasonably priced products by financial institutions, enhanced banking infrastructure and distribution channels, a rise in innovation and the supply of digital financial services, an emphasis on financial literacy and consumer education, and the distribution of social grants to recipients through bank accounts are some of the factors that have led to this improvement.

Despite an increase in account ownership, there is still little actual access to financial services, as seen by low account usage rates. 83% of South Africans deemed financially included use non-bank channels, while up to 68% continue to use informal channels. In the event that social grant recipients are not included, only 69% of adults would be regarded as formally banked. Usage is primarily a problem for those with lower incomes. According to the findings of the Finscope survey conducted in 2021, people from low-income households held 40% of dormant accounts, and of those people, 19% withdrew all of the money as soon as it was deposited; these accounts are referred to as "mailbox accounts." Only 3% of people in the high-income category said they had not used their bank account in the previous month, and 72% said they had done so at least three times.

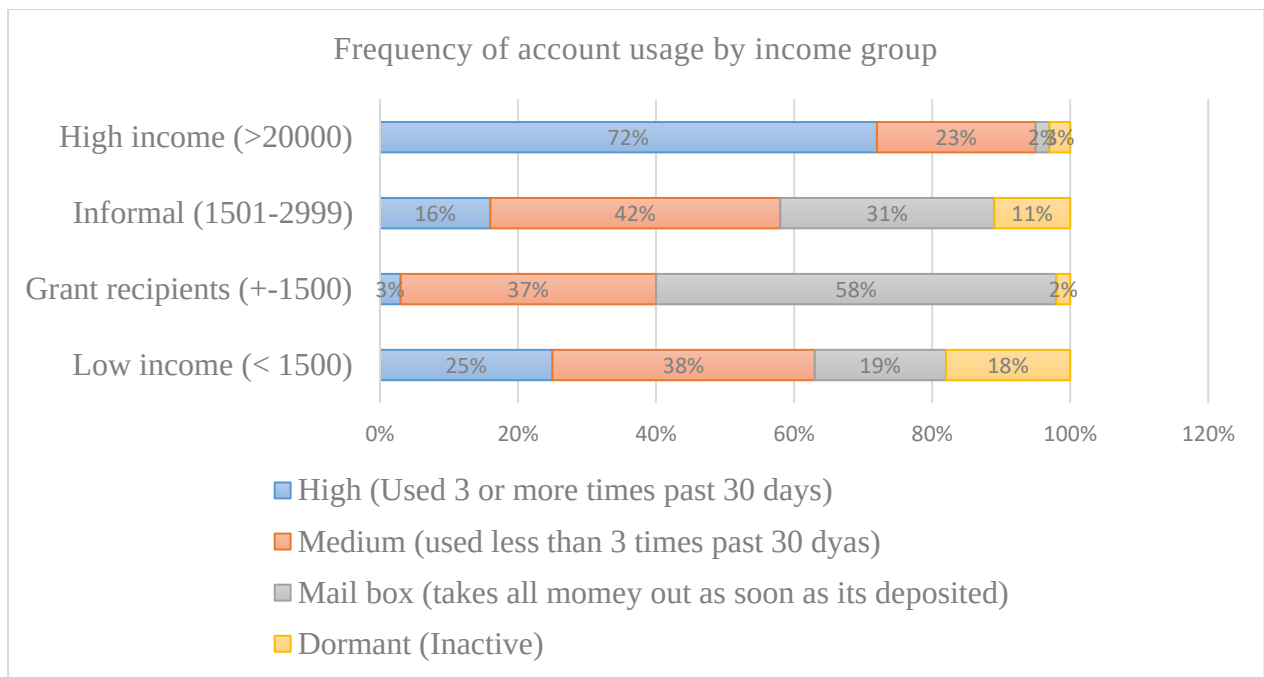


Figure 2.9: Bank account usage by income group

Source: Own diagram using South African Reserve Bank data (2021)

Many people with low incomes lack the means to interact meaningfully with the financial sector. The low product usage rate, as seen in the figure below, is evidence of this. In South Africa, a transaction account serves as the gateway to formal financial institutions for the purposes of receiving, transacting, and saving. Debit cards connected to savings or transactional accounts have been used more frequently, but demand for more advanced products like credit cards, insurance, and home loans is still very low.

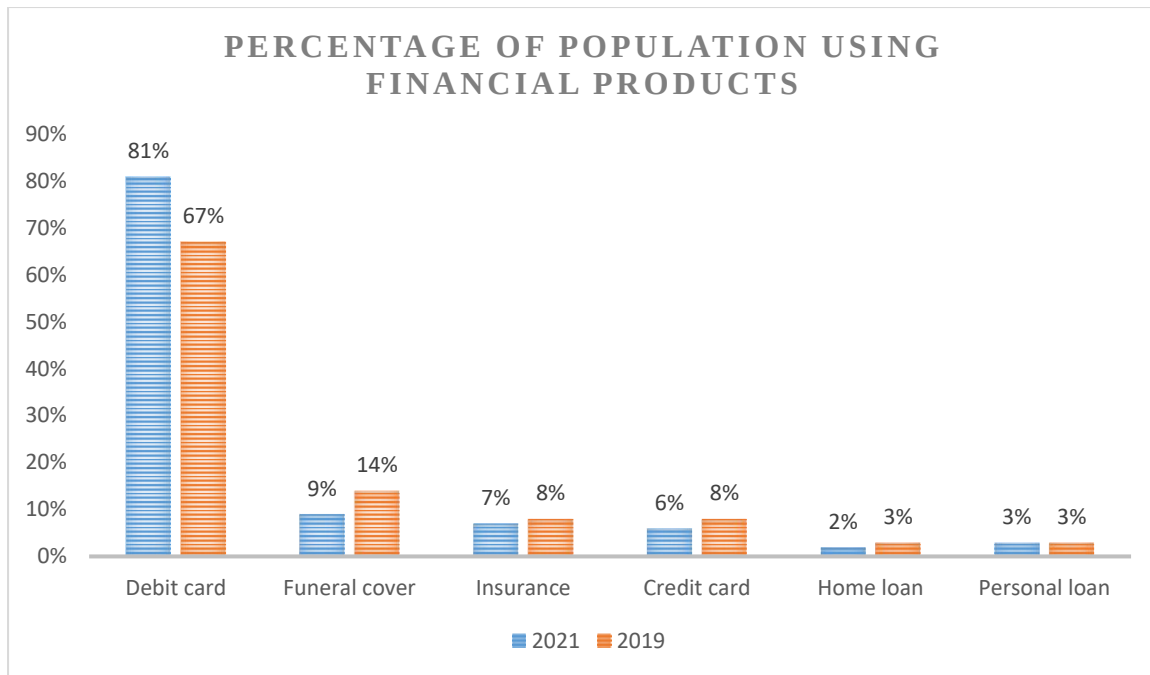


Figure 2.10: Penetration of banking products

Source: own diagram using South African Reserve Bank data (2021)

The poor savings culture that permeates South African households through official channels is also a result of a lack of resources. The debt to income ratio, which stood at 75.3% in the first quarter of 2021, and the aggregate household savings rate of 0.751 indicate that there is cause for concern regarding debt and limited savings in the South African market. Nonetheless, there are areas in South Africa where a strong savings culture exists through unofficial channels like stokvels, which are thought to collect about R50 million in member contributions each year. The FSCA launched the #FSCAMyMoney campaign in 2020 with the goal of promoting saving by giving consumers a clear, comprehensive guide to better money management.

There are 11,6 million people served by the Stokvel market. According to the Old Mutual Savings and Investment Monitor for 2021, an increasing number of South Africans are using loyalty programs, "rainy-day" funds, and stokkels as ways to save money. The main purpose of stokvels is saving; twenty percent of them are especially designed for buying groceries in bulk, twenty-five percent are established to pay for funeral or burial expenses, and forty-five percent are organized as rotating savings clubs, in which a new member receives the group's savings at each meeting.

According to estimates from the National Stokvel Association of South Africa (NASASA), 25% of stokvels are banked. In order to serve this market, there hasn't been much innovation in product development. For instance, members have less recourse in the event of fraud because

they aren't identified as owners on the bank account. In order to access a wider range of goods and services, members are also unable to take advantage of the stokvel's active banking relationship. In this area, targeted product development and innovation may enhance the security of stokvel savings.

2.3.3 Customer insurance activity and behavior

Another important part of the formal finance sector in South Africa is insurance companies. They offer a range of insurance products, including life, home, and auto insurance. In order to provide financial security against unanticipated events, insurance companies are essential in reducing risks for both individuals and businesses. The Financial Sector Conduct Authority oversees these businesses, ensuring that they conduct themselves fairly and openly.

In South Africa, monthly insurance premium payments cost more than ZAR12.3 billion on average. In 2020, insurance penetration, as determined by dividing premiums by GDP, was 13.7%, making it one of the highest penetration rates globally, surpassing that of the US and UK markets. Nevertheless, the majority of this insurance consists of funeral insurance products, as is further explained below. 70% of market premiums in the African insurance sector are held by South Africa.

There were 150 active reinsurers and insurance providers registered with the PA in 2020. Of them, 47% offered non-life insurance through their insurers. Long-term life insurers are contractually obligated to provide a certain amount of money to the policy's designated beneficiary in the event of a life event, health event, disability event, or death event. In certain cases, the policyholder may request payment in advance of a fixed, determinable date. Reinsurance is essentially insurance for insurers, acquired by primary insurers to cover risks that might be too big or too small for them to handle.

The Prudential Authority listed 60 primary life insurers as of March 2021, which is ten fewer than the previous year. Eighty-two percent of the market's total assets are held by the top five life insurers in terms of assets: Sanlam, Old Mutual Life Assurance, Liberty, Momentum Life, and Discovery Life. The total number of life insurers, despite being concentrated, indicates the strength of the market, as smaller specialty insurers can meet a wide range of client needs.

The market share of the top ten insurers by gross written premiums (GWP) in 2020 was 73.8% of the entire non-life insurance market, indicating a less concentrated market. The four companies that contribute the most to GWP are Old Mutual, Hollard, Sanlam, and Guardrisk.

The two most widely used products, property and motor insurance, accounted for 76% of the industry's gross written premiums in 2020.

The insurance sector has grown positively on average between 2015 and 2020, with gross written premiums increasing by 3%. Non-life insurance companies reported a 32% spike in gross written premiums from 2019 to 2020, or roughly ZAR172 billion. Nearly three out of every five South Africans claim to be insured in some capacity. In South Africa, 17% of adults say they have insurance through their bank, 38% say they have insurance from a regulated insurance company (not affiliated with a bank), and 29% say they have insurance (usually funeral cover) through unofficial channels like a funeral parlor or burial society, according to the 2021 FinScope survey.

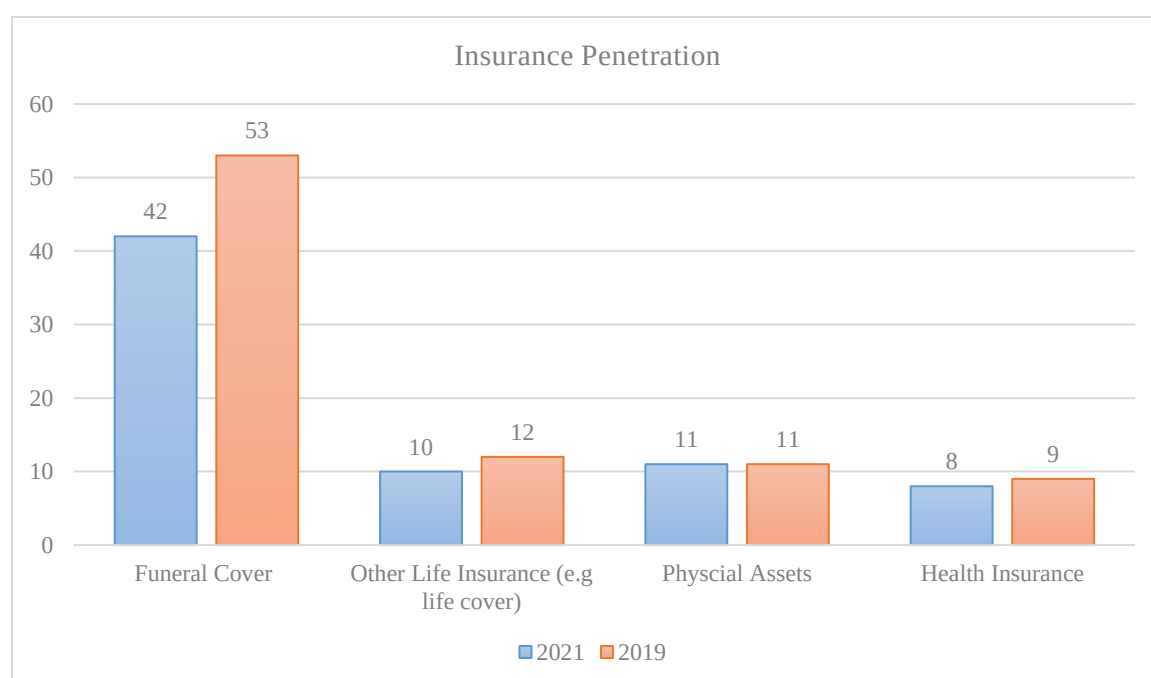


Figure 2.11: Insurance penetration

The most popular insurance product, funeral cover, artificially inflates the number of insured South Africans. Adults in South Africa report having a funeral product at a rate of 42%; however, if funeral cover is taken out of the equation, the percentage falls to 19%. The majority of South Africans with insurance products are in the form of life, physical asset, and health insurance, with rates of 10%, 11%, and 9%, respectively. Affordability is the main deterrent for 95 South Africans without non-funeral insurance to purchase an insurance policy.

2.3.4 Constraints of the formal financial sector in South Africa

There are a number of obstacles that the South African formal financial sector must overcome in order to offer the populace comprehensive financial services. The nation's extreme income

disparity is one of the primary problems (Simatele & Maciko, 2022). With a sizable fraction of the population living in poverty, South Africa has one of the highest rates of income inequality in the world. Because low-income people frequently lack the collateral or credit history required to access financial services like loans or credit cards, it is challenging for the formal financial sector to meet their needs.

The population's low level of financial literacy is another barrier facing South Africa's formal banking sector. Many people struggle to navigate the formal financial sector because they know very little about financial products and services. This ignorance can lead to people being taken advantage of by dishonest people or organizations and prevent them from making wise financial decisions.

Additionally, the high costs associated with formal financial services act as a constraint for many South Africans (Triki & Faye, 2013). Banks and other financial institutions often charge high fees for services such as account maintenance, transactions, and transfers. These fees can be prohibitive for low-income individuals, forcing them to turn to informal financial services or go unbanked altogether. The lack of affordable formal financial services limits the opportunities for individuals to save, invest, and build assets, perpetuating the cycle of poverty.

2.4 The growing informal credit and savings market

One of the biggest obstacles to the sustainable and responsible use of credit in South Africa is the prevalence of the informal credit market. 2016 saw changes to the National Credit Act (NCA), which state that if a supplier is not registered with the NCR, all credit agreements—regardless of amount—are unlawful. Credit has historically been obtained by South Africans through unofficial means. The formal credit system was closed off to black South Africans for many years. So, in order to meet a critical need, unofficial credit and lending models emerged.

More people are turning to informal credit because over half of all loan applications in the formal sector are denied. According to the graph below, 59% of credit applications were denied in 2019. This percentage increased to 4% in 2020 as a result of more consumers being in worse financial situations and failing the formal credit application process' affordability test.

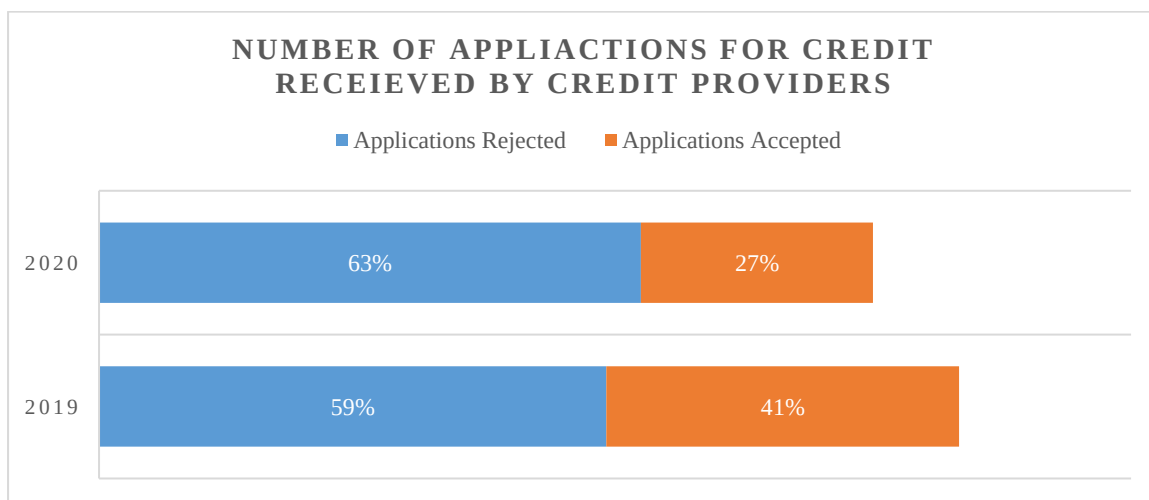


Figure 2.12: Formal credit applications

Source: NCR, 2021, Credit Bureau Monitor.

In South Africa, unregistered lenders are commonly found in lower-class neighborhoods and have been in business for a considerable amount of time. In the year 2019, 28% of the participants obtained formal credit from a banking establishment, whereas a mere 2% obtained credit from a microfinance institution. Additionally, 28% of the respondents borrowed money from friends and relatives, and 16% borrowed from loan sharks, also referred to as stokvels.

Although informal lending is common in low-income areas, using them exposes borrowers to a number of risks, such as exorbitant interest rates and questionable collection practices. Informal lenders are easily accessible and can be visited after business hours because they are located within communities. Informal lenders provide a fairly simple repayment schedule that is expressed as the total amount repayable rather than an interest rate. For instance, you could borrow R1000 and pay back R1300 at the end of each month. Because both lenders and borrowers are part of the community, this adds elements of reputation and trust that formal financial institutions might not be able to match. But when borrowing from unofficial lenders, consumers have no regulatory or legal recourse. Short payback terms, high interest rates ranging from 30% to 50% monthly, and frequently questionable collection practices are characteristics of mahonisas. There have been reports of the direct collection of grant payments, the retention of borrowers' Identity Documents (IDs), the theft of their bank card pins, and the threat of violence in the event that non-payment is made.

2.4.1 Savings stokvels in South Africa

A significant component of South Africa's social and economic structure are stokvels. Informally organized savings clubs known as "stokvels" are formed by individuals who want to pool their money together. These groups may consist of coworkers, friends, relatives, or neighbors. In South Africa, stokvels have a long history and are a vital source of financial support for many people and communities.

Stokvels' main objective is to improve their members' financial security. Every member makes a regular, usually monthly, fixed-amount financial contribution to a common fund. After then, the money can be used for a variety of things, including investments, home renovations, emergency medical costs, and educational costs. Members can take turns accepting contributions, guaranteeing that everyone gets a chance to gain from the combined money. For people who might not have access to conventional financial institutions, stokvels offer an alternate method of saving and lending.

In additionally, stokvels promote social cohesiveness and a sense of community. The groups frequently get together on a regular basis to talk about money issues, exchange ideas, and provide support for one another. These groups give people a place to connect, form bonds, and gain knowledge from one another. Members of stokvel gatherings can share food, tales, and customs in this setting of cultural celebration and interchange. Stokvels foster a sense of unity among their members and strengthen the social fabric of South African communities through these get-togethers.

"Stokvel" is a term used to refer to a wide range of "groups," such as social clubs, informal savings organizations, burial societies, syndicates, mgalelo, etc. Stokvel membership is distributed across all LSM categories, according to data (see figure 2.13), dispelling the myth that stokvels are only for the impoverished. People in LSM 5-7 make up the largest share of the stokvel market.

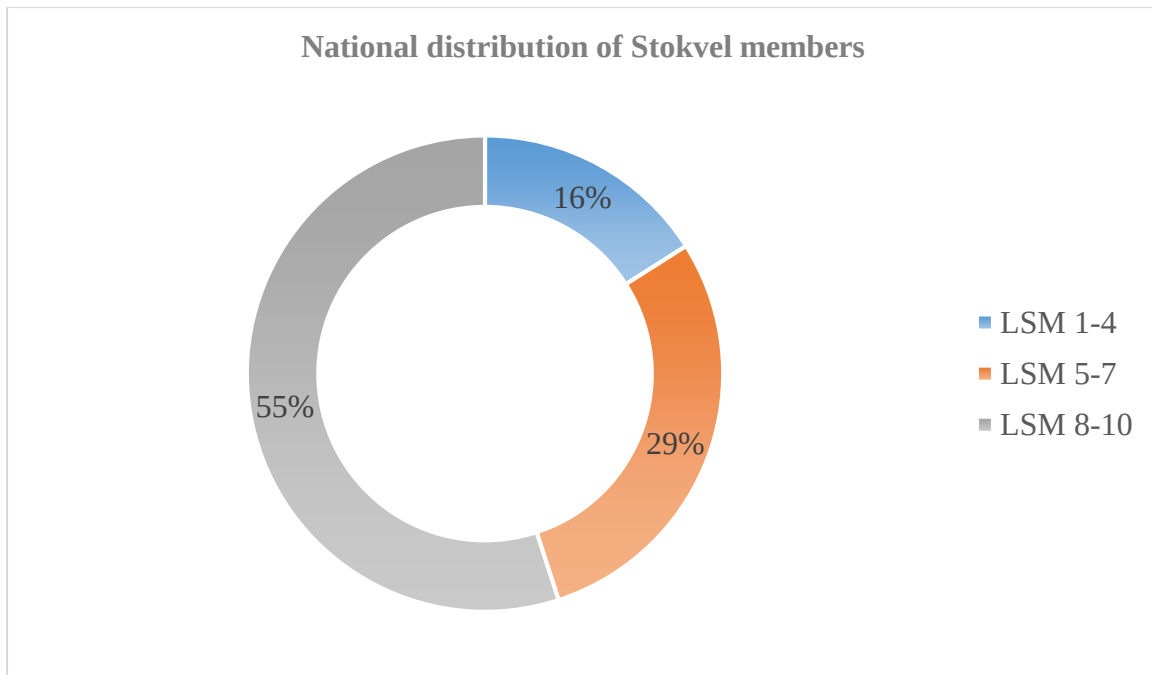


Figure 2.13: National distribution of stokvel members

Source: Own graph using data from NASASA, 2017

Stokvels are groups of people who come together to pool money with the main goal of either saving for a particular goal or aiding, especially when individual financial resources are not enough or were not anticipated, like in an emergency. As of the end of 2017, there were 810,000 officially registered stokvels with 11.5 million individual members spread across all nine provinces of South Africa, and they possessed approximately R49 billion in savings.

2.5 Formal and informal saving behaviour

Although a sizable percentage of respondents exclusively use community-based savings clubs, Figure 2.14 demonstrates that savers typically combine formal and informal methods. Of those who save, 34% in Sub-Saharan Africa and 46% in West Africa respectively say they have only used community-based savings clubs. Similar to the global average, 36% of adults in Africa say they have saved or put money aside. When it comes to saving or putting money aside, over half of respondents in North Africa and about half of respondents in Central Africa claim not to have done so with the assistance of a formal financial institution, an informal savings group, or a person outside of their family. These alternative saving techniques, such as hoarding assets like animals and storing under the mattress, were not covered by the Global Findex survey. (Triki & Faye, 2013).

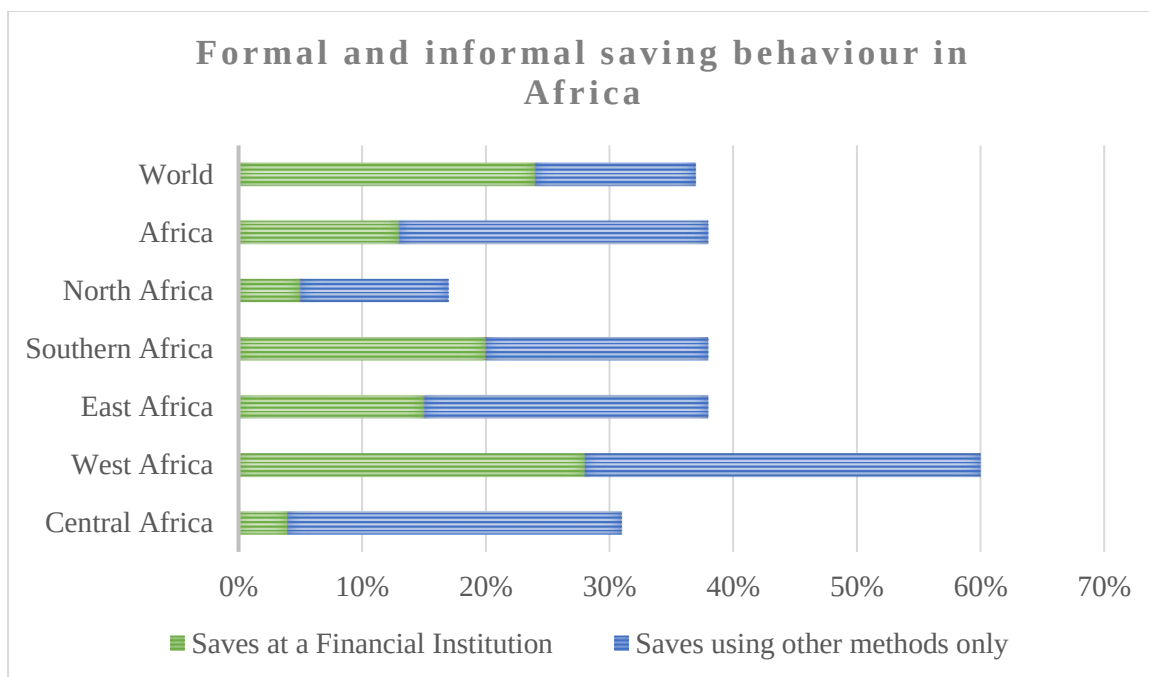


Figure 2.14: Formal and informal savings behavior in Africa (% Population)

Source: Author's compilation from 2015 – 2016 Global Findex database findings

2.6 Formal and informal credit behaviour

Africa has a comparatively high rate of newly originated loans, both formal and informal, compared to the rest of the world; 44% of adults in the continent report having taken out a loan in the previous year. Much like savings rates, borrowing habits vary widely throughout Africa. Adults in East Africa are 58% more likely than those in North Africa to admit to borrowing money. In Africa, 39% of adults report having taken out a loan from friends or family within the past year, and 28% claim this is the only way they have ever obtained a loan.

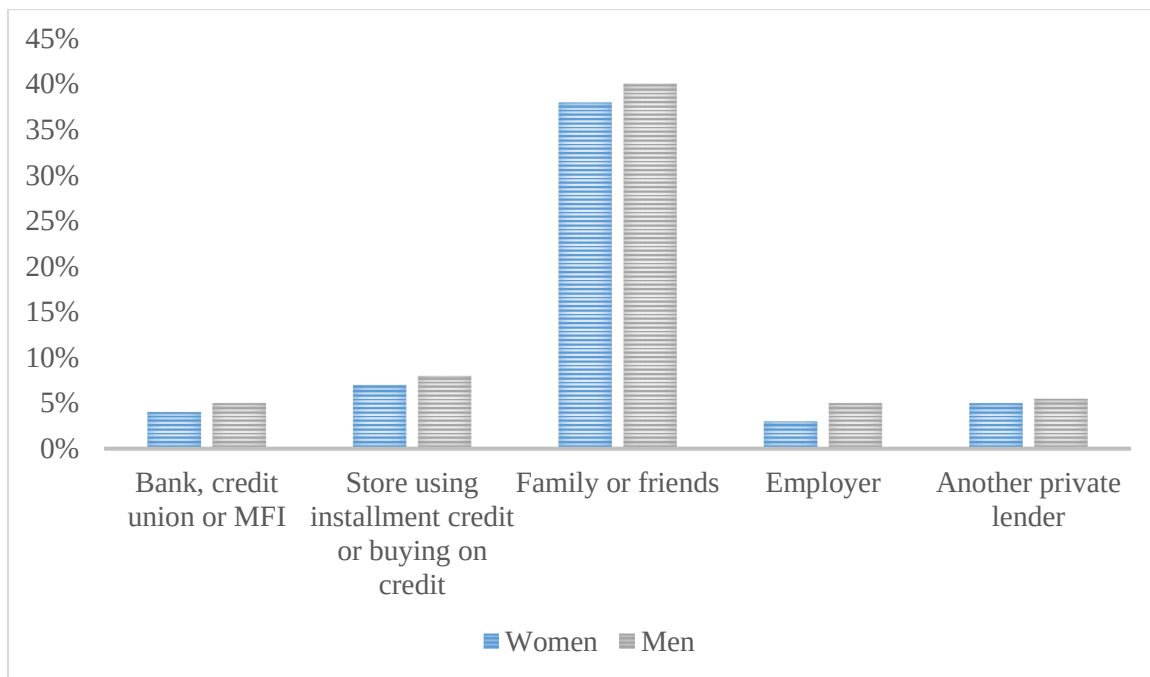


Figure 2.15: Formal and informal sources of credit by individual gender

Source: Author's compilation from 2015 – 2016 Global Findex database findings

The most popular source across all sub-regions is borrowing from friends or family. Merely 3% of adult individuals in Central and West Africa report having recently obtained a new loan from a reliable financial institution. In South Africa, where eight percent of the population reported formal borrowing, formal financial institutions originate most new loans.

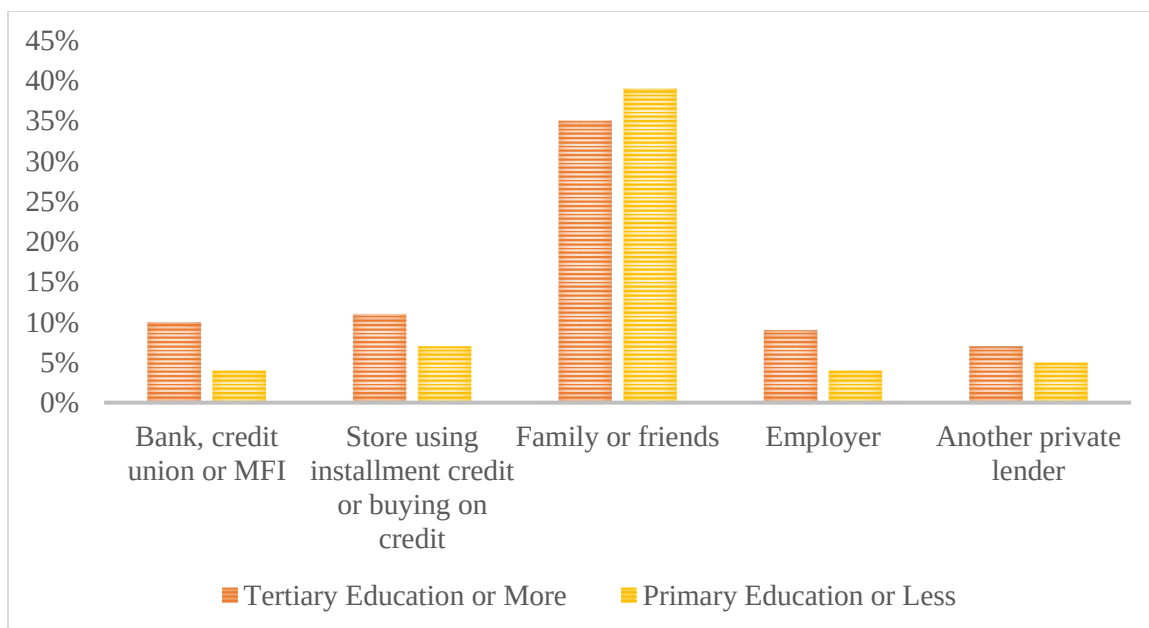


Figure 2.16: Formal and informal sources of credit by individual education

Source: Author's compilation from 2015 – 2016 Global Findex database findings

Comparing adults in East Africa (13%) to those in Central and West Africa (7%), where borrowing from informal private lenders is more prevalent, the former is more likely to use retail credit. The lowest percentage of credit card owners in Africa (3%), with the highest percentage reported by adults in Southern Africa (7%), are those in Africa.

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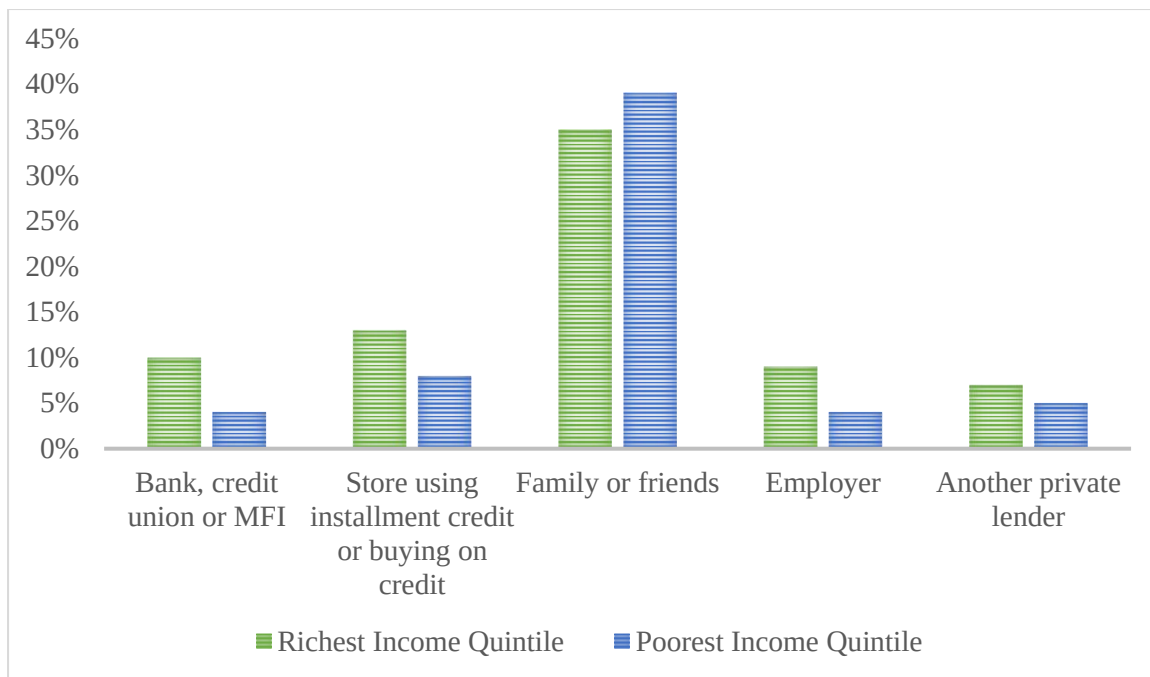


Figure 2.17: Formal and informal sources of credit by individual income

Source: Author's compilation from 2015 – 2016 Global Findex database findings

The most common trait across all sub-regions when analyzing individual characteristics is borrowing from friends and family. Men, those with a tertiary degree or above, and those in the highest income quintile tend to use formal financial institutions more frequently (see Figures 2.14 to 2.17).

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2.9 Summary

This chapter has demonstrated that even though there is no doubt that the financial sector in South Africa is highly developed, many people still do not have access to formal financial services. Nonetheless, a number of obstacles prevent South Africa's formal financial sector from offering the country's citizens full financial services. The nation's extreme income inequality is one of the primary problems. The population's low level of financial literacy is another barrier facing South Africa's formal banking sector. In addition, a lot of South Africans are limited by the high expenses of formal financial services (Triki & Faye, 2013). As a result of these formal finance constraints, households approach informal financial service providers to cater their financial needs.

Chapter Three

Literature Review

3.1 Introduction

In the context of the study, this chapter provides a thorough analysis of the body of current knowledge. It summarizes the research that has already been done on the relationship between poverty and finance. The conceptual literature on poverty, formal and informal finance, credit strand access, and saving strand access is presented at the beginning of the chapter. Next were discussions of the theoretical literature relevant to the research. The empirical literature is then discussed. The theoretical framework was presented at the end of the chapter.

3.2 Conceptual Literature

The conceptual literature on poverty is the main topic of this section, formal finance and informal finance. This section also discusses different approaches to measuring poverty.

3.2.1 Conceptualising Poverty

Lack of fundamental necessities like food, shelter, healthcare, water, and safety can be characterized as poverty in general (Bradshaw, 2007). According to Engberg-Pedersen & Ravnborg (2010), poverty is a complex issue with many theoretical interpretations that aim to encompass all of its dimensions. Poverty theories have developed over time as a means to understand the concept because varied people are frequently classified as poor by different measures of poverty (Sameti et al., 2012). The minority group theory which uses certain traits to categorize the disadvantaged was promoted by Rowntree in 1901. The hypothesis contends that events such the death of the head of the home, incapacity of the head of the household, an accident, old age, loss of job, low earnings, a sizable household, and irregular work make a household more likely to become poor (Addae-korankye, 2019). In addition, the theory contends that the disease of poverty is generational, spreading from one to the next.

Contrarily, the poverty theory based on subcultures proposes that people adapt to unfair and inequitable living conditions because they are the only way of life they have access to (Harvey & Reed, 2016). As a result, people tend to adjust and adapt to their way of life. The idea further divides the poor into different categories based on their circumstances and traits; it suggests that those living in a culture of poverty and those who are poor themselves do not produce a lot of wealth, which causes their returns to be low. According to Harvey & Reed (2016), the following traits characterize the culture of poverty and keep people trapped in it. These traits

include poor salaries, unemployment and underemployment, a lack of property, child labour, a lack of savings, and a lack of food.

The culture of poverty theory is visible in South Africa and that specific groups, such as children, newlyweds with dependents, and the elderly, are particularly vulnerable to the injustices of poverty. Harvey & Reed (2016) further assert that the poverty culture position has been misconstrued as one that blames the victim for their predicament; in reality, the idea does not condemn the poor; rather, it honours their fortitude and resourcefulness. The theory on how people see poverty contends that structural, individualistic, and fatalistic aspects contribute to it.

According to the structural view of poverty, society is too responsible for the existence of poverty (Calnitsky, 2018). According to the theory, there is no equity in society because some people are better off and have more resources than others. Given the legacy of apartheid, as well as the high levels of inequality and unemployment in the nation, this condition is not exceptional in South Africa. Furthermore, the personal perspective on poverty assigns personal responsibility to an individual's circumstances (Addae-korankye, 2019). The individual approach places a strong emphasis on behavioural and cultural elements.

According to the individualistic perspective, each person's culture and actions affect their surroundings (Calnitsky, 2018). The lack of aptitude, intelligence, and a dubious lifestyle are therefore seen as causes of poverty. Last but not least, the fatalistic view of poverty proposes that people blame their predicament on poor blessing, for example, being sick or physically incapable or getting into vehicle accidents (Addae-korankye, 2019). People view these as obstacles to riches or, more appropriately, leading comfortable lives (Engberg-Pedersen & Ravnborg, 2010).

3.2.1.1 Measurements of Poverty

In order to track social and economic situations and to assess the success or failure of the government and its programs, poverty measurements are primarily used. More poverty measures have been developed over time as a result of the significance of measuring poverty and the inadequacies of some existing measures (Engberg-Pedersen & Ravnborg, 2010).

The majority of poverty indicators focus on calculating the proportion of people who live in poverty. As a result, income levels are used to select the popular measurements. Nevertheless, the proportion of people being impoverished—specifically, lower than the poverty threshold—

does not always reflect the severity of poverty in the corresponding homes. Such a method of assessing poverty may be viewed as a workable but still desired measure if the level of poverty in a household were taken into account (K. M. Chen et al., 2019).

Using the income of each household, a poverty line is a threshold used to distinguish between those who are poor and those who are not. Contrarily, according to Johnson (1976), the poverty line is the sum of money needed to maintain a person's minimum level of living. In both developed and developing nations, poverty lines are frequently employed to assess a household's level of poverty. As a result, someone is considered poor if their income is below the established poverty level. Three approaches, namely absolute, subjective, and relative, are frequently used to assess poverty lines (Flik & van Praag, 1991).

Headcount Index (HI) is a well-liked indicator of poverty. It is defined as the proportion of the population that is either merely poor or lives below the poverty line (Goedemé et al., 2022). The index is regarded as a common and straightforward measurement. Since the HI physically counts heads to determine the proportion of people living in poverty, policymakers and scholars find it informative and successful. The HI has its limitations, just like any other measure. Some features of the index limit its effectiveness, one of which is that it cannot tell how far below the established poverty threshold a person actually is. Additionally, the HI only considers an individual's poverty level rather than the poverty level of their household. The following definition applies to the headcount index:

$$H(y, z) = \frac{M}{N}$$

Where y is distribution of income, z is considered the poverty line, and as such, the function that quantifies poverty is (y, z) . Where M denotes the total sample, and N is the number of people in a household.

The severity of poverty is determined by the Poverty Gap Index (PGI). The PGI estimates the percentage of people living in poverty, so indicating both the poorest and least poor people's consumption. Since the measure sets the social payments intended for the poor, it helps to lessen the severity of poverty (Clark et al., 1981). The measure's failure to account for the intensity of poverty is one of its weaknesses. The following gives an example of the PGI:

$$PG = \frac{1}{n} \sum_i^q = 1 \left[\frac{z - y_i}{z} \right]$$

Whereas the variables for the PG equation are Y_q and y_i , which represent the consumption of the people categorized as the poorest, and z , which represents the poverty line.

The Squared Poverty Gap (SPGI) Index gauges how poor a region is in a certain location. For each home or individual, the SPGI squares the disparity in poverty and weights the outcome. In contrast to data that are nearer the poverty line, the technique gives observations that are significantly below it a larger weight (Clark et al., 1981). It is said that the metric is interesting because it evaluates the disparity between impoverished households and individuals. On the other hand, it has additionally drawn criticism for being uncommonly utilized because it is somewhat challenging to understand.

$$P_2 = \frac{1}{N} \sum_{i=1}^q \left(\frac{z - y_i^2}{z} \right)$$

The SPGI can be defined as such, where P_2 signifies the squared poverty gap, N sums up the population, y_1 is an indicator of welfare (consumption per capita), z is the poverty line and N_p is the entire population of impoverished people. One of the metrics that Foster et al. (1984) invented is the SPGI.



The Sen index, initially aimed to integrate the impact of the number of impoverished, the extent of their poverty and how the impoverished are divided among the group (Clark et al., 1981). Below is a definition of the Sen index:

$$P_s = P_0 \left(1 - (1 - G^P) \frac{\mu^P}{Z} \right)$$

Where P_0 indicates the index of headcount, μ^P represents the average income (or spending) of the impoverished and the poor's disparity is indicated by G^P , observing that the Gini coefficient is a measure of inequality that goes from 0 to 1, with 1 denoting perfect equality and the poor experiencing more inequality the closer they are to 1.

The multidimensional poverty index (MPI) is a thorough assessment that considers all aspects of poverty (Foster et al., 2010). The MPI evaluates the extent of poverty by examining various dimensions rather than just one aspect or one particular because of it. As a result, the MPI offers useful findings that can be used to methods for policymaking and reducing poverty (Statistics South Africa, 2014). The lack of data intended to reflect various sorts of deprivations that are not solely dependent on income levels is one of the index's limitations. The index

considers a variety of factors, including spirituality, general standard of life, education, and health. Ten variables are therefore utilized to measure the dimensions as a result. The MPI identifies and distinguishes between those who are impoverished and those who are not, and then uses Foster et al. (2010) methodology to assign weights to the various variables. Following analysis, the index's findings will categorize all of the household's deprived conditions according to their dimensions. According to Bourguignon & Chakravarty (2003), the MPI can pinpoint the disparity that particular households are experiencing.

3.2.2 Conceptualising Informal Finance

Any financial activity or transaction that takes place outside of the established banking system is referred to as informal finance. It covers a broad spectrum of activities, such as lending and borrowing among close friends and family, microfinance organizations, rotating savings and credit societies, and even pawnshops (Nguyen & Canh, 2020). In developing nations, where the vast majority of people do not have access to standard financial services, informal money is essential. Understanding informal finance's traits, advantages, and difficulties is crucial for conceptualizing it.

The adaptability and flexibility of informal finance is one of its fundamental traits. Informal finance functions on a more individualized and flexible basis than traditional banking systems, which impose rigid norms and constraints (Matuku & Kaseke, 2014). Individuals are therefore able to receive financial services that are personalized to their own requirements and situation. For instance, the qualifying requirements for borrowers in the informal finance sector are frequently more lenient, enabling them to obtain loans even with nothing in the way of collateral or credit history (Wonga Finance SA (Pty) Ltd, 2017).

Individuals and communities can benefit in a number of ways from informal financing. It offers a chance for entrepreneurship and economic development while acting as a crucial source of financing for individuals who are shut out of traditional banking institutions (Mashigo, 2015). In addition, informal finance is frequently integrated into social networks, which promotes trust and solidifies links within the community (Matuku & Kaseke, 2014). People who rely on informal finance have quick and inexpensive access to finances, allowing them to deal with emergencies or make investments in sources of income (van Wyk, 2017).

However, there are still some difficulties with informal money. It is susceptible to abuse and fraud because there is no regulation or control. Borrowers may fall into debt traps as a result of the much higher interest rates imposed by informal lenders than by professional lenders

(Charemza & Ghatak, 1994). Additionally, people may find it difficult to obtain larger loans or develop financial stability without the necessary documentation and credit history. In order to create an environment that balances the benefits of informality with the protection of vulnerable people, it is critical for politicians and financial institutions to acknowledge the significance of informal finance.

3.2.2.1 Measurements of Informal Finance

Financial operations that take place outside of the official banking industry are referred to as informal finance. It is made up of a variety of financial arrangements, such as unofficial loans, savings groups, moneylenders, and other non-bank organizations (Matuku & Kaseke, 2014). To fully comprehend an economy's dynamics, policymakers, researchers, and financial institutions must measure the scope and significance of informal finance. Measuring informal finance might be difficult due to its nature.

However, surveys and interviews can be used to measure informal finance. The magnitude and scope of informal financial activities are frequently estimated in research studies using data gathered through questionnaires and interviews. People may be questioned in these surveys about their involvement in savings organizations, lending, borrowing habits, and other informal financial activities (Aliber, 2015). Researchers can determine the frequency and scope of informal finance within a given region or community by analysing this data (van Wyk, 2017).

Utilizing already available data sources and indicators is another way to measure informal finance. This method involves identifying patterns and trends in informal financial activities by using existing data, such as household surveys, national accounts, and central bank data. For instance, analysing household statistics can reveal information on the proportion of households that rely on informal loans and savings (Nanziri, 2018). Economists and decision-makers can better grasp the importance and function of informal finance in an economy by looking at these indicators.

3.2.3 Conceptualising Formal Finance

Formal finance refer to the conventional banking system, where borrowers get loans from banks and other financial institutions (Nguyen & Canh, 2020). Understanding the guiding concepts, frameworks, and operating mechanisms of the financial sector is necessary to conceptualize formal finance. It requires an understanding of the several elements and roles that make up this field, including as the markets, instruments, and financial institutions, as well as the rules and frameworks that control them. Individuals, businesses, and governments

engage in formal finance when they engage in structured, regulated, and standardized financial activity. It creates investment opportunities, promotes resource allocation, and supports economic progress (Aryeetey, 2008).

Formal finance is founded on the fundamentals of financial intermediation. Lenders and borrowers are connected via financial organizations including banks, insurance companies, and investment corporations (Nguyen & Canh, 2020). They transfer money from people and organizations with excess capital to people and organizations in need of money for a variety of things, such as starting a business, purchasing a home, or investing in new initiatives. These organizations also provide a variety of financial services, such as asset management, risk management, payment systems, and credit provision.

Additionally, transparent and well-regulated markets constitute the foundation of formal finance. Financial markets that make it easier to buy and sell financial assets like stocks, bonds, and derivatives include stock exchanges, bond markets, and commodity markets (Nanziri, 2018). Investors can exchange assets on these marketplaces and profit from their investments. For the financial system to be stable and honest, formal finance also needs effective rules and oversight structures. To safeguard investors and preserve market confidence, regulatory agencies, such as central banks and financial regulatory authorities, are essential in setting laws and ensuring compliance.



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3.2.3.1 Measurements of Formal Finance

The many metrics used to evaluate the accessibility and effectiveness of financial services and products provided by formal financial institutions are referred to as "measurements of formal finance." These organizations include, among others, commercial banks, credit unions, insurance providers, and investment companies (Manja & Badjie, 2022). The level of financial inclusion, which counts the percentage of people and enterprises with access to various financial services, is one crucial indicator of formal finance. For economic development and the eradication of poverty, access to formal money is essential since it enables people to invest, save, and guard against unforeseen financial calamities (Prathap et al., 2018).

The depth and scope of financial services offered is a crucial indicator of formal finance. The breadth and complexity of the available financial services, such as savings, loans, insurance, and investment possibilities, are referred to as the depth. The breadth gauges how far these services are available to various population groups, such as low-income and rural areas. Access to inexpensive credit and other financial services is frequently lacking in many developing

nations, which restricts economic prospects and stifles entrepreneurship. As a result, measuring depth and breadth offers useful information on the degree of financial inclusion and the potential for economic growth (Dawood et al., 2019).

Efficiency is yet another important measurement used in formal finance. It evaluates the efficiency and value of financial intermediation, including handling deposits, processing loan applications, and facilitating transactions (Le et al., 2019). An effective formal financial system decreases information and transaction costs while effectively allocating savings to profitable investments (Mohammed et al., 2017). For financial intermediaries to remain profitable and long-lasting while simultaneously providing customers with better financial services and cheaper prices, efficiency is essential. Measuring the effectiveness of formal finance aids in identifying potential hurdles to economic growth and financial inclusion, such as legal restrictions or outdated technology.

3.3 Theoretical Review

The various theories that support the use of both formal and informal financial services are reviewed in this section, along with how they serve as the study's foundation. Its goal is to provide a solid theoretical foundation that elucidates the coexistence of formal and informal finance phenomena from the perspectives of supply and demand. This facilitates comprehension of how financial use and access impact economic entities, like households. The supply side of financial services is concerned with financial intermediation, while the demand side examines the decisions made by economic agents regarding the services offered by financial institutions. The study employs multiple theories to explain financial services use and access. Specifically, the supply side is explained by Stiglitz and Weiss Imperfect Information Theory, while the demand side is explained by the Rational Choice Theory. Additionally, a review of the Financial Dualism Theory is conducted, which is concerned with investigating the coexistence of formal and informal finance systems within an economy. The financial dualism model serves as the accepted theoretical framework.

3.3.1 Rational Choice Theory

Rational choice theory can be traced back to the neoclassical school of thought in the late 19th century. Scholars like Jeremy Bentham, William Stanley Jevons, and Alfred Marshall played crucial roles in shaping this theory. Their works on utilitarianism, marginal utility, and consumer behaviour laid the groundwork for rational choice theory, which emphasizes individuals' decision-making processes based on the pursuit of self-interest and cost-benefit

analysis (Zafirovski, 2000). Today, rational choice theory continues to be a foundational concept in social sciences and provides valuable insights into understanding human behaviour.

A social science paradigm called rational choice theory examines how people make decisions in order to understand human behaviour (Burns & Roszkowska, 2016). For the purpose of the study, the use of formal and informal finance is explained using this approach. In the world of formal finance, people make logical decisions based on the benefits and costs they see. The interest rates, loan conditions, and potential risks related to borrowing from banks or other financial institutions are all thoroughly examined. Individuals' rational decision-making process enables them to raise money for a variety of goals, like launching a business or investing in assets. The theory is also being used to explain why people choose to use informal financing, on the other hand. Rational choices are made to rely on alternatives to official financial institutions, such as moneylenders or community-based savings and credit groups, for people who cannot access them. By considering elements like credibility, loan flexibility, and accessibility, these people weigh the benefits and drawbacks of informal finance.

The premise that people want to get the most utility or satisfaction out of their decisions is a crucial component of rational choice theory (Salazar & Lee, 1990). People may believe that using banks or other formal financial institutions will result in lower costs or better interest rates than using informal options when it comes to formal funding. They examine the advantages and disadvantages carefully to determine the prospective advantages and expenses of borrowing from official sources. The individuals' desire to optimize their financial well-being and accomplish their goals drives this logical decision-making process.

The rational choice theory in this study is also used to study informal finance. For a number of reasons, those lacking access to conventional financial services may logically elect to use informal options. These people might not have credit histories at all, which makes it challenging for them to get loans from conventional institutions. They might also discover that borrowing from unofficial lenders is more dependable and available because it might involve fewer red tape requirements and more lenient payback terms. Such choices are based on logical analysis of the available options and the individuals' specific financial situations.

Finally, rational choice theory is utilized to comprehend how decisions are made in relation to the use of formal and informal money. Based on their expectations of obtaining better interest rates, loan terms, and lesser risks, people consider the potential advantages and disadvantages of using formal financial services. Similarly, people who rely on informal financing do so after

weighing the benefits and drawbacks of using such resources. The use of rational choice theory sheds insight on the variables impacting people's financial decisions in both formal and informal financial spheres, which helps to understand why people make the decisions they do.

Strengths and weaknesses of the Rational Choice Theory

The rational choice theory is a fundamental concept in finance that assumes individuals make decisions based on rationality, self-interest, and the maximization of utility. This theory has been widely applied in various financial models and frameworks, but it also carries certain assumptions that may limit its applicability.

The rational choice theory assumes that individuals have perfect information and are capable of processing this information efficiently. However, in reality, individuals often face limited information and cognitive biases that can influence their decision-making process. For instance, investors may rely on heuristics or past experiences rather than conducting thorough research when making investment decisions.

In addition, the rational choice theory assumes that individuals have consistent preferences over time. However, human behaviour is often influenced by emotions and external factors such as market conditions or social pressure. These factors can lead to irrational decision-making or deviations from expected utility maximization.

Furthermore, the rational choice theory assumes that individuals are risk-averse and seek to maximize their wealth. While this assumption holds for many investors, there are also those who exhibit risk-seeking behaviour or prioritize other non-financial objectives over wealth accumulation.

3.3.2 Stiglitz and Weiss Imperfect Information Theory

The imperfect information theory dates back in the early eighties from the work by Joseph Stiglitz, Bruce Greenwald and Andrew Weiss. According to Ho (2004) imperfect information theory evolved because rural credit markets could not operate the same way as classical competitive markets are supposed to work. Stiglitz & Weiss (1981), observed that informal finance service provider (rural moneylenders) abused monopoly power by charging more than 75 per cent interest rates and in some periods, credit was unavailable at any price. To respond to high interest rates Stiglitz & Weiss suggested that formal financial service provider (cheap institutional credit) must be provided as an alternative to rural moneylender. However the establishment of alternative formal finance credit has not prevailed to push the informal finance (traditional moneylender) out of the market and whatever competition institutional credit

provided, traditional moneylenders continue to charge high interest rate (Myint, 1985). Therefore, the formal and informal financial systems coexistence despite the fact that interest rates in formal sector are considerably below those charged in the informal sector.

The idea of imperfect information theory, which is widely accepted in economics, covers circumstances when parties or individuals involved in a transaction have little or no knowledge about important elements Greenwald & Stiglitz (1993). When analysing how formal and informal finance are used in an economy, this idea becomes extremely important. In contrast to numerous unregulated systems like community-based lending or remittances, formal finance refers to the regulated financial institutions like banks and credit unions. In both situations, incomplete knowledge has a big impact on how financial transactions behave and turn out.

People frequently don't fully understand the terms and conditions of financial products or the creditworthiness standards applied by banks when it comes to formal finance (Asongu & Nwachukwu, 2017) and (Asongu & Odhiambo, 2018). Potential borrowers may be discouraged from obtaining credit as a result of this informational asymmetry because they fear being rejected or don't comprehend the conditions. Similar difficulties may arise for lenders when determining a borrower's creditworthiness, resulting in the denial of credit to deserving people or the awarding of loans to people who would default. This incomplete information makes it difficult for formal financial systems to operate effectively, which restricts how easily enterprises and people can acquire funds and carry out useful activities.

On the other hand, incomplete information has a significant impact on how informal finance is used. Many times, people choose informal finance over formal institutions because it needs less paperwork, is more adaptable, and offers quicker access to funds. However, the absence of oversight and transparency in such networks makes it easier for fraud and excessive interest rates to flourish. Additionally, it may be difficult for borrowers to fully understand the standing and dependability of the lenders, making it tough for them to make wise choices. Imperfect information can result in exploitative behaviours, fewer options for borrowers, and a higher risk of financial losses in informal financing.

Finally, the dynamics of formal and informal financial use can be better understood thanks to the application of imperfect information theory. Lack of understanding of the terms and circumstances of formal financial products or the creditworthiness requirements makes it difficult to obtain credit and may lead to improper capital allocation. The absence of regulation and transparency in informal finance, meanwhile, raises the danger of fraudulent activity and

places additional obligations on borrowers. Understanding and addressing the problems caused by incomplete information are essential for increasing the effectiveness and inclusivity of both formal and informal finance as policymakers and researchers work to improve financial systems.

Strengths and Weaknesses of Stiglitz and Weiss Imperfect Information Theory

Stiglitz and Weiss's imperfect information theory in finance has been widely recognized as a ground-breaking contribution to the field. Their work sheds light on the significance of information asymmetry between borrowers and lenders, which has profound implications for financial markets. However, despite its strengths, their theory also exhibits certain weaknesses that need to be addressed.

One of the major strengths of Stiglitz and Weiss's theory is its ability to explain market failures resulting from adverse selection and moral hazard. By emphasizing the role of imperfect information in financial transactions, they provide a comprehensive framework for understanding why lenders may face higher risks when lending to borrowers with limited creditworthiness or when borrowers have incentives to engage in risky behaviour.

Moreover, their theory offers valuable insights into the design of optimal contracts in situations where information is asymmetric. It highlights how lenders can use screening mechanisms such as collateral requirements or interest rates to mitigate adverse selection problems and align incentives with borrowers.

Despite these strengths, there are several weaknesses in Stiglitz and Weiss's imperfect information theory. Firstly, it assumes that all individuals are rational actors who maximize their own utility without considering potential psychological biases or irrational behaviour. This assumption limits the applicability of their model to real-world scenarios where individuals often deviate from rational decision-making.

Additionally, their theory does not adequately address the dynamic nature of information asymmetry over time. In reality, new information becomes available during the course of a loan agreement that can significantly impact borrower's creditworthiness or lender's perception of risk. Ignoring this temporal dimension undermines the accuracy and relevance of their model.

Furthermore, Stiglitz and Weiss's focus on adverse selection neglects other important factors contributing to market failures such as systemic risks or external shocks. By solely attributing

market inefficiencies to asymmetric information between borrowers and lenders, they overlook broader macroeconomic factors that can have significant impacts on financial markets.

3.3.4 Theory of Financial Dualism

The theory of financial dualism, also known as the dualistic theory of finance, is a concept that seeks to explain the coexistence of formal and informal financial systems within developing economies. It posits that in these countries, there are two distinct financial sectors operating simultaneously: one formal, regulated by government institutions and commercial banks, and another informal, characterized by unregulated activities such as moneylending and savings groups. The origins of this theory can be traced back to the works of economists such as Thorstein Veblen and Alexander Gerschenkron in the early 20th century. They observed that in many developing countries, traditional financial practices persisted alongside modern banking systems. This led them to question why these dualistic structures emerged and how they functioned.

The idea of financial dualism theory has attracted a lot of interest in the field of finance. The coexistence of formal and informal financial systems within an economy is the main topic of this theory (Charemza & Ghatak, 1994). Formal finance is the term used to describe the conventional banking system, which is governed by government agencies and is subject to a particular set of rules and laws. Contrarily, the term "informal finance" refers to a variety of non-bank financial organizations that function outside the established framework, including payday lenders and microfinance organizations.

The formal and informal financial systems both play essential roles in delivering financial services to various parts of the population, according to one of the main justifications of the financial dualism theory (Shem & Atieno, 2001). Large firms and high-income individuals frequently have access to formal financing because they have the credentials and collateral needed to satisfy bank criteria. But for low-income people, microenterprises, and tiny businesses that don't fit the rigid requirements of official financial institutions, informal finance is a crucial source of credit.

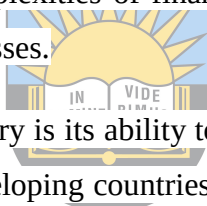
The acknowledgement that both formal and informal finance systems have their strengths and shortcomings is another essential component of the financial dualism theory. Although formal money is frequently more safe, transparent, and regulated, it may not be as adaptable or responsive to the financial requirements of vulnerable groups. On the other side, informal finance may be more versatile and accessible, but it frequently has higher interest rates and less

comprehensive consumer protection. Both systems are crucial for financial inclusion and economic growth, therefore when creating financial regulations and policies, authorities should take into account how they coexist and interact (Ifionu & Ibe, 2015).

Finally, the financial dualism hypothesis sheds light on how formal and informal financial systems coexist in a given economy. These systems, which both have benefits and drawbacks, serve the financial demands of various population sectors. Policymakers can strike a balance that encourages financial inclusion and economic progress by considering the advantages and disadvantages of formal and informal financing. This study is underpinned by the financial dualism theory. The justifications for the relevance of financial dualism theory to this study is provided in the following section.

Strengths and Weaknesses of the Theory of financial Dualism

The theory of financial dualism, which posits the coexistence of formal and informal financial sectors in developing economies, has gained considerable attention in recent years. While it offers valuable insights into the complexities of financial systems in these contexts, it also presents certain strengths and weaknesses.



One of the main strengths of this theory is its ability to explain the persistence and resilience of informal financial practices in developing countries. By recognizing that individuals often resort to informal channels due to limited access to formal institutions, it sheds light on the importance of understanding local socio-economic conditions when designing policies. Moreover, the theory highlights how informal finance can serve as a safety net for vulnerable populations who are excluded from formal systems.

However, a weakness lies in its generalization that formal and informal sectors are mutually exclusive entities. In reality, there is often overlap between these sectors as individuals navigate both simultaneously. This complexity challenges the binary nature of financial dualism and calls for a more nuanced understanding. In addition, critics argue that the theory overlooks potential synergies between formal and informal finance. Instead of viewing them as competing alternatives, some scholars suggest exploring ways to leverage their respective strengths for inclusive development strategies.

3.3.5 Reflection on theories

The rational choice theory's assumption of purely rational decision-making and self-interest, lack of consideration for cognitive limitations, and disregard of external factors limit its applicability to complex human decision-making. To gain a more comprehensive

understanding, this study considers alternative theory such the theory of financial dualism that account for the role of emotions, values, social norms, cognitive biases, and structural inequalities in decision-making processes. Stiglitz and Weiss imperfect information theory's oversimplification of imperfect information, the assumption of rationality, and the neglect of the dynamic nature of information are some of the key critiques of their theory. To address these limitations, this study develops a more comprehensive and accurate understanding of economic behaviour in the real world. While the theory of financial dualism offers valuable insights into the coexistence of formal and informal finance in developing countries, it falls short in several areas. By assuming superiority of formal institutions and overlooking demand-side factors, it fails to capture the complexity and nuances inherent in these systems. To account for demand-side factors overlooked by the theory of financial dualism, this study incorporated the rational choice theory.

3.4 Empirical literature

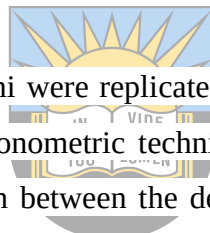
3.4.1 Empirical Evidence on Formal Finance and Poverty

According to empirical research on formal finance and poverty, people who have access to these services can dramatically reduce their level of poverty and enhance their quality of life (Boukhatem, 2016). Banks, microfinance organizations, credit unions, and other regulated entities are examples of formal financial services. According to Rewilak (2017) study, formal financial access to credit significantly contributed to the decline of poverty in a number of emerging nations. Low-income people now have the ability to create small enterprises, invest in income-generating ventures, and save money for unforeseen expenses or future needs.

To support this, Imai et al. (2010) utilised treatment effects modelling to estimate the poverty-reducing effects of microfinance institution loans for productive purposes, such as non-farm enterprises or agricultural investment, on household poverty levels using survey data from the Small Industries Development Bank of India. The endogenous binary treatment effects and sample selection bias related to microfinance institution access were considered by the treatment effects model that was employed. Although there are certain limitations that the authors identified, it has been confirmed that microfinance institution productive loans have a significant positive impact on a multidimensional welfare indicator. These limitations may stem from potentially overlooked but significant determinants of access to microfinance institutions. The Tobit and Propensity Score Matching models were also used to confirm the significance of the coefficients. Additionally, the writers discovered that credits for hard work had a greater impact on reducing poverty in rural regions. However, in urban areas, simply

having access to microfinance institutions has a greater average impact on reducing poverty than having loans from these institutions used for productive purposes.

Similarly, Ayyagari, Beck, & Hoseini (2013) measured the impact of financial sector development on changes in rural and urban poverty in 15 Indian states between 1983 and 2005 using data from an annual household survey. The authors discovered, by tracing the events of 1991, a strong inverse relationship between rural poverty and financial deepening as opposed to financial inclusion. It appears from the results of instrumental variable regressions that endogeneity and omitted variable biases cannot break this relationship. The authors also discovered that financial deepening has lowered poverty rates, particularly for self-employed people in rural areas. However, it has also encouraged an interstate migration trend from rural to urban areas' tertiary sectors, which is consistent with the idea that credit to the tertiary sector is what drives financial deepening. According to this, financial deepening encouraged entrepreneurship and caused geographic-sectorial migration, which in turn helped to reduce poverty in rural areas.



Results by Ayyagari, Beck, & Hoseini were replicated by Sehrawat & Giri (2016) in India, Sehrawat & Giri used a different econometric technique Auto Regressive Distributed Lag (ARDL) to investigate the connection between the development of the financial sector and poverty reduction in India over the period 1970 to 2012. The co-integration test results indicate a long-term correlation between India's financial development and the decline of poverty. The findings of the ARDL test imply that economic expansion and financial development reduce poverty in both short- and long-term. Additionally, the results of the causality test demonstrate a positive and unidirectional causal relationship between financial development and the decrease of poverty.

Another similar study by Inoue & Hamori (2010) examined empirically if India's financial deepening has helped to reduce poverty. Making use of imbalanced panel data for 28 states and union territories from 1973 to 2004, the authors estimated models that accounted for international openness, inflation rate, and economic growth while explaining the poverty ratio through financial deepening. The authors calculated a GMM that demonstrated that while economic growth and financial deepening reduce poverty, the relationship between inflation rate and global openness is inverse. The findings demonstrated resilience to shifts in the poverty ratios across the board for the economy, rural areas, and urban areas.

Furthermore, empirical research have demonstrated that microfinance in low income developing countries has been always used as a tool to gear up the standard of living for the poor people. Usman (2015) analysed the contribution of microfinance in raising the standard of living for low income people and poverty reduction. The author developed a questionnaire to examine the impact of microfinance for the development of poor people in Pakistan. To investigate the impact of micro finance in poverty reduction, the author used Content analysis. Results show that micro finance has a positive impact on poverty reduction and increase income level, education and develops the living standard for the poor. However, the author suggests that loan size may have the positive or negative effect on the people. This is because there are many issues which are faced by people for getting loan from financial institutions.

Similarly, Kasali, Ahmad, & Lim (2015) collected data through surveys questionnaire to examine the role of micro finance on alleviating poverty in the South West Zone of Nigeria. To analyse the data collected, the authors used descriptive statistics together with binary logit regression model. Results from the study show that micro finance credit have a significant impact on the credit beneficiaries in the study area which lead to the alleviation of poverty.

Sehrawat & Giri (2016a) investigated the influence of financial development on alleviating poverty in eleven South Asian less developed countries over the period 1990 to 2012. They used Levin-Lin-Chu and Im-Pesaran-Shin unit root tests to test for the stationarity properties of the data. To investigate the existence of long run relationship, the authors employed the Pedroni panel co-integration test. Furthermore, they used fully modified OLS to investigate the coefficients of co-integration and panel causality test to check the causal link. Results from Pedroni co-integration test show the existence of a long run relationship between financial development and poverty reduction in South Asian emerging economies. A significant and positive relationship between financial development, trade openness, inflation, and poverty reduction were confirmed by the fully modified OLS method. Furthermore, a unidirectional causality running from financial development to poverty reduction variable is confirmed by panel causality test.

The role that financial markets play on reducing poverty in less developed countries cannot be overlooked. For instance Rewilak (2017) employed the baseline model to investigate what role does financial development play in alleviating poverty in sub-Sahara Africa over the period 2004 to 2015. The author separated financial development into four categories and employed recent available data. Results reveal that both financial inclusion and increased physical access

are significant in minimising the amount of people underneath the poverty line. In contrast, if alternatives measure of financial instability is used existing results are changed, thus financial deepening and greater physical access to finance may increase the incident of poverty. Furthermore, the results remain robust even when controlling for mobile money, providing a further valuable contribution to the literature.

In contrast, a study by Neaime & Gaysset (2018) used both GMM and Generalised Least Squares (GLS) estimators to examine the impact of financial inclusion on income inequality, poverty, and financial stability in eight Middle East and North Africa (MENA) countries over the period 2002 to 2015. The results reveal that whereas financial inclusion decreases income inequality, population size and inflation rate are found to increase income inequality. On the other side of literature results reveal that financial inclusion has no effect on poverty, while population, inflation rate, and trade openness are all found to significantly increase poverty. This arises because MENA's banking system is not industrialised enough in terms of access to financial services to effectively impact poverty in a positive way. Furthermore, the results show that whereas financial integration is a contributing factor to financial instability, however financial inclusion contributes positively to financial stability.

Boukhatem (2016) examined the direct impact of financial development on reducing poverty in a panel of 67 low- and middle-income nations between 1986 and 2012 using a Generalized Methods of Moments (GMM) estimator. The primary goal of the author was to pinpoint and measure the ways that financial development influences poverty. Regardless of the econometric method employed, the study's findings point to the significant role that financial development plays in reducing poverty. On the other hand, it has been discovered that financial development instability penalizes the impoverished population and may outweigh the benefits of financial development.

Differing result were found by Seven & Coskun (2016), in their study they investigate whether the growth of the banking and stock industries helps to lessen poverty and income inequality in developing nations. The authors used a dynamic panel data method with an updated dataset over the period 1987 to 2011, they considered the distinct and concurrent effects of banks and stock markets when evaluating the connection between finance, inequality, and poverty. The authors analysed panel studies and discovered contradictory explanatory findings, indicating that while financial development fosters economic growth, low-income individuals in developing nations may not always profit from it. The authors' analysis of the connection

between finance and poverty revealed that neither stock markets nor banks significantly contribute to the decrease of poverty. The authors contend that the poorest societal segments in developing nations have not benefited from financial development in banks and stock markets.

Similar results were found in Malaysia by Samer et al. (2015), who investigated the impact of household income on Malaysian microfinance Amanah Ikhtiar Malaysia (AIM). In the Malaysian states of Melaka and Selangor, the author interviewed 780 recent and former clients in a cross-sectional survey. To collect the data from urban and rural district, the authors used a stratified random method. The results of multinomial logistics show that Malaysian micro finance has is positively correlated with the income of household who participated in the program for three years as opposed to recent borrowers who did not receive treatment.

Removing barriers to accessing financial services has been at centre of research. Dawood et al. (2019) examined, using Indonesia as a case study, how financial inclusion affects household poverty in developing nations. Data from roughly 300,000 households from the 2017 Indonesian National Social and Economic Survey (Susenas) were used by the author along with a binary logistic model. According to the author, financial inclusion lowers the chance that a household will be completely impoverished. Furthermore, it was discovered that financial inclusion could make up for a lack of assets, a deficiency in non-agricultural employment opportunities in rural areas, and low levels of education among household heads. Additionally, the author makes the case that financial inclusion might lessen the incentives for low-income, unskilled rural residents to move to cities in pursuit of non-agricultural employment opportunities.

The globalised world economy still faces the problem of reducing poverty. Bayar (2017) used the Westerlund (2009) co-integration test and the Carrion-i-Silvestre, del Barrio-Castro, and Lopez-Bazo (2005) panel unit root test to consider cross-sectional dependence and multiple structural breaks in order to examine the relationship between financial development and the reduction of poverty in developing market economies from 1993 to 2012. The findings show that financial development, particularly the growth of the banking industry and the stock market, significantly reduces poverty in emerging market economies.

Lal (2018) gathered data from 540 cooperative bank customers in three northern Indian states: J&K, Himachal Pradesh (HP), and Punjab. In order to find out how financial inclusion affects India's cooperative banks' ability to reduce poverty, the author used purposive sampling from

July to December 2015. The factor analysis technique was utilized by the author to reduce the total data to a minimum number of factors. Utilizing second order Confirmatory Factor Analysis (CFA), the author verified the accuracy and consistency of the data. The author used statistical methods like one-way ANOVA, t-test, and structural equation modelling (SEM) to analyse the data. According to the study, financial services provided by cooperative banks that are easily accessible and reasonably priced have a direct, significant, and positive impact on reducing poverty. Additionally, the author discovered that financial inclusion has improved the lives of the impoverished and assisted them in escaping the grip of poverty by providing access to basic financial services like savings, loans, insurance, credits, etc.

In contrast to other literature which focuses on the effects of financial deepening on inequality and poverty. Zhang & Ben (2019) focused on multidimensional investigation of the effects of financial development on inequality and poverty. The authors have considered financial access, depth, efficiency, stability, and liberalisation. They used Ordinary Least Squares (OLS) and Instrumental Variables (IV) estimators to provide evidence for the relationship between multidimensional financial development, income inequality, and poverty reduction in 143 developing and developed countries over the period 1961 to 2011. They found that four of the five dimensions of financial development (access, depth, efficiency, and stability) may significantly decrease inequality and poverty. Furthermore, financial liberalisation may worsen inequality and poverty. In addition, the development of the banking showed a more significant impact on income distribution than the development of the stock market.

To take into account what extent banks and micro financial institutions reduce poverty. Donouadonsou & Sylwester (2016) applied Instrumental Variables (IV) approach such as the fixed-effects two-stage least squares to examine the impact of banks and micro-finance institutions on poverty reduction in a panel of 71 developing countries over the period 2002 to 2011. By using credit to GDP as the main indicator for financial development, the authors found that banks reduce poverty when poverty is measured by the headcount and poverty gap. However, when it is measured by squared poverty gap there is no significant effect of banks. In contrast, micro financial institutions revealed not to have any impact on poverty regardless of the measure of poverty used. They implied that banks have some ability to reduce poverty whereas microfinance institutions do not, however this is at the aggregate level.

Nanziri (2018) used a panel and treatment effect techniques to investigate whether welfare outcomes of users of formal financial services and uses of alternative non-formal financial

services differ in South Africa. The results of the study reveal that the use of formal and non-formal financial services leads to positive and significant welfare outcomes which are measured using an asset and well-being index. Furthermore, the results build on assumption that formal and informal financial services are substitutes and not necessary complements, the choice to use them depends on both personal and sector specific characteristics.

Prathap, Mahesh, & Karthik (2018) used both qualitative and quantitative research methods to examine how micro finance can impact poverty alleviation in Karnataka. The analysis of results reveals a significant positive correlation between access to financial activities and the development of the standard of living by families both in economic and social terms.

Literature survey studies also recognise financial sector development as an effective tool to for alleviating poverty. For instance, a study by Mehta (2018) carefully reviewed the research demonstrating the connection between the growth of the financial sector and the impoverished in developing nations. According to the author, semi-formal financial services provided by microfinance institutions directly benefit the impoverished in developing nations, whereas formal financial services offered by commercial banks in those same countries are primarily appropriate for the non-poor population and therefore function as a medium-direct channel of financial development to affect the poor.

In summary, this empirical research shows a link between formal financial access and a decline in poverty. Through formal financial services, people can invest in businesses that generate income, put money away for unexpected expenses, and handle financial shocks. However, the effect of formal finance on reducing poverty may vary depending on a number of variables, emphasizing the significance of all-encompassing strategies and complementing resources. These results highlight how important it is for policymakers to support measures that improve financial inclusion while simultaneously addressing the larger problems that people who are poor must deal with.

3.4.2 Empirical Evidence on Informal Finance and Poverty

One of the most prevalent characteristics of emerging economies is poverty. Various levels of government have implemented various programs to reduce poverty, but their efforts have not been successful. The poor are largely shut out of formal financial system credits in the majority of global economies. In order to meet their financial needs, the impoverished without access to banks have created a wide range of informal financial arrangements. Therefore, it is impossible to overstate the importance of informal financial institutions in the mobilization and

distribution of rural savings. The majority of the rural poor would not have had much or any access to credit facilities without them, which would have raised the rate of poverty.

Research by (Oleka & Eyisi, 2014) examined the main issues these informal mechanisms faced and the degree to which they contributed to the goal of reducing poverty in Nigeria. With a population of 800 respondents, the study used a descriptive survey design. Simple percentage analysis and descriptive statistics were used to analyse the data. Results showed that there is no discernible difference in poverty levels in Nigeria as a result of informal financial institutions. The main issues these institutions face is low infrastructure, cultural loan defaults, illiteracy, and poverty-mentality.

Poor people still rely heavily on the informal credit market as a source of funding. To validate this Viet & Berg (2014) determined the average impact of informal credit on the spending of households that are borrowing money, and then evaluated its influence on inequality and poverty. They aimed to remove potential bias resulting from variations between participants and non-participants in credit markets by employing fixed-effect regressions with instrumental variables. They discover that the impoverished borrowed proportionately more from unofficial sources than did the affluent, and that unofficial credit was highly successful in reducing poverty. In 2006, it lowered the population's overall poverty incidence by 1.4 percentage points and the poverty incidence of borrowers by 8 percentage points. In a similar vein, the poverty-severity index and the poverty gap index were both dramatically reduced by informal credit. There was minimal impact on the inequality of expenditure.

Similarly, a study by Eroglu (2010a) focuses on Turkey's rotating savings and credit associations, which are organized among low-income households. The research shows the unique capacity of different rotating savings and credit associations to function properly under inflationary conditions, based on a longitudinal study of 17 households. Instead of being portrayed as a recreational activity for middle-class women as is commonly believed, rotating savings and credit associations are portrayed as a self-welfare tool that helps impoverished households develop the discipline of saving money for both consumption and investment needs. In contrast to popular belief, these households use revolving credit and savings associations when formal credit and savings options are available.

Same results we discovered by Eroglu (2010), who demonstrated the distinct ability of various rotating savings and credit associations to operate smoothly under inflationary conditions. To achieve this the author conducted longitudinal study of 17 households in Turkey. The findings

demonstrated that, in contrast to the common perception of rotating savings and credit associations as a recreational activity for middle-class women, they actually serve as a self-welfare tool by teaching impoverished households how to save money for both their consumption and investment needs, which in turn lowers poverty. Contrary to popular belief, these households are observed to use revolving credit and savings associations when formal credit and savings options are accessible.

Research clearly shows that informal finance mechanisms in the form of *stokvels* are self-help initiatives created to respond to the problems of poverty and income security in communities. Matuku & Kaseke (2014) validates the latter by using a qualitative research approach amongst the population of 30 women to investigate what role does the *stokvels* groups play in improving the lives of people in Johannesburg (Orange Farm community), South Africa. They used the snowball sampling technique to select the participants and scheduled a semi-structured interview to guide the face to face interviews to collect data. The study's findings showed that in addition to helping members achieve their basic needs, *stokvels* give them the chance to save, invest, and eventually amass assets. The outcomes show even more how *stokvels* support women's empowerment. The *stokvels* were portrayed by the writers as a comprehensive provider of informal finance services.

Results by Matuku & Kaseke (2014) were replicated by Van Wyk (2017), who conducted semi-structured interview sessions which lasted for thirty minutes to outline the reasons why rural women in South African play a part in *stokvels* in their communities together with how *stokvels* are organised and how they support rural families. To select women whom participated in the interviews, the author employed a purposive sampling approach. The author found that participation in the *stokvel* helps its members to eradicate specific circumstances such as poverty and unemployment in their respective communities. Furthermore, the results demonstrated that women who participate in *stokvels* believe that their participation play an important role in financial support during tough times, especially when a sudden bereavement strikes a family.

Another similar study in South Africa by Nyandoro (2018) employed a feminist lens that concentrates on women's agency in South Africa to interpret the vital role that informal financial services play. To develop a distinct story about poverty, gender, and the republic's use of rotating savings plans, the author used both qualitative and empirical research methodologies. The results revealed that most South African women were poor then by

embarking on informal financial service groups activities they succeeded in the fight against poverty. Furthermore, South African ventured into *stokvels* with such vigour which, despite the known challenges of *stokvels*, confounded the perceptions of the limited successes of the programmes by showing that whereas there were low points, *stokvels* also brought out the high points of achievement.

There is a possibility that the concept of economic growth will be accompanied by an increase in unpaid work. Informality can boost competitiveness and lower labour costs, which can aid in growth. Nonetheless, achieving sustainable growth will require a well-run and controlled informal economy. Furthermore, a generalized informality concerning work, business, and productive activities is commonly seen as impeding full economic participation, as well as long-term economic growth and the reduction of poverty. This is due to an incomplete understanding of the relationship between growth, poverty alleviation, and informality.

To provide insights on the relationship between informality, poverty alleviation and growth. Research by Yelwa et al. (2017) looked into how Nigerian poverty reduction efforts relate to the activities of the informal financial sector. Data from 150 informal sector operators in Gwagwalada Area Council-FCT are used in a multivariate panel data approach. The socio-economic impact of the informal sectors on poverty alleviation in Nigeria was perceived, and data was gathered using a structured questionnaire and analyzed using the appropriate technique. The results showed that informal sector operators significantly and positively contribute to the reduction of poverty in Nigeria; however, these institutions face several challenges, including low infrastructure, high inflation, illiteracy, poverty mentality, and difficulty obtaining credit.

Similar results were found Yusuf et al. (2009), their empirical study details the level of poverty in Offa town, Kwara State, Nigeria's informal sector and the contribution of an informal financial institution—Rotating Savings and Credit Associations, or ROSCAs—to lowering the poverty rate. A multiple regression analysis, the P-alpha-class poverty measure, and a set of household data were employed. A survey was distributed to 500 members of Offa town's ROSCAs who operate in the informal sector. According to their research, the unofficial financial sector contributes significantly to the decline in poverty in society.

Utilizing a field study on the distribution of financial services information in more than 320 Malawian villages, Flory (2018) discovered that formal savings boosts private transfers to other households during the lean season, as well as agricultural investments and crop income. Higher

educated households open accounts and see increases in income and savings; lower educated households do not. But unlike other suggestions in the literature, the adopters' benefits are utilized to help insure the village as a whole., rather than having a negative impact on sharing through networks due to savings. The health, food consumption, and transfer receipts of non-savers all increase significantly. The households that are least fortunate see especially significant increases in informal aid. Results demonstrate that the expansion of the financial markets has significant and unexpected effects on informal support networks, in addition to immediate effects on service users. The effectiveness of a novel strategy to promote service uptake and quicken financial deepening is also supported by the results.

Informal financial mechanisms are those financial institutions found in the rural areas through which rural dwellers save their money on a short-term basis and also source funds when they are in need. A study by Ngozi & Frank (2021) investigated the role that rural informal financial institutions play in reducing poverty in the study area. They noted that rural residents face barriers to funding any significant project. The vicious cycle of poverty results from their equally extreme difficulty in raising sufficient capital, particularly from formal financial institutions, to undertake small-scale investments. Primary and secondary data sources were both utilised. Using a random sampling technique, 250 respondents were selected, and 250 of them completed and returned the questionnaire. Descriptive statistics were used in the analysis. The findings showed that the bulk of rural residents save between N6,000 and N10,000, that all informal mechanisms rely on member contributions as their primary source of funding, and that 64% of rural mechanisms only disburse loans after receiving an acceptable surety. According to the study's findings, Enugu State, Nigeria's informal financial institutions significantly contribute to the reduction of poverty. It was suggested, among other things, that the institutions work to raise their savings in order to give more loans to applicants for worthwhile projects.

Nonprofit organisations train villagers to create and lead savings-led microfinance programs to operate in poor rural communities in emerging countries to establish groups that save and then lend out the accumulated savings to each other. In a clustered randomised evaluation across Ghana, Malawi, and Uganda, Karlan et al. (2017) examined the effects of savings groups on the lives of the impoverished. The authors discovered that encouraging community-based microfinance groups improves household business outcomes and women's empowerment through the use of a qualitative research methodology. They did not, however, discover any proof of effects on average consumption. In contrast to formal financial markets, the authors

emphasize that the availability of informal financial markets allows for greater cost effectiveness and is advantageous for households in both urban and rural areas.

A study by Masuda (2021) which aimed to shed light on whether people can escape poverty without relying on external loans and accumulating group savings shared the same sentiments as (Karlan et al., 2017). Masuda examined how participants reduced their poverty and the effect that micro-savings groups funded by NGOs had on poverty. In rural Sri Lanka, 104 households participated in a survey using random sampling. According to the survey, member households were only involved in saving groups for an average of 3.2 years. But after joining savings groups, the percentage of surveyed households that used high-interest moneylenders fell from 46.2% to zero. To put it briefly, the data showed that participating households had both actually and perceived lessened their poverty as defined by this study. Belonging to a savings group also reduced the need to borrow money from banks. Notably, regardless of past history of high interest loan use, members stopped using informal borrowing methods after joining saving groups. Savings in microfinance are gaining popularity, but many savings products are thought to require outside funding. This study did, however, imply that external funding was not always necessary for reducing poverty. The findings of the factor analysis showed that the participants experienced a number of additional personal benefits along two axes: greater independence and the ability to carry on with present activities, as well as the acquisition of skills unrelated to the reduction of poverty. Participating in saving groups generally proved to have a particularly significant benefit in terms of increased autonomy; as a result, saving groups support the human right to live in dignity, which is crucial for human security.

The complicated relationship between these two factors is made clear by empirical data on informal finance and poverty. Reviewed studies have yielded conflicting findings, fuelling the ongoing discussion about informal finance's effect on poverty. Informal finance may impact poverty in both positive and negative ways, according to an important empirical discovery. On the one hand, it can give credit-starved people who are unable to obtain loans from formal banking institutions much-needed access. Their ability to obtain credit may aid them in starting new businesses, making investments in sources of income, or managing unforeseen bills. Contrarily, informal financing frequently has high interest rates and repayment plans that can trap borrowers in debt cycles and worsen their poverty levels.

Empirical research has also underlined how important social networks are to poverty and informal finance. According to empirical research, people with more solidified social ties have

a higher likelihood of utilizing unofficial financial services and escaping poverty. These networks can help, investment opportunities, and knowledge about money management techniques. However, individuals who lack such networks might continue to be excluded, which would prolong poverty. So, while there may be some advantages to informal finance, its success as a poverty-reduction strategy depends on how strong social links and inclusivity are. These findings underline the necessity of comprehensive policies that, in order to successfully combat poverty, address the limitations of the formal banking sector, support equitable financial practices, and foster social integration.

3.4 Assessment of the Literature

While the rational choice theory is a useful tool in this study to understand decision-making processes in finance, however it is important to acknowledge and critique its limitations. The assumption of perfect information, neglect of emotional and psychological factors, and the failure to consider systemic influences considerably weaken the applicability of rational choice theory in finance. Recognizing these weaknesses can lead to the development of more comprehensive and accurate models to explain and predict financial behaviours.

In addition, although Stiglitz and Weiss's work on imperfect information in finance is highly influential, however it is not immune to criticism. Critics argue that their assumption of perfect competition, limited focus on moral hazard, and neglect of market mechanisms may hinder a comprehensive understanding of this complex issue. As the study of imperfect information in finance continues to evolve, it is essential to consider and address these critiques to enhance our understanding and bring us closer to effective solutions to the challenges posed by information asymmetry in financial markets.

The financial dualism theory underpins this study, because it provides a valuable lens through which to analyse the finance in developing economies. Its acknowledgment of the coexistence of formal and informal financial sectors, its recognition of their distinct roles, and its focus on the interplay between these sectors are all strengths that enhance our understanding of the dynamics and challenges of finance in these contexts. By utilizing this theory, policymakers and researchers can develop more targeted interventions and policies that promote financial inclusion and stability, while minimizing unintended negative consequences.

The empirical literature review of formal and informal finance on poverty highlights the potential of both systems to eradicate poverty. While informal finance gives flexibility and accessibility in areas where official services are unavailable, formal finance offers structured

and regulated services that help financially empower the disadvantaged. Each method, nevertheless, faces obstacles that restrict its usefulness. To develop methods for boosting financial inclusion, increasing the usability and affordability of formal services, and enhancing the sustainability and risk management of informal financing, further study is required. In the end, a comprehensive and inclusive approach to finance that blends the advantages of formal and informal institutions can offer a more efficient remedy for reducing poverty. The literature as a whole show how crucial it is to have a comprehensive understanding of both formal and informal finance in order to effectively combat poverty. However, it fails to shed light on the joint impact of formal and informal finance on poverty.

3.5 Conceptual framework: Financial Dualism Model

The financial dualism model is a financial system that aims to alleviate poverty and empower individuals in underprivileged communities. Individuals who normally don't have access to traditional banking institutions are given access to small loans, savings accounts, and other financial services. The strategy is based on the idea that little sums of money, used wisely, may make a significant difference in the lives of the poor.

The financial dualism model's emphasis on financial inclusion is one of its main characteristics. Formal financial institutions and informal financial schemes help people to start or grow small enterprises, make investments in healthcare or education, and accumulate assets by giving them access to loans and banking services. This not only aids in removing people from poverty but also encourages economic growth as a result of the jobs and income that these firms produce.

The financial dualism model's emphasis on social empowerment is another crucial component. Since empowering women improves outcomes for entire families and communities, formal financial institutions and informal financial schemes frequently focus on women. Women are provided with the knowledge and skills they need to make wise financial decisions and achieve financial independence through financial literacy programs and entrepreneurship training. In turn, this promotes gender equality and increases the involvement of women in the decision-making process.

The financial dualism model provides a distinctive strategy for eradicating poverty and fostering economic growth. By offering financial services to underserved people, it not only encourages financial inclusion but also gives them the power to take charge of their life. People are given the skills they need to escape the cycle of poverty and build a better future for both

themselves and their communities with the assistance and resources offered by financial institutions.



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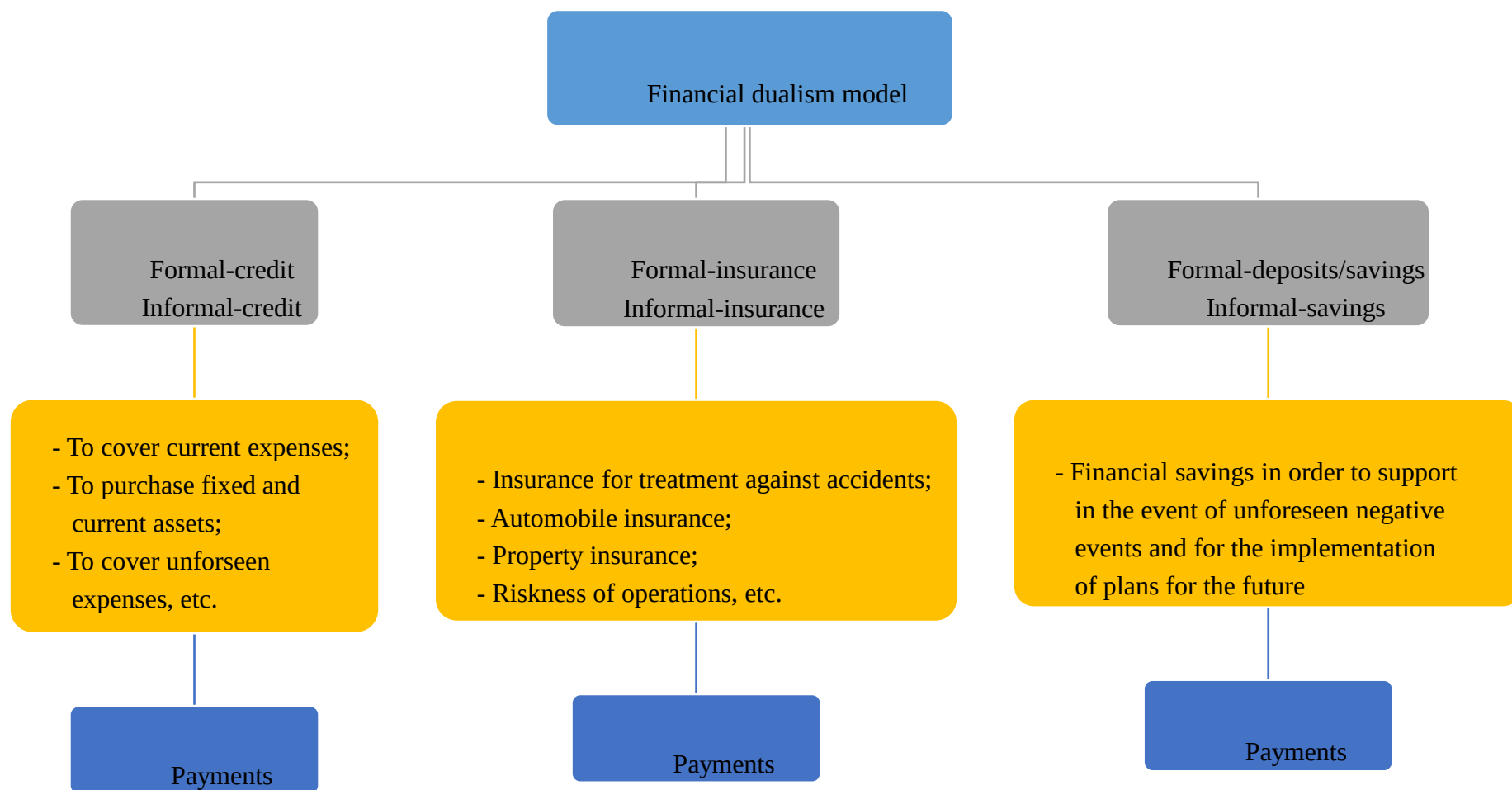


Figure 3.1: Conceptual framework

Source: An adaptation from (Kulinich et al., 2022) *microfinance model*

Formal and informal financial services such as credit, insurance, and deposits are the three different ways that the formal and informal finance process can be carried out (see Fig. 3.1). Each of the techniques described has a framework that includes a list of financial services that is regularly updated and increased. Non-governmental organizations (specialized institutions), commercial banks, state banks, and nonbank financial institutions offer the whole range of financial services. Informal financial organizations such as credit unions, pawnshops, and creditors, as well as member associations, credit and savings associations, and other organizations, also provide financial services.



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Chapter 4

Research Methodology

4.1 Introduction

The research methodologies used for this study are described in this chapter after the literature review. It incorporates a range of quantitative and qualitative research techniques. When measurements and result analysis are conducted, errors are removed by the use of mixed method techniques. The collected, analysed, interviewed, and subjected to econometric analyses data is described. The study theory, research design, population, and sample are highlighted in this chapter. The study's ethics will subsequently be covered when it ends.

The research approach used to achieve the study's goals is partially explanatory, explanatory-descriptive, and econometric in character. Utilizing and evaluating the secondary data that Fincoscope gathered within South Africa allows us to better understand the second purpose, which is to "investigate the impact of formal and informal finance on household poverty in South Africa." The primary data are used as the basis for a descriptive analysis. The connection between household poverty and household use of financial services will next be further assessed. The third objective will be addressed after a qualitative approach to the analysis of participant's experiences and opinions regarding the factors influencing the use of financial services in South Africa is applied. That goal is to "examine whether an interaction between formal and informal finance enhances the impact of finance on household poverty in South Africa".

4.2 Research philosophical stance

An organized method for conducting research is offered by the conceptual framework known as the "research onion." Developed by Saunders et al. (2012), it has six layers, each of which stands for a distinct phase of the research process. The research methodology, suitable research approach, and relevant strategies and philosophies are described in this section. Additionally, the procedure used for gathering and analysing data is described and explored below.

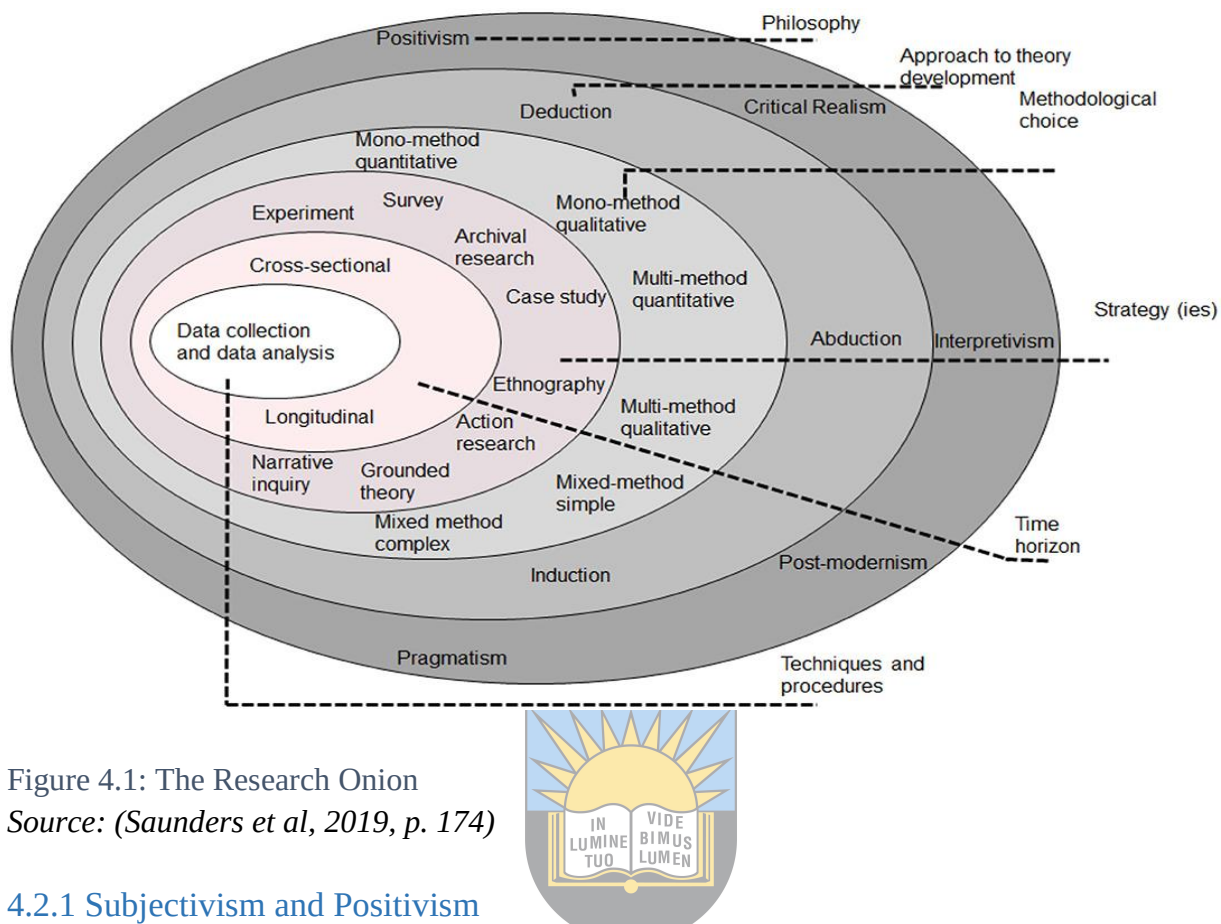


Figure 4.1: The Research Onion

Source: (Saunders et al, 2019, p. 174)

4.2.1 Subjectivism and Positivism

This research considered broader schools of thinking like subjectivism and positivist methods of inquiry. Although each of these ways has provided what the other cannot, they cannot be employed independently, hence it has been appropriate to embrace the pragmatic approach (Asghar, 2013). For the purpose of this study "subjectivism" plays a crucial role in exploring and examining participants' behaviour, beliefs, and perceptions on whether the relationship between the use of formal and informal finance strengthens the effect of finance on household poverty. Through the application of interviews, subjectivism allowed the study to gain valuable insights into the diverse perspectives, motivations, and influences that shape the joint use of formal and informal finance. Through the use of open-ended questions and active listening, the study uncovered the motives and benefits of using both formal and informal financial services. In addition, the study uncovered patterns and discrepancies in the data that were overlooked.

Positivism is applicable to this study because it allows to uncover general patterns and regularities in households' joint use of formal and informal finance, and to explain the joint effect of formal and informal finance on household poverty based on observable facts rather than subjective

interpretations. Positivist approach relates to this research because it helps to study measurable variables (such as formal finance, informal finance, and poverty) and objective data, using statistical analysis to identify the joint effect of using formal and informal finance on household poverty. Positivist research method, such as statistical analysis provided valuable insights into households' use of formal and informal financial services, and poverty.

To address the research issues, a pragmatist approach has been adopted in order to bring together the different schools of thought that have been unable to independently respond to the research questions. It has been possible to employ a method of digestion rather than detection because of pragmatic philosophy, even though no efforts have been made to force a particular class on the community of interest. Based on a sound methodology supplied by this philosophy, the remainder of the thesis is supported.

4.2.2 Pragmatic approach

Pragmatism is chosen as the right philosophy because it is the best fit for addressing the objectives of this study. Through this philosophy, the quantitative research approach is used to investigate the effect of the joint use of formal and informal finance on household poverty, and the qualitative research approach is applicable to identify the motives and benefits of using both formal and informal finance. A mixed methods approach is used in this study because it is widely acknowledged that a quantitative or qualitative approach alone cannot provide a complete picture of the situation regarding the joint use of financial services and their effects on household poverty in both rural and urban communities as well as nationally.

Mixed methods research approach is used to gain valuable insights into the diverse perspectives, motivations, and influences that shape the joint use of formal and informal finance and study measurable variables (such as formal finance, informal finance, and poverty) and objective data, using statistical analysis to identify the joint effect of using formal and informal finance on household poverty. The study finds it necessary to utilize a combination of qualitative and quantitative methodologies to enable triangulation since the joint effect of using formal and informal finance exhibits a variety of manifestations, making the use of a single approach for this research would lead to unneeded explanatory model fragmentation.

As a result, a transformative method is necessary to establish whether a connection between formal and informal finance strengthens the influence of finance on household poverty. The people's common experiences serve as its foundation. However, a post-positivist perspective is necessary to determine whether there is any connection between the combined usage of formal and informal finance and household poverty. This makes the philosophy that has been embraced compatible with both strategies.

4.3 Research Approach

4.3.1 Deductive and Inductive approach

This study has used a variety of philosophical and multifaceted techniques. Complete investigation of the relationship amongst variables has been made possible by deductive reasoning. This has been done by examining the relationship between household poverty and the use of each sort of finance. Moreover, whether there is a link between household poverty and the combined usage of legal and informal financing. It hasn't been able to provide us with insights into how people utilize formal and informal financial services together, though. Deductive perceptive has also provided the scope of the issue through the research conclusions, as seen in the chapter after this one. The situation of households' joint use of official and informal financial services has been observed through inductive reasoning. One has been able to draw conclusions based on the shared information that has been noticed using the meaning from the qualitative data that has been produced via experiences of the respondents. The report, however, does not address whether household poverty is affected by the combined use of formal and informal money. With this strategy, the issue of whether the interaction between formal and informal finance strengthens the effect of finance on household poverty has been addressed. One of the drawbacks of the inductive technique is that hypothesis testing is not possible. This called for a methodology that would combine both methodologies in order to accomplish all of the study's goals.

4.3.2 Abductive Approach

The abductive approach was used as a result of the experience mentioned above. This combines an inductive and deductive approach and is pragmatic in character (Kaushik & Walsh, 2019). Because of the distinct but similar responsibilities that each of these two techniques fills, they are thought of as complements to one another. The deductive and inductive approaches both provide numerical data and cognitive reasoning separately. The abductive technique combines these two

types of data. This method can be used to build hypotheses and logical inferences about how financial services are used in communities. The study can assess whether the deductive phenomenon's hypothesis supports the inductive approach's conclusions through the use of abductive reasoning. Essentially, the abductive technique has looked at which suggestion from the deductive method utmost clarifies the data the study obtained using the inductive strategy.

4.4 Research design

Figure 4.2 shows the map as well as the protocols for managing and carrying out this study.

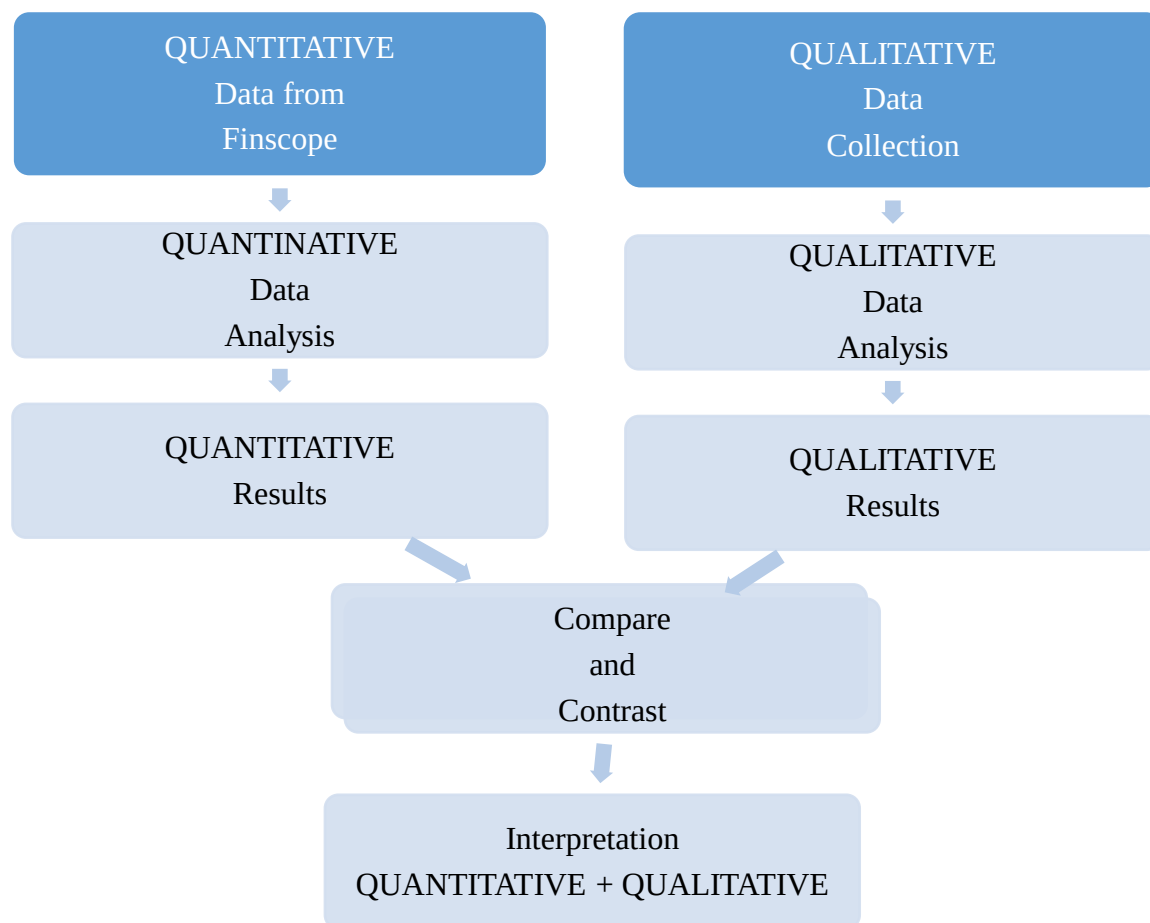


Figure 4.2: Research design

Source: *Authors diagram*

The study's methodology is outlined in the master plan, which is depicted in Figure 4.2. Once the data is analysed and interpreted, the outcome starts to make sense. After the data has been analysed, it can be used as a source of information to guide policy.

4.4.1 Embedded research Design

In light of this research, an embedded mixed methods research design has been employed. Simultaneous triangulation, simultaneous nesting, and simultaneous transformation are the three steps in the embedded mixed methods study design process. Both qualitative and quantitative data are collected at the same time, but one is prioritized over the other (Cheetham et al., 2018). The embedded mixed approach consider the sequential or convergent use of data; the important thing is that either of the two is embedded inside a larger design and that data sources support the overall design (Creswell & Pioano Clark, 2006).

Regarding the objective of this research, the embedded mixed method design has adopted a variety of data, but complementary data in the form of interviews and Finscope data, and more precisely to get complementary and parallel outcomes so that there may be a deeper understanding of the research problem. The major approach in this study is qualitative data, whereas the secondary method—which examines the problem's prevalence—is quantitative data. The procedures taken in this method include gathering data, then analyzing two separate data sets simultaneously and independently from one another. The study's qualitative data were first used to examine how respondents used financial services together and to explain any recurring patterns. It was possible to explore the participant opinions through the qualitative data. Building on the second phase of quantitative research was made possible by the data analysis of qualitative data.

This approach allows this study to take advantage of the distinctive advantages of both qualitative and quantitative research. Furthermore, it produced insights that could not have been attained using just one technique. One can understand the various phenomena and the various effects they have by applying both perspectives. It gives the ideas of access and usage context. This gave the study the chance to handle many cases derived from the Finscope data and patterns of variable interactions, as well as to confirm the justifications and advantages of households employing both types of financing. In the study, questions pertaining to peoples' experiences and attitudes that result in the joint usage of formal and informal financial services were analyzed using a qualitative approach. The study benefited from a contemporaneous nested design as a result of this. The

chosen design is significant since it can offer the best environment for testing specific research hypotheses.

During analysis and interpretation, there was a mixing. Due to the independence of the questions, data will only be combined during interpretation, and each part will contribute equally to the study. The quantitative and qualitative data will be analysed in chapters five and six, respectively, as the study used mixed methodologies. The overview of findings for both qualitative and quantitative research can be found in chapter 7.

4.4.2 Challenges of using a mixed-methods design

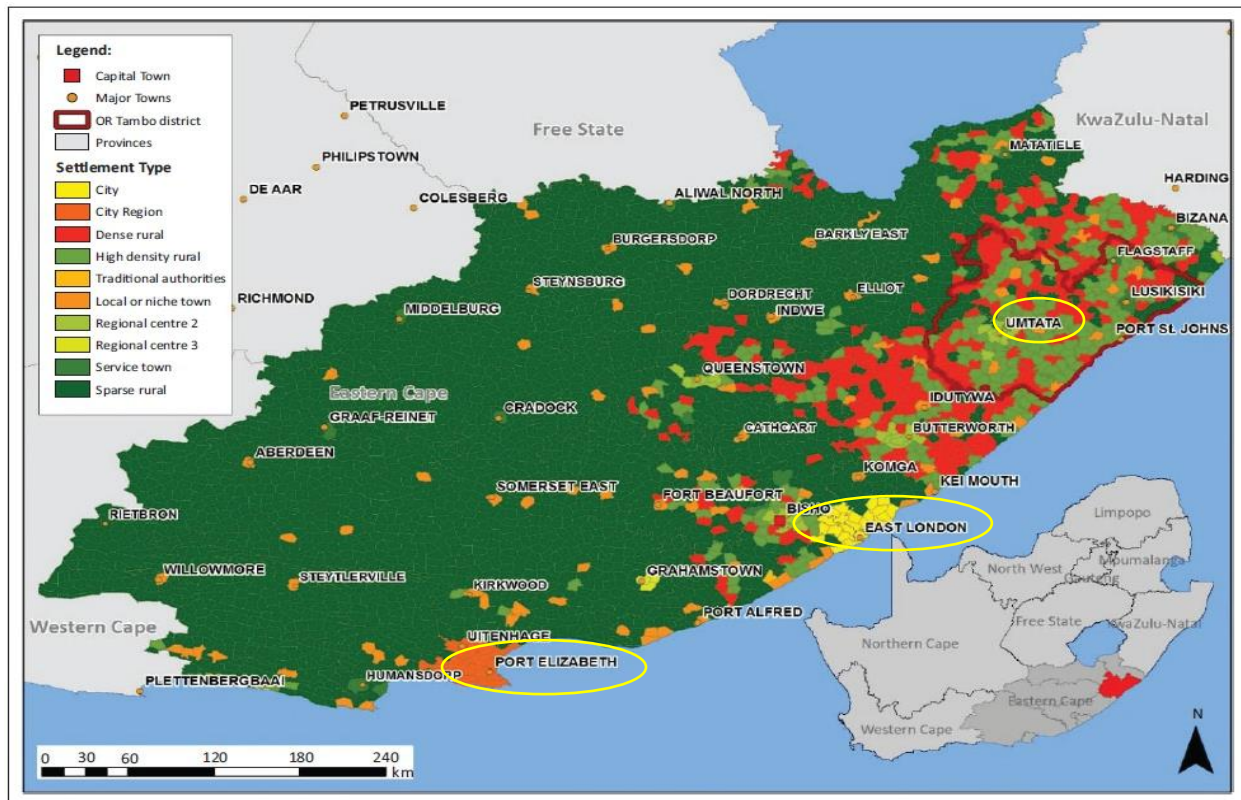
In this study, using a mixed-method research design was challenging because collecting qualitative data through interviews was time-consuming and resource-intensive. In addition, scheduling interviews with participants was challenging, because they were located in different geographical areas and have busy schedules. Furthermore, transcribing and analysing interview data was also challenging because it requires significant time and effort.

4.5 Population, Sample and Data



4.5.1 Qualitative data

Since it was not feasible to collect data from every person in the relevant provinces for the qualitative research for this study, the appropriate sampling technique has been implemented. The participants were specifically chosen based on their socioeconomic traits. In the Eastern Cape Province, respondents were chosen from the King Sabata Dalindyebo Local Municipality, Nelson Mandela Bay Metropolitan Municipality, and Buffalo City Metropolitan Municipality as marked by yellow circles in figure 4.3. These three municipalities were chosen since they serve as the province's economic centres and contain both urban and rural areas that are crowded with low-income households that utilize both official and informal financial services and are significantly reliant on government assistance to survive.



Source: GAP CSIR, 2010, *Geospatial Analysis Platform (GAP)*, viewed 06 May 2016, from <http://www.gap.csir.co.za/images/images/GAPmesozones2010.pdf/view>

FIGURE 1: O.R. Tambo district in Eastern Cape province.

Figure 4.3: Eastern Cape Province Map

Source: GAP CSIR, (2010) University of Fort Hare

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Currently, 7 million of South Africa's total population live in the Eastern Cape. In the Eastern Cape, the majority of people are from rural areas. As a result, the province with the highest proportion of rural areas is the Eastern Cape. The Eastern Cape province was chosen due to its high ranking among the poorest provinces, large number of socially and economically marginalized rural areas, poor economic indicators, heavy reliance on government grants for subsistence, geographic isolation, high usage of formal and informal financial services, and majority of agricultural output.

This study uses both qualitative and quantitative data, which are two different types of data. Finscope gathered quantitative data from South Africans all over the country, but the province indicated above has been chosen to be the source of the qualitative data.

4.5.1.1 Qualitative sampling process

Since it was not feasible to gather information from every individual in each of the provinces for the qualitative research portion of this study, an appropriate sampling technique was used. Based on the participants' socioeconomic characteristics, a purposeful selection process was used. The King Sabata Dalindyebo Local Municipality, Buffalo City Metropolitan Municipality, and Nelson Mandela Bay Metropolitan Municipality in the Eastern Cape were the urban and rural areas from which the sample of sixty participants was selected. The responses exhibited every trait that was deemed interesting. The population from which the data was gathered is accurately reflected in the data.

The purposive sampling technique is utilized for qualitative data. This method was chosen because it provides data that is informed by many viewpoints and the respondents provide it based on their experience. Additionally, it makes it possible to quickly reach the appropriate sample. The sample's diverse traits allowed for the collection of a variety of experiences and viewpoints pertinent to the subject. This type of sample design seeks to shed as much light as possible on the topic being studied. People who need social assistance, use both sources of financing, and have low incomes made up the sampling frame. Individuals with high incomes were not included in the sample. Instead of just receiving descriptions, the respondents' explanations were obtained through this procedure.



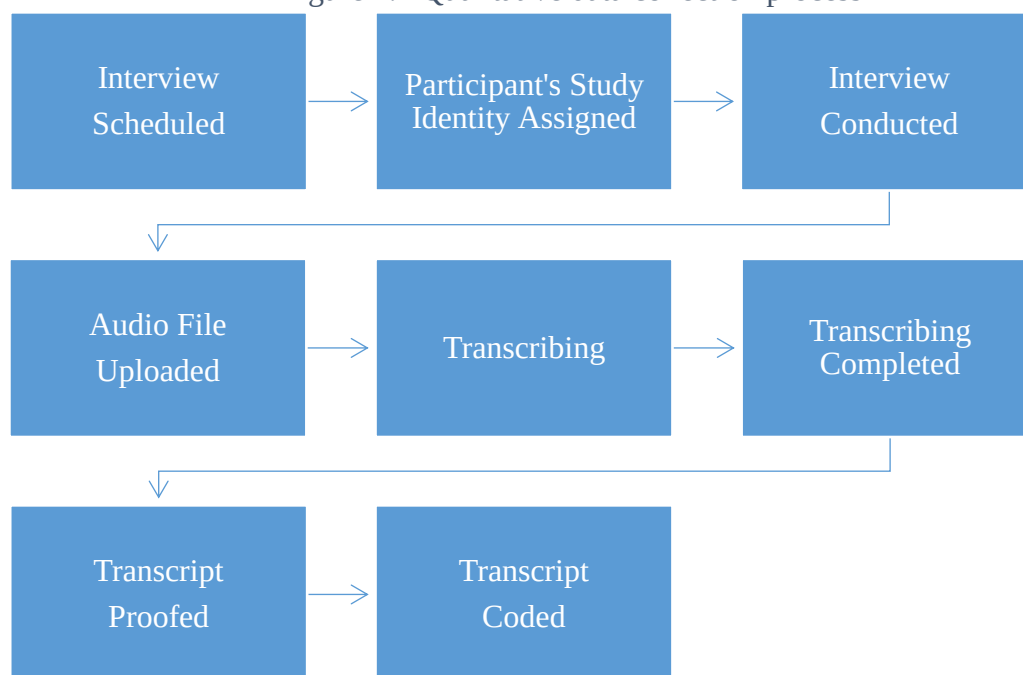
4.5.1.2 Qualitative instruments and data collection

The instruments that were utilized to gather the data for this investigation are described in this section. Interviews were used to gather data. The researcher's job during the interview conversations with the participants was to gather information from them. Because the respondents had a range of experiences, dependability was raised and information bias was avoided. This study examined issues of meaning, interpretation, and socially constructed realities through qualitative research. This research promoted debates regarding the causes and justifications underlying the joint use of formal and informal financial services by measuring observable data such as preferences of people in urban and rural communities. The participants were able to share their experiences through the questions. The aim of the questions asked was to address the following objective: To examine whether an interaction between formal and informal finance enhances the impact of finance on household poverty in South Africa.

The nature of this research required to be exploratory in order to accomplish the aforementioned goal. This made it possible to contextualize the quantitative statistics of the phenomenon being examined with rich, meaningful facts and a thorough knowledge. The main focus of the qualitative research was how people perceive, comprehend, and experience the joint usage of formal and informal finance as it strengthens the impact of finance on poverty. The author learned the realities of the people in both urban and rural regions on the issue of interest through qualitative research.

The participants in the study, who included 42 women and 18 men, provided qualitative data. 60 participants from the three municipalities participated. A total of 20 individuals were assigned to each municipality. Every interview lasted between 45 and 60 minutes. The information was gathered concurrently for the three municipalities over the course of one month.

Figure 4.4 Qualitative data collection process



Source: Authors diagram

Although interviews were conducted in both English and isiXhosa, all of the questions were in English. All interviews were verbatim transcribed after being recorded on audio cassette. To support the recorded discussions, notes were taken. Both strategies were justified by the idea that, should one strategy fail, data would still be available via the other strategy. The research assistant validated the participant's isiXhosa response after translating it into English. The author concluded

by looking for themes in the texts. The participants were made aware of the motivations behind the recording and note-taking during the meeting. The interviews were all secretly recorded at all times. The interviews were verbatim captured as a result of the recording. Handwritten notes were kept throughout the data gathering process, and transcription of the audio recordings was prepared before the interviews were scheduled. The interviewing process considered: Date focused on the guidelines that must be followed to guarantee that the policies are applied from one interview to the next and provided clear directions on when investigations should come next. The interval between the questions and the answers was long enough. All of the responders received a word of thanks at the conclusion of the interviews.

4.5.2 Data Analysis

This section will outline the procedures used to get the data and analyse it. Two data sets were used in this investigation. The qualitative information satisfied the third research purpose. The quantifiable data addressed the problem's widespread nature across the country. The following section discusses how much the findings from these two data sets agree or disagree with one another. The aforementioned components were crucial to data analysis. In terms of qualitative analysis, this relates to the choice of techniques appropriate for answering the research question, as well as the emergence of codes and themes.

The interpretive dimension based on the experiences of people in urban and rural communities was made possible by the qualitative data, which is not possible with quantitative data. The primary data collection method used is interviewing. The way the interviews were performed wasn't typical. Telephonic interviews were used as one of several methods to gather data. The interviewees came from both urban and rural populations, as well as student leaders, local churches, and local church leaders. Respondents were read the exact set of questions, and each one's responses were recorded. The interviews were only loosely structured, although each participant was asked the identical set of questions. As the participants gave their answers, it was anticipated that some queries might come up. When conducting the interviews, the following method was used.

The interviews were conducted using a semi-structured interview guide. However, depending on the participants' responses, flexibility and consistency in asking were maintained. Several grand tour and mini-tour questions were adopted during this session. Grand tour questions are general

inquiries like, "What do you gain from combining formal and informal sources of funding, and what would you like to see implemented to maximize their use together?" However, the questions from the mini-tour were more focused, including "What inspires you to use both types of finance?" The conversation involved a lot of probing. Words like "can you tell us more about what you just said?" were used. The researcher had summaries based on the respondents' opinions at the end of each section. The goals and research questions of this study were the primary conversation points in the interviews. This qualitative study looked at whether using formal and informal sources of funding simultaneously had an influence on household poverty.

There were no expected or preset responses. The respondents' interpretations and experiences are what matter most in this study. The author used a practical research approach. It should be mentioned that the research design is connected to several tactics that have ontology and epistemology as their foundations. The research questions are thought to be best addressed via a qualitative technique. This study's design was exploratory and explanatory in nature. The exploratory questions posed to the respondents aim to learn about people's actual lived experiences. Explanatory comments are given in response to the questions of why and how to employ formal and informal financing, as well as whether doing so improves the impact of finance on household poverty. Thus, the qualitative methodology has made it possible to conduct this study in its entirety. The qualitative approach has made data collection easier and made it possible to uncover profound insights.

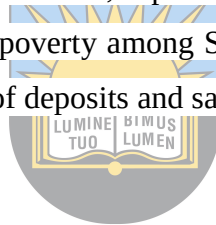
4.5.3 Quantitative Data

The Finscope data collected between 2013 and 2016 is used in the second phase of this study. The sample for these years is a nationwide representative dataset that offers specific information about how people obtain their money and manage their financial affairs by using the financial services that are readily available. It offers empirical information on how South Africans' lives are evolving. Additionally, it offers special perspectives into the lives of particular South Africans. It comprises private information, like the main sampling unit, occupational codes, and geographic codes, among others. Thus, using computer-assisted personal interviews, a national representative sample of 3900 (2013–2014)–5000 (2015)–4980 (2016) households was selected for this thesis. The questionnaire was also translated into the most widely spoken South African languages—isiXhosa, isiZulu, Sesotho, Setswana, Sepedi, and Afrikaans.

The survey focused on key demographic and social structure information, including household size, gender, age, and employment status, as well as personal income, household income quintile, level of education (primary, secondary, apprenticeship, matric, diploma, and university degree), province, source of income, and respondents' perceptions of banks. The second stage examines how people save and borrow money. Another category examines people's attitudes toward financial service providers in terms of their behaviour and perceptions in that area.

4.5.3.1 Financial dualism model

This study aims to ascertain how household poverty is impacted by formal and informal financing. Comprehensive data about South Africans' access to and usage of financial services can be found in the national dataset Finscope. Empirical information about how South Africans' lives are changing is provided. It offers distinct perspectives into the personal experiences of individual South Africans. The study used the financial dualism model, which can be found in chapter 3, for this analysis. It includes the following: insurance, deposits/savings, and formal and informal credit. The study can analyse how household poverty among South Africans is affected by formal and informal credit, insurance, and the use of deposits and savings accounts thanks to the quantitative data.



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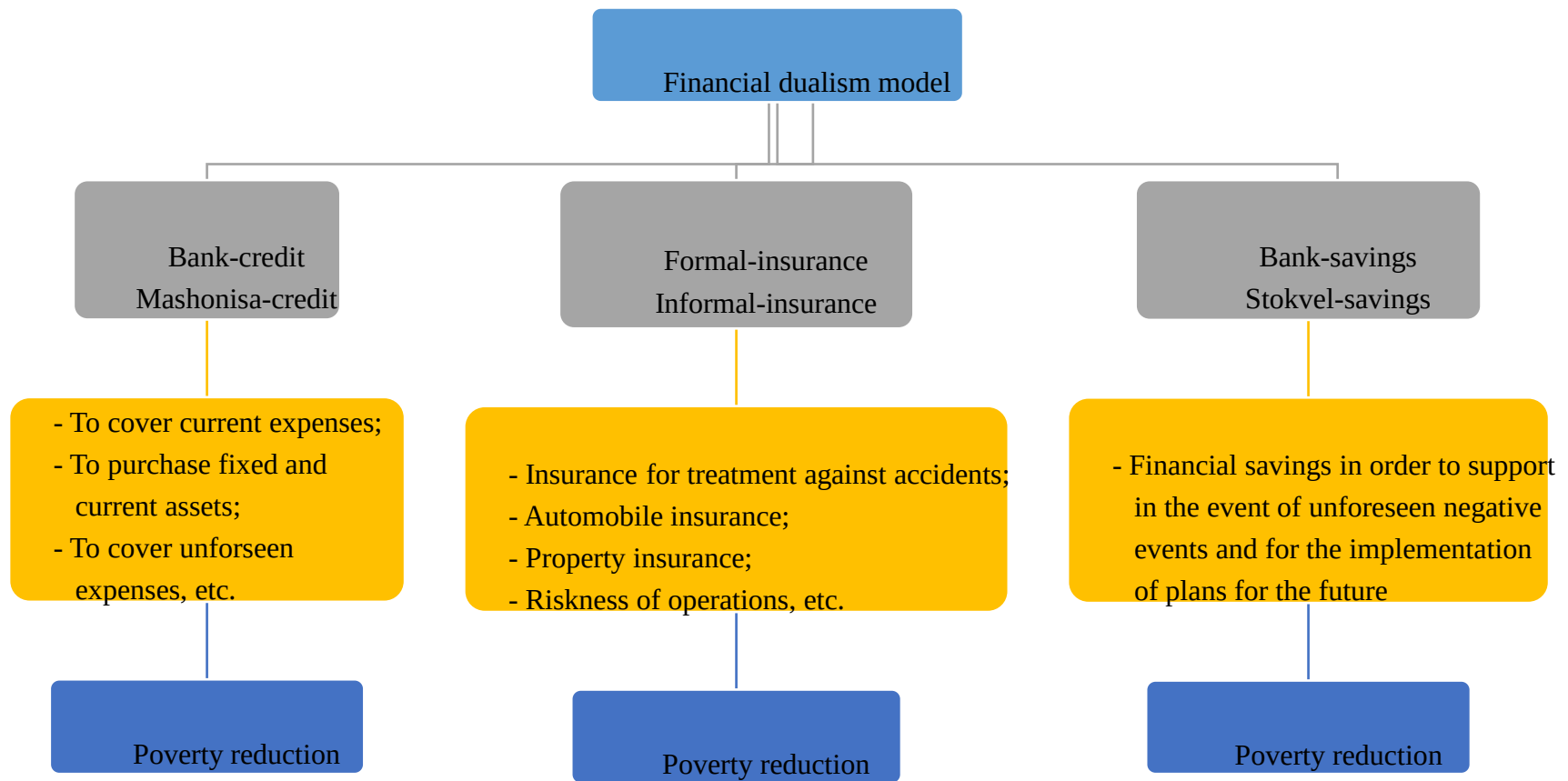


Figure 4.5: Financial dualism model

Source: An adaptation from (Kulinich et al., 2022) microfinance model

The financial dualism model (see Figure 4.5) is used as the foundation of the model for this study. This model has been adapted and some variables such as poverty, bank credit, mashonisa credit, bank savings, and stokvel savings have been include to capture the changes made. Formal and informal finance is a system of financial support for individuals and businesses in case of adverse situations or deteriorating living conditions (Kulinich et al., 2022). The process of formal and informal finance can be implemented through methods (see Fig. 4.5), which are divided into credit, insurance and deposits. Each of the methods outlined has a list of financial services in its structure, which is constantly updated and expanded. According to financial dualism model in figure 4.5, the range of formal and informal financial services can be obtained through: informal financial schemes (such as mashonisa's, and stokvel savings groups); and formal financial institutions (such commercial banks).

The financial dualism model offers insight into the impact of formal and informal finance on poverty at the individual level. Formal and informal finance refers to the provision of loans, savings accounts, and other financial services to individuals or groups who have limited access to traditional financial services. This model argues that by extending financial services specifically tailored to the needs of the poor, formal and informal financial institutions can empower them to engage in income-generating activities and improve their livelihoods. Additionally, formal and informal financial services often emphasizes social development and capacity building alongside financial accessibility, promoting financial literacy, entrepreneurship, and community cohesion. Through the financial dualism model, formal and informal finance use is seen as a poverty alleviation strategy that not only addresses financial needs but also promotes social and economic empowerment at the grassroots level.

Based on the financial dualism model, household poverty is a function of the use of financial services from formal institutions and informal organizations. In this regard, the household poverty model can be written as;

$$y_{it} = f(x_{it}, 2x_{it}) \dots \dots \dots 1$$

Where y_{it} is poverty of household i at time t

x_{it} is formal finance use of household i at time t

$2x_{it}$ is inform finance use of household i at time t

Equation 1 shows that any change in the use of each type of finance affects the change in the household poverty, hold other factors constant. Control variables such as household income, household size, gender, marital status, population group, geographic area, education level and age will also be included in the model.

The gap in literature is that, it does not show the joint impact of using both formal and informal finance on household poverty. In this regard, equation 1 can be expanded to take into consideration the joint use of formal and informal finance, as written in equation 2.

$$y_{it} = f(x_{it}, 2x_{it}, x_{it}^2) \dots \dots \dots 2$$

Where x_{it}^2 is formal and inform finance joint use of household i at time t . Control variables such as household income, household size, gender, marital status, population group, geographic area, education level and age will also be included in the model.

Equation 2 represents that any change in joint use of formal and informal finance affects the change in the household poverty, hold other factors constant.



Equation 1 of the study investigates the impact of using each type of finance (x_{it}) on household poverty (y_{it}); and equation 1 is expanded to investigates the joint impact of using both formal and informal finance (x_{it}^2) on household poverty (y_{it}) in equation 2. All these investigations will be done using descriptive statistics in the following chapter.

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4.5.3.2 Multinomial analyses

Quantitative analyses have been made using econometric techniques. For a thorough examination of the correlation between these variables, the statistical dispersion is helpful. The model predicts a categorical dependent variable from a range of variables using multinomial logistic regression. An analysis of the relationship between multiple independent and dependent variables is conducted using this multinomial logistic model. When appropriate, the odds-ratio—a gauge of the degree of association—will also be shown. Multinomial regression was chosen because it provides a flexible modelling framework that can handle complex relationships between predictors and outcomes. Unlike other techniques such as logistic regression, which only deal with binary outcomes, multinomial regression allows for the analysis of multiple response categories simultaneously. This makes it particularly useful when studying phenomena with more than two possible outcomes

Multinomial logistic regression model is the most widely used multivariate approach to study the dynamics of poverty (Samer, Majid, Rizal, Muhamad, Sarah-Halim, et al., 2015a). The multinomial logistic regression model is defined as follows:

$$P_{ij} = \frac{e^{x_i' \beta_j}}{\sum_{l=1}^m e^{x_i' \beta_l}} \quad j=1, \dots, m \dots\dots\dots 3$$

Results 1, 2, 3, ..., m are supposed for y and the explanatory variables are defined as X. It is also assumed that there are m = 3 results, which are unordered. This property of the categorical variable y is typical of multinomial regressions.

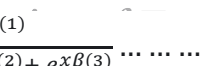
In the multinomial logistic regression model, a set of coefficients β^1, β^2 & β^3 , are estimated, corresponding to each result the following probabilities for each case of the value of the dependent variable (poverty status):



$$\Pr(y = 1) = \frac{e^{x\beta(1)}}{e^{x\beta(1)} + e^{x\beta(2)} + e^{x\beta(3)}} \dots\dots\dots 4$$



$$\Pr(y = 2) = \frac{e^{x\beta(1)}}{e^{x\beta(1)} + e^{x\beta(2)} + e^{x\beta(3)}} \dots\dots\dots 5$$



$$\Pr(y = 3) = \frac{e^{x\beta(1)}}{e^{x\beta(1)} + e^{x\beta(2)} + e^{x\beta(3)}} \dots\dots\dots 6$$

This model is indeterminate in the sense that there exists more than one solution β^1, β^2 & β^3 which lead to the same probability for y=1, y=2 y y=3. If a value of 0 is assigned to β^1 , the remaining coefficients β^2 & β^3 will measure the relative change for y=1. On the other hand, if $\beta^2 = 0$, the remaining coefficients β^1 & β^3 will measure the relative change for y = 2. The coefficients may differ because they have different interpretations, but the odds of y = 1, 2 and 3 are the same.

Assuming $\beta^1 = 0$, the equations are as follows:

$$\Pr(y = 1) = \frac{1}{1 + e^{x\beta(2)} + e^{x\beta(3)}} \dots\dots\dots 7$$

$$\Pr(y = 2) = \frac{e^{x\beta(2)}}{1 + e^{x\beta(2)} + e^{x\beta(3)}} \dots\dots\dots 8$$

$$\Pr(y = 3) = \frac{e^{x\beta(3)}}{1 + e^{x\beta(2)} + e^{x\beta(3)}} \dots\dots\dots 9$$

$$\frac{\Pr(y=2)}{\Pr(y=1)} = e^{x\beta(2)} \dots\dots\dots 10$$

$$\frac{e^{\beta_1^{(2)}x_1+\dots+\beta_i^{(2)}(x_i+1)+\dots+\beta_k^{(2)}x_k}}{e^{\beta_1^{(2)}x_1+\dots+\beta_i^{(2)}(x_i+1)+\dots+\beta_k^{(2)}x_k}} = e^{\beta_i^{(2)}} \dots\dots\dots 11$$

According to Samer et al. (2015), any nonlinear model's parameters should be interpreted carefully, but multinomial models require extra caution because the sign and the coefficient's probability do not always match up exactly. A positive coefficient indicates that there is a greater chance of selecting or falling into one of the categories if the independent variable rises.

numer et al. (2015), The multinomial logistic regression model is difficult to interpret; instead, we must convert them into odd ratios. The multinomial logistic regression model has as many models as the number of categories minus one, which further complicates interpretation.

4.5.3.3 Dependent and independent variables

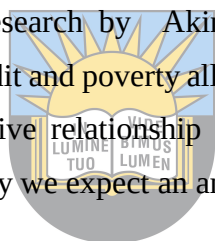
79

food poverty line plus the average amount derived from non-food items of households whose food expenditure is equal to the food poverty line.

Variables of interest:

The **saving strand** variable which is also categorical and coded 1 for formal saving, 2 for informal saving, and 3 for not saving. Literature by Lal (2018) suggest a positive relationship between access to saving services and poverty reduction. Lal (2018) argue that financial inclusion has had a good effect on the lives of the poor and has assisted them in escaping the shackles of poverty by providing access to essential financial services including savings, loans, insurance, and credit. However, literature by Hickson (2001) and Srinivas (2004) is disputed the positive relationship between access to savings and poverty reduction. This study expects the relationship between access to saving and poverty to be ambiguous.

The **credit strand** variable which is categorical and coded 1 for formal credit, 2 for informal credit, and 3 for not borrowing. Research by Akinlo & Oni (2012) suggest a positive relationship between the access to credit and poverty alleviation. However, literature by Samer et al. (2015) mention that this positive relationship between the variable is still debated. Therefore, for the purpose of this study we expect an ambiguous relationship between the two variables.



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Control Variables:

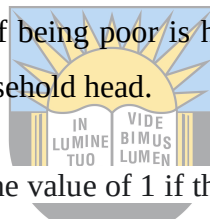
Gender variable which takes the value of 1 if the household is a male or zero otherwise. Numerous research studies by Nwosu & Ndinda (2018); Sekhampu, (2013); Garza-Rodríguez (2015); Chen & Wang (2015); Iqbal et al., (2020); Ravindra Deyshappriya & Minuwanthi, (2020); Teka et al., (2019); and Biyase & Zwane (2018) have discovered evidence in support of the feminization of poverty. The study expect a negative relationship between female gender and poverty reduction and positive relationship between male gender and poverty reduction.

Marital status variable takes the value of 1 if the household head is married or zero otherwise. Several studies provide support for the claim that being single whether one has been married before or not increases the likelihood of being poor (Cotter, 2002); (D'Ambrosio et al., 2011); (Lekobane & Seleka, 2017) and (Weaver, 2012). Peng et al. (2019). We expect a positive relationship between married household head and poverty reduction.

Geographical area variable which takes the value of 1 if the household head reside in urban area or zero otherwise. Many studies have indicated that poverty is more prevalent in rural and underdeveloped areas than it is in urban and rich areas Lekobane & Seleka's (2017); Biyase & Zwane (2018); and Ravindra & Minuwanthi (2020), we expect a positive relationship between a household head residing in urban area and poverty reduction.

Level of education variable of the household head take the value of 1 if the household head has primary – matric, 2 for apprenticeship – university degree, and 3 for no education. Studies by Garza-Rodríguez (2015); Biyase & Zwane (2018; Lekobane & Seleka (2017); and Peng et al. (2019) show that poverty tends to be inversely associated to education level. We expect an inverse relationship between poverty and high level of education.

Ethnic group variable take the value of 1 if the household head is black, 2 if is a coloured, 3 if is an Asian, and 4 if is a white person. The literature Canelas & Salazar (2014); Jayathilaka et al. (2016); and Ravindra Deyshappriya & Minuwanthi (2020) has extensively documented that being non-white the likelihood of being poor is high. We expect a positive relationship between poverty and a non-white household head.



Size of the household variable take the value of 1 if the household has one – five people, 2 if it has six – ten people, and 3 if it has eleven – thirteen people. Literature by McKernan & Ratcliff (2002); and Geda et al. (2005) contend that the expenses of having big household sizes are fairly significant. For example, a normal household with children is likely to spend more on food, home utilities, clothing, and healthcare. We expect a positive relationship between poverty and a big household size.

Age variable of the household head takes the value of 1 if the household head is between 18 – 44 years, 2 if he/she is between 45 – 60+ years, and 3 if he/she is between 16 – 17 years. Literature assume that the relationship between poverty and age is nonlinear and that poverty is higher in childhood, declines in middle life, and then rises once again in old age Garza-Rodriguez (2015); Lekobane & Seleka (2017) and Ravindra Deyshappriya & Minuwanthi (2020) have discovered this U-pattern. We expect positive relationship between poverty, childhood, and old age. However, a negative relationship between poverty and middle age life of the household.

Income variable of the household head take the value of 1 if it is between R1 000 – R11 999 a month, 2 if it is between R12 000 – R40 000+ a month, and 3 if the household head does not have an income. Evidence in favor of the hypothesis that income reduces the probability of being poor includes Mdluli & Dunga (2022), therefore, we expect a negative relationship between poverty and income.

Table 4.1: A summary of dependent and independent variables

Dependent Variable	Code Book
Household Poverty	Extreme poverty = 0 Lower-bound poverty = 1 Upper-bound poverty = 2
Independent Variables	Code Book
Credit strand	Formal credit = 1 Informal credit = 2 Not borrowing = 3
Saving strand	Formal saving = 1 Informal saving = 2 Do not save = 3
Bank saving	No = 0 Yes = 1
Informal mechanisms saving	No = 0 Yes = 1
Bank credit	No = 0 Yes = 1
Informal mechanism credit	No = 0 Yes = 1
Gender	Female = 0 Male = 1
Marital status	Not married = 0 Married = 1

Geographical area	Rural = 0 Urban = 1
Level of education	Primary – matric = 1 Apprenticeship – university degree = 2 No education = 3
Ethnic group	Black = 1 Coloured = 2 Asian = 3 White = 4
Size of the household	One – five people = 1 Six – ten people = 2 Eleven – thirteen people = 3
Age of the household head	18 – 44 years = 1 45 – 60+ years = 2 16 – 17 years = 3
Income of the household head	R1 000 – R11 999 = 1 R12 000 – R40 000+ = 2 No income = 3

4.6 Ethics and research limitations

Before beginning data collecting, the researcher got an ethical clearance certificate from the University of Fort Hare's Research Ethics Committee (UREC) with the certificate reference number SIM011SMJA01. The researcher tried to anticipate any potential research constraints. The researcher then tried to minimize any potential negative effects on the project. Time constraints are the most likely restriction for this kind of research. This is a result of the researcher's time constraints in conducting this study.

It was difficult to consider how to organize the interviews. Since different people had varied availability windows and the researcher had a limited amount of time, his hectic schedule necessitated careful planning and time management. During the data collection phase, the researcher also faced financial consequences. The dual usage of formal and informal financial

services has received scant attention. This also acted as a constraint when creating the study's literature review. Due to a new provision that demands large sums of money, Finscope would not provide recently revealed data from 2017 to 2018. The data set from 2013 to 2016 was all the researcher had.

4.7 Summary

An outline of the research strategy and technique used for this study has been provided in this chapter. It has even gone so far as to outline the philosophical principles that guided the selection of the paradigms, methods, approaches, and strategies used in this study. This study used mixed methods research, an ethnographic and survey approach, exploratory and explanatory research, a pragmatic paradigm, and both qualitative and quantitative methodologies for data processing.



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Chapter 5

Joint impact of formal finance and informal finance on household poverty in South Africa

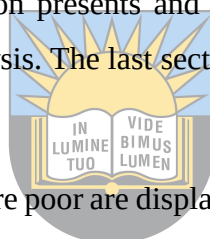
5.1 Introduction

In order to address objective two—which looks into the effects of formal and informal finance on household poverty in South Africa—this chapter employs quantitative data within the context of that country. It goes on to discuss objective three, which looks at whether formal and informal financial interactions have a greater effect on household poverty in South Africa.

Descriptive statistics on household poverty, financial services use, demographics, socioeconomic status, and social construction of the respondents are presented in the first section of the chapter based on the variables of interest. To give a more complete picture of the financial services landscape in South Africa, cross-tabulations are employed subsequent to the descriptive data. The following section presents and discusses the main conclusions drawn from the multinomial regression analysis. The last section contains a summary of the chapter.

5.2 Descriptive statistics

The percentages of respondents who are poor are displayed in Figure 5.1. Figure 5.1 shows that 10% of the respondents are extremely poor, indicating that they lack access to basic necessities like food, clean water to drink, sanitary facilities, health care, shelter, education, and information. 16% of people are living below the federal poverty line, which means they can buy necessities like clothes but only if they forgo some nutritional expenses. 74% of people are below the upper-bound poverty line, which means they make enough money to cover other necessities like clothing and a minimum standard of nutrition.



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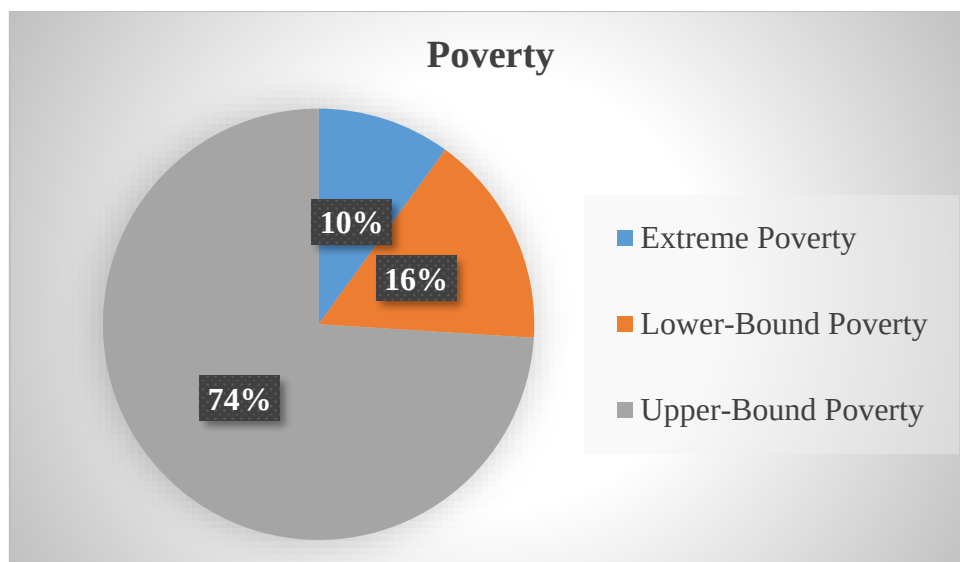


Figure 5.1: Poverty by percentages

In addition, figure 5.2 shows that 26 percent of the respondents save in formal financial institutions, whereas 13 percent save in informally and 61 percent do not save at all. Furthermore, 48 percent of the respondents borrow from formal financial institutions, whereas 3 percent borrow from informal financial service providers and 49 percent do not borrow at all.

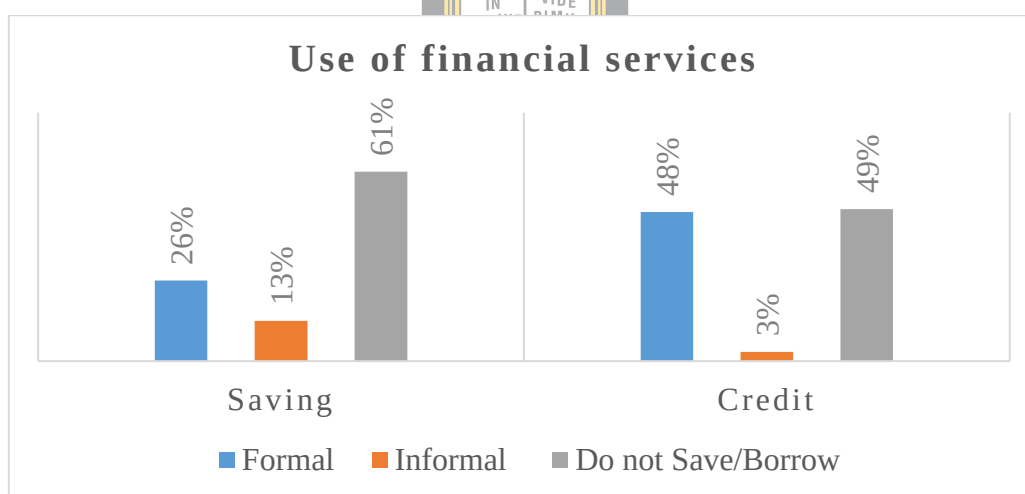


Figure 5.2: Use of financial services by percentage

Most of the respondents' in this study are between the ages 18 – 44 years as shown in figure 5.3. This is also presented by high percentage of 62 percent, followed by 35 percent of the respondents aged 45 – 60+ years and 3 percent of the respondents aged 16 – 17 years.

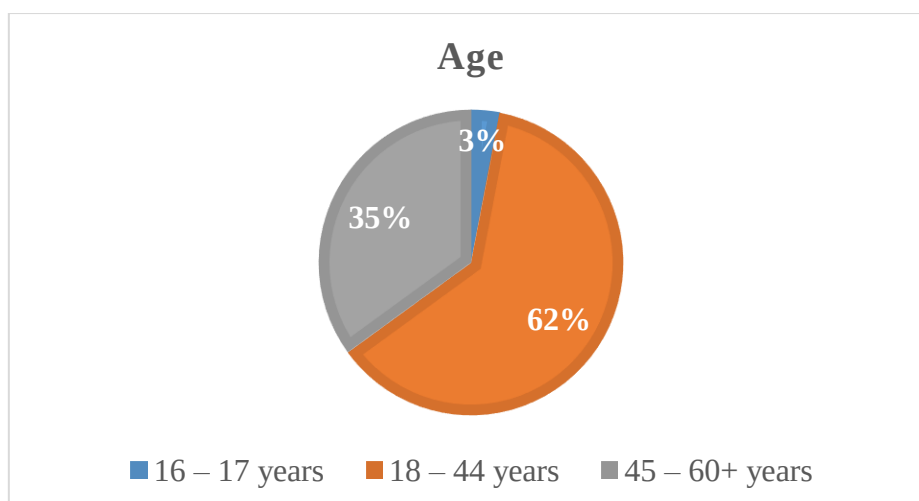


Figure 5.3: Age by percentage

Female respondents showed more interest to participate in the study than men. This is showed by 54 percent female respondents and 46 percent male respondents respectively in the dataset. In addition, most respondents from this study came from urban areas, which are dominated by households belonging at the upper-bound poverty line.

5.3 Cross Tabulation of categorical variables

Poverty at the household level is associated with household use/access to financial services. Since the variables of interest and other control variables in this study are categorical, cross tabulations were performed. Cross tabulations have been conducted to analyze the relationship between poverty and the use/access to financial services, poverty and level of education, poverty and household size, and poverty and ethnicity at the household level. In cross tabulations the data have been broken down into categories and percentages are observed in each combination of categories. Cross tabulations have allowed the researcher to identify patterns, correlations, and associations between variables, contributing to a deeper understanding of the data and the underlying phenomena being studied.

Table 5.1: Poverty by households' use/access to financial services

	Poverty		
	Extremely	Lower-Bound	Upper-Bound
Use/access to Financial Services			
Saving Strand			
Formally Saving	1%	1%	23%
Informally Saving	1%	2%	10%
Do not Save	7%	13%	41%
Credit Strand			

Formally Borrowing	3%	4%	40%
Informally Borrowing	0%	1%	2%
Do not Borrow	6%	11%	49%

Table 5.1 shows the distribution of households' poverty across use/access to financial services. Poverty is divided into extreme poverty, lower-bound and upper-bound poverty lines. It should be noted that out of 17 789 respondents on the saving strand, 1% of them that are formally saving are in extreme poverty, another 1% is at the lower bound poverty, and 23% is at the upper bound poverty line. In addition, one percent of them that are informally saving are in extreme poverty, 2% is in lower bound poverty, and 10% is in upper bound poverty. Furthermore, seven percent of them that do not save at all are extremely poor, 13% is in lower bound poverty, and 41% is in upper bound poverty. Respondents on the credit strand, 3% of them that are formally borrowing is in extreme poverty, 4% is in lower bound poverty, and 40% is in upper bound poverty. In addition, 0% of them that are informally borrowing is in extreme poverty, 1% is in lower bound poverty, and 2% is in upper bound poverty. Moreover, 6% of them that do not borrow are in extreme poverty, 11% are in lower bound poverty, and 49% are in upper bound poverty.

Table 5.2: Poverty by households' level of education

Education Level	Poverty		
	Extremely	Lower-Bound	Upper-Bound
Primary – Matric	8%	14%	60%
Apprenticeship – University Degree	2%	2%	13%
No Education	0%	0%	1%

Table 5.2 shows poverty by household education level. It shows that there are 8% of respondents with primary to matric level of education that are in extreme poverty, then 14% belong to the lower bound poverty and 60% to the upper bound poverty line. In addition, 2% of those with apprenticeship – university degree are in extreme poverty, 2% belong to the lower bound poverty and 13% at the upper bound poverty line. Furthermore, 0% of those with no education are extremely poor and at the lower bound poverty, whereas 1% is at the upper bound poverty line.

Table 5.3: Poverty by households' size

	Poverty Extremely	Lower-Bound	Upper-Bound
Household size			
One – Five	7%	13%	67%
Six – Ten	2%	3%	7%
Eleven – Thirteen	0%	0%	0%

Table 5.3 shows that seven percent of households that have one – five individuals are in extreme poverty, 13% in lower bound poverty and 67% in upper bound poverty. In addition, 2% of households with six – ten individuals are extremely poor, 3% in the lower bound poverty, and 7% are in the upper bound poverty line. Furthermore, 0% of households with eleven – thirteen individuals are extremely poor, in lower bound and upper bound poverty lines.

Table 5.4: Poverty by households' ethnicity

	Poverty Extremely	Lower-Bound	Upper-Bound
Ethnicity			
Black	6%	13%	44%
Colored	2%	2%	12%
Asian	1%	1%	5%
White	1%	1%	13%

Table 5.4 shows that six percent of the black respondents are extremely poor, 13% are in lower bound poverty, and 44% are in upper bound poverty line. In addition, of the colored respondents 2% is extremely poor, another 2% is at the lower bound poverty line, while 12% is at the upper bound poverty line. Furthermore, of the Asian respondents 1% is extremely poor, another 1% is at the lower bound poverty, and 5% is the upper bound poverty line. Moreover, of the white respondents 1% is extremely poor, an additional 1% is at the lower bound poverty, and 13% is at the upper bound poverty line.

5.4 The correlation matrix

The variables' correlation matrix is displayed in Table 5.5. The relationships demonstrate numerous signs representing different direction of movement. Notable observations include the saving and credit strands which have negative correlation with the household poverty. This is

expected considering that most of the households save and borrow money to minimize the chances of being poor in the future.



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Table 5.5: Correlation matrix

	<i>P</i>	<i>Age</i>	<i>G</i>	<i>Area</i>	<i>Edu</i>	<i>HMI</i>	<i>MS</i>	<i>SS</i>	<i>CS</i>	<i>HS</i>	<i>Race</i>
Poverty (P)	1										
Age	0.01	1									
Gender (G)	0.01	0.00	1								
Area	0.06	0.01	0.012	1							
Education (Edu)	0.04	0.02	0.038	0.09	1						
Household monthly income (HMI)	0.05	0.01	0.037	0.24	0.21	1					
Marital status (MS)	0.07	0.14	0.019	0.13	0.13	0.17	1				
SavingStrand (SS)	-0.21	0.01	-0.031	-0.14	-0.14	-0.13	-0.11	1			
CreditStrand (CS)	-0.21	0.01	0.001	-0.14	-0.11	-0.12	-0.10	0.43	1		
Household Size (HS)	-0.13	-0.01	-0.054	-0.07	-0.03	-0.02	-0.03	0.13	0.11	1	
Race	0.10	0.09	0.024	0.19	0.09	0.17	0.16	-0.25	-0.24	-0.12	1

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5.5 Multinomial Regression Analysis on the Impact of Each Type of Finance on Household Poverty

This section of the research seeks to achieve objective number two which investigate the impact of formal and informal finance on household poverty in South Africa. To achieve this objective, we investigate the impact of each type of finance on household poverty. Then followed by investigating the joint impact of the types of finance on household poverty in the next section. To investigate the joint impact of types of finance on household poverty discussed in the latter chapters, and to run the estimation. The Multinomial regression was adopted. This is because the ordinary least square estimation can limit its applicability and validity in some cases. Furthermore, ordinary least square estimation is sensitive to outliers, leverage points, and influential observations, which can distort the estimates and reduce their accuracy. In addition, it is restricted by assumptions such as linearity, independence, homoscedasticity, normality, and no multicollinearity.

To start with, the baseline model in Table 5.6 show results of multinomial regression model on the impact of each type of finance on household poverty. Financial services such as savings and credit variables, and other variables such as household income, and household size, and household head characteristics such as gender, marital status, population group, geographic area, education level and age were used as determinants of poverty. Financial access strand is used in this study to compare the financial product usage between individuals who use formal products, those who use informal products, and lastly those who do not use any products. For the purpose of this study, financial access strand is divided into saving and credit strands in order to compare the different type of financial usage. Based on the literature, poverty is regressed against the saving strand which includes formal savings, informal savings, not saving, and credit strand which includes formal credit, informal credit, not borrowing and other determinants of poverty such as household income, household size, gender, marital status, population group, geographic area, education level and age.

Table 5.6: Baseline Model

Variables	Lower-Bound Poverty Line	Upper-Bound Poverty Line
Constant	.487 (.782)	.715 (.703)
Male Gender	-.146** (.062)	-.016 (.053)
Urban Area	-.301*** (.075)	-.114* (.067)
Married Marital status	-.033 (.073)	.049 (.061)
Savings Strand		
Reference Category: Do Not Save	.	.
Formal Institutions Savings	-.761*** (.111)	.654*** (.080)
Informal Institutions Savings	.639*** (.117)	.995*** (.106)
Credit Strand		
Reference Category: Do Not Borrow	.	.
Formal Institutions Credit	.145* (.075)	.788*** (.063)
Informal Institutions Credit	.492*** (.180)	.369** (.168)
Household Head Age		
Reference Category: 16 – 17 Years		
18 – 44 Years	.404*** (.131)	.997*** (.117)
45 – 60+ Years	.347**	1.320***



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	(.142)	(.126)
Household Head Level of Education	.	.
Reference Category: No Education		
Primary – Matric	.052	-.169
	(.260)	(.227)
Apprenticeship – University Degree	-.282	-.465*
	(.276)	(.238)
Household Monthly Income	.	.
Reference Category: No Income		
R1 000 – R11 999	-.587***	-.915***
	(.130)	(.203)
R12 000 – R40 000+	-.847***	-.888***
	(.264)	(.203)
Household Size	.	.
Reference Category: Eleven – Thirteen Persons		
One – Five	.523**	.991***
	(.257)	(.231)
Six – Ten	.255	.273
	(.264)	(.237)
Household Head Ethnicity	.	.
Reference Category: White		
Black	.810***	.191**
	(.115)	(.084)
Colored	.273**	.063
	(.131)	(.098)
Asian	.124	.205
	(.180)	(.132)
Observations	17 789	
Chi2	4011.443	
r2_pseudio	.121	



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Omnibus Test

$$\begin{aligned}x^2 &= 2296.617, \\df &= 36, \\p &= .000\end{aligned}$$

Nagelkerke R2

16%

Hosmer&Lemeshow goodness of fit

P = .655

Classification Accuracy

74.5%

Standard errors in parentheses ***p<0.01,**p<0.05,*p<0.1



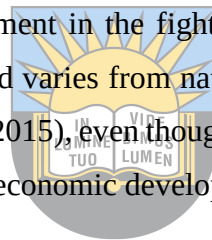
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5.5.1 Multinomial Logistic Results on the Impact of Each Type of Finance on Household Poverty

According to respondents, the independent variables account for 12% of household poverty on the R^2 pseudo. To better understand how much independent variables account for poverty, the Nagelkerke R^2 adds sixteen percent. A modified form of the Cox & Snell R-square, Nagelkerke R^2 modifies the statistic's scale to encompass the whole range from 0 to 1. The model is fit because the R-squared and the Nagelkerke are complementary to one another. Additionally, the p-value for Hosmer and Lemeshow is greater than 0.05, indicating that the model fits the data in explaining the relationship between the independent and dependent variables. Finally, based on classification accuracy, the model can explain poverty with a 74.5 percent accuracy. Additionally, a general conclusion can be drawn from the model explaining the study's findings.

The findings from Table 5.6 indicate that for saving strand of the household head, not saving served as the category of reference, the coefficient for formal saving by the head is negative on lower-bound poverty line (-.761) and positive at the upper-bound poverty line (.654), suggesting that the probability of being poor is lower when saving with formal institutions than it is when saving with informal financial mechanisms and not saving. The formal saving variable is significant at the 1% significance level, meaning that it significantly predicts poverty both at the lower and upper bounds of the poverty line. In addition, the coefficient for informal saving by the head of households is positive on both lower-bound and upper-bound poverty lines (.639) and (.995), implying that the likelihood of living in poverty is greater when saving with informal institutions than it is when not saving on the lower-bound and upper-bound poverty lines. At the 1% significance level, the informal saving variable is significant, meaning that it can predict poverty at both the lower- and upper-bound poverty lines. This supports the research by Lal (2018), which found that cooperative banks' contribution to financial inclusion had a large and direct effect on reducing poverty. Research by Lal (2018) have shown that access to formal savings mechanisms, such as banks or microfinance institutions, can lead to increased income and asset accumulation for the poor. By securely depositing their savings, individuals can benefit from interest earnings and gradually build wealth over time. The significance of finance in reducing poverty, however, is disputed by certain research Hickson (2001) and Srinivas (2004) , which demonstrate that lack of financial literacy among the poor can hinder their ability to effectively navigate the financial system and make sound financial choices.

For credit strand of the household head, not borrowing served as the category of reference, the coefficient for formal credit by the head of households is positive on both lower-bound and upper-bound poverty lines (.145) and (.788), implying that the likelihood of living in poverty is greater when borrowing from formal institutions than it is when not borrowing. Formal credit variable is significant at 5% and 1% significance levels, indicating that the variable is a significant predictor of poverty at the lower-bound and upper-bound poverty lines. In addition, the coefficient for informal credit by the head of households is positive on both lower-bound and upper-bound poverty lines (.492) and (.369), suggesting that the probability of being poor is greater when borrowing from informal institutions than it is when not borrowing. According to the lower-bound and upper-bound poverty lines, the variable is a significant predictor of poverty, as demonstrated by the significance levels of 1% and 5%. This implies that in some cases, the financial system may be inaccessible or biased against the poor, exacerbating income inequality and perpetuating poverty. These findings support those of Akinlo & Oni (2012), who found no evidence of a beneficial effect of microfinance on poverty and argue that microfinance is an essential but insufficient instrument in the fight against poverty. The effectiveness of microfinance is still being debated and varies from nation to country and even from urban to rural areas, according to Samer et al. (2015), even though it has been highlighted as an effective tool for eradicating poverty and socioeconomic development.



For gender of the household head, female served as the category of reference, for male heads of households, the coefficient is negative on both upper-bound and lower-bound poverty lines (-.146) and (-.016), indicating that men have a lower likelihood of being impoverished than women. Gender is a significant predictor of poverty at the lower-bound poverty line, as evidenced by the gender variable's significance at the 5% significance level. The conclusion that homes headed by women have a higher risk of falling into poverty than homes headed by men is in line with other research that showed female-headed households were more susceptible to poverty than households headed by men (Nwosu & Ndinda, 2018; Sekhampu, 2013). Numerous studies have also examined whether the gender of the family's head affects poverty, particularly whether a female head of household is more likely to live in a low-income home. This issue, referred to as the feminization of poverty Pearce (1978), it can be attributed to discrimination against women in the workforce as well as the fact that women typically have less education than males, which results in lower wages in the labor market (Garza-Rodríguez, 2015). The majority of studies (Chen & Wang, 2015; Iqbal et al., 2020; Ravindra Deyshappriya & Minuwanthi, 2020; Teka et al., 2019) have discovered evidence in support of the

feminization of poverty. According to research by Biyase & Zwane (2018), women are more likely to be poor.

For geographical area of the household head, a rural area served as the category of reference, on both upper- and lower-bound poverty lines, the coefficient for the head of the household's urban geographic area is negative (-.301) and (-.114), implying that the likelihood of living in poverty is lower in cities than it is in rural areas. At the 1% and 10% significance levels, the urban geographic area variable is also significant, suggesting that geographic area is a significant predictor of poverty at both the lower- and upper-bound poverty lines. The fact that poverty is more prevalent in rural areas than in cities is perhaps one of the most accurate generalizations concerning poverty in emerging nations (Todaro & Smith, 2011). The fact that poverty is higher in rural areas than in urban areas may be due to three factors, according to Garza-Rodríguez (2015). First, rural areas are characterized by their reliance on agriculture, which is low productivity and consequently poor incomes in developing nations. Second, government policies have historically been biased in favor of urban areas and against rural areas, and third, rural areas are more vulnerable to natural disasters, which have an impact on them not only immediately but also long-term by lowering their capital stock. According to this logic, numerous studies have indicated that poverty is more prevalent in rural and underdeveloped areas than it is in urban and rich areas. In Botswana, households in urban regions have an 8.2% lower likelihood of being poor than those in rural areas, according to Lekobane & Seleka's (2017) research. Living in rural areas, in the situations of South Africa and Sri Lanka, respectively, increases the likelihood of being poor, according to research by Biyase & Zwane (2018) and Ravindra & Minuwanthi (2020).

For age of the household head, 16 – 17 years age served as the category of reference, the age range for the coefficient (18–44) years of the household's head is positive on both upper-bound and lower-bound poverty lines (.404) and (.997), implying that the likelihood of living in poverty is greater at 18 – 44 years age than it is at 16 – 17 years old. The household head's age is significant at the 1% significance level, suggesting that at both the lower- and upper-bound poverty lines, age is a significant predictor of poverty. In addition, the coefficient 45 – 60+ years age of the household head is also positive in both lower-bound and upper-bound poverty lines (.347) and (1.320), implying that the chances of being poor are more at 45 – 60+ years than it is at 16 – 17 years. At both the lower-bound and upper-bound poverty lines, age is a significant predictor of poverty, as evidenced by the household head's significant age at the 5%

and 1% significant levels. According to the life cycle theory, it is normal for a person's income to be low when they are young (due to a lack of work experience), to increase as they gain experience, and to start to decline as they get older due to a decline in productivity brought on by a decreased health stock. Thus, it is reasonable to assume that the relationship between poverty and age is nonlinear and that poverty is higher in childhood, declines in middle life, and then rises once again in old age (Garza-Rodriguez, 2015). Authors like Lekobane & Seleka (2017) and Ravindra Deyshappriya & Minuwanthi (2020) have discovered this U-pattern. However, Garza-rodriguez et al. (2021) for Mexico and Sekhampu (2013) for South Africa are other empirical research that have discovered an inverse association between the age of the head of the household and poverty.

The reference category for the household head's education level was an uneducated household; the coefficient for the household head's primary–matric level of education is positive on the lower-bound poverty line (.052) and negative on the upper-bound poverty line (-.169), suggesting that the probability of being poor is greater when the level of education is between primary – matric than it is without education at lower-bound poverty line and it is not significant. In addition, apprenticeship – university degree education level of the household head is negative in both lower-bound and upper-bound poverty lines (-.282) and (-.465), implying that the chances of being poor are less when household head education level is between apprenticeship – university degree than it is with no education level. This implies that a higher education level increases the likelihood of securing stable and well-paying employment. The educational level of the household head is significant at 10% significant level, indicating that apprenticeship – university degree education level is a significant predictor of poverty at upper-bound poverty line, but not at the lower-bound poverty line. Since education raises a person's human capital, and greater capital enhances productivity and income, hence poverty tends to be inversely associated to education level (Garza-Rodríguez, 2015). The idea that a greater degree of education for the head of the family reduces the likelihood that the household is poor has been supported by a number of research, including (Biyase & Zwane, 2018; Lekobane & Seleka, 2017; and Peng et al., 2019).

For monthly income of the household, no monthly income served as the category of reference, the coefficient for R1 000 – R11 999 monthly income of the household is negative on both lower-bound and upper-bound poverty line (-.587) and (-.915), suggesting that the likelihood of poverty is less when the monthly household income is between R1 000 – R11 999 than it is

when the household does not have income. The results show that household monthly income R1 000 – R11 999 significant, this suggests that it is a significant predictor of poverty. In addition, R12 000 – R40 000+ monthly income of the household is negative in both lower-bound and upper-bound poverty lines (-.847) and (-.888), implying that the chances of being poor are less when household monthly income is between R12 000 – R40 000+ than it is with no monthly income. Household monthly income R12 000 – R40 000+ is significant, indicating that it is a significant predictor of poverty at both lower-bound and upper-bound poverty lines. Evidence in favor of the hypothesis that income reduces the probability of being poor includes Mdluli & Dunga (2022), who mentioned that one major factor thought to determine poverty at household level is income.

For the size of the household, household with eleven – thirteen individuals served as the category of reference, the coefficient for one – five individuals in a household is positive on both lower-bound and upper-bound poverty line (.523) and (.991), suggesting that the likelihood of poverty is more when the household has one – five individuals than it is when the household has eleven – thirteen individuals. This indicates that the variable is a significant predictor of poverty because it is significant at the 5% significance level for the lower bound poverty line and the 1% significance level for the upper-bound poverty line. Furthermore, the coefficient for six – ten individuals in a household is positive on both lower-bound and upper-bound poverty line (.255) and (.273), suggesting that the likelihood of poverty is more when the household has six – ten individuals than it is when the household has eleven – thirteen individuals. However, this variable is not significant in both lower-bound and upper-bound poverty lines, suggesting that it does not significantly predict poverty. This result is in line with the conclusions of McKernan & Ratcliff (2002), who contend that the expenses of having big household sizes are fairly significant. For instance, the cost of food, utilities, clothing, and healthcare is likely to increase in a typical household with children. Similar to this, Geda et al. (2005) contend that a large household is more likely to experience poverty since it takes more resources.

For the ethnicity of the household head, white household head ethnicity served as the category of reference, the coefficient for black household head ethnicity is positive on both lower-bound and upper-bound poverty line (.810) and (.191), suggesting that the likelihood of poverty is more when the household head is black in ethnicity than it is when the household head is white in ethnicity. This indicates that the variable is a significant predictor of poverty because it is

significant at the 1% significance level for the lower bound poverty line and the 5% significance level for the upper-bound poverty line. In addition, the coefficient for colored household head ethnicity is positive on both lower-bound and upper-bound poverty line (.273) and (.063), suggesting that the likelihood of poverty is more when the household head is colored in ethnicity than it is when the household head is white in ethnicity. This variable is significant at 5% significance level for lower-bound poverty line and not significant for upper-bound poverty line, this suggests that it is a significant predictor of poverty at the lower-bound poverty line, but not at the upper-bound poverty line. This is because throughout history, black and colored individuals and communities have been disproportionately affected by poverty due to various systemic factors such as racial discrimination, lack of access to quality education, and limited economic opportunities. Furthermore, the coefficient for Asian household head ethnicity is positive on both lower-bound and upper-bound poverty line (.124) and (.063), suggesting that the probability of being poor is more when the household head is Asian in ethnicity than it is when the household head is white in ethnicity. This variable is not significant at both lower-bound and upper-bound poverty lines, this suggests that it does not significantly predict poverty. This occurs frequently and is primarily related to South Africa's apartheid era (Gradin, 2012) and (Leibbrandt et al., 2007). In many nations, being a member of particular ethnic groups is a factor that is typically linked to higher levels of poverty. This may be a result of historical, economic, political, and social issues that affect these vulnerable groups' ability to generate income and assets. The literature Canelas & Salazar (2014); Jayathilaka et al. (2016); and Ravindra Deyshappriya & Minuwanthi (2020) has extensively documented this impact.

5.6 Multinomial Regression Analysis on the Interaction between Formal and Informal Finance on Household Poverty

Findings from section 5.6 revealed that saving and borrowing from each type of finance solely increases the probability of households being poor. This section of the research seeks to achieve objective number three which investigate interaction effect of the types of finance on household poverty in South Africa. This objective is achieved by investigating the interaction between borrowing from formal institutions and informal mechanisms. In addition, it is also achieved by investigating the interaction between saving with formal institutions and informal mechanisms. To investigate the joint impact of formal and informal finance on household poverty discussed in the latter chapters, and to run the estimation. The Multinomial regression as above was adopted.

To start with, Table 5.7 show results of multinomial regression model on the interaction between the types of finance on household poverty. There is scant literature that acknowledges the interaction between the types of finance on eradicating poverty. To investigate whether an interaction between the types of finance enhances the impact of finance on household poverty in South Africa. We estimate the interaction between credit from formal institutions and informal mechanisms, savings at the formal institutions and informal groups on household poverty.



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Table 5.7: Results for the Multinomial Regression Model

Variables	Lower-Bound Poverty Line	Upper-Bound Poverty Line
Constant	.610 (.781)	.852 (.702)
Household Head Age Reference Category: 16 – 17 Years		
18 – 44 Years	.406*** (.130)	.994*** (.117)
45 – 60+ Years	.353** (.142)	1.320*** (.125)
Household Head Level of Education Reference Category: No Education		
Primary – Matric	.028 (.260)	-.188 (.226)
Apprenticeship – University Degree	-.298 (.275)	-.475** (.237)
Household Monthly Income Reference Category: No Income		
R1 000 – R11 999	-.590*** (.113)	-.914*** (.311)
R12 000 – R40 000+	-.854*** (.321)	-.891*** (.255)
Household Size Reference Category: Eleven – Thirteen Persons		
One – Five	.470* (.256)	.934*** (.230)
Six – Ten	.198 (.263)	.206 (.236)
Household Head Ethnicity		



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Reference Category: White		
Black	.809*** (.115)	.182** (.085)
Colored	.257** (.132)	.039 (.098)
Asian	.120 (.180)	.201 (.132)
Male Gender	-.150** (.063)	-.016 (.053)
Urban Area	-.289*** (.075)	-.102 (.067)
Married Marital status	-.023 (.073)	.062 (.061)
Informal mechanisms credit	.250 (.282)	.408 (.253)
Formal Credit	.099 (.076)	.754*** (.063)
Informal mechanisms credit * Formal Credit	.942** (.452)	.913** (.411)
Informal groups saving	.318** (.131)	.624*** (.116)
Informal groups saving * Formal Saving	-.642** (.265)	-.686*** (.187)
Formal Saving	-.750*** (.123)	.571*** (.088)
Observations	17 781	
Chi2	4665.283	
r2_pseudio	.118	
Omnibus Test	$\chi^2 = 2236.092,$	



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$df = 40,$
 $p = .000$

Nagelkerke R²

15%

Hosmer&Lemeshow goodness of fit

P = .698

Classification Accuracy

74.4%

Standard errors in parentheses ***p<0.01, **p<0.05, *p<0.1



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5.6.1 Multinomial Logistic Results on the Interaction between Formal and Informal Finance on Household Poverty

According to the respondents, the independent variables account for 12% of household poverty on the R^2 pseudo. To better understand the extent to which independent variables explain poverty, the Nagelkerke R^2 adds fifteen percent. The Nagelkerke R^2 is a modified version of the Cox & Snell R-square, which modifies the statistic's scale to encompass the entire interval between 0 and 1. The model fits because the R-squared and the Nagelkerke are complementary to one another. Additionally, the model fits the data in explaining the relationship between the independent and dependent variables because the Hosmer & Lemeshow p value is greater than 0.05. Finally, the classification accuracy indicates that the model's explanation of poverty is 74.4 percent accurate. Generally speaking, it can also be said that the model fits the data from this investigation.

The findings from Table 5.7 indicate that for the household head borrowing from informal mechanisms, not borrowing from informal mechanisms served as the category of reference, the coefficient for borrowing from informal mechanisms by the head of households is positive on both lower-bound and upper-bound poverty lines (.250) and (.408), implying that the likelihood of poverty is greater when borrowing from informal mechanism than it is when not borrowing from informal mechanisms. Borrowing from informal mechanisms variable is not significant at 1%, 5%, and 10% significance levels indicating that the variable does not significantly predict poverty at the lower-bound and upper-bound poverty lines. For the household head saving with the informal saving groups, not saving with informal saving groups served as the category of reference, the coefficient for saving with informal saving groups by the head of households is positive on both lower-bound and upper-bound poverty lines (.318) and (.624), implying that the likelihood of poverty is greater when saving with informal saving groups than it is when not saving with informal saving groups. Saving money in the informal saving group's variable is significant at 5% and 1% significance level representing that the variable is an important predictor of poverty at the lower-bound and upper-bound poverty lines. These findings support a research by Hickson (2001) that questions the contribution of finance to reducing poverty and demonstrates the inadequacy of microfinance institutions as a vehicle for doing so. Microfinance organizations still have a ways to go before efficiently achieving the goal of reducing poverty, according to (Hickson, 2001). Additionally, according to Srinivas (2004), through microfinance, significant aid money is misdirected to risky and unsuccessful microfinance schemes instead of being used for vital projects like health and education.

For the household head borrowing from formal institutions, not borrowing from formal institutions served as the category of reference, the coefficient for borrowing from formal institutions by the head of households is positive on both lower-bound and upper-bound poverty lines (.099) and (.754), implying that the likelihood of poverty is more when borrowing from formal institutions than it is when not borrowing from formal institutions. The variable that measures borrowing from formal institutions is significant at the 1% significance level, meaning that it only significantly predicts poverty at the upper bound of the poverty line. These results contradict those of Usman (2015), who discovered that microcredit has a beneficial effect on lowering poverty and raising income levels, as well as improving education and the living standards of the poor. However, because there are several difficulties that people encounter when applying for loans from financial organizations, the loan size will have a favorable or negative impact on the population. For the household head saving with formal institutions, not saving with formal institutions served as the category of reference, the coefficient for saving with formal institutions by the head of households is negative at the lower-bound line and positive at the upper-bound poverty lines (-.750) and (.571), implying that the likelihood of poverty is less when saving with formal institutions than it is when not saving with formal institutions at the lower-bound poverty line, however it is greater at the upper bound poverty line. The formal institution's variable for saving money is significant at the 1% significance level, meaning that it predicts poverty at both the lower- and upper-bound lines. These results collaborate the findings by Ahmed-Karim & Alders-Sheya (2014), who pointed out that microcredit has received far more attention in the microfinance discourse than micro savings. They argue that lending institutions typically find micro savings to be less financially profitable than microcredit.

For the household head borrowing from both informal mechanisms and formal institutions, not borrowing from both informal mechanisms and formal institutions served as the category of reference, the coefficient for borrowing from both informal mechanisms and formal institutions by the head of households is positive on both lower-bound and upper-bound poverty lines (.942) and (.913), implying that the likelihood of poverty is greater when borrowing from both informal mechanism and formal institutions than it is when not borrowing from both informal mechanism and formal institutions. At the 5% significance level, the variable "borrowing from both informal mechanisms and formal institutions" is significant, meaning that it significantly predicts poverty at both the lower- and upper-bound poverty lines. These findings differ with those of Akinlo & Oni (2012), who found no evidence of a beneficial effect of microfinance

on reducing poverty. They argued that microfinance is a required however insufficient weapon in the fight against poverty. In a similar vein, Samer et al. (2015) note that while microfinance has been highlighted as a useful instrument for eradicating poverty and fostering socioeconomic development, its effectiveness is still debatable and varies from nation to nation, and even from urban to rural locations.

For the household head saving with both informal saving groups and formal institutions, not saving with both informal saving groups and formal institutions served as the category of reference, the coefficient for saving with both informal saving groups and formal institutions by the head of households is negative on both lower-bound and upper-bound poverty lines (-.642) and (-.686), implying that the likelihood of poverty is less when saving with both informal saving groups and formal institutions than it is when not saving with both informal saving groups and informal institutions. Saving with both informal saving groups and formal institutions variable is significant at 5% and 1% significance level indicating that the variable is a significant predictor of poverty at the lower-bound and upper-bound poverty lines. This supports the research by Lal (2018), which found a direct and significant connection between financial inclusion through cooperative banks and the reduction of poverty. Lal (2018) emphasized that financial inclusion has produced a significant influence on the lives of the poor and helped them to escape the grip of poverty. These fundamental financial services, like as savings, loans, insurance, credit, etc., are made available to them. Studies that suggest microfinance organizations are an ineffective tool for reducing poverty, on the other hand, contest the role of finance in reducing poverty. For instance, according to Hickson (2001), microfinance organizations still have a long way to go before significantly reducing poverty. Additionally, Srinivas (2004) argues that the use of microfinance diverts significant assistance monies away from vital initiatives like education and health that require these funds and instead directs them to unproven and unviable microfinance schemes.

Gender of the household head, female served as the category of reference, the coefficient for male head of households is negative on both lower-bound and upper-bound poverty lines (-.150) and (-.016), implying that the likelihood of poverty is lower of males than it is for females at the lower-bound and upper-bound poverty lines. Gender is a significant predictor of poverty at the lower-bound poverty line, as evidenced by the gender variable's significance at the 5% significance level. This suggests that women-headed households are more vulnerable to poverty than male-headed households, which is in line with research showing that women-

headed households are more likely to experience poverty than households headed by men (Nwosu & Ndinda, 2018) and (Sekhampu, 2013).

Geographical area of the household head, rural area served as the category of reference, the coefficient for urban geographical area of the household's head is negative on both upper-bound and lower-bound poverty lines (-.289) and (-.102), implying that the likelihood of poverty is lower in urban areas than it is in rural areas. The urban geographic area variable is also significant at 1% significance levels indicating that geographic area is a significant predictor of poverty at the lower-bound poverty line. The idea that poverty is more common in rural than in urban areas in developing countries may be one of the most accurate generalizations about the issue (Todaro & Smith, 2011).

Age of the household head, 16 – 17 years age served as the category of reference, the coefficient for 18 – 44 years age of the household's head is positive on both upper-bound and lower-bound poverty lines (.406) and (.994), implying that the likelihood of poverty is greater at 18 – 44 years age than it is at 16 – 17 years old. The age of the household head is significant at 1% significant level, representing that age is an important estimator of poverty at the lower-bound and upper-bound poverty lines. In addition, the coefficient 45 – 60+ years age of the household head is also positive in both lower-bound and upper-bound poverty lines (.353) and (1.320), implying that the chances of being poor are more at 45 – 60+ years than it is at 16 – 17 years. The age of the household head is significant at 5% and 1% significant levels, representative that age is an important estimator of poverty at the lower-bound and upper-bound poverty lines. According to life cycle theory, it is normal for a person's income to be low when they are young (due to lack of work experience), to rise with experience, and to start declining as they get older (due to a decline in productivity brought on by a declining health stock).

Education level of the household head, household head without education served as the category of reference, the coefficient for primary – matric level of education of the household's head is positive on lower-bound poverty line (.028) and negative on upper-bound poverty line (-.188), implying that the likelihood of poverty is greater when the level of education is between primary – matric than it is with no education at lower-bound poverty line. However, the probability of being poor reduces at the upper-bound poverty line. Primary – matric level of education of the household's head is not significant, showing that it does not significantly predict poverty at the lower-bound and upper-bound poverty lines. In addition, apprenticeship

– university degree education level of the household head is negative in both lower-bound and upper-bound poverty lines (-.298) and (-.475), implying that the chances of being poor are less when household head education level is between apprenticeship – university degree than it is with no education level. The education level of the household head is significant at 10% significant level, indicating that apprenticeship – university degree education level is an important estimator of poverty at upper-bound poverty line, but not at the lower-bound poverty line. Poverty and education levels are typically inversely correlated because education builds a person's human capital, and human capital increases productivity and income (Garza-Rodríguez, 2015).

Monthly income of the household, household without monthly income served as the category of reference, the coefficient for R1 000 – R11 999 monthly income of the household is negative on both lower-bound and upper-bound poverty line (-.590) and (-.914), implying that the likelihood of poverty is less when the monthly household income is between R1 000 – R11 999 than it is when the household does not have income. The results show that household monthly income R1 000 – R11 999 is significant, this suggests that it is a significant predictor of poverty. In addition, R12 000 – R40 000+ monthly income of the household is negative in both lower-bound and upper-bound poverty lines (-.854) and (-.891), implying that the chances of being poor are less when household monthly income is between R12 000 – R40 000+ than it is with no monthly income. Household monthly income R12 000 – R40 000+ is significant, indicating that it is a significant predictor of poverty at both lower-bound and upper-bound poverty lines.

Size of the household, household with eleven – thirteen individuals in a household served as the category of reference, the coefficient for one – five individuals in a household is positive on both lower-bound and upper-bound poverty line (.470) and (.934), implying that the likelihood of poverty is more when the household has one – five individuals than it is when the household has eleven – thirteen individuals. This indicates that the variable is a significant predictor of poverty because it is significant at the 10% significance level for the lower bound poverty line and the 1% significance level for the upper bound poverty line. Furthermore, the coefficient for six – ten individuals in a household is positive on both lower-bound and upper-bound poverty line (.198) and (.206), implying that the likelihood of poverty is more when the household has six – ten individuals than it is when the household has eleven – thirteen individuals. However, this variable is not significant in both lower-bound and upper-bound

poverty lines, suggesting that it does not significantly predict poverty. This result aligns with the findings of (McKernan & Ratcliff, 2002), who contend that large household sizes come at a high cost. For instance, the average family with kids is probably going to spend more on clothing, food, utilities, and health care. In a similar vein, Geda et al., (2005) suggest that since a larger household size necessitates more resources, it is more likely that the household will experience poverty.

Ethnicity of the household head, white household head ethnicity served as the category of reference, the coefficient for black household head ethnicity is positive on both lower-bound and upper-bound poverty line (.809) and (.182), implying that the likelihood of poverty is more when the household head is black in ethnicity than it is when the household head is white in ethnicity. This indicates that the variable is a significant predictor of poverty because it is significant at the 1% significance level for the lower bound poverty line and the 5% significance level for the upper-bound poverty line. In addition, the coefficient for colored household head ethnicity is positive on both lower-bound and upper-bound poverty line (.257) and (.039), implying that the likelihood of poverty is more when the household head is colored in ethnicity than it is when the household head is white in ethnicity. This indicates that the variable is a significant predictor of poverty at the lower-bound poverty line because it is significant at the 5% significance level for the lower-bound poverty line and not significant for the upper-bound poverty line. Furthermore, the coefficient for Asian household head ethnicity is positive on both lower-bound and upper-bound poverty line (.120) and (.201), implying that the likelihood of poverty is more when the household head is Asian in ethnicity than it is when the household head is white in ethnicity. This variable is not significant, this suggests that it does not significantly predict poverty. This is typical and primarily related to South Africa's apartheid period. In many nations, being a member of a particular ethnic group is a factor that is typically linked to greater rates of poverty.

5.7 Concluding remark

It has been possible to address objectives two and three in this chapter. This chapter shows that household poverty differs between when the household head uses finance from each type of finance and from both types of finance jointly. It shows that several households are mostly in poverty because they either use formal finance only or informal finance only instead of using the financial services jointly, especially on the savings side. Insights drawn from the findings show that the joint use of formal and informal credit perpetuate poverty by reinforcing and deepening income inequalities. Poor individuals who have access to formal credit may have to

resort to informal borrowing to bridge the gap between the loan amount and their actual needs. This dichotomy creates a situation where a portion of their income is diverted towards repaying multiple loans, stifling their chances of upward mobility and trapping them in poverty.

Formal and informal savings play crucial roles in alleviating poverty in many developing countries. Both formal and informal savings contribute significantly to poverty reduction by providing a financial safety net, supporting income-generating activities, and enabling individuals to cope with unexpected expenses. One of the key insights into the effect the joint use of formal and informal savings on poverty is its ability to provide a financial safety net for individuals. In many developing countries, people often lack access to social security or formal insurance programs. By saving money, individuals can accumulate assets that act as a buffer during times of economic downturn or personal crises. This safety net helps mitigate the risks associated with poverty and acts as a springboard for economic mobility.

Furthermore, joint saving with formal and informal finance can support income-generating activities that help individuals escape poverty. Formal savings provide access to credit and investment opportunities, allowing individuals to start businesses or expand existing ones. On the other hand, informal savings groups often pool their resources and provide loans to members at low interest rates, enabling them to invest in income-generating activities. Such savings mechanisms facilitate entrepreneurship and empower individuals to generate consistent income, thereby breaking the cycle of poverty. In addition, joint formal and informal savings enable individuals to cope with unexpected expenses, which can otherwise push people further into poverty. Whether it's a medical emergency, education expenses, or household repairs, having savings allows individuals to cover these costs without resorting to expensive loans or selling assets at a loss. By avoiding debt and maintaining the stability of their financial situation, individuals can create a foundation for long-term economic stability and improve their overall well-being.

Chapter 6

Use of formal and informal financial services and its impact on household poverty

6.1 Introduction

There is evidence in the literature that access to finance is of dominant significance in household poverty reduction. This is also validated by the empirical findings provided in the preceding chapter. However, even though access to finance is significant for household poverty reduction, available research left an unfilled gap on whether the combined use of formal and informal finance increase the impact of finance on poverty reduction. In addition, there is still scant literature regarding the use of formal and informal finance jointly.

It is of paramount importance to bridge this gap on understanding whether the combined use of formal and informal finance increase the impact of finance on poverty reduction at the household level, because it could play a significant role in formalizing informal finance, thereby further enhancing the impact of finance on household poverty reduction in South Africa. This supplements the quantitative analysis results in the previous chapter by exploring whether the combined use of formal and informal finance increase the impact of finance on poverty reduction using Buffalo City Metropolitan Municipality, King Sabata Dalindyebo Local Municipality, and Nelson Mandela Bay Metropolitan Municipality in the Eastern Cape Province for pragmatic reasons because they are similar to households in other municipalities in other provinces.

Most of the households in the Eastern Cape use both formal and informal finance, similar to households in other provinces such as Western Cape, Northern Cape, Gauteng, KwaZulu Natal, Limpopo, Free State, Mpumalanga, North West, 36% of households' use formal finance together with informal finance (FinScope South Africa, 2015). In addition, the quantitative data for South Africa, same as that of Eastern Cape, does not provide insights on whether the combined use of formal and informal finance increase the impact of finance on poverty reduction. Therefore, Eastern Cape municipalities that are the province's economics centres were chosen in order for the qualitative methodology to support the numerical data, in so doing gaining more knowledge on whether the combined use of formal and informal finance increase the impact of finance on poverty reduction. Furthermore, these municipalities were picked based on proximity to data collection.

This study investigates the joint use of formal and informal finance by households in South Africa. Specifically, this chapter primarily focuses on identifying whether the combined use of formal and informal finance increase the impact of finance on poverty reduction. This was done by exploring the motives and benefits of using both formal and informal finance. The importance of finance use motives in the fight against poverty cannot be overstated. Access to financial services and the ability to use them effectively can empower individuals and communities to break free from the cycle of poverty. One of the key reasons for poverty is the lack of access to capital and financial resources, which hinders economic growth and development. By having access to financial services such as loans, savings accounts, and insurance, individuals can start and expand their own businesses, invest in education and skills training, and afford essential services like healthcare and housing. Furthermore, finance use motives play a crucial role in poverty alleviation by promoting financial inclusion.

The precautionary motive on the impact of finance on poverty represents the need for individuals to save and protect themselves from potential future poverty. One of the main factors that contribute to the precautionary motive on poverty is the unpredictable nature of life. Despite one's best efforts to secure their financial stability, unexpected events such as sudden job loss, illness, or natural disasters can lead to an abrupt decline in income and an increase in expenses. By adopting a precautionary motive, individuals aim to mitigate the risks associated with these unpredictable circumstances by building a financial buffer.

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In the future, the consumption motive is expected to play a crucial role in addressing poverty. With advancements in technology and changing consumer behaviours, there is a growing emphasis on sustainable and responsible consumption. This shift has the potential to alleviate poverty by promoting fair trade, reducing inequalities, and creating opportunities for economic empowerment.

The speculative motive on the impact of finance on poverty contribute to a vicious cycle of financial instability. When individuals are trapped in poverty, they often lack the resources to invest, save, or accumulate wealth. As a result, they are unable to take advantage of potential opportunities for upward mobility. Consequently, they continue to remain in poverty, perpetuating the cycle. This speculative motive creates a barrier for individuals to break free from poverty, as they are unable to access capital or resources to improve their situation.

The chapter starts by describing the participants of the study. Then, discussion of results and concluding remarks follow.

6.2 Socioeconomic Characteristics

The participant's profiles, financial services utilization, and the socio-economic situation of the participants are presented in the table below. The financial services utilization such as formal and informal were investigated and are thought to have the biggest influence on household poverty. All the people that took part in the study use formal and informal financial services. Figure 6.3 shows that of the 60 participants of this study 36 percent are formally served while 24 percent are informally served. In addition, 40 percent use formal and informal financial services jointly. This shows that joint usage of formal and informal finance is a factor that contributes to household poverty alleviation.

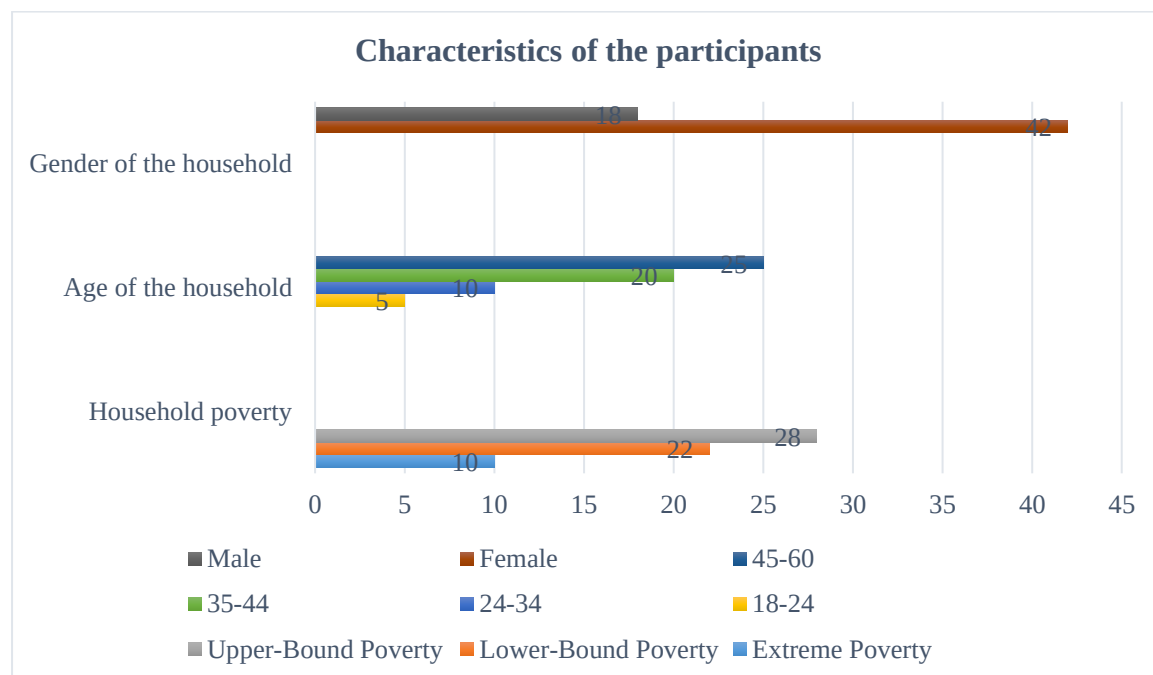


Figure 6.1: Characteristics of study participants by gender, age, and poverty

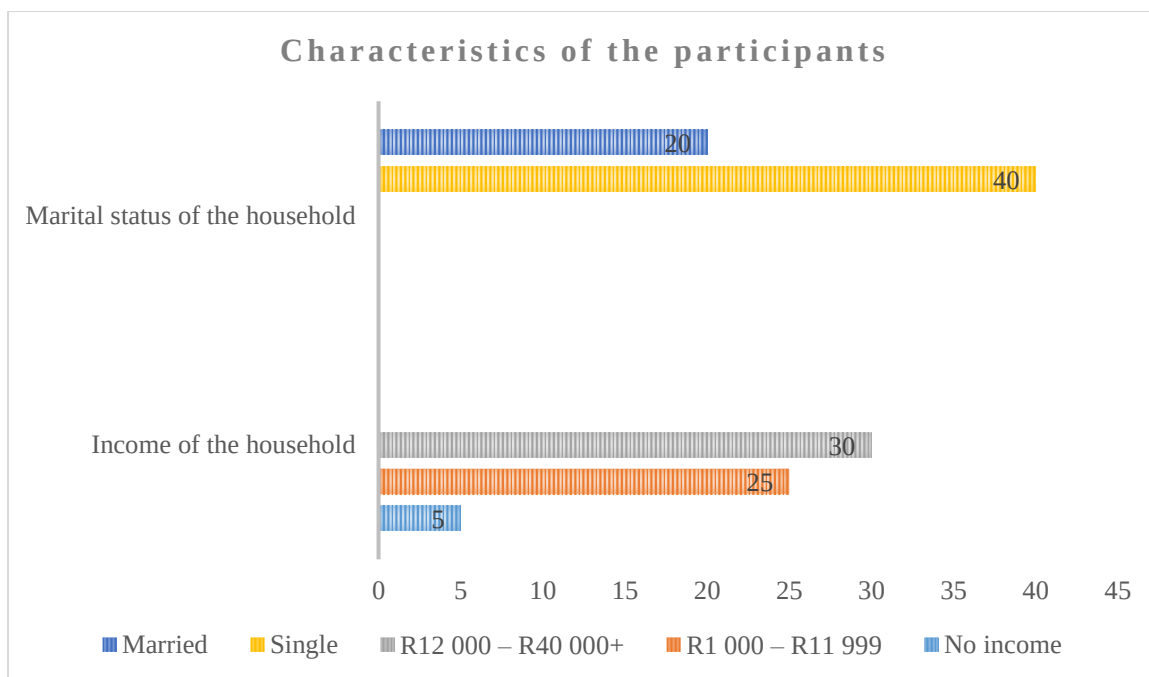


Figure 6.2: Characteristics of study participants by marital status and income

As can be seen in Figure 6.1, 30% of the participants were men and 70% were women. The literature indicates that the majority of women in African nations live in poverty, so it was crucial to include more female participants in the research.

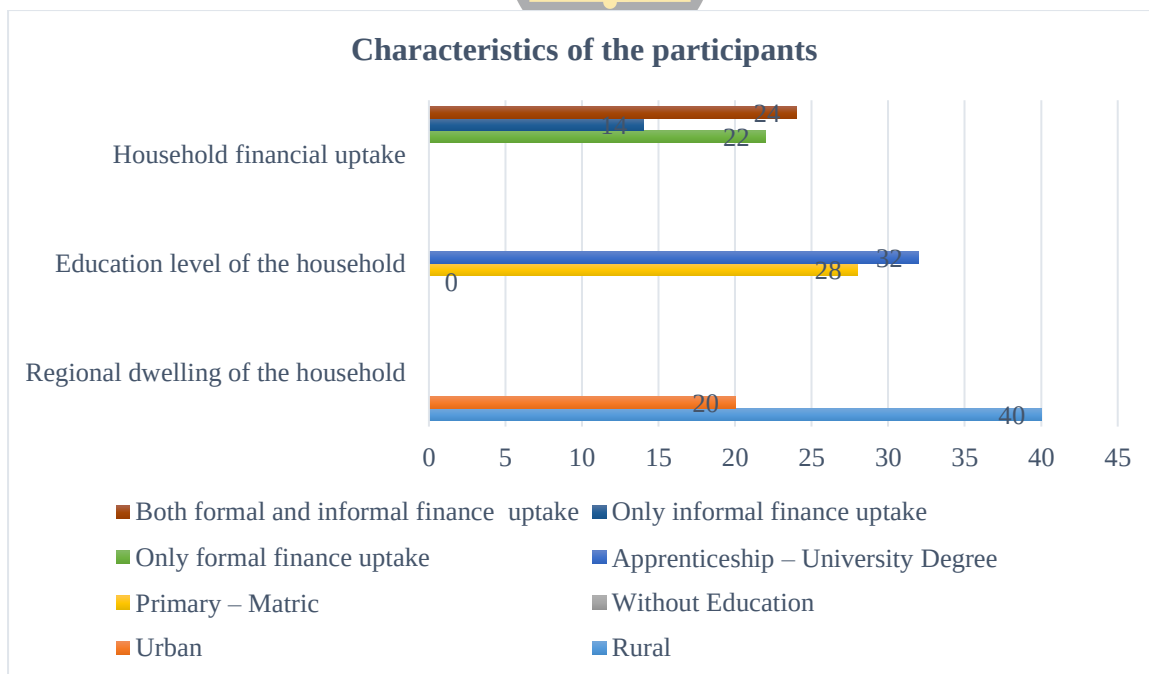


Figure 6.3: Characteristics of study participants by financial uptake, education, and regional dwelling

According to Figure 6.3, 34% of the contributors in the three municipalities came from urban areas, while 66% of them came from rural areas. Literature suggests that the high rate of poverty in rural areas could be the cause of this imbalance.

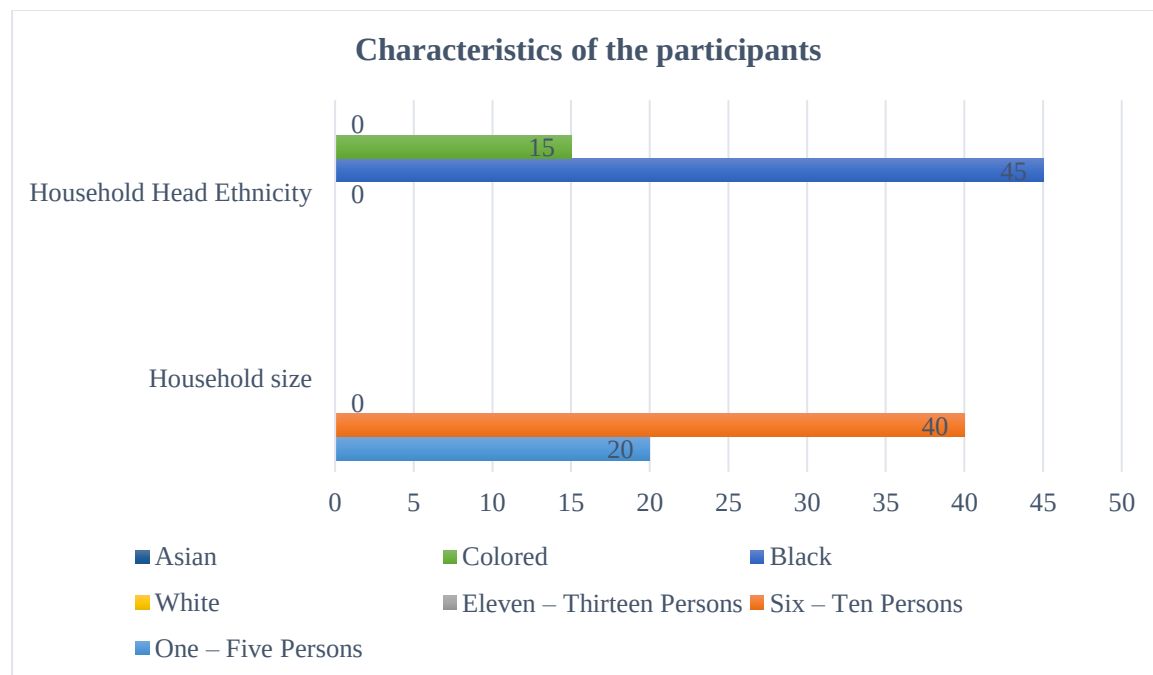


Figure 6.4: Characteristics of study participants by ethnicity and household size

Figure 6.4 shows that in the three municipalities about 75 percent contributors were black compared to the 25 percent that was Colored, and zero percent for both Asian and White households. This imbalance may be attributed to high level of poverty in black and colored communities, as suggested by literature.

6.3 The combined use of formal and informal finance and its impact on poverty

The interview transcripts that have been transcribed are shown in this section. It demonstrates how the themes and codes for the qualitative study came to be. This is solely based on the accounts provided by the participants in the study.

6.3.1 Emerging Codes

After the interviews were over, data analysis got underway. The Eastern Cape served as the venue for the interviews, which were audio recorded to document the respondent's experiences. A transcription of the entire text came next. To examine the data, thematic analysis was used. It was critical to remain in close proximity to the data and possess a strong understanding of it. This made it easier to comprehend the factors influencing the combination of formal and informal financial services use. Theory, critical reflection, and the coded interviews served as

the sources for the themes and categories. The texts underwent theme analysis and coding. The author has used coding that is descriptive. An overview of the extract can be found in the indicated descriptive code. We took the actions listed below to obtain the codes and themes.



Figure 6.5: Qualitative Data Analysis Process

The primary data that was discovered during the interviews served as the basis for the entire process. To make the raw data easily understood, it was necessary to gain a basic understanding of it by becoming familiar with and immersing oneself in it. In order to comprehend the different justifications offered by the respondents for utilizing both formal and informal financial services, as well as the effect that the simultaneous use of formal and informal finance on poverty, this was accomplished by reading through each interview transcript again and listening to the audio recordings. Following that, significant claims and concepts pertaining to the experiences of the respondents were taken out, grouped, and coded.

In order to give the data context, structural coding was used as an exploratory method of problem-solving. It made it possible to go from data to an idea and from an idea to all the data that was related to it. Descriptive coding, indicated by the capitalized code on the appendix's right side, was used a lot. As shown below, the extract was summarized by the aforementioned descriptive code. Twenty-four participants of the study who use both formal and informal finance explained the motives that made them use both formal and informal finance, they said it was because they want to finance expenditure in the case of emergency, to cope with

unplanned events, finance funeral costs and buy medication prescribed by the doctor. We coded these as *precautionary motives* (see the appendix). Twenty participants of the twenty-four who use both formal and informal finance alluded that the reason they use both formal and informal finance is to purchase food, pay school fees or education, buy a car, save for retirement or old age, pay future holidays or go overseas; and buy household goods and these were coded as *future consumption motives*. Lastly, fifteen of the twenty-four participant who use both formal and informal finance mentioned that the reason they use both formal and informal finance is to start businesses or to expand current businesses, acquire assets, and to social network for business or job opportunities and these were coded as *speculative motives*. When asked about the benefits of using both formal and informal finance they indicated that they were able to buy groceries and access lump sum cash and these were coded as ability to meet basic needs. Twenty-two participants mentioned that it benefited them in extending their houses and this was coded as ability to save and invest. Twenty participants allude that they benefit from using both formal and informal because these institutions lend them money and this was coded as *easy access to credit and loans*. Fifteen of the participants stated that using both formal and informal finance supported them during tough times and this was coded as *providing financial support*. Lastly, all twenty-four of the interviewees alluded that the joint use of formal and informal finance is the means to eradicate poverty and create jobs. Twelve codes were extracted from the transcripts. The codes consisted of an idea, a sentence, or a paragraph containing information about the themes that were being discussed. We had to determine which of the respondents' opinions were similar and which weren't. It should be noted that the codes that emerged were combined based on predetermined criteria derived from the research questions or participant responses.

An insignificant amount of the transcript was coded and examined in order to guarantee consistency in the coding. All discrepancies that could have emerged in the data coding were found after that review was finished, along with any changes that needed to be made for the codebook. The theories, constructs, concepts, languages, models, and interpretations of the qualitative data provide insight into how this study was organized. Ivankova et al. (2006) previously stated that methodological, phenomenological, and ethnographic concerns also had an impact on the coding. Additionally, subjectivity and predispositions had an impact on this coding. Subthemes and themes arose from the generated codes.

6.4 Discussion of the results

This chapter's objective was to use Eastern Cape municipalities to investigate the combined effects of formal and informal finance on household poverty in South Africa. The themes that arose after applying the framework for thematic analysis covered in chapter four are depicted in figure 6.6.

- Motives for the joint use of formal and informal financial services
- Benefits of using both formal and informal financial services



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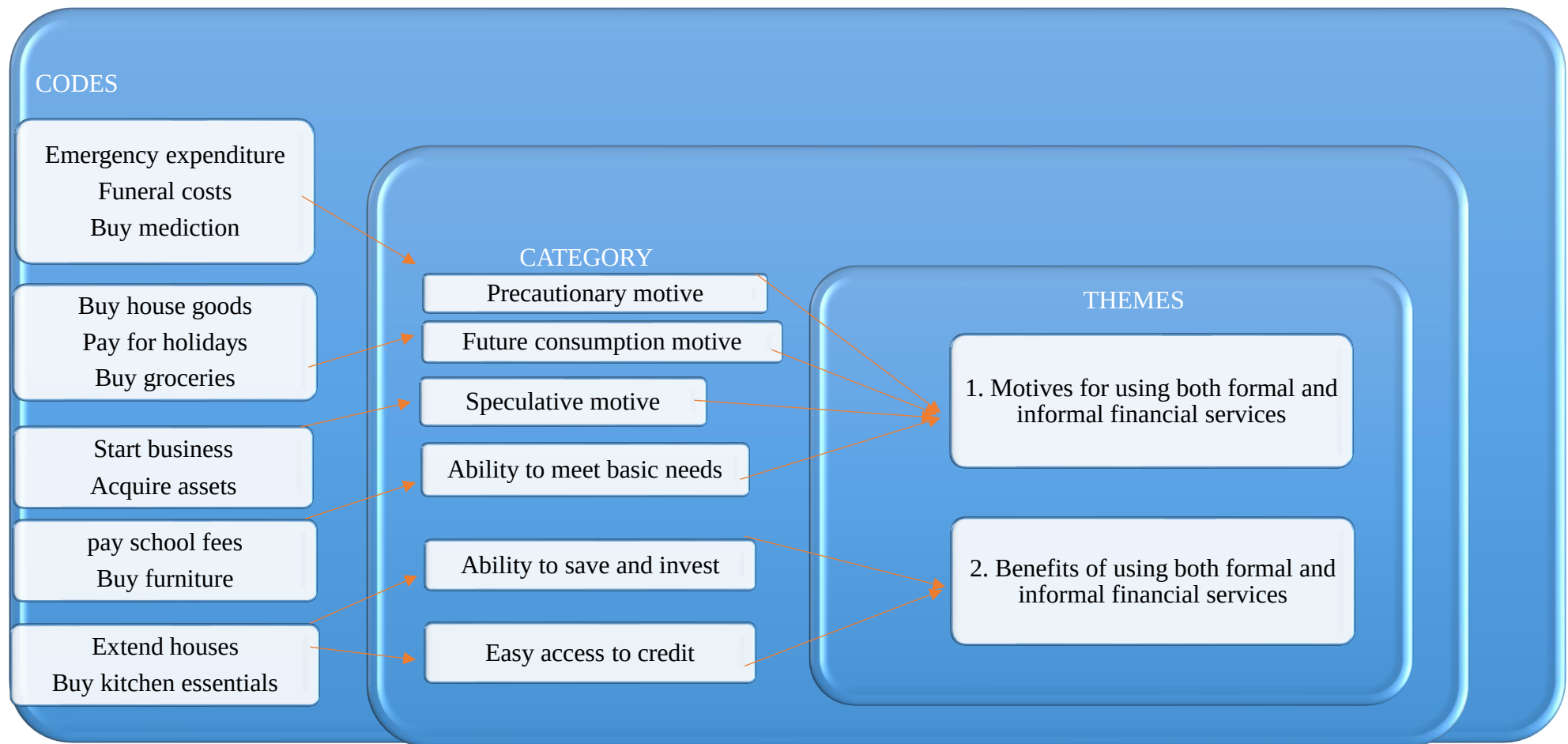


Figure 6.6: Thematic analysis framework

The chapter found that motives for finance use all contribute to the positive effects finance can have on poverty reduction. Firstly, precautionary motives through financing emergency expenditure, funeral costs, and medication household can reduce their level of poverty. Secondly, future consumption motive through financing house goods, future holidays, and extra groceries households may reduce the level of poverty. Thirdly, speculative motive through financing a new business, and assets household may reduce the likelihood of being poor.

One of the most significant benefits of finance is its potential to enable economic empowerment. Households benefit from formal and informal finance use through utilizing funds from these institutions to establish or expand their businesses, generate income, and lift themselves and their families out of poverty. Firstly, ability to meet basic needs through financing school fees, and furniture household can lift themselves out of poverty.

6.4.1 Motives for the joint use of financial services

This theme pertains to the motivations behind the respondents' utilization of both formal and informal financial resources. The stories and narratives shared by the respondents suggest that a multitude of factors played a role in the combined use of formal and informal financing. Each participant was able to provide an explanation for their concurrent use of formal and informal finance. Three recurring subthemes were noted by the researcher. A number of participants ascribed their behavior to a precautionary motive. Thus, the first subtheme is the precautionary motive. Other subthemes, such as future consumption motive and speculative motive, were found in addition to the precautionary motive.

6.4.1.1 Precaution as a motive for the joint use of formal and informal finance.

The extent to which respondents' perspectives differ on the reasons for using both formal and informal financial services jointly was the subject of more discussion. The findings of the study revealed that precautionary motive is one of the most noticeable themes that necessitate the joint use of formal and informal financial services. Precautionary motives refer to the actions taken by individuals or societies to protect themselves against potential risks or uncertainties. In finance, individuals may adopt precautionary motives when saving money or making investment decisions. They set aside funds for emergencies or unexpected events, such as job loss or medical expenses, to ensure financial security (Chudzian et al., 2015). This precautionary measure allows them to have a financial buffer to rely on, reducing the impact of any unforeseen circumstances and providing peace of mind. When asked why they used both formal and informal finance, almost every participant who was questioned had the same

answers. In essence, the participants used both formal and informal channels to finance unexpected expenses. The direct quotes from the interview transcriptions that follow demonstrate the wide range of participant responses regarding the reasons for using both formal and informal financial services jointly:

KSDLHOUSEHOLD2 demonstrated this, implying that:

“I always keep money as savings in my bank account and stokvel money savings group to finance expenditure in the case of emergency.”

BCMHOUSEHOLD1 shared the same sentiments and alluded that:

“I joined a stokvel saving club in order to be able borrow and save money in order to cope with unplanned events.”

This was further supported by BCMHOUSEHOLD1 who mentioned that:

“Some of my savings at the bank and at the stokvel saving club are for future usage due to uncertainty surrounding future”

Accidents and deaths are usually unforeseen events therefore no one expects to get in a car or bike accident or die on a given day (Mastrogiacono & Alessie, 2014). Because of unforeseen events, individuals keep part of their money to cover for funeral costs and pay for their medication costs (Heinzel & Peter, 2021). BCMHOUSEHOLD12 validated this and alluded that:

“Half of the money I spent on the funeral of my late father, I took it from my savings”

In addition to this, KSDLHOUSEHOLD15 mentioned that:

“Whenever I am not feeling well, I normally use my savings to buy medication prescribed by the doctor”

Research by Van Wyk (2017) directly discussed the impact that stokvel saving groups have on individual well-being. They also acknowledged that even though financial empowerment might often be the primary aim when joining stokvel saving clubs, the result often offers benefits beyond this goal. For instance, in this quote from KSDLHOUSEHOLD13, financial well-being was integrally linked to health and physical well-being.

“Wealth is actual possession that comes as a result of working effort. The reality of wealth is not cash, it is what is visible. Most importantly for me is my health, I cannot be wealthy when I am not healthy. That is why some of the money I save is for my medical expenses”

6.4.1.2 Future consumption motive

Future consumption motives refer to the reasons individuals have for engaging in consumption activities that are geared towards achieving long-term goals or desires. Individuals driven by future consumption motive seek to acquire knowledge, skills, and experiences that will benefit them in the future (Lotto, 2022). This motive often leads to investments in education, professional development, and personal growth activities such as travel or hobbies. Individuals motivated by personal growth understand that investing in themselves now will open up opportunities and enhance their satisfaction and quality of life in the future. These include the payment of the following: for food; school fees or education; a car; retirement or old age; future holidays or go overseas; and buying household goods. NMMHOUSEHOLD07 mentioned that:

“I joined stokvel saving group because sitting at home and depending on bank savings and salary was not helping in any way. The salary that my husband and I are getting was not enough for us to do anything. But ever since I started being a member of stokvel saving group, we managed to purchase furniture for our house in 2019, and we are managing to pay our children’s school fees. One is at Kwazakhele High School, and another is at Nelson Mandela University in her second year.”

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In addition to this, KSDLHOUSEHOLD23 alluded that:

“When I was growing up, my father taught me that money is not kept behind doors like brooms that is why some of my money is kept at the bank and in stokvel savings group, because I did not want to keep my money under a pillow. The little money that I have I keep it at the bank and contribute some of it to stokvel saving group so that I can go to holidays in the future because I cannot afford it on my own”

Keeping money at the bank and in stokvels saving groups harness the advantage of collective and bulk purchases (Chudzian et al., 2015). This allows people and members of the group to buy more for less and to provide access to food for not only themselves and their immediate households, but also their relatives within the country of residence of the stokvel members. Furthermore, BCMHOUSEHOLD19 mentioned that:

“Some of the money which we save is allocate to purchasing groceries during the year, and to make it possible to purchase extra groceries in Christmas shopping.”

This is supported by NMMHOUSEHOLD15, who outlined that:

“I joined the stokvel saving group to supplement my bank savings so that I can feed my children as I am the breadwinner and it’s difficult for me to manage and feed the family. Therefore, having extra groceries during Christmas helps a lot since almost all members of the family will be at home.”

The participants shared that since they began saving in banks and stokvels saving clubs, they have never experienced hunger or food insecurity. This is validated by BCMHOUSEHOLD16, who further stated that:

“Being part of the stokvel saving group and also have savings at the bank have benefited me a lot, I do not have that difficulty when it comes to food, I don’t want to lie, and even now I am still eating some of the food that I bought in December”

Another important motive for saving is to prepare for retirement. As people age, it becomes increasingly important to have a reliable source of income to support them in their later years. By starting to save early and consistently contributing to a retirement account, households can ensure that they will have enough money to sustain themselves once they are no longer working. This can be critical for people who do not have access to pension plans or other employer-sponsored retirement benefits.

6.4.1.3 Speculative motive

Speculative motives refer to the reasons behind investment activities based on expectations of future changes in the market. Such motives are driven by the desire to make profits from buying and selling financial assets, such as stocks, bonds, and currencies, by speculating on the future price movements. The main goal of speculative motives is to capitalize on expected changes in market conditions rather than on the intrinsic value of the investment itself (Lotto, 2022).

There is a strong correlation between capital accumulation and the usage of formal and informal financial services. Ngalawa & Vieg (2013) claim that formal and informal financial sector loans and savings are complementary overall, indicating that an increase in the use of formal financial sector credit and saving results in the creation of additional productive capacity that necessitates an increase in the amount of informal financial sector credit and savings to maintain equilibrium. According to the households interviewed, they use the money received

from the financial systems to start a private business, finance investments in an already-existing enterprise, and purchase financial assets. NMMHOUSEHOLD2 implied that; to substantiate this

“I used the money the bank lent me to refurbish my apartments and build new ones, and I supplemented it with the money I borrowed from the moneylender.”

According to Stiglitz & Weiss (1981), those offering financial services may not necessarily know as much about the person to whom they are giving services as they would like to know. In this regard, financial service providers do not provide the maximum amount of funds to the customers. Hence, some household tend to approach informal financial service providers for additional funds to finance their private businesses. This was validated by KSDLHOUSEHOLD3, who mentioned that;

“I needed a capital amount of R50 000 to start my private business...the bank provided me with R35 000...then the last R15 000 I borrowed it from the local moneylender...”

This was further confirmed by BCMHOUSEHOLD3, according to this participant the credit score plays an important role on the amount of credit the bank will provide to an individual. To this, the respondent alluded that;

“...the bank told me that my credit score was very low...therefore I couldnot get the full amount of money I was looking for...and that lead me to borrow the additional funds from the local moneylender in order to fully finance my business...”

The participants further stated that savings through informal financial systems supplements their savings with formal financial systems. According to the respondents, this is done by saving money with the stokvel savings group then lend the money to other household looking for funds and charge higher interest. The high interest obtained is then used to supplement the formal savings at bank. In this regard, NMMHOUSEHOLD1 alluded that;

“In our stokvel savings group we save a fixed amount of money every month, then the money we save we make it available to other households who are in need of funds, and we charge 40% as interest. The interest received is then taken to supplement the savings at the bank.”

This was validated by KSDLHOUSEHOLD1, according to this participant the higher interest charged encourages other investments. To this the respondent alluded that;

“...we combine the savings from the bank with the interest we get for lending money to other households...and that has assisted us in buying tents, tables, and chairs that we rent them out to households who host functions and events...”

BCMHOUSEHOLD1 further stated that the use of informal financial services together with formal financial services assists to accumulate capital for producing agricultural goods. The household mentioned that;

“...in order to be able to buy fertilizer for our farm, we combined the money we get as interest for lending money with the money we saved at the bank...”

6.4.2 Benefits of using both formal and informal financial services

There are several benefits in using both formal and informal financial services. To start with, formal financial services provide safety and security to individuals and businesses. Banks, for example, offer insured deposits, which safeguard customers' money even in the event of a bank failure. Additionally, formal financial institutions adhere to regulatory frameworks that ensure transparency and fair practices, offering a sense of trust to customers. On the other hand, informal financial services, such as community savings groups or rotating savings and credit associations (ROSCAs), provide quick access to funds without the need for lengthy paperwork and collateral. These informal services are often more flexible and understanding of the needs of individuals with limited access to the formal banking sector.

Furthermore, utilizing both formal and informal financial services can help individuals diversify their financial options. Formal financial institutions typically provide access to credit, investment vehicles, and insurance products that allow customers to grow their wealth over time. These services are structured, regulated, and provide access to larger sums of money for businesses and individuals seeking to expand or invest. However, informal financial services can also be advantageous, particularly for those who are excluded from the formal banking sector due to lack of collateral or proper credit history. In these cases, informal services can provide a critical lifeline, allowing individuals to borrow money for emergencies, start small businesses, or meet short-term financial needs.

In addition, using both formal and informal financial services can help promote financial inclusion and economic growth. By combining the advantages of formal financial institutions and informal financial services, individuals and businesses can access a wider range of financial products and services tailored to their specific needs. This can lead to increased

financial literacy and empowerment, as individuals learn to navigate both the formal and informal financial systems.

6.4.2.1 Ability to meet basic needs

The participants disclosed that their basic needs were met by combining the financial services. The participants reported that they were able to obtain groceries and a lump sum of money that they could use to cover their essential expenses and escape poverty. This was expressed quite well by KSDLHOUSEHOLD40 who boldly declared that:

“It has benefited me a lot, I do not have that headache when it comes to food, I don’t want to lie, and even now I am still eating food that I bought in December, they are still here in my place so it helps me a lot, soaps, toothpaste are still there even the washing powder I still have them so it helps me a lot.”

The individuals who took part in the study said that since using both forms of financing, they have not experienced hunger or food insecurity. BCMHOUSEHOLD44 added that:

“I benefit a lot because when the money comes I can buy something bigger like furniture and that one from the mashonisa I used it even when my child was going to college when the round came on me I used to pay the school fees.”

These responses confirm the observation by Matuku & Kaseke (2014) and Samer et al., (2015) that the joint use formal and informal finance enable households to achieve what they would not be able to achieve on their own.

6.4.2.2 Ability to save and invest

The study found that households have the opportunity to save and reduce their level of poverty when they use both formal and informal finance. Households can now undertake large-scale projects like adding on to their homes. NMMHOUSEHOLD33 who had been using both types of finance for a long period of time had this to say:

“Oh my savings help me a lot, because I’ve bought windows with that money, because I was budgeting it and putting it in the bank, but I decided let me do something aside, so I went and bought windows and frames with that money. I want to build, I bought those things and put aside, I bought tiling with that money I saved, because I saw that this money was supposed to buy food, but now because we are doing the stokvel it helps us to save a lot.”

Another key benefit that participants derived from using both formal and informal finance was the opportunity to invest in household property. BCMHOUSEHOLD35 responded as follows:

“Yes, it has benefited me; I bought curtains for my house, a new pot, a slow cooker.”

BCMHOUSEHOLD37 explained that:

“There is an amount that we collect and we decide on what we want to buy that month. For example, people can contribute say a 100 rand and then if the total amount buys three pots, we will buy the three pots; then in the following month we will buy more until every member has her own.”

As a result, participants were able to gain possessions. Despite the fact that these were small investments, participants mentioned that they were considering making larger ones, like purchasing land. This agrees with the conclusion made by Lappeman et al. (2019) and Bophela & Khumalo (2019) that participation in both types of finance enables households to end the poverty cycle.

6.4.2.3 Easy access to credit and mini-loans

Another significant advantage that participants gained from engaging in both forms of financing was having access to credit and mini-loans for productive purposes to reduce poverty. Borrowers paid interest to stokvels, which increases the savings. The stokvel is able to have a sizeable amount of money that it can lend to both members and non-members at fair interest rates when the contributions and interest fees are combined (Bophela & Khumalo, 2019). NMMHOUSEHOLD28 remarked that:

“It operates very well, because when we contribute R200 every month, we borrow and then other people come and borrow from us and then they bring it with 30% interest.”

This demonstrates how a lot of stokvels function as credit associations where borrowers can obtain loans at reasonable interest rates. Members' quality of life is enhanced as a result of being able to meet their basic needs.

On the other hand, households borrow money from the banks to purchase homes. Mortgages allow individuals to own a home without having to pay the full price upfront. In many cases, owning a home is seen as a good investment, as the value of the property is likely to appreciate over time. Additionally, owning a home provides stability and a sense of security for individuals and families. KSDDLHOUSEHOLD31 argued that:

“I want to buy houses because my focus is on property than other things. I am serious about creating wealth, and investing for a long-term”

Furthermore, students pursuing higher education also often borrow money in the form of student loans. These loans allow individuals to further their education and increase their earning potential. This was validated by KSDLHOUSEHOLD32 who mentioned that:

“I don’t think you would want to borrow so much of money that when you do finally get it you going to spend it on clothes. It’s always for things that you need, like things for the house or maybe putting down that registration money for your tuition. It’s always those types of things. Even with the ladies it was for something purposeful”

Another motive for borrowing money is to finance a business. Small business owners often need loans to get their business off the ground or to expand it. Loans can be used for anything from buying inventory to hiring employees. However, borrowing money for a business can be risky as there is no guarantee of success. It is important for entrepreneurs to carefully consider the risks before taking on any debt. Some households borrow money for discretionary spending, such as purchasing a new car or taking a vacation. While borrowing for these reasons can provide temporary enjoyment, it can also lead to financial stress and long-term debt if not managed properly.



6.5 Summary of results

The sample comprised of 60 participants aged between 20 years to 61+ years. The participants were from Buffalo City Metropolitan Municipality, King Sabata Dalindyebo Local Municipality, and Nelson Mandela Bay Metropolitan Municipality in the Eastern Cape Province. The participants spoke isiXhosa and English. This chapter has revealed that the precautionary motive plays a crucial role in poverty reduction. Individuals and households who have savings are better prepared to face unforeseen events and emergencies, thereby reducing their vulnerability to poverty. Policymakers can foster the precautionary motive by providing financial education, promoting access to financial services and insurance, and creating an enabling environment for individuals to save. By prioritizing policies that encourage the precautionary motive, societies can break the cycle of poverty and build a more secure and resilient future.

In addition, future consumption motives offer a promising approach to poverty reduction. By encouraging individuals and communities to save and invest in their future, a sustainable and long-term transformation is possible. The promotion of this mindset can empower individuals, break the cycle of poverty, and create a more inclusive society. Furthermore, the speculative motive plays a significant role in poverty reduction by stimulating investment and economic

growth. Through speculation, individuals and businesses invest their capital, leading to job creation and increased incomes for the population. Moreover, the profits generated from speculative activities contribute to government revenues, which can be used to fund poverty alleviation programs. Thus, the speculative motive can contribute to reducing poverty by creating a favorable economic environment that supports job creation, income generation, and social development.

The joint use of formal and informal finance is crucial in poverty reduction. By leveraging the strengths of both types of financing, individuals and communities can access a diverse range of financial services that meet their specific needs. This approach not only provides stability and credibility to those in need, but also fosters economic growth and promotes social inclusion.



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Chapter Seven

Summary of the Findings, Policy Implications and Recommendations

7.1 Introduction

The purpose of this study was to investigate the impact of formal and informal finance in South Africa and whether their joint use has a greater impact on poverty reduction. Multinomial regression analysis was used to estimate the joint impact of formal and informal finance on household poverty in South Africa. Furthermore, thematic analysis was used to examine whether an interaction between formal and informal finance enhances the impact of finance on household poverty in South Africa? The summary of the findings is provided in the next section. Followed by policy recommendations, then limitations of the study in the last section.

7.2 Summary of the findings

Objective 1: Overview of joint use of formal and informal finance in South Africa.

To achieve this objective the study used South African data from finscope to show the trends in joint use of formal and informal finance. The trends from finscope data show that in the year 2010, approximately 19% of South Africa's adult population makes use of all financial services. Furthermore, nearly 40% of people in 2012 manage their financial needs through a combination of formal and informal mechanisms, suggesting that the formal sector is not meeting all of their needs. In 2013, this 40% dropped to 32%. Additionally, in 2015, nearly 36% of people managed their financial needs through a combination of banked, other formal (non-bank), and informal mechanisms; this represents an increase from 34% in 2014 and suggests that people's needs may not be fully met by the formal sector alone.

Objective 2: impact of formal and informal finance on poverty.

To achieve this objective the study employed a multinomial regression analysis. The results reveal that household poverty differs between when the household head uses finance from each type of finance. It shows that several households are mostly in poverty because they either use formal finance only or informal finance only, especially on the savings side.

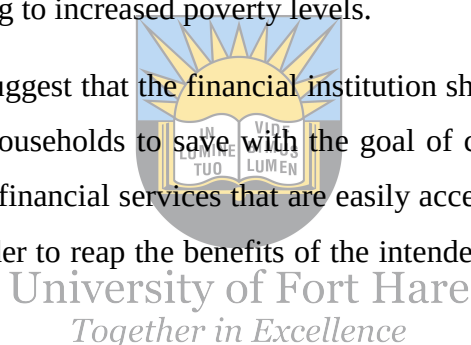
Objective 3: interaction of formal and informal finance

To achieve this objective the study employed a multinomial regression analysis. The results showed the probability of being poor is greater when a household head borrows from both informal and formal financial institutions. On the other hand, when the head of the household saves with both formal institutions and informal saving groups, the likelihood of being poor is

reduced. Theoretically, the main forces behind the decline of poverty in South Africa should be credit from formal and informal financial service providers as well as savings.

However, the negative impact of credit from both formal and informal finance on household poverty reduction could be explained by the fact that the availability of credit alone does not address the underlying causes of poverty, such as lack of education, healthcare, and social support systems. While credit may offer short-term relief, it does not address the systemic issues that perpetuate poverty. Additionally, individuals who are already trapped in poverty may struggle to repay their loans due to their limited resources and lack of financial literacy. This can result in a cycle of debt, further exacerbating their poverty situation. Moreover, the focus on credit as a poverty reduction strategy often neglects the importance of sustainable economic development and job creation. In many cases, individuals who take on credit may invest in ventures that do not generate sufficient income or fail to create long-term employment opportunities. This can result in a situation where individuals are burdened with debt without the means to repay it, leading to increased poverty levels.

These results of the study suggest that the financial institution should implement policies and schemes which motivates households to save with the goal of creating an environment that supports savings and offers financial services that are easily accessible and reasonably priced for the general public in order to reap the benefits of the intended financial sector's ability to reduce poverty.



In addition, to achieve this objective qualitative data was collected and thematic analysis was used to analyze it. The results show that an interaction between formal and informal finance enhances the impact of finance on household poverty when households borrow and save in both informal and formal financial institutions for precautionary, speculative, and future consumption motives. These findings imply that, in order for the financial institution to reap the benefits of the intended poverty reduction effect of finance, it should put in place policies and programs that encourage households to borrow and save with the goal of creating an environment that allows credit and savings to provide financial services that are easily accessible and reasonably priced to the general public.

7.3 Policy Implications of the Study

The study findings show that saving in both formal finance institutions and informal finance mechanism is important in spurring poverty reduction in South Africa. This suggests that savings play a fundamental role in uplifting individuals and communities out of poverty.

Therefore, the government should introduce legislation that recognizes and regulates stokvels. This would provide legal protection for members and ensure transparency in financial transactions. In addition, it would enable stokvels to access formal banking services such as loans or interest-bearing accounts.

Furthermore, the government should introduce tax incentives to incentivize participation in stokvels. For example, tax breaks on interest earned from stokvel savings or deductions on contributions made could encourage more people to join these groups. Moreover, the government should collaborate with existing community organizations that promote financial inclusion. By partnering with these organizations, the government can leverage their expertise and networks to reach a wider audience and create awareness about informal savings options like stokvels.

7.4 Limitation of the Areas of Future Research Study

Using data from 2013 to 2016, the current study examined household poverty, informal and formal finance in South Africa. Thus, future research that looks at the relationship between household poverty and finance use may benefit from using data that includes other financing resources not covered in this study, provided that data are available. Furthermore, we used each household's income to calculate the poverty level in that household. Thus, additional measures of household poverty, such as the headcount index, multidimensional poverty index, Sen index, poverty gap index, squared poverty gap index, etc., can be used in future research. Our comprehension of the research phenomenon can be improved by utilizing additional estimation panel estimation techniques.

The study's summary and conclusion are provided at the end of this chapter. The chapter also offered recommendations for future research areas, policy implications, and recommendations. In terms of savings, the study discovered that combining formal and informal financing greatly promotes the decline of household poverty in South Africa. Additionally, it was observed that the combined utilization of formal and informal finance does not substantially contribute to the decrease of household poverty in South Africa related to credit.

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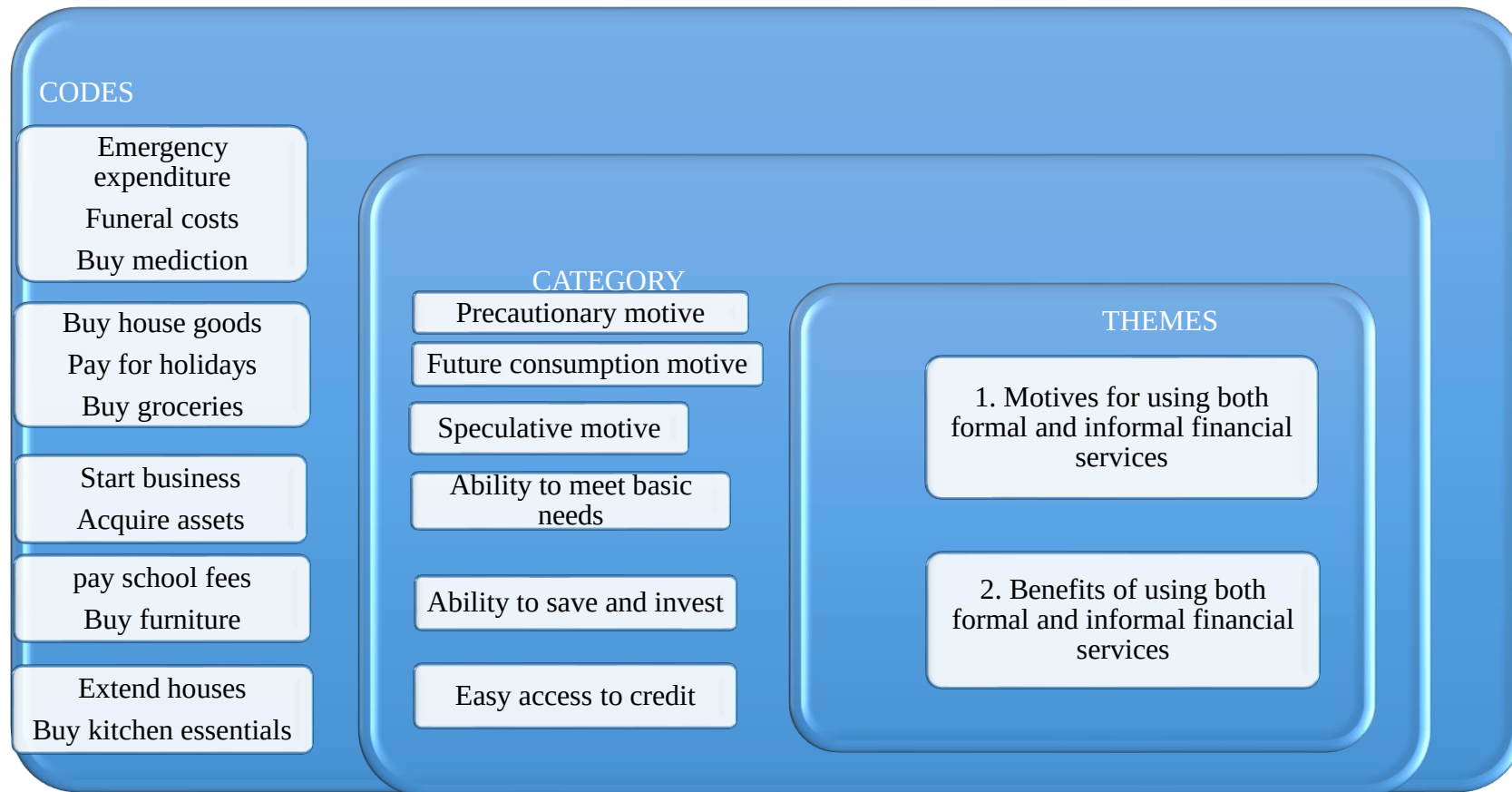
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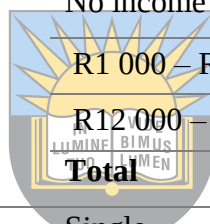
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APPENDICES



Appendix 1: Thematic analysis framework

Household Characteristic	Category	N	%
Household poverty	Extreme Poverty	10	17
	Lower-Bound Poverty	22	36
	Upper-Bound Poverty	28	47
	Total	60	100
Age of the household	18-24	5	8
	24-34	10	17
	35-44	20	33
	45-60	25	42
	Total	60	100
Gender of the household	Female	42	70
	Male	18	30
	Total	60	100
Income of the household	No income	5	8
	R1 000 – R11 999	25	42
	R12 000 – R40 000+	30	50
	Total	60	100
Marital status of the household	Single	6	66.7
	Married	3	33.3
	Total	60	100
Regional dwelling of the household	Rural	40	66
	Urban	20	34
	Total	60	100
Education level of the household	Without Education	0	0
	Primary – Matric	28	47
	Apprenticeship – University Degree	32	53
	Total	60	100
Household financial uptake	Only formal finance uptake	22	36
	Only informal finance uptake	14	24
	Combination of formal and informal finance uptake	24	40
	Total	60	100



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Household size	One – Five Persons	20	33
	Six – Ten Persons	40	67
	Eleven – Thirteen Persons	0	0
	Total	60	100
Household Head Ethnicity	White	0	0
	Black	45	75
	Colored	15	25
	Asian	0	0
	Total	60	100



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Appendix 2: Model Fitting Information

Model Fitting		Likelihood Ratio Tests		
	Criteria			
	-2 Log Likelihood			
Model	Likelihood	Chi-Square	df	Sig.
Intercept Only	8648.513			
Final	6351.939	2296.574	36	.000

Appendix 3: Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4012.323	4048	.652
Deviance	3630.408	4048	1.000



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Appendix 4: Pseudo R-Square

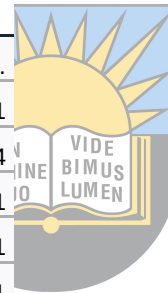
Cox and Snell	.121
Nagelkerke	.157
McFadden	.087

Appendix 5: Likelihood Ratio Tests

Effect	Model Fitting	Likelihood Ratio Tests		
	Criteria	Chi-Square	df	Sig.
	-2 Log			
	Likelihood of			
	Reduced Model			
Intercept	6351.939 ^a	.000	0	.
Area	6372.461	20.522	2	<.001
Marital status	6354.842	2.903	2	.234
SavingStrand	6832.792	480.853	4	<.001
CreditStrand	6653.109	301.170	4	<.001
Age	6520.580	168.642	4	<.001
Gender	6361.234	9.296	2	.010
Education	6369.541	17.603	4	.001
Household monthly income	6393.328	41.389	4	<.001
Household Size	6489.638	137.699	4	<.001
Race	6480.652	128.714	6	<.001

The chi-square statistic is the difference in -2 log-likelihoods between the final model and a reduced model. The reduced model is formed by omitting an effect from the final model. The null hypothesis is that all parameters of that effect are 0.

a. This reduced model is equivalent to the final model because omitting the effect does not increase the degrees of freedom.



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Appendix 5: Parameter Estimates

Poverty ^a		B	Std. Error	Wald	df	Sig.	Exp(B)	95% Confidence Interval for Exp(B)	
								Lower Bound	Upper Bound
1	Intercept	.200	.777	.066	1	.797			
	Area	-.300	.075	16.075	1	<.001	.741	.640	.858
	Marital status	-.033	.073	.198	1	.657	.968	.838	1.117
	[SavingStrand=1]	-.765	.111	47.156	1	<.001	.465	.374	.579
	[SavingStrand=2]	.640	.117	30.091	1	<.001	1.896	1.509	2.384
	[SavingStrand=3]	0 ^b	.	.	0	.	.	.	.
	[CreditStrand=1]	.143	.075	3.633	1	.057	1.154	.996	1.337
	[CreditStrand=2]	.493	.180	7.508	1	.006	1.637	1.151	2.328
	[CreditStrand=3]	0 ^b	.	.	0	.	.	.	.
	[Age=1]	.403	.131	9.555	1	.002	1.497	1.159	1.933
	[Age=2]	.347	.142	5.988	1	.014	1.415	1.071	1.868
	[Age=3]	0 ^b	.	.	0	.	.	.	.
	[Gender=1]	.144	.062	5.316	1	.021	1.155	1.022	1.305
	[Gender=2]	0 ^b	.	.	0	.	.	.	.
	[Education=1]	.052	.260	.040	1	.842	1.053	.633	1.753
	[Education=2]	-.281	.276	1.041	1	.308	.755	.439	1.296
	[Education=3]	0 ^b	.	.	0	.	.	.	.
	[Household monthly income=1]	-.588	.663	.103	1	.0001	.555	.151	2.039
	[Household monthly income=2]	-.848	.664	.264	1	.0020	.428	.117	1.574
	[Household monthly income=3]	0 ^b	.	.	0	.	.	.	.
	[Household Size=1]	.522	.257	4.127	1	.042	1.685	1.019	2.788
	[Household Size=2]	.254	.264	.932	1	.334	1.290	.769	2.162

2	[Household Size=3]	0 ^b	.	.	0	.	.	.	.
	[Race =1]	.808	.115	49.574	1	<.001	2.243	1.791	2.809
	[Race =2]	.272	.131	4.276	1	.039	1.312	1.014	1.698
	[Race =3]	.123	.180	.466	1	.495	1.131	.794	1.610
	[Race =4]	0 ^b	.	.	0	.	.	.	.
	Intercept	.682	.699	.952	1	.329			
	Area	-.114	.067	2.853	1	.091	.893	.782	1.018
	Marital status	.049	.061	.644	1	.422	1.051	.931	1.185
	[SavingStrand=1]	.653	.080	67.124	1	<.001	1.922	1.644	2.247
	[SavingStrand=2]	.995	.106	88.786	1	<.001	2.706	2.200	3.328
	[SavingStrand=3]	0 ^b	.	.	0	.	.	.	.
	[CreditStrand=1]	.787	.063	155.688	1	<.001	2.197	1.942	2.487
	[CreditStrand=2]	.369	.168	4.859	1	.028	1.447	1.042	2.009
	[CreditStrand=3]	0 ^b	.	.	0	.	.	.	.
	[Age=1]	.997	.117	72.048	1	<.001	2.709	2.152	3.410
	[Age=2]	1.320	.126	109.932	1	<.001	3.742	2.924	4.789
	[Age=3]	0 ^b	.	.	0	.	.	.	.
	[Gender=1]	.016	.053	.094	1	.759	1.016	.916	1.128
	[Gender=2]	0 ^b	.	.	0	.	.	.	.
	[Education=1]	-.169	.227	.556	1	.456	.844	.542	1.317
	[Education=2]	-.465	.238	3.820	1	.051	.628	.394	1.001
	[Education=3]	0 ^b	.	.	0	.	.	.	.
	[Household monthly income=1]	-.915	.603	.203	1	.0012	.401	.123	1.306
	[Household monthly income=2]	-.888	.603	.2037	1	.0014	.412	.126	1.342
	[Household monthly income=3]	0 ^b	.	.	0	.	.	.	.
	[Household Size=1]	.990	.231	18.367	1	<.001	2.692	1.712	4.235

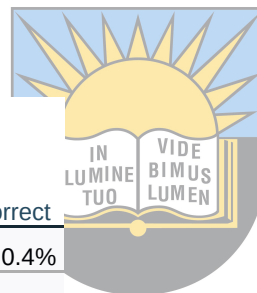
[Household Size=2]	.273	.237	1.325	1	.250	1.314	.825	2.091
[Household Size=3]	0 ^b	.	.	0	.	.	.	.
[Race =1]	.191	.084	5.097	1	.024	1.210	1.025	1.427
[Race =2]	.063	.098	.413	1	.520	1.065	.879	1.290
[Race =3]	.205	.132	2.426	1	.119	1.228	.948	1.590
[Race =4]	0 ^b	.	.	0	.	.	.	.

a. The reference category is: 0.

b. This parameter is set to zero because it is redundant.

Appendix 6: Classification

Observed	Predicted			Percent Correct
	0	1	2	
0	7	52	1631	0.4%
1	9	88	2787	3.1%
2	5	50	13152	99.6%
Overall Percentage	0.1%	1.1%	98.8%	74.5%



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Appendix 7: Model Fitting Information

Model	Model Fitting		Likelihood Ratio Tests	
	Criteria			
	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	8723.905			
Final	6487.813	2236.092	40	.000

Appendix 8: Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4665.282	4716	.698
Deviance	3828.198	4716	1.000



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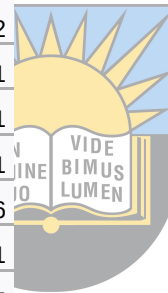
Appendix 9: Pseudo R-Square

Cox and Snell	.118
Nagelkerke	.153
McFadden	.085

Appendix 10: Likelihood Ratio Tests

Effect	Model Fitting	Likelihood Ratio Tests		
	Criteria	Chi-Square	df	Sig.
	-2 Log			
	Likelihood of Reduced Model			
Intercept	6487.813 ^a	.000	0	.
Age	6657.313	169.499	4	<.001
Education	6504.710	16.897	4	.002
Household monthly income	6529.864	42.051	4	<.001
Household Size	6628.046	140.233	4	<.001
Race	6619.177	131.364	6	<.001
Gender	6497.890	10.077	2	.006
Area	6507.612	19.799	2	<.001
Marital status	6491.188	3.375	2	.185
Informal machanism credit	6491.084	3.271	2	.195
Formal Credit	6768.237	280.424	2	<.001
Informal machanism credit *	6493.130	5.317	2	.070
Formal Credit				
Informal groups saving	6530.330	42.516	2	<.001
Informal groups saving *	6500.981	13.168	2	.001
Formal Saving				
Formal Saving	6773.822	286.008	2	<.001

The chi-square statistic is the difference in -2 log-likelihoods between the final model and a reduced model. The reduced model is formed by omitting an effect from the final model. The null hypothesis is that all parameters of that effect are 0.



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a. This reduced model is equivalent to the final model because omitting the effect does not increase the degrees of freedom.



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Appendix 12: Parameter Estimates

Poverty ^a		B	Std. Error	Wald	df	Sig.	Exp(B)	95% Confidence Interval for Exp(B)	
								Lower Bound	Upper Bound
1	Intercept	.610	.781	.610	1	.435			
	[Age=1]	.406	.130	9.697	1	.002	1.501	1.162	1.939
	[Age=2]	.353	.142	6.216	1	.013	1.423	1.078	1.879
	[Age=3]	0 ^b	.	.	0	.	.	.	.
	[Education=1]	.028	.260	.011	1	.915	1.028	.618	1.710
	[Education=2]	-.298	.275	1.174	1	.279	.742	.432	1.273
	[Education=3]	0 ^b	.	.	0	.	.	.	.
	[Household monthly income=1]	-.590	.663	.113	1	.003	.555	.151	2.034
	[Household monthly income=2]	-.854	.663	.321	1	.001	.426	.116	1.562
	[Household monthly income=3]	0 ^b	.	.	0	.	.	.	.
	[Household Size=1]	.470	.256	3.380	1	.066	1.601	.969	2.643
	[Household Size=2]	.198	.263	.569	1	.451	1.219	.729	2.039
	[Household Size=3]	0 ^b	.	.	0	.	.	.	.
	[Race =1]	.809	.115	49.458	1	<.001	2.245	1.792	2.812
	[Race =2]	.257	.132	3.826	1	.050	1.293	.999	1.674
	[Race =3]	.120	.180	.441	1	.507	1.127	.792	1.604
	[Race =4]	0 ^b	.	.	0	.	.	.	.
	Gender	-.150	.063	5.719	1	.017	.861	.762	.973
	Area	-.289	.075	14.979	1	<.001	.749	.647	.867
	Marital status	-.023	.073	.101	1	.750	.977	.846	1.128
	Informal machanism credit	.250	.282	.786	1	.375	1.284	.739	2.230
	Formal Credit	.099	.076	1.706	1	.192	1.104	.952	1.280

	Informal machanism credit *	.942	.452	4.354	1	.037	2.565	1.059	6.216
	Formal Credit								
	Informal groups saving	.318	.131	5.905	1	.015	1.375	1.064	1.778
	Informal groups saving *	-.642	.265	5.884	1	.015	.526	.313	.884
	Formal Saving								
	Formal Saving	-.750	.123	37.215	1	<.001	.472	.371	.601
2	Intercept	.852	.702	1.471	1	.225			
	[Age=1]	.994	.117	72.089	1	<.001	2.701	2.147	3.397
	[Age=2]	1.320	.125	110.919	1	<.001	3.745	2.929	4.789
	[Age=3]	0 ^b	.	.	0	.	.	.	.
	[Education=1]	-.188	.226	.694	1	.405	.828	.532	1.290
	[Education=2]	-.475	.237	4.017	1	.045	.622	.391	.990
	[Education=3]	0 ^b	.	.	0	.	.	.	.
	[Household monthly income=1]	-.914	.602	.311	1	.001	.401	.123	1.304
	[Household monthly income=2]	-.891	.602	.255	1	.001	.410	.126	1.335
	[Household monthly income=3]	0 ^b	.	.	0	.	.	.	.
	[Household Size=1]	.934	.230	16.422	1	<.001	2.545	1.620	3.998
	[Household Size=2]	.206	.236	.760	1	.383	1.229	.773	1.953
	[Household Size=3]	0 ^b	.	.	0	.	.	.	.
	[Race =1]	.182	.085	4.620	1	.032	1.199	1.016	1.415
	[Race =2]	.039	.098	.156	1	.693	1.039	.858	1.259
	[Race =3]	.201	.132	2.337	1	.126	1.223	.945	1.582
	[Race =4]	0 ^b	.	.	0	.	.	.	.
	Gender	-.016	.053	.093	1	.761	.984	.886	1.092
	Area	-.102	.067	2.326	1	.127	.903	.791	1.030
	Marital status	.062	.061	1.017	1	.313	1.064	.943	1.200

Informal machanism credit	.408	.253	2.605	1	.107	1.504	.916	2.470
Formal Credit	.754	.063	142.638	1	<.001	2.126	1.879	2.407
Informal machanism credit *	.913	.411	4.939	1	.026	2.491	1.114	5.571
Formal Credit								
Informal groups saving	.624	.116	28.699	1	<.001	1.866	1.485	2.345
Informal groups saving *	-.686	.187	13.434	1	<.001	.503	.349	.727
Formal Saving								
Formal Saving	.571	.088	42.439	1	<.001	1.771	1.491	2.103

a. The reference category is: 0.

b. This parameter is set to zero because it is redundant.



Appendix 13: Classification

Observed	Predicted			Percent Correct
	0	1	2	
0	7	51	1632	0.4%
1	10	82	2792	2.8%
2	6	55	13146	99.5%
Overall Percentage	0.1%	1.1%	98.8%	74.4%

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