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Disruptive innovation and the long run impact of mobile lending on bank sustainability in Zambia and Kenya

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Disruptive innovation and the long run impact of mobile lending on bank sustainability in Zambia and Kenya

"A research report submitted to the Wits Business School in the University of the Witwatersrand, in partial fulfilment of the requirements for the degree of Master of Management in the field of Innovation Studies"

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LIST OF ABBREVIATIONS & ACRONYMS

BoP	Bottom of the economic Pyramid
DFS	Digital Financial Services
GDP	Gross Domestic Product
MNOs	Mobile Network Operators
SSA	Sub Saharan Africa
Fintechs	Financial Technology Companies
FSPs	Financial Services Providers
NPL	Non-Performing Loan
SME	Small and Medium Enterprise
DIT	Disruptive Innovation Theory

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ABSTRACT

The emergence of financial technology companies (fintechs) in the past decade has provided new twists on financial models, allowing customers more influence on their financial outcomes. As financial innovations disrupt financial services across the globe, many banks face the risk of reduced competitive advantage. In response, banks are exploring strategic alliances with Mobile Network Operators (MNOs) and fintechs to maintain their competitive advantage and enter new markets. One such innovation is the use of mobile phones to conduct financial transactions and tap into new markets.

Mobile banking adoption studies predominantly focus on financial inclusion and its critical role in economic development and less on the potential transcendental impact that adoption of other mobile banking functions, such as mobile lending, might have on the banks' affluent customer segment. More specifically, knowledge on whether mobile lending is a complementary or disruptive innovation for banks in the long term remains unclear. Firms that have managed to successfully develop or leverage on disruptive innovations were only able to determine the disruptiveness of the innovation ex post and scholars that have attempted to identify disruptive innovations ex ante, found it challenging.

This research took a pre-emptive look at the long run impact of mobile lending on banks in Africa. Specifically, the case for mobile lending in Zambia and Kenya was assessed one of the four large multinational African banks in Zambia and Kenya. The literature review evaluated the theory of disruptive innovation as well as the Base of the Pyramid (BoP) theory as they were relevant to the establishment of mobile lending as a complementary or disruptive innovation for banks. An explanatory sequential mixed-methods design was adopted. A quantitative analysis of the secondary data for Zambia and Kenya for 2017 - 2019 was analysed, which was followed by in-depth, semi-structured interviews with ten participants from various business units (and various levels) within the bank. This allowed for the exploration of the main reasons for the quantitative analysis findings as well as provided additional insights.

This study contributes to the business literature by providing new empirical depth to the long run impact of mobile lending on banks in sub-Saharan Africa. Specifically, mobile lending could emerge as a competitive channel for existing bank customer, resulting in the cannibalisation of its affluent segment customers. Therefore, this study intended to provide insights on the sustainability of partnerships between banks and fintechs regarding mobile lending. Furthermore, understanding of various factors that influence adoption of mobile lending by different customer segments within the bank will help inform customer retention strategies to protect existing clients, which could occur in various forms such as proactive cannibalisation. This study also suggests future research opportunities in mobile lending adoption for further theoretical and empirical advancement. Lastly, this research also intended to provide insights pertaining to the key factors that affect the successful growth associated with the adoption of mobile lending services by affluent customers and hence inform business strategic decisions.

KEY WORDS

Mobile Lending, BoP, Disruptive Innovations, Complementary Innovations, Fintechs, MNOs, Affluent Segment, Proactive Cannibalisation

DECLARATION

I, Kgahliso Bridget Nonyane, declare that this dissertation is my own unaided work except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements for the degree of Master of Management in the field of Innovation Studies at the Wits Business School in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other University.

Signature: K.B Nonyane

On this 28 May 2022

Kgahliso Bridget Nonyane

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CHAPTER 1: INTRODUCTION

The establishment of mobile banking in developing countries has seen a significant inclusion of previously under-served and unserved customers into the financial services ecosystem. Mobile lending has been perceived as the panacea for credit access to the bottom of the economic pyramid (BoP) customer segment as banks have historically struggled to extend their lending appetite to this customer segment. As a result, studies on mobile lending tend to focus on mobile lending from a financial inclusion perspective and less on the potential transcendental impact that adoption of other mobile banking functions, such as mobile lending, might have on the banks' affluent customer segment. More specifically, knowledge on whether mobile lending is a complementary or disruptive innovation for banks in the long term remains unclear.

1.1 PURPOSE OF THE STUDY

The need for strategic partnerships to manage disruption and remain relevant in present-day global economies have intensified. Banks that compete in global economies continuously face challenges as traditional channels with limited servicing models have been proven inadequate. As such, financial institutions need to find innovative ways to retain existing customers while expanding into new markets.

Mobile lending innovation is one of the strategies that banks are pursuing as part of their mobile banking strategy to remain relevant and tap into new customer markets. The purpose of this study is to gain insight into the impact of mobile lending on bank sustainability in Zambia and Kenya. It specifically assumed a pre-emptive look at mobile lending innovation as either a complementary innovation to the BoP segment or a disruptive innovation for banks affluent segment in the long run. Following an explanatory sequential mixed-method design, the study initially used secondary quantitative data, which was then be followed by in-depth, semi-structured interviews.

1.2 CONTEXT OF THE STUDY

Technological developments and strategic partnerships are rapidly changing the competitive landscape, especially in banking. Companies are continuously looking for opportunities to innovate by searching for unsolved problems and acknowledging unmet needs (Linna, 2013). In the quest for meeting customers' expectations, it is imperative for banks to understand the long-term impact of their strategic partnerships with fintechs on their customer segments. Digitalization has enabled financial services providers (FSPs) to develop profitable financial solutions to the BoP that enhance their social and economic wellbeing at an affordable cost (Govindarajan & Kopalle, 2006b).As a result, social needs are also starting to be perceived as potential business opportunities to serve new markets. One of the ways in which banks have embraced digitalization is through the extension of their mobile banking services to include mobile loans.

Mobile lending is described as the ability to utilize a mobile phone to apply for, gain approval on, and check the status of a loan within minutes (Daniel, 1999). Mobile technology is used all through the entire loan process, and, in particularly, draw on social and transactional data for the credit assessment. Furthermore, providers can deploy mobile technology in their loan products through traditional loans, mobile-enabled loans and pure mobile loans**.**

This paper focussed on pure mobile loans, where the loan process becomes digital and even cashless, replacing arduous processes and prolonged loan approval time. The central innovation of pure mobile loans is the credit model, which extrapolates transactional and social data available online to deliver real-time client evaluations. Such models enable the expansion of lending services to the unbanked segment of the population who do not have credit records and other official documents (GSMA, 2019).

This study focussed on two retail banking customer segments, which were organised into two groups based on the income segmentation as defined by the bank: the personal banking segment (also referred to as the BoP) as well as the

affluent segment. Various scholars have also highlighted that understanding the needs and wants of a select group of consumers is imperative to sustainable business success (Villiers et al., n.d.).

Retail banks predominantly use income segmentation to categorise the different customer segments so they can better solution for their financial needs.

Customer segmentation is defined as the categorisation of a customer base into groups of people that are similar in specific ways relevant to marketing such as age, gender and income (Melnic, 2016). Studies show that customer segmentation models enable the efficient distribution of marketing resources by aiding companies with targeting specific groups of customers (Hofstede et al., 1999; Melnic, 2016).Most incumbent banks still use the traditional income segmentation method to group customers as this enables them to focus their acquisition and marketing efforts on customers who yield the highest return on investment. The income segmentation definition used in this study is standard to the four African multinational banks, despite the variation in income bands per country. The variation in income bands is due to the diverse economic conditions in the different countries. By grouping customers according to their similarity on key dimensions, we gain an understanding of how banks can develop and plan business and investment strategy accordingly.

The paper also focussed on two retail banking customer segments, namely, BoP customers and affluent customers. The personal banking segment in this study is defined as customers who earn between $505 - $2k in Zambia and $196 - $982 in Kenya while the affluent segment is defined as customers who earn $2k - $3.5k in Zambia and customers who earn more than $982 in Kenya.

The next section provides a background on mobile lending in developing and developed countries.

1.2.1 THE MOBILE LENDING LANDSCAPE

The banking landscape has transformed over the last decade. Banks are finding ways to circumvent historical impediments, such as bricks and mortar branches, to avail financial services to previously financially excluded customer segments. According to Demirguc-kunt (2015), there were approximately 2.5 billion people in 2019 who did not have a credit score, and therefore could not apply for loans, globally. However, digitalization has transformed the traditional banking models by enabling banks to extend their lending offering to new market segments without eroding their margins. This is especially important for banks as competition has intensified from non-banks and the new players who have entered the banking ecosystem are slowly eroding their market share (Pauget, 2016).

Daniel (1999) described mobile lending as the ability to use your mobile phone to apply for, gain approval on, and check the status of a loan within minutes. It can start from as basic as an online loan application offered by a bank or credit union on the website to an entirely automated platform that incorporates online loan applications, document capture, electronic signatures, document capture, electronic signatures, loan pricing, loan decisioning, and loan administration. Mobile lending leverages existing mobile money technology to understand consumer behaviour and develop customized risk profiles. This is achieved through the utilisation of alternative data points that conventional FSPs do not utilise. As a result, they are able to minimise non-performing loans (NPLs) to a very low rate.

There are seven major digital lending models, namely: online lenders, peer to peer platforms, marketplace platforms, e-commerce and social platforms, supply chain lenders, tech-enabled lenders and mobile lenders (Punatar, 2018).
In the most popular scenario, which is a bank-telco partnership, the loan is initiated by the bank, while customer interactions are conducted through the mobile money platform. The value of the loans is small, mostly not collateralized and the loan terms are typically no longer than a month.

A fixed facilitation fee is generally charged. Dynamic incentives and punishment to lower moral hazard are generally used. Timely repayment of mobile loans increases

the likelihood of receiving a bigger loan in the future at a lower interest rate while defaulting is dissuaded by either influencing access to future loans, automatic deduction of the outstanding loan amount from linked mobile savings or mobile money accounts, or blacklisting defaulting borrowers with credit bureaus (Francis et al., 2017).

Some benefits of mobile lending include: the expansion of financial services to non-financial sectors; loan decisions are frequently based on unconventional data analysis; instantaneous processes from loan application to loan approval; increased financial intermediation for both customers and the economy; affordable, convenient and secure banking service to poor individuals in developing countries; remote loan processing and long-term positive effects for banking performance (Gencer, 2011; Ozili, 2018; Scott et al., 2017).

This research focussed on Bank-Telco partnership as it is currently the most dominant form of digital credit.

1.2.2 MOBILE LENDING IN DEVELOPED COUNTRIES

Fintech credit has expanded rapidly worldwide in the past couple of years, but its size still differs across economies (Frost & Turner, 2018).Various studies have indicated that one of the primary drivers of fintech credit in developed countries is unmet demand (de Roure et al., 2017; Frost, 2020; Tang, 2019). In 2018, fintech lenders made up 38% of unsecured personal lending in the US while extending 15.1% of equivalent bank credit to SMEs (Frost, 2020).

In the United States, fintech credit complements bank lending for small scale loans while serving a neglected segment of the consumer credit market in Germany (de Roure et al., 2017; Tang, 2019). Fintech credit also showed to be common in economies with above average income, where there are less onerous banking regulations, where economies have a higher cost of finance and where the banking sector has higher mark-ups (Frost & Turner, 2018).

Although there has been rapid growth in fintech credit over recent years, the volume of activity (per capita) varies greatly across economies. Moreover, the disparities were indicative of aspects that influence conventional forms of credit (Frost & Turner, 2018).In essence, fintech adoption has been greater in countries where financial services are comparatively more costly or there is less competition among providers while fintech credit is expanding where the existing financial system is not meeting demand for financial services (Frost, 2020).

1.2.3 MOBILE BANKING IN DEVELOPING COUNTRIES

Unmet demand has also been a driver of fintech adoption and fintech credit in a number of cases in developing countries (Frost, 2020). This is predominantly attributed to improve economic efficiency and growth potential resulting from fintechs in regions where they help provide services to those commonly excluded from the financial system or to overcome information disparities.

The rapid adoption of mobile phones in Africa has given banks and fintechs the ability to extend financial solutions to BoP consumers.

Porteous (2006) identified four mobile banking models being followed in Africa:

- Pure-bank driven model, whereby the bank has exclusive control of the deposit account
- Joint-venture model, whereby the bank goes into partnership with a non-bank organization yet still holds ownership of the deposit account
- Non-bank-led model, whereby the bank still takes control of the account, but the brand of the MNO becomes dominant
- Non-bank-driven-model, whereby the MNOs own the deposit accounts and can provide a range of financial services to the account holder

This study is explored from a non-bank-led model perspective. The reason for selecting this perspective is because of the nature of the research question as well as the context in which it is undertaken. The research question considers the impact of mobile lending as a complementary or disruptive innovation for banks, which is based on the non-bank-led model.

1.3 RESEARCH PROBLEM STATEMENT

The objective of this study is to understand the long-term impact of mobile lending on bank sustainability. More specifically, the study aims to determine whether mobile lending is a complementary or disruptive innovation for banks in the long run. The introduction of mobile technology has resulted in the transformation of traditional business models by digitizing various parts of the banking value chain. Innovations are introducing novel approaches to customer engagements and have forced incumbent banks to step out of their comfort zone and improve their digital offering (Ernst & Young, 2016). To be successful, banks must embrace the digital wave and improve their agility by collaborating with fintechs to bring various components together and build the strongest business ecosystems. Antiquated predicaments such as branch proximity are no longer key determinants of distribution strategies, instead, speed and efficiency have become a major imperative (Bello et al., 2017).

Financial innovations have been instrumental in not only providing the essential channels to obtain competitive advantage but have also enabled banks to acquire new customer segments.

Insights on the long-term impact of mobile innovations on various customer segments, is lacking. Studies on mobile lending tend to focus on mobile lending from a financial inclusion perspective and less on the potential transcendental impact on the banks' affluent customer segments. More specifically, knowledge on whether mobile lending is a complementary or disruptive innovation for banks, remains unclear. Several scholars have attempted to identify disruptive innovations ex ante, but found it challenging (Danneels, 2004; Govindarajan & Kopalle, 2006a; Kostoff et al., 2004). Firms that have managed to successfully develop or leverage on disruptive innovations were only able to determine the disruptiveness of the innovation ex post, as disruptive technologies are by their nature nascent and can only be revealed as being disruptive in hindsight (Kostoff et al., 2004). This has resulted in scepticism from established companies of the disruptiveness construct (Danneels, 2004; Govindarajan & Kopalle, 2006b).

1.4 RESEARCH QUESTIONS

The objective of this study is to assess the impact of mobile lending innovation as either a complementary or disruptive innovation on one of the four large multinational African banks in Zambia and Kenya.
In particular, this study addresses the following research questions:

1. Does mobile lending function as a complementary innovation for BoP customers? If so, to what extent?
2. Does mobile lending function as a disruptive innovation for the affluent customer base? If so, to what extent?
3. Is mobile lending following the cannibalization trajectory that other disruptive innovations follow? If so, to what extent?

1.5 SIGNIFICANCE OF THE STUDY

This study aimed to contribute to the business literature by providing new empirical depth to the long run impact of mobile lending on banks in sub-Saharan Africa. Specifically, mobile lending could emerge as a competitive channel for existing bank customer, resulting in the cannibalisation of its affluent segment customers. Therefore, this study aimed to provide insights on the sustainability of partnerships between banks and fintechs regarding mobile lending. Furthermore, understanding of various factors that influence adoption of mobile lending by different customer segments within the bank will help inform customer retention strategies to protect existing clients, which could occur in various forms such as proactive cannibalisation.

This study also suggests future research opportunities in mobile lending adoption for further theoretical and empirical advancement. Lastly, this research also aimed to provide insights pertaining to the key factors that affect the successful growth associated with the adoption of mobile lending services by affluent customers and hence inform business strategic decisions.

1.6 LIMITATIONS OF THE STUDY

Some of the challenges encountered upon the resumption of the study were:

- Owing to time and scope restrictions, the perspectives of ten individuals for the qualitative study were considered
- Most of the respondents for the quantitative data are based in the capital cities of the countries under study
- The data is obtained from one of the four large multinational African banks in Zambia and Kenya, which will limit the generalizability of the findings. The data is also limited to two markets, namely Zambia and Kenya
- Research methods in the field of disruptive innovations are challenging since the disruptiveness of an innovation can only be done in retrospect
- Mobile lending research in the SSA context is limited

1.7 ASSUMPTIONS

- A large proportion of the financially excluded population has mobile phones
- The consumer income segmentation is similar for the different banks across the markets in study
- The segment customer banking needs and expectations are similar across the various countries

1.8 DEFINITION OF KEY TERMS

- Mobile Banking is defined as a service provided by a bank or other financial institution that allows its customers to conduct financial transactions remotely using a mobile device such as a smartphone or tablet (Porteous, 2006) .
- Mobile Lending is described by Daniel (1999) as the ability to utilise your mobile phone to apply for, gain approval on, and check the status of a loan within minutes.
- Mobile Money is described by various scholars as the ability for customers to send, receive, and store money using their mobile phone (Donovan, 2011; Kopala, 2012; McKee et al., 2015).

- Bottom of the economic Pyramid (BoP) customers are defined by Prahalad (2002) as customers with an annual income below $ 3000 per capita in local purchasing power .
- Proactive Cannibalisation, according to Cravens (2002), is described as the methodical pursuit of an ongoing strategy to develop new products and processes that will attract buyers of existing products or replace existing processes of the same firm.

1.9 OUTLINE AND STRUCTURE OF THE REPORT

The research report is structured as follows:

Chapter 1: Introduction – Provides a synopsis and an overview of the entire study.

Chapter 2: Literature Review - The chapter aligns the study with existing literature in the discipline of Disruptive Innovation and the BoP Innovation. It documents theoretical and empirical literature available in the field of Disruptive Innovation and BoP Innovation and its application in the context of banking mobile innovations.

Chapter 3: Research Methodology – This chapter contains the justification of the research strategy and design, data collection techniques, presentation, and analysis

Chapter 4: Presentation of Findings/ Results – Presentation of data from the quantitative and qualitative research, including the results of the study.

Chapter 5: Analysis and Discussion of the Research Findings – Analysis of data as it addresses the research problem

Chapter 6: Conclusion and Recommendations – This chapter provides the conclusions, recommendations, and limitations of the study and suggests further areas of research.

CHAPTER 2: LITERATURE REVIEW

This chapter will provide a synthesis of previous literature on mobile lending innovation to understand what has already been studied in relation to the long run impact of mobile lending in the banking context and find possible solutions to the research questions and problem. The literature included in this study is meant to highlight the basis of mobile lending adoption by bank customer segments and the framework that will guide the study.

2.1 INTRODUCTION

The long run impact of mobile lending innovation on banks, remains unknown (Scott et al., 2017). Mobile banking adoption studies predominantly focus on financial inclusion and its critical role in economic development and less on the potential transcendental impact that adoption of other mobile banking functions, such as mobile lending, might have on the banks' affluent customer segment. More specifically, knowledge on whether mobile lending is a complementary or disruptive innovation for banks in the long term remains unclear. This is further compounded by that several scholars that have attempted to identify disruptive innovations ex ante, found it challenging and firms that have managed to successfully develop or leverage on disruptive innovations were only able to determine the disruptiveness of the innovation ex post (Danneels, 2004; Govindarajan & Kopalle, 2006a).

Disruptive technologies can trigger major technology product paradigm shifts and it is therefore imperative for firms to understand the long-term impact of innovations in their quest to meet customers' expectations (Walsh & Linton, 2000).
Research in this area has identified the need for ex ante predictions of disruptive innovations. The purpose of this research is to determine whether mobile lending innovation is disruptive in the long run or if it is just complementary to existing bank solutions. Furthermore, the research also aims to determine the extent of the disruption or complementarity.

Literature will be reviewed to determine whether mobile lending exhibits the attributes of a disruptive innovation as defined by Govindarajan and Kopalle (2006b). This will be achieved by reviewing literature on mobile lending adoption by both BoP and affluent customer segments. Consequently, mobile lending will be classified as disruptive if

i) There is adoption of mobile lending by BoP customers; and
ii) There is also adoption of mobile lending by affluent customers

The literature is structured into five main sections. The first section gives an overview of the background foundations which form the basis of BoP and Disruptive Innovation. The sub-sections focus on literature pertaining to mobile lending adoption by both BoP and affluent customers. The second section focuses on the theoretical framework consisting of the two theoretical models that underpin it, along with the conceptual framework. The BoP innovation theory will have a specific focus on mobile lending as a complementary innovation while the Disruptive Innovation Theory (DIT) will focus on mobile lending as a disruptive innovation. The third section provides a contextual summary of mobile lending in Sub-Saharan Africa and its impact thus far. The fourth section will comprise of two case studies on mobile lending in Zambia and Kenya. The last section will provide the hypotheses of the study

2.2 BOP INNOVATION THEORY

2.2.1 THE CONCEPT OF BOP INNOVATIONS

Companies are continuously looking for opportunities to innovate through identifying unsolved challenges and recognising unacknowledged needs (Linna, 2013). Social needs can be seen as business opportunities for which to serve new markets and solve long-standing business problems (Kanter, 1999). According to Prahalad and Hart (2002) these needs equate to four billion people who live in relative poverty and are currently served by an inefficient, unorganised sector. Furthermore, these four billion people are not a monolith but represent various cultures, literacy, capabilities and needs and therefore require a differentiated approach.

The World Resources Institute and the International Finance Corporation also supported that there is a large, untapped global BoP market worth five trillion dollars in purchasing power parity. However, the market continues to be underserved, inaccessible and not fully monetized. Govindarajan and Trimble (2009) confer that the BoP segment also presents an opportunity for the development of reverse innovations and can also function as a launching pad for innovations that cannot be tested in developed countries due to their advanced infrastructure, technologies and systems (Hart & Christensen, n.d.).

Some of the challenges posed by various scholars are whether the BoP can offer any realistic market opportunities and whether the full value of social innovations can be captured in the absence of well-defined business models (Karamchandani et al., 2011; Teece, 2010).
Reverse innovations are described as products that are originally created for poor environments and later successfully diffused into developed markets.

Unlike other social innovations, BoP innovation assumes that poverty is caused by resource scarcity; large low-income populations constitute an untapped market; access to the BoP is not necessarily a problem; the BoP market is digitally connected and that BoP consumers are open to advanced technologies via mobile phones and related devices. Furthermore, the conditions that BoP innovations need to fulfil in order to successfully create financially viable and socially beneficial business opportunities include the affordability of products and services, solutions should also offer some additional value to the living standards of people faced with poverty cycles, customers' affordability and value-added points need to be factored into the product development process and form the basis for innovating (Anderson & Markides, n.d.; Chanda, Mahesh;Neelankavil, 2008; Gollakota et al., 2012; Martinez & Carbonell, 2007).

2.2.2 BOP INNOVATION RESEARCH

The focus of the review of the literature will be on the adoption of mobile lending by BoP consumers as well as the impact of mobile lending on financial access for BoP

consumers. This will enable the author to argue that mobile lending adoption by the BoP segment implies that mobile lending has extended the access of financial solutions to non-served customers (low end disruption).

Historically, banks have generally avoided BoP markets and as a result, serving BoP customers was not their primary focus (Taylor & Yamin, 2016).This was attributed to barriers faced by both BoP customers and banks. The introduction of digital technologies in emerging markets has provided both BoP customers and banks with the ability to extend financial services to the previously unbanked because of the significantly reduced transactional costs as well as the lower information asymmetries (Haider, 2018; Ozili, 2018).

Below is a summary of research regarding mobile lending adoption by BoP consumers in SSA (in Africa or in general). This will enable the author to argue that mobile lending adoption by the BoP segment implies that mobile lending has extended the access of financial solutions to non-served customers (low end disruption).

Table 1. Key literature regarding BoP Innovations

Author	(Govindarajan & Kopalle, 2006)	Pankomera & Van Greunen (2018)	Pankomera, .R (2018)
Theme/Category	Disruptive Innovations		
Topic	The usefulness of measuring disruptiveness of innovations ex ante predictions	Challenges, Benefits and adoption dynamics of mobile banking at the base of the pyramid in Africa: a Systematic Review	Mobile banking at base of the pyramid (BoP) in Africa: Systematic Review

Main Findings	A better understanding the type of organizational abilities that would result in disruptive innovations will help make ex ante predictions about the type of companies better able to develop such innovations.	Strategic innovation in developing markets is different from developed markets. The differences centre around the following:• Products should be culturally acceptable and change the traditional price-performance ratio in a dramatic way • Appropriate distribution channels should be developed for the above products • A new “what” and a new “how “ are more important than discovering a new “who”	In this review, it was determined that the perceived benefits of mobile banking by people at the BoP in Africa are convenience, accessibility, promotion of financial inclusion, reduced urban-rural divide and reduced inequality. The perceived challenges are poverty, illiteracy, lack of awareness of mobile banking services,lack of trust and cultural factors. Furthermore, they also identified a variety of dynamics impacting upon adoption of mobile banking by BoP as perecievd ease of us;perceived privacy;social influences;awareness;availability of ICT products and services and cultural dynamics
Theories Applied		N/A	N/A
Geographical Context		Africa	Africa
Sectorial Context		Banking	Banking
Methods Used		Systematic Review (PRISMA)	Systematic review of peer reviewed papers, journals from 2007 - 2018. The papers were based on Nigeria, Zimbabwe, Sudan, Rwanda, South Africa, Malawi, Ghana, Zambia, Kenya and Mozambique

Mobile technology is driving innovation in how people transact and new market entrants have started to disrupt traditional business models (Haider, 2018).Digital disruptors in the global financial services sector have different objectives depending on the maturity of the various markets. In developed markets, the primary goal of the new market entrants offering digital products is to attract customers away from incumbent providers while their main objective in developing markets is to attract unserved, first time customers (*EFInA Access to Financial Services in Nigeria 2018 Survey*, 2018). This is attained by reducing costs to a level that the products become accessible to low-income groups that are perceived to be unviable for traditional financial products.

Inclusive digital financial systems support BoP customers with saving and borrowing in the formal financial system, enabling them to build their account balances and assets, earn a financial return, smooth their consumption and invest in entrepreneurial ventures (Makholwa et al., 2020).As a result, livelihoods can be bettered and greater ability to deal with financial shocks can also be improved. Furthermore, the convenient access to a range of financial instruments (including credit facilities), by individuals and firms emanating from digital financial systems can boost the gross domestic product of digitalized economies (Ozili, 2018).

Other studies examined the relationship between digital finance and financial inclusion (Haider, 2018; Ozili, 2018; Stella, 2019) and reported that the advent of digital technologies has provided access of a wider range of financial services to the unbanked. This is due to the reduced transactional costs that are a result of lower information disproportions, improved risk-based pricing efficiency as well as increased transaction feasibility (Bachas et al., 2018). With mobile financial services, rural users are now able to access low cost financial services in remote areas where formal banking is deemed unfeasible (Karjaluoto & Shaikh, 2015). The introduction of mobile lending in Kenya did not only provided credit access to previously excluded customers, but has also increased access of other financial solutions such as bank accounts, to customers (Gubbins & Totolo, 2019). The Central Bank of Kenya reported that the number of deposit and loan accounts in the overall banking

system increased from 3.5 trillion and 2.7 trillion Kenyan shillings (Ksh) in 2019 to Ksh.4.0 trillion and Ksh.2.9 trillion in 2020 (Central bank of Kenya, 2020).

The benefits of mobile lending in SSA, among others, include increasing access to finance among poor individuals, the expansion of financial services to nonfinancial sectors, improving the gross domestic product (GDP) of digitalized economies by offering expedient access to diverse range of financial services and credit facilities for individuals and businesses (Ozili, 2018).

Mobile financial services platforms in Sub-Saharan Africa like JUMO and Timiza, are also providing BoP consumers access to credit and savings products, with over 5 million active users across six African countries in the first two years of operation (*Leveraging Digital to Unlock the Base of the Pyramid Market in Africa Waves of Digital Innovation in Financial Services*, 2017). Furthermore, approximately 80% of JUMO's customer base are consumers who had limited or no interaction with formal financial institutions. These mobile financial services platforms are extending access of financial products to unserved customers by introducing new distribution models that tend to make their products more aligned to the needs and requirements of low-income consumers. As a result, the increased access of financial products to individuals with below median income levels has a sizeable positive effect on economic activity and improves financial inclusion (Bharadwaj et al., 2019; Bruhn & Love, 2014).

It was also observed that M-Shwari in Kenya provided credit and savings access to millions of poor Kenyans that helped them manage risks, mitigate the impact of shocks and invest in improving their livelihoods. Furthermore, over 2.8 million customers who historically did not have access to formal lending, were provided access to instant loans.

The four predominant segments of M-Shwari users in Kenya were classified as (*The Growth of M-Shwari in Kenya-A Market Development Story Going Digital and Getting to Scale with Banking Services*, n.d.) **(1) Rural females** who rarely own property that can be used as collateral when applying for a loan and have the lowest bank account ownership of the four segments, **(2) Urban females** who live above

the poverty line and rely on peer to peer transfers as the source of money for daily expenses, **(3) Rural males** who make their living from agriculture and skilled-labor jobs and some of them rely on remittances from other people and **(4) Urban males** who mostly have regular jobs and some have savings to pay for daily expenses when they are not employed. The significance of this is that at the end of 2014, 2.8 million customers, who were previously excluded from the financial system, were provided with access to instant loans, which has increased their resilience against shocks (Bharadwaj et al., 2019)

It was also observed that the benefits of digital financial services are not only limited to retail customer segments.According to Gosavi (2018), firms that use mobile money for their financial transactions have better access to finance than other firms.

2.3 DISRUPTIVE INNOVATION THEORY

2.3.1 THE CONCEPT OF DISRUPTIVE INNOVATION

Christensen describes disruptive technologies as technologies that are inferior to mainstream technologies at the outset in comparison to the features of mainstream technologies that are valuable to customers and offer different values from mainstream technologies (Christensen, Clayton M; Scott, Anthony; Roth, Erik; Kaufman, 2005). Each product, based on a particular disruptive technology, can only serve niche segments that value its uncommon performance attributes. Successively, additional developments could increase the disruptive technology's performance on the key mainstream attributes to a point that it is adequate to gratify mainstream customers. The market disruption occurs when the new product disestablishes the mainstream product in the mainstream market despite its inferior performance attributes.

Raynor and Christensen (2003) expanded the application of the theory to include not only technological products but also services and business models innovation. To this end, disruptive innovation is described as the interference of existing market linkages by the expansion and development of additional markets and the provision of new functionality (Christensen & Bower, 1996).

Christensen highlighted that the two potential markets for disruptive innovations are low-end market disruption and new market disruption (Raynor & Christensen, 2003). He further emphasized that the distinctive attribute of disruptive innovations is that they are established in a different value network than sustaining innovations (Christensen, Clayton M; Scott, Anthony; Roth, Erik; Kaufman, 2005; Christensen, 1997). Moreover, the potential for a new market disruption is high if there is an overlap between old value-network of the incumbents and the new value network of the disruptive innovation; if the overlap increases over time; and if there are non-served customers (Barnes, 2007). Govindarajan and Kopalle (2006b) extended Christensen's definition of disruptive innovations to include both low end and high-end markets. They define a disruptive innovation as an innovation that establishes other performance, features and price attributes in relation to the existing product. They described the four key aspects of disruptive innovations as:

i. The niche segments that initially find the disruptive innovations attractive can be either the price sensitive segment (low end disruptions) or the less price sensitive segment (high end disruptions)
ii. Disruptive innovations underperform on the dimensions' mainstream customers value
iii. Disruptive innovations introduce new dimensions of benefits that the niche segment finds more attractive; and
iv. Disruptive innovations pose a dilemma for the incumbent

2.3.2 DISRUPTIVE INNOVATION RESEARCH

The focus of the review of the literature will be on the attributes and trend that disruptive innovations follow. More specifically, the author will review seminal papers on the attributes of M-PESA in Kenya which will enable the author to argue that if mobile lending is displaying similar attributes and following the same trajectory, then it will also be disruptive in the respective markets in the long run.

Table 2. Key literature on Disruptive Innovations

Author	Haider (2018)	Myerson (2019)	Morawczynski (2009)	Sadana et. Al (2011)	Kerubo (2011)
Theme /Category	Financial Innovations	Disruptive Innovation	Transformational Innovation	M-PESA	Mobile money
Topic	Innovative financial technologies to support livelihoods and economic outcomes	The Next Global Disruptive Innovation: Can Mobile Money Make the Journey Upmarket to Disrupt the Financial Services Industry?	Exploring the usage and impact of “transformational ” mobile financial services: the case of M-PESA in Kenya	Riding the M-PESA Rails: Advantages & Disadvantages	Factors affecting effective capacity in mobile phone money transfer services: A case of Safaricom M-PESA services
Main Findings		It is unlikely that mobile money will disrupt financial services in develped countries as incumbent players are turning away low-end customers while still being able to deliver value to their mainstream customers	The major benefits of financial services are derived from informal money transfers	M-PESA was found to have both advantages and disadvantages to both financial institutions and customers. Advantages for financial institutions include cost reduction and efficiency as well as customer satisfaction while convenience, cost savings and reduced risk of carrying cash are	The study outlined the various challenges faced by M-PESA which were listed as system delays,slow customer care response and help as well as slow processing procedures.The platform capacity was

				some of the advantages for customers. Disadvantages for financial institutions were listed as delays in transaction processing and system incompatibility between Safaricom and financial institutions.For customers, the most disadvantages emanate from the delay in transaction clearing resulting from system delays	highlighted as the main contributing factor to the outlined challenges and the author recommended that regular platform maintenance be carried out to help address the delays in processing
Theories Applied		Disruptive innovation theory	Transformational Innovation	N/A	N/A
Geographical Context		Africa; Global North	Kenya	Kenya	Kenya
Sectorial Context		Financial services sector	Financial services sector	Financial services/Telecoms	Financial services
Methods Used	Desktop Research	Desktop Research	Ethnographic methods; 350 semi-structured interviews and 21 group interviews	Desktop research;14 financial institutions were analysed	Mixed methods

Disruptive innovation is defined as the process by which a product or service initially takes root in simple applications at the bottom of the market and relentlessly moves upmarket, eventually displacing established market leaders (Christensen & Bower, 1996; Govindarajan & Kopalle, 2006b).The two ways in which new entrants can enter the market are by establishing a low-end foothold or by creating a new market foothold.

Mobile money is arguably one of the most widespread technological innovations in the context of developing countries (Aker & Callen, 2021). The advent of mobile money has enabled previously excluded customer segments in developing countries access to financial services without owning a bank account. Although mobile money has been adopted widely across the developing world, M-PESA in Kenya remains as one of the most successful deployments of mobile money (Chibango, 2014; Demirgüç-Kunt et al., 2018; Gencer, 2011; Haider, 2018)

Below is a summary of the attributes of M-PESA in Kenya measured against disruptive innovations attributes:

(1) The niche segments that initially find the disruptive innovations attractive can be either the price sensitive segment (low end disruptions) or the less price sensitive segment (high end disruptions):

At the time that M-PESA was launched, there was an access issue with the traditional financial industry infrastructure; Kenya had a few ATMs and a limited number of branches. Furthermore, there was an opportunity to create value for individuals to have a reliable, efficient, and inexpensive way to remit money. M-PESA's dramatic early growth and adoption was attributed to the ability of Safaricom to bridge the access gap through the establishment of agents throughout the country (Myerson, 2019).Additionally, the key demographics that have given rise to the success of mobile money are that a high percentage of the population is unbanked due to access issues and there was a lack of alternatives for meeting the financial needs of the poorest communities (Aker & Callen, 2021).

Case studies on M-PESA in Kenya show that the BoP market segment is the predominant user of M-PESA, with 97% of households in Kenya having an account

as of 2014 compared to the 19% of Kenyans who had access to financial services by the time M-PESA was launched (Haider, 2018; Karjaluoto & Shaikh, 2015; Ngugi et al., 2012; Suri & Jack, 2014). Myerson (2019) conducted a case study on M-PESA in Kenya and concluded that M-PESA in Kenya was a transformative innovation as it was able to integrate unbanked populations into the formal financial sector. More specifically, M-PESA in Kenya possessed the attributes of a disruptive innovation as it met the needs of an ignored segment in the market while incumbents were increasingly focussed on developing additive products and services to their demanding customers. Some of the highlighted benefits include the cultivation of livelihoods, socialization and accumulation of assets and the maintenance of social networks (Morawczynski, 2009)

(2) Disruptive innovations underperform on the dimensions' mainstream customers value:

While the explosive growth of M-PESA in Kenya has inevitably inspired a great deal of discussion, there are various disadvantages highlighted by (Sadana et al., 2011) associated with its use that have been indicated: (1) Withdrawals from a bank account using the M-PESA channel can be challenging as customers have to connect through the institution's m-banking platform and then transfer to M-PESA, which can sometimes take hours (2) Ubiquitous connectivity options are minimised by delays in receiving bank confirmation that money has been credited to the customer's account number (3) Errors made by borrowers resulting from receiving different instructions from different banks.

(3) Disruptive innovations introduce new dimensions of benefits that the niche segment finds more attractive:

In 2007 when M-PESA was officiallly launched, the only two options for making domestic money transfers were to deliver the money in person or to use a secure formal service (Hinz, 2014). There were also no alternatives for customers looking for liquidity without the high fees associated with traditional financial services. M-PESA sought to provide short term liquidity at a reasonable price while presenting customers with a secure way to transfer money at a significantly cheaper price.

These benefits did not only appeal to the unbanked BoP customer segment but also attracted existing bank customers. Lonie & Ferrand (2010) conducted a study on the economics of M-PESA and observed that M-PESA had been adopted by both the banked and unbanked in equal proportions in Kenya.Furthermore, it has been inextricably woven into the daily lives of Kenyan households, rich and poor, rural and urban (Hinz, 2014)

Costa et al. (2016) in their study of the digital revolution found that 80% of digital credit early adopters in Kenya were affluent, banked and already had relationships with formal financial institutions. Their primary reasons for utilising digital financial services were stated as convenience and the ability for DFS to respond to their needs better than any option in the market.

(4) Disruptive innovations pose a dilemma for the incumbent:

Christensen (1997) conveyed that the reason why incumbents get disrupted is because they fail to value new innovations properly and attempt to apply them to existing markets. This results in the investment needed to be rejected as the return on investment (ROI) needed to advance the innovation is perceived as low.

Kerubo (2011) conducted a study on factors affecting effective capacity in mobile phone money transfer in Kenya and found that the major challenges faced were system delays, slow customer care response and help, and slow processing procedures especially during weekends. He concluded that the M-PESA platform capacity is inefficient and requires improvement in capacity management. Specifically, improved capacity management will assist in addressing float availability challenges and problems of storing enough cash and e-float to meet immediate customer needs. One way through which system capacity can be managed is through investment into the regular maintenance of the M-PESA system which will help address the problems of transaction delays.

Sadana et. al (2011) also highlighted that one of the biggest challenges faced by financial institutions with M-PESA was reconciling deposits initiated by M-PESA users to customers' accounts, which is due to the system incompatibility between

Safaricom and M-PESA. Investment into system and link compatibility is required to eliminate manual reconciliation as well as delays in transaction processing.

2.4 THEORETICAL FRAMEWORK

This section outlines the theoretical concepts relevant to this study based upon the reviewed literature, which are the BoP innovation theory as well as the theory of disruptive innovations.

The theoretical framework is based on two key theories, namely the Theory of Disruptive Innovation (Christensen, 1997), and BoP Innovation Theory (Prahalad & Hart, 2002) .The first theory, termed the BoP Innovation Theory, was developed by Prahalad to emphasize that the BoP demographic represent an untapped and profitable consumer base. He also highlighted that the BoP segment presents a new business opportunity for companies to make money while simultaneously solving the problems of the disadvantaged groups within the society (Prahalad & Hart, 2002) The BoP innovation theory remains the leading foundation for the conceptualization of innovation for underserved markets.

The second key theory is the Disruptive Innovation Theory by Christensen (Prahalad & Hart, 2002). Christensen's theory of disruptive innovation is considered to be one of the most influential theories in recent management and academic literature (Barnes, 2007)

According to Christensen, disruption is characterised by the following:

1. Incumbent businesses innovate and develop their products or services in order to appeal to their most demanding and/or profitable customers, ignoring the needs of those down-market.
2. Entrants target this ignored market segment and gain traction by meeting their needs at a reduced cost compared to what is offered by the incumbent.
3. Incumbents don't respond to the new entrant, continuing to focus on their more profitable segments.
4. Entrants eventually move upmarket by offering solutions that appeal to the incumbent's "mainstream" customers.

5. Once the new entrant has begun to attract the incumbent business's mainstream customers en masse, disruption has occurred.

In detailing the BoP framework, Prahalad and Hart (2002) counselled against the notion that BoP consumers cannot use advanced technologies and that access to the BoP is difficult. Similarly, Christensen advocated that overlapping value-networks may lead to disruptive innovations (Christensen, Clayton M; Scott, Anthony; Roth, Erik; Kaufman, 2005).Overlapping value networks refers to the ability for disruptive innovations to initially satisfy only low-end customers of the traditional value-network but become attractive for more customers in the old value network who ultimately switch over to the new value network (Barnes, 2007).

2.5 THE CONCEPTUAL FRAMEWORK

The conceptual framework of this study intends to assess the impact of mobile lending as complementary or disruptive to banks, in the long term. This will be achieved by analyzing mobile lending adoption by bank and non-bank customers in the BoP and affluent segments, in the long run. A two-step process will be followed where we will first establish mobile lending adoption by the BoP segment and then determine mobile lending adoption by the affluent segment. If adoption of mobile lending is observed only in the BoP segment, then mobile lending is complementary to banks. However, if mobile lending adoption is observed in both the BoP and affluent segments, then disruption has occurred.
The two theories specified above are integrated to arrive at a conceptual framework describing the adoption of mobile lending innovation by BoP and affluent customers.

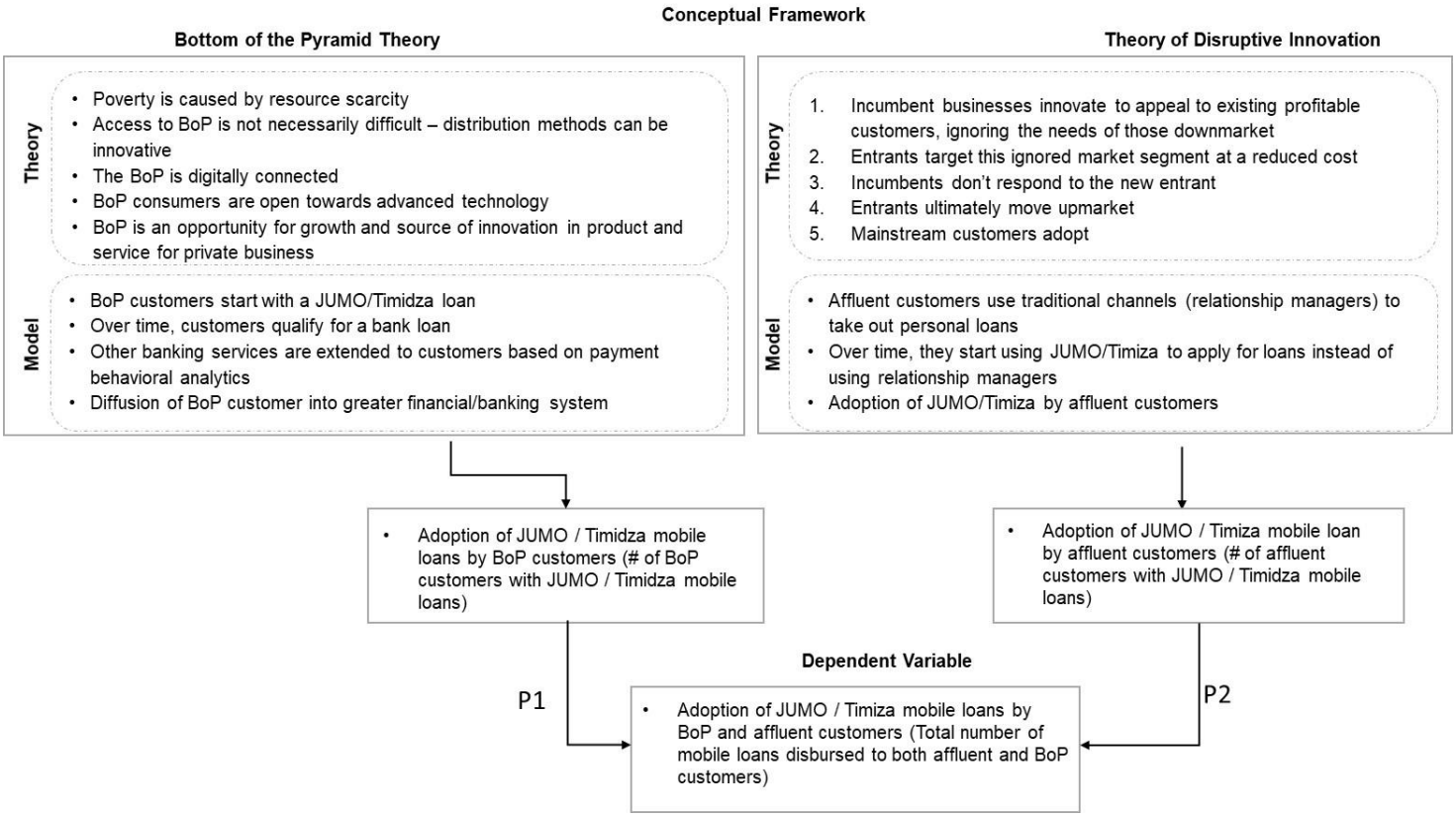
In our resulting framework, mobile lending can either be limited to being an extension of banking channels for BoP consumers or it can be a disruptive innovation by having overlapping value networks. This process will entail that mobile lending first achieves adoption by BoP customers and then subsequently, adoption by affluent customers.

We also expand the notion of complementarity to go beyond mobile loans but to also include the extension of other banking products and services to BoP consumers who otherwise would not have qualified. Complementarity has been defined as a two-step process consisting of access to loans and access to banking products. Access to loans start with BoP consumers applying for loans via their mobile phones. Once the loans are approved and disbursed, consumers are able to build credit records that banks can use to qualify the BoP consumers for other banking products. Thus, adoption of mobile lending by BoP consumers signifies that mobile lending is complementing existing banking channels by extending banking products to consumers who were previously excluded.

On the other hand, mobile lending adoption by the affluent segment has been defined as a one-step process that consists of affluent customers choosing to use their mobile phones to apply for loans instead of utilising existing channels and services for loan application. In this instance, adoption of mobile lending by affluent consumers would signify that mobile lending is competing with existing banking solutions.

The conceptual framework is illustrated by Figure 1 below:

Figure 1: The Conceptual Framework



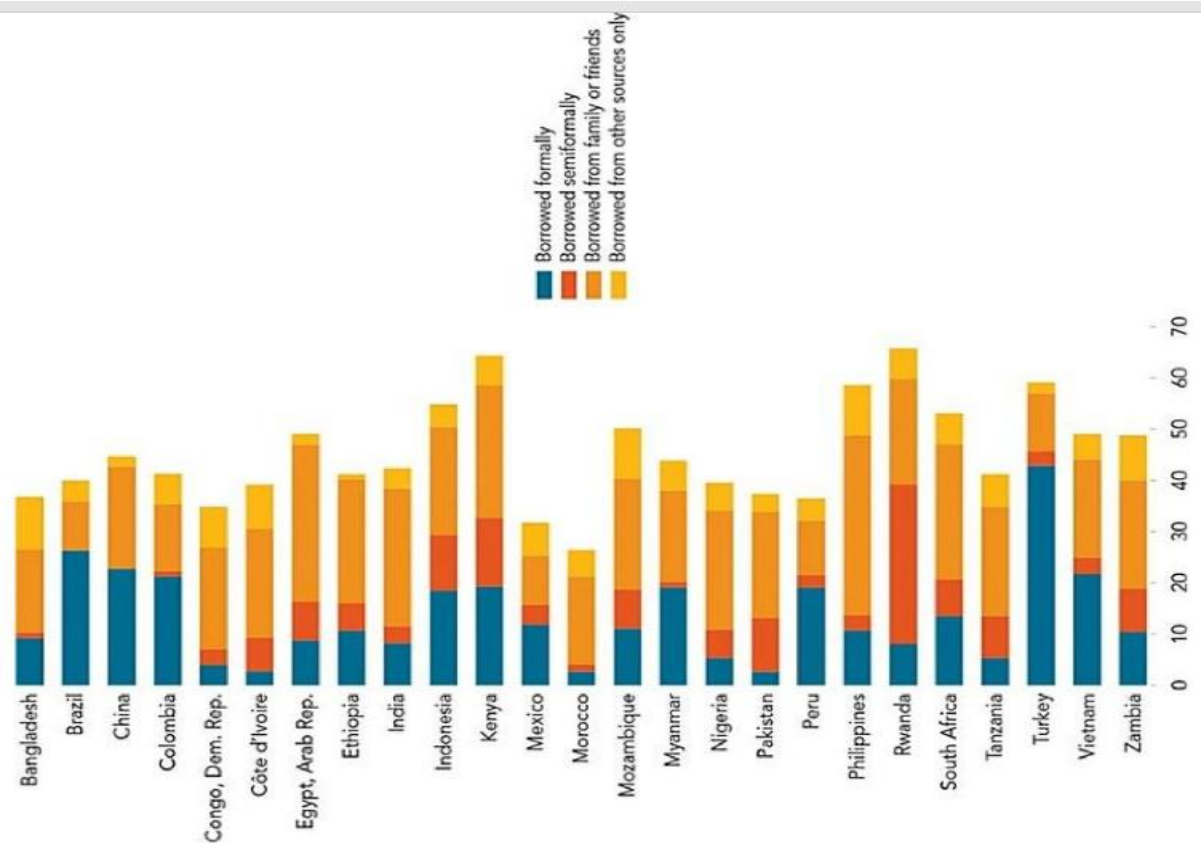
Source: Primary care research methods: Qualitative data and writing results, 2014

2.6 MOBILE LENDING IN SUB-SAHARAN AFRICA

Microfinance has long been recognised as fundamental to the socio-economic advancement of communities, yet access to credit remains as one of the key challenges that BoP consumers face in Sub- Saharan Africa (United Nations, 2013). This is mainly attributable to the fact that BoP household incomes are small, cash flows are irregular and unpredictable and existing financial instruments are not suited to the erratic cash flow patterns. This has resulted in a heavy dependence of BoP households on a wide variety of informal community-based financial arrangements to meet their financial needs (Brau & Woller, n.d.).

Microcredit is defined as a poverty eradicating mechanism aimed at providing small loans to low-income earners who cannot access mainstream finance to improve their livelihoods (Isserles, 2016). In 2007, it was estimated that only 12.7 per cent of the poorest families had access to microfinance services in Africa (Demirguc-kunt, 2015). The below table shows the financial penetration for five selected African countries

Figure 2: Financial Penetration – Adults borrowing any money in the past year (%), 2017



Source: Global Findex database

Many BoP consumers mostly use informal loans due to the collateral flexibility that informal lenders present, exposing them to exorbitant interest rate payments, no formal borrowing history as well as making them poorer in the long run by ignoring other basic economic aspects (Karaivanov & Kessler, 2018).

Karaivanov and Kessler (2018) advocated that social needs can be seen as business opportunities for which to serve new markets and solve long-standing business problems. Digital Financial Services are a great example of how mobile lending in developing countries has given previously excluded income groups the ability to apply for automated instant loans without being required to provide formal borrowing history. Other advantages resulting from the introduction of mobile lending include lower fees, security, faster transactions, access to loans without having to travel long distances, creation of a digital footprint as well as access to finance emergencies (Wall et al., 2017).

DFS are spearheading greater financial inclusion in Sub-Saharan Africa, with 338 million registered accounts and 21% penetration in 2017 (*African Financial Inclusion*, n.d.). Furthermore, they have also enabled the diversification of digital financial services from basic money transfer and bill payments to credit and other value-added services, leading to a rapid growth in digital lending in mature DFS markets in Africa.

Amongst the many players who are exploring digital financial services are banks, who prefer partnering with MNOs as part of their strategic response to the changing financial services landscape and expansion into new markets. Some of the advantages emanating from the partnership include significantly lower transaction costs, shorter loan disbursement turnaround time and that credit lending can be extended to a large group of individuals while significantly minimising their lending risk.

Nevertheless, there are also still concerns regarding the extension of loans to previously unserved markets. Banerjee et al. (2015) argue that while high-interest rate loans can be helpful in principle for liquidity constrained customers, they may also result in over indebtedness (Agarwal et al., 2009) and therefore an inability for customers to pay their bills (Melzer, 2011) .Moreover, consumer protection for digital credit is still at its infancy so consumers might not fully understand the loan terms (McKee et al., 2015)

2.7 CASE STUDIES

This section comprises of two case studies for Kenya and Zambia. An analysis on mobile lending adoption is provided and how this is addressing existing needs within the respective countries.

2.7.1 MOBILE LENDING ADOPTION IN ZAMBIA: CASE STUDY

In the early 1990s, Zambia fully liberalized transactions on the capital account and undertook a series of reforms to promote a market-based financial system, which encouraged the entry of new domestic banks and led to the expansion of existing foreign banks (Martinez & Carbonell, 2007). Despite this, access to finance remains a challenge among BoP Zambians. According to the (United Nations, 2013), credit to the private sector by banks represented only 8% of GDP in 2005 and the ratio of bank accounts to population was among the lowest in Sub-Saharan Africa (Martinez & Carbonell, 2007). Furthermore, most account holders were usually people living in urban areas and with regular employment in the public sector or large private firms. Several studies show that financial access points in Zambia are still predominantly focused in the more densely populated urban hubs. As a result, rural provinces are critically underserved due to the high cost of opening brick-and-mortar branches, which is estimated at $350 000.

Access to credit for the BoP from commercial banks is also limited. This is because most of the consumer lending consists of salary loans. The monthly payments are debited directly from the workers' salary and remitted to the banking institution, making it less risky than lending to low income customers that are not permanently employed by public sector (Martinez & Carbonell, 2007).

It is with this context that Zambian financial services providers are leveraging on alternative delivery channels and strategic partnerships to extend their footprint and lending parameters.

JUMO is a mobile financial services platform that facilitates digital financial services such as credit and savings by using USSD short codes. JUMO provides a platform

for MNOs and banks to provide loans to Zambian customers without collateral. JUMO uses USSD technology when interacting with its customers and leverages the MNOs brand to create trust throughout the process. Some of the customer advantages of JUMO over traditional loans include:

- Small loan amounts
- Shorter loan terms than traditional loans
- No collateral or credit history required for loan application
- Almost instant loan approval
- Rewarding desirable behavior by increasing the likelihood of obtaining a larger loan in the future, with longer repayment periods and at a lower interest rate.

For banks, partnerships with JUMO also offers several advantages (Francis et al., 2017):

- Mobile loans providers use non-traditional data to develop alternative credit scores, making it possible for banks to extend credit to large groups of individuals without collateral or traditional scores. This is particularly important for banks as the top of the pyramid customers are multibank and the future growth segment, according to the World Bank, will come from the BoP.
- Mobile lending lowers transactional costs since loans can be disbursed through mobile money
- Instant disbursement of loan without requiring in-person vetting by a financial institution

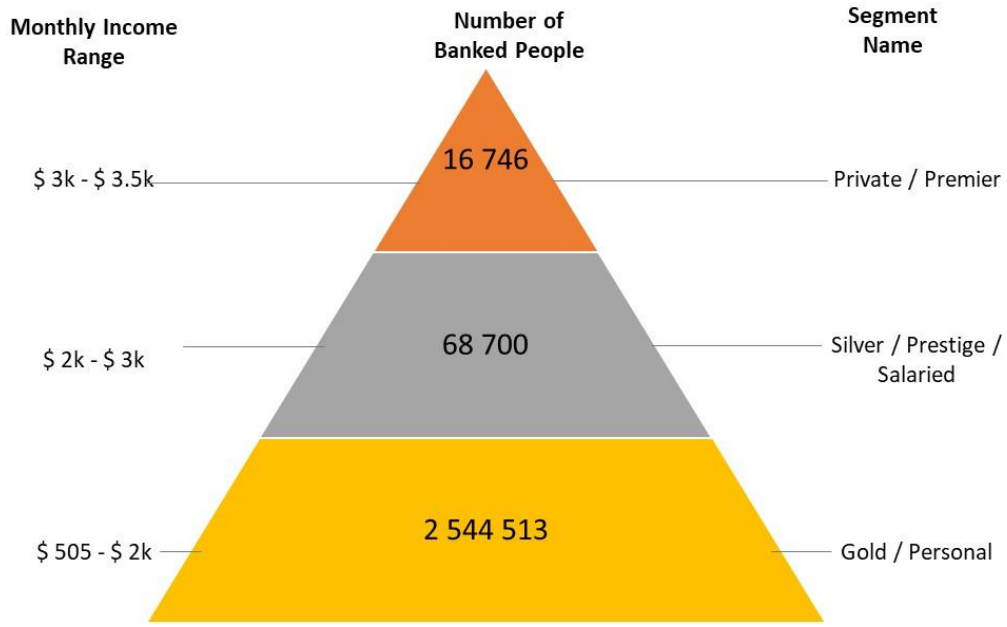
As already highlighted in the background, retail banks predominantly use income segmentation to categorise the different customer segments so they can better solution for their financial needs. The customers were organised into two groups based on their income segmentation as defined by the bank: the personal baking segment (also referred to as the BoP) as well as the affluent segment.

Customer segmentation is defined as the categorisation of a customer base into groups of people that are similar in specific ways relevant to marketing such as age, gender and income (Melnic, 2016). Studies show that customer segmentation

models enable the efficient distribution of marketing resources by aiding companies with targeting specific groups of customers (Hofstede et al., 1999; Melnic, 2016).Most incumbent banks still use the traditional income segmentation as this enables them to know where to focus their acquisition and marketing efforts to target customers who yield the highest return on investment. The income segmentation definition used in this study is standard to the biggest retail banks in Africa, despite the variation in income bands per country. The variation in income bands is due to the diverse economic conditions in the different countries. By grouping customers according to their similarity on key dimensions, we gain an understanding of how banks can develop and plan business and investment strategy accordingly.
The personal banking segment in Zambia is defined as customers who earn between $505 - $2k while the affluent segment is defined as customers who earn $2k - $3.5k.

Below is a diagram depicting the Zambian retail banking landscape (Market insights, 2017):

Figure 3: Zambia Retail banking income segmentation

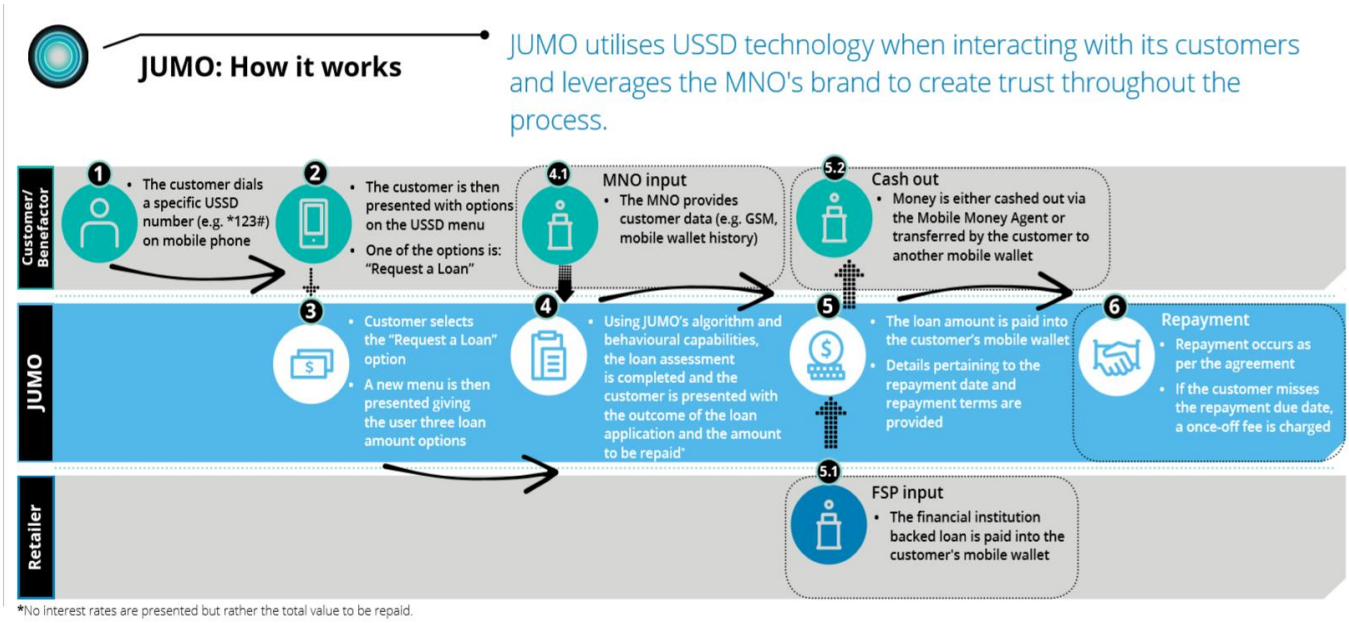


Sources: World Bank Indicators, Hall & Partners and Bank Client Data 2016

The bank under study is one of the four large multinational African banks in Zambia.

The figure below depicts how mobile lending with JUMO works:

Figure 4: JUMO- How it works



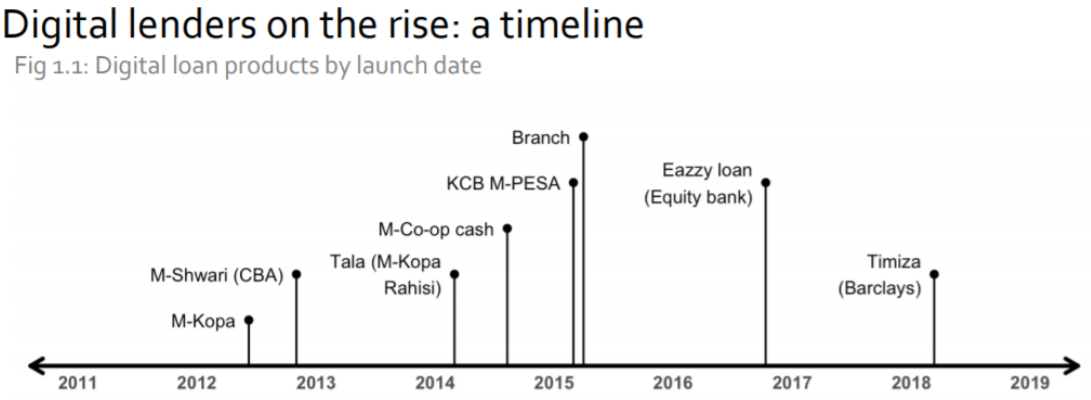
Source: Leveraging digital to unlock the base of the pyramid market in Africa Waves of digital innovation in financial services. (2017).

2.7.2 MOBILE LENDING ADOPTION IN KENYA: CASE STUDY

In the past five years, digital loans have transformed the market in Kenya (Gubbins & Totolo, 2018).The building blocks of digital credit have enabled providers to deliver loans quickly and at scale, which has provided millions of adults access to formal consumer credit for the first time. Mobile financial services are the preferred method to access financial services and are used by almost 80% of the adult population (Gates Foundation, 2014) . There are more than 20 digital credit services in Kenya, and new services continue to come on stream. Mobile credit services include (Fig. 5) M-PESA, M-Shwari, Tala, M-Co-op cash, Eazzy loan, branch, M-Kopa and Timiza with M-PESA having the bulk of the market share in terms of active subscribers, number of transactions, and value of transactions. Total mobile money transactions

in Kenya reached US$38.5bn in 2018, and the total number of mobile money accounts in Kenya reached 45.43 million (Barboni, 2015).

Figure 5: Digital lenders timeline



Source: Digital Credit in Kenya, FSD Kenya (2019)

Historically, getting a consumer loan would have required travelling about 9 kilometres to the nearest branch, speaking to a loan officer, document consolidation, submitting an application and hoping for the best (Bylander, 2015). Putting interest rates and often unattainable collateral requirements aside, the process was costly for the average earner and involved out-of-pocket costs such as paying for transportation. For a bank, extending these kinds of loans was also costly (Agarwal et al., 2009). It required having staff who could screen an applicant and consolidate documents or collateral to make a judgement about a customer's creditworthiness (Barnes, 2007). Digital loans have transformed the process for both borrowers and lenders.

Our study is going to focus on the Timiza mobile loan in Kenya.Timiza mobile loan is a product of Barclays Kenya (now known as Absa Kenya) and was created as a response to the growing need of mobile lending solutions in Kenya to provide easier access of unsecured loans to the market. The Timiza app offers other services as well including insurance, money transfer from the Absa account and bill payments. Other benefits include anywhere, anytime you can: higher loan limits, lowest facility

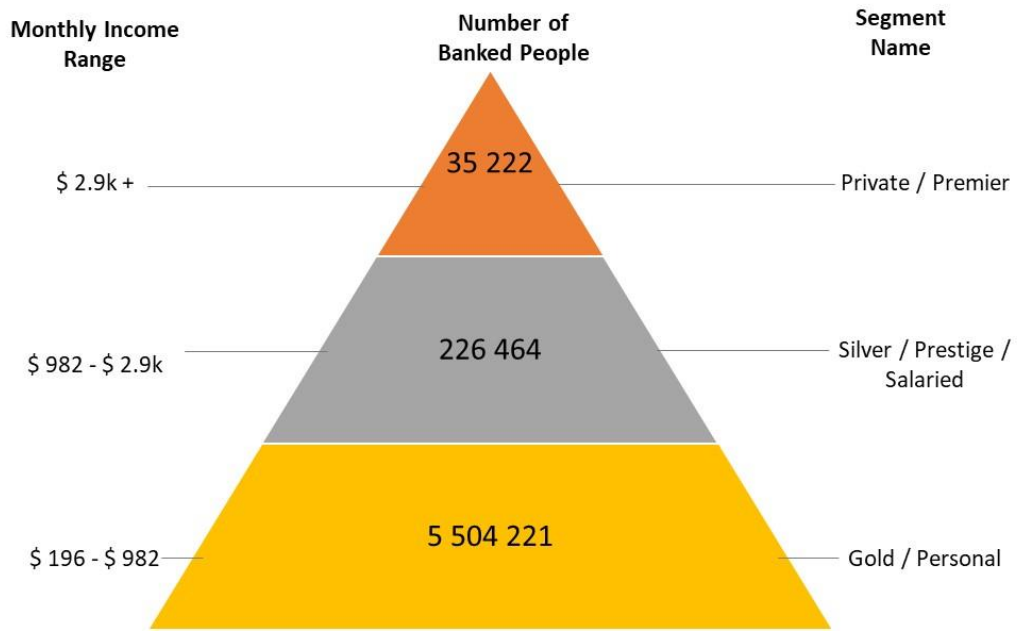
fees at 5% compared to the market, differentiated and lower pricing for good repeat borrowing customers, incentives for early repayment, good transacting behaviour and loyalty. The app had over 1 million downloads in 2020.

Most incumbent banks still use the traditional income segmentation as this enables banks to know where to focus their acquisition and marketing efforts to target customers who yield the highest return on investment. The income segmentation definition used in the study is standard to the biggest retail banks in Africa. Our study is going to focus on understanding the adoption of both mobile lending solutions by BoP and affluent customers. By grouping customers according to their similarity on key dimensions, we gain an understanding of how banks can develop and plan business and investment strategy accordingly.

The personal banking segment in Kenya is defined as customers who earn between $196 - $982 while the affluent segment is defined as customers who earn more than $ 982 in Kenya.

Below is a diagram depicting the Kenyan retail banking landscape (Market insights, 2017):

Figure 6: Kenya Retail banking income segmentation



Sources: World Bank Indicators, Hall & Partners and Bank Client Data 2016

The bank under study is one of the four large multinational African banks in Kenya.

2.8 STATEMENT OF HYPOTHESES OR PROPOSITIONS

Proposition 1: There is no significant diffusion of mobile lending (Zambia or Kenya) by affluent customers

Proposition 1.1: There is significant diffusion of mobile lending (Zambia or Kenya) into the BoP customer segment

Proposition 1.2: There is no significant diffusion of mobile lending (Zambia or Kenya) into the affluent customer segment

Proposition 2: There is significant diffusion of mobile lending (Zambia or Kenya) by affluent customers

Proposition 2.1: There is significant diffusion of mobile lending (Zambia or Kenya) into the BoP customer base

Proposition 2.2: There is significant diffusion of mobile lending (Zambia or Kenya) into the affluent customer base

Proposition 3: Mobile lending is exhibiting characteristics of disruptive innovations (Zambia or Kenya)

Proposition 3.1: The niche segment that initially find mobile lending attractive are the price sensitive segment (low end disruptions)

Proposition 3.2: Mobile lending underperforms on the dimensions mainstream customers value

Proposition 3.3: Mobile lending introduced new dimensions of benefits that the niche segment finds more attractive

Proposition 3.4: Mobile lending poses a dilemma for the incumbent

CHAPTER 3: RESEARCH STRATEGY AND METHODOLOGY

3.1 INTRODUCTION

The previous chapter outlined the literature on the topic of mobile lending innovation, seeking to address the research questions in different contexts.
This chapter contains an in-depth view on the research strategy and methodology that was followed to find an answer to the given research problem. The rest of the chapter is structured into eight sections: philosophical underpinnings of the study; research strategy and design; selection of participants; research methodology; data analysis; limitations of the study; suggestions for further studies; and ethical and quality considerations.

3.2 PHILOSOPHICAL UNDERPINNINGS

Pragmatism, as an underlying philosophy of inquiry, supports researchers in choosing between different models of inquiry as research questions being addressed intrinsically determine which methods are best suited (Morgan, 2014). This study followed the pragmatic philosophy as the pragmatic philosophical rationale allows for the systematic application of appropriate quantitative and qualitative methods to address each specific aim in the study. Certain research questions in this study are best addressed using qualitative analysis while others using quantitative methods and therefore the overall research objective can best be addressed with multiple perspectives (Creswell & Ssp, 2007).For the reason that the nature of the research questions of this study is such that one data source is not sufficient, the results of the quantitative analysis need to be further explained; exploratory findings need to be generalised and the qualitative method is needed to enhance the quantitative method.

3.3 RESEARCH STRATEGY AND DESIGN

This method of inquiry was most suited for addressing the research aims of this proposal.This study used a sequential explanatory mixed methods design, consisting of two distinct phases: the quantitative phase followed by the qualitative phase (Creswell & Ssp, 2007).Mixed methods research has been described as a philosophically underpinned model of inquiry integrating qualitative and quantitative models of research so that knowledge is improved in a more meaningful manner than either model could achieve alone (Ivankova et al., 2006).
In order to address the issues of priority, implementation and integration of the quantitative and qualitative approaches which are common in mixed methods designs, the decision making process was guided by the purpose of the study and its research questions, as well as the methodological discussions in literature (Ivankova et al., 2009).

Priority refers to the approach, qualitative or quantitative (or both), a researcher gives more weight or attention to throughout the data collection and analysis process in the study (Creswell, 2005). In the sequential explanatory design, priority, typically, is given to the quantitative approach because the quantitative data collection comes first in the sequence and often represents the major aspect of the mixed-methods data collection process. The qualitative component follows in the second phase of the research.

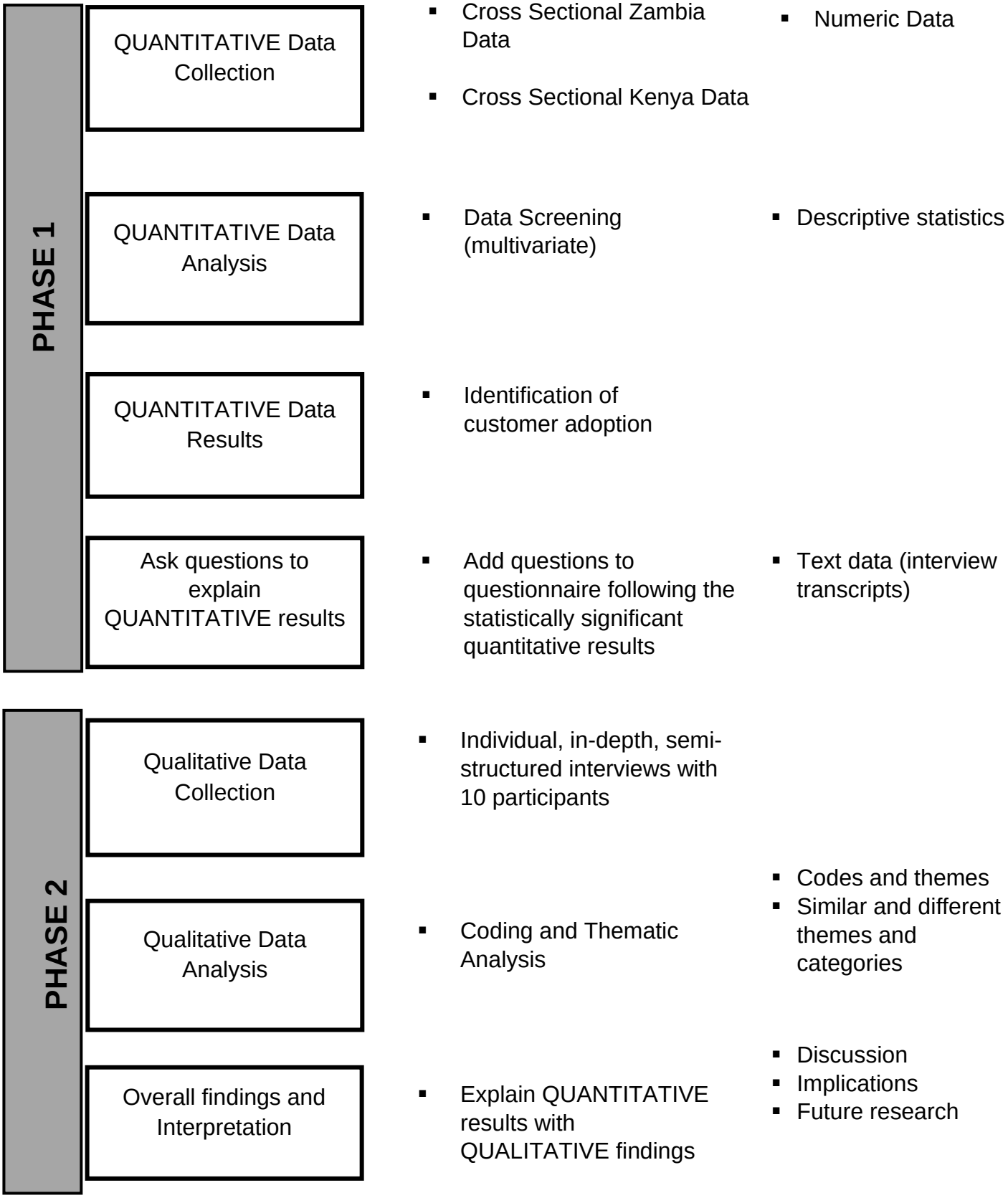
The priority in this study was given to the quantitative approach. The decision was influenced by the purpose of the study to assess the long-term impact of mobile lending innovation on banks. The quantitative (numeric) data was collected and analyzed first.

The goal of the qualitative phase was to explore and interpret the statistical results obtained in the first, quantitative, phase. To enhance the depth of the qualitative analysis, multiple levels of data analysis were used. A thematic analysis on two levels was performed, individual cases and across cases, comparing the themes and categories and used several cross-case analysis techniques. Thereafter, the

qualitative (text) data was collected and analyzed second in the sequence and help explain, or elaborate on, the quantitative results obtained in the first phase.

The second qualitative phase was built on the first quantitative phase and the two phases were then connected in the intermediate stage in the study. The rationale for this approach is that the quantitative data and their subsequent analysis provide a general understanding of the research problem, which is to understand the adoption of mobile lending by BoP and affluent customers. See (Fig. 7) for a diagram of the mixed methods sequential explanatory design procedures in the study. The qualitative data and subsequent analysis refined and explained those statistic results by exploring the cause of the adoption in more depth (Creswell, John and Clark, Vickie and Gutmann, Michelle and Hanson, 2003).

Figure 7: Visual model for mixed methods design procedure followed in this study



Source: Field Methods Sequential Explanatory Design (From Theory to Practice)

3.4 SELECTION OF PARTICIPANTS

The process of participant selection has two main components. The participants in the first phase (quantitative phase) are different from the participants in the second phase (qualitative phase), in that the qualitative participants' selection process was not random (Sargeant, 2012). For the first phase, secondary data was obtained for both Zambia and Kenya from the banks' data and analytics team from 2017 - 2019. Criteria for selecting the participants for the quantitative phase included (1) total number of active BoP customers (in alignment with market segmentation); (2) total number of active affluent customers (in alignment with market segmentation); (3) total number of BoP mobile loans; and (4) total number of affluent mobile loans.

In the second, qualitative phase, a criterion based purposive sampling approach was used to identify ten participants for study participation. The purposive method, according to Maxwell (2008), is a sampling strategy where individuals are selected accordingly to the setting and the critical information that the individuals can provide that cannot be provided by any other party. The strategy is commonly used in qualitative research to select a characteristic or group of characteristics known to vary within a population as well as to achieve a good representation of the setting (Maxwell, 2008; Teddlie & Yu, 2007).

The sample for the study to be selected is based on the critical information that the individuals will provide. The criteria used to identify the participants is firstly the area in which the individuals work, as well as its relevance to the topic of research, and secondly the position and level of seniority that the individual participant holds.

Respondents are considered to have the required knowledge and experience based upon their job role within the organisation. Respondents have roles within digital credit; risk; virtual banking; finance and product innovation. The job titles associated with these roles vary by organisation and respondents represent a diverse level of hierarchical organisational roles (e.g., managers and department heads). Table 3 shows a breakdown of the participants per country and business unit.

Table 3. An overview of participants

Country	Business Unit	Leadership Level	Participant Number
Kenya	Product Innovation	Senior Manager	P1
	Finance	Senior Manager	P2
	Digital Credit	Executive	P3
	Virtual Banking	Senior Manager	P4
	Credit Risk	Manager	P5
Zambia	Product Innovation	Executive	P6
	Virtual Banking	Senior Manager	P7
	Product Innovation	Manager	P8
	Digital Credit	Head	P9
	Finance	Executive	P10

The total sample population for the study includes: documents, interviews with division heads in the areas within digital credit, virtual banking, product innovation, finance and virtual banking business units (Sargeant, 2012).

To provide the richness and depth of the case description, multiple sources for collecting data were used: (1) in-depth semi structured telephone interviews with all ten participants; (2) researcher's reflection notes on each participant's feedback recorded immediately after the interview; and (3) participant's response to additional questions based on the emerging themes.

3.5 RESEARCH METHODOLOGY

To answer the research questions of this study, the researcher followed a mixed methods approach, which is a procedure for collecting, analysing and mixing or integrating both quantitative and qualitative data at some stage of the research process within a single study (Creswell, 2005). The rationale for mixing both types of

data is that neither quantitative nor qualitative methods are sufficient by themselves to capture the impact of mobile lending on banks in the long run. When used in combination, quantitative and qualitative methods complement each other and provide a more complete picture of the research problem (Abbas Tashakkori & Charles Teddlie, 2003).

3.5.1 QUANTITATIVE PHASE

The participant selection process comprised of two components. For the first phase, secondary data was obtained for both Zambia and Kenya from the banks' data and analytics team from 2017 - 2019.Criteria for selecting the participants for the quantitative phase included (1) total number of active BoP customers (in alignment with market segmentation); (2) total number of active affluent customers (in alignment with market segmentation); (3) total number of BoP mobile loans; and (4) total number of affluent mobile loans.
Quantitative analysis examined the relationship between the dependent variable, total number of loans across all segments, and independent variables, total number of BoP loans and total number of affluent loans.

For analysis purposes, the customers were organised into two groups based on their income segmentation as defined by the bank: the personal baking segment (also referred to as the BoP) as well as the affluent segment. Customer segmentation is defined as the categorisation of a customer base into groups of people that are similar in specific ways relevant to marketing such as age, gender and income (Melnic, 2016). Studies show that customer segmentation models enable the efficient distribution of marketing resources by aiding companies with targeting specific groups of customers (Hofstede et al., 1999; Melnic, 2016).

Most incumbent banks still use the traditional income segmentation as this enables them to know where to focus their acquisition and marketing efforts to target customers who yield the highest return on investment. The income segmentation definition used in this study is standard to the biggest retail banks in Africa, despite

the variation in income bands per country. The variation in income bands is due to the diverse economic conditions in the different countries.

By grouping customers according to their similarity on key dimensions, we gain an understanding of how banks can develop and plan business and investment strategy accordingly.

The personal banking segment is defined as customers who earn between $505 - $2k in Zambia and $505 - $2k in Kenya. The affluent segment is defined as customers who earn $2k - $3.5k in Zambia and $ 982+ in Kenya.

3.5.2 QUALITATIVE PHASE

In the second qualitative phase, we used in-depth, semi-structured interviews to help elucidate on the primary reason for customer adoption of mobile lending. For this phase, ten participants were purposefully selected. Qualitative research allows for insights outside of structure which is useful for understanding why something is done, thus, this is relevant for the exploratory nature of this research in understanding the reason for the customers' response to the mobile lending innovation.

The participants were from various business units (and various levels) within the bank and were interviewed individually to enable the encapsulation of all participants' viewpoints. This allowed for the exploration of the main reasons for the quantitative analysis findings as well as provide additional insights. The interviews were conducted in English and were scheduled for an hour and were tape-recorded and transcribed.

The two sampling methods employed for this study are the convenience sampling method and the purposive method.
To begin with, the convenience sampling method, which is defined as a non-probabilistic examination where individuals from the observed population that meet specific criteria are chosen (Etikan, 2016). The case was chosen due to accessibility

as the author is employed by the company for the research period and there was willingness by the company to participate in the study.

An explorative and semi-structured questionnaire with open ended questions was administered to ten (10) interviewees to encourage them to provide more insights into the rationale of the adoption of mobile lending by BoP and affluent customer segments. APPENDIX A contains questions the participants were asked to the participants

Interview schedule and procedures of the interview

Interview schedule

1. Opening
    a. Greeted the participant and thanked them for availing themselves to meet with the author
    b. Stated the expected duration of the interview
    c. Introduced the topic and a brief background of the research and motivation for the significance of the study
    d. Specified the purpose of the interview
    e. Informed the participant on the measures taken to protect their confidentiality
    f. Requested permission to record responses and take notes
    g. Addressed any question or concerns that the participants might have had regarding the interview itself

2. Proceeded with the instrument questions in APPENDIX A and requested whether the participant has further information to share

3. Closed, and thanked the participant for their participation in the study

3.6 DATA CODING AND ANALYSIS

The collected data was analysed using both quantitative and qualitative measures. The data was collected, coded, and tabulated according to dependent and independent variables and analysed using descriptive statistics in terms of the mean values. Interviews were transcribed. Verbatim transcriptions of audio recordings

were made using Microsoft Teams. Transcription creation focused on capturing both interviewer and interviewee whole statements, while not capturing insignificant utterances, such as “uhms,” “well,” etc. Transcribed data were prepared for analysis using Microsoft Excel (Microsoft, 2021). All interview data was first organized into an Excel spreadsheet in which the columns were labelled as interviewee code, interviewer question and interviewee response.

Each column represented a single question and full response. Each response was categorized into initial categorizations based on the topics of interview guide and extant literature. These initial categorizations included: Mobile lending adoption by the BoP customer segment, BoP access to traditional banking solutions, mobile lending adoption by the affluent customer segment and mobile lending trajectory in the long run. Exchanges that were not coded were often clarification exchanges in which the interviewee asked for clarification about an interviewer’s question.

Quantitative Data Analysis

Bar graphs were used to summarise numerical information and identify trends

Qualitative Data Analysis

Descriptive statistical analysis was also undertaken for the qualitative portion of the research.

The analysis of the qualitative data was based on interview transcripts. The process followed the steps outlined by (Creswell, 2005):

1. Organizing and preparing for data analysis
2. Read through all data
3. Coding the data
4. Establishment of themes/ trends
5. Interpretation of themes
6. Comparison between the customer segments
7. Selection of quotes

3.7 LIMITATIONS OF THE STUDY

The following are inherent limitations of the chosen research strategy and methodology:

- The study was limited to two sub-Saharan markets for one of the four large multinational African banks in Zambia and Kenya, which limited the generalizability of the findings as well as its external validity
- The use of industry practitioners in the qualitative data collection to provide research direction may have inherent bias or be incorrect in their understanding and recommendations
- Owing to purposive convenience sampling the results may not be extrapolated to being representative of all banks in the industry
- The Halo effect may come into account, whereby participants provide answers that they deem to be what the researcher is seeking (Creswell, 2014).

3.8 ETHICAL AND QUALITY CONSIDERATIONS

3.8.1 ETHICS

Creswell (2003) considers the broad classification of ethical issues to include: “informed consent procedures, deception of covert activities, confidentiality towards participants, benefits to participants and requests that go beyond social norms”. The researcher exercised due diligence and was conscious of ethical considerations. The following was done in accordance with ethical sensitivity: every attempt was made to correctly cite and give credit to researchers, participants and advisors; research procedures were adhered to and data was not manipulated in order to ensure legitimate and reliable findings; full disclosure was made to participants regarding the purpose of the study and how their responses were used and respondents were informed that their specific responses were anonymous.

The study abided by the following rules, as outlined in the Wits policy documents and ethics form:

- The interviewee's details remained anonymous, and the notes taken during the interview remained confidential
- All data collected during the process was stored in a secured and encrypted format during the study, and when the study was complete, was destroyed

3.8.2 RELIABILITY AND VALIDITY

The quality aspects that assess trustworthiness and transparency of qualitative research include confirmability, credibility, dependability, and transferability. The following details explain how the process was followed by the researcher to assure quality, transparency, and trustworthiness of the data.

3.8.3 CREDIBILITY

To ensure the credibility of the research, triangulation and member check strategies were adopted for this study. The adopted triangulation strategies were twofold, namely the data triangulation strategy, whereby data was collected from people at different levels and teams within the organisation, and triangulation in the different methods in which the required data was collected. The data was also carefully analysed to remove bias and identify responses that could potentially cause inconsistencies which could impact the trustworthiness of the collected data.

Credibility was further ensured through the mechanism of member check whereby the data, interpretations, analysis, and conclusion were shared with the original group of people who were interviewed for analysis and confirmation.

3.8.4 TRANSFERABILITY

To guarantee transferability, the study contains detailed descriptive data that include: (1) the specific circumstances and settings in which the study was conducted; (2) sample; (3) population; (4) inclusion criteria and exclusion criteria;

and (5) details on the interviews including questions, subjects, method, and short extracts from the interviews.

3.8.5 DEPENDABILITY AND CONFIRMABILITY

An audit trail was in place which comprised of interview recordings, analysis notes, coding notes, process notes as well as the research report.

CHAPTER 4: PRESENTATION OF FINDINGS

4.1 INTRODUCTION

This chapter outlines the findings of the study obtained through the methods and techniques outlined in Chapter 3: Research methodology. A sequential explanatory mixed methods design, consisting of two distinct phases: the quantitative phase followed by the qualitative phase, was utilized.

To address the issues of priority, implementation and integration of the quantitative and qualitative approaches, priority in this study was given to the quantitative approach. Quantitative and qualitative data was collected to derive insights relating to the objectives of this research. The findings are organised in accordance with the research questions and formulated conceptual framework outlined in Chapter 3. The quantitative results are presented using statistical methods while the qualitative results are presented utilising numerical, narrative, and graphical formats.

4.2 DEMOGRAPHIC PROFILE OF PARTICIPANTS

QUANTITATIVE PHASE

The population of the study is comprised of secondary data of BoP and affluent customers in Zambia and Kenya. The criteria for selecting the participants for the quantitative phase included (1) customers who had applied and received a mobile loan and (2) bank customers. Quantitative analysis examined the relationship between the dependent variable, total number of loans across all segments, and independent variables, total number of BoP loans and total number of affluent loans.

For analysis purposes, the customers were organised into two groups based on their income segmentation as defined by the bank: the personal baking segment (also referred to as the BoP) as well as the affluent segment.

Customer segmentation is defined as the categorisation of a customer base into groups of people that are similar in specific ways relevant to marketing such as age,

gender and income (Melnic, 2016). Studies show that customer segmentation models allow for the effective allocation of marketing resources by enabling companies to target specific groups of customers (Hofstede et al., 1999; Melnic, 2016).Most incumbent banks still use the traditional income segmentation as this enables banks to know where to focus their acquisition and marketing efforts to target customers who yield the highest return on investment. The income segmentation definition used in the study is standard to the biggest retail banks in Africa.

The personal banking segment is defined as customers who earn between $505 - $2k in Zambia and $505 - $2k in Kenya. The affluent segment is defined as customers who earn $2k - $3.5k in Zambia and $982+ in Kenya.

QUALITATIVE PHASE

Qualitative analysis from the data collected in the semi-structured interviews involved a process of coding for emerging themes and interpreting findings in the context of the literature.

For this phase, ten participants were purposefully selected, and a semi-structured questionnaire was administered to them to provide more insights into the rationale of the adoption of mobile lending by BoP and affluent customer segments.

Respondents are considered to have the required knowledge and experience based upon their job role within the organisation. Respondents have roles within digital credit; risk; virtual banking; finance and product innovation. The job titles associated with these roles vary by organisation and respondents represent a diverse level of hierarchical organisational roles (e.g., managers and department heads). Table 3 shows a breakdown of the participants per country and business unit.

4.3 PRESENTATION OF FINDINGS AND DATA RESULTS

4.3.1 QUANTITATIVE PHASE

RESEARCH QUESTIONS 1 AND 2

ZAMBIA

The total number of active bank customers per segment for 2017, 2018 and 2019 are presented in Table 3. The affluent customer segment accounted for 10 percent of the total active customer base in 2017 and 2018 and increased by 4 percent in 2019 to 14%. The BoP customer segment accounted for 90% of the customer base in both 2017 and 2018 and decreased by 4% in 2019 to 86%.

Analysis of mobile lending adoption by the active bank customer base was conducted in Table 4. To further explore the mobile lending adoption by the bank customer base, the number of mobile loans customers per segment were analysed from 2017 – 2019 to identify any emerging trends. In 2017, there were 452 affluent and 15 109 BoP customers with mobile loans. This indicates that mobile lending adoption by the affluent segment was 2.90 percent while mobile lending adoption by the BoP segment was 97.09 percent.

In 2018, there were 831 affluent and 27 736 BoP customers with mobile loans. This suggests that mobile lending adoption by the affluent segment was 2.91 percent while mobile lending adoption by the BoP segment was 97.09 percent. In 2019, there were 1 384 affluent and 34 212 BoP customers with mobile loans. This indicates that mobile lending adoption by the affluent segment was 2.91 percent while mobile lending adoption by the BoP segment was 97.09 percent.

Table 3. The total number of active bank customers per segment

Active bank customers	2017	2018	2019
Affluent	14 000	25 700	42 795
BoP	126 000	231 300	274 205
Total	140 000	257 000	317 000
% Affluent customers to total	10%	10%	14%
% BoP customers to total	90%	90%	86%

Table 4. The total number of mobile loans per segment

Mobile loan customers	2017	2018	2019
Affluent	452	831	1 384
BoP	15 109	27 736	34 212
Total	15 561	28 567	35 596
% Affluent customers to total	2.90%	2.91%	3.89%
% BoP customers to total	97.09%	97.09%	96.11%

Figure 8. Segment contribution to the total customer base

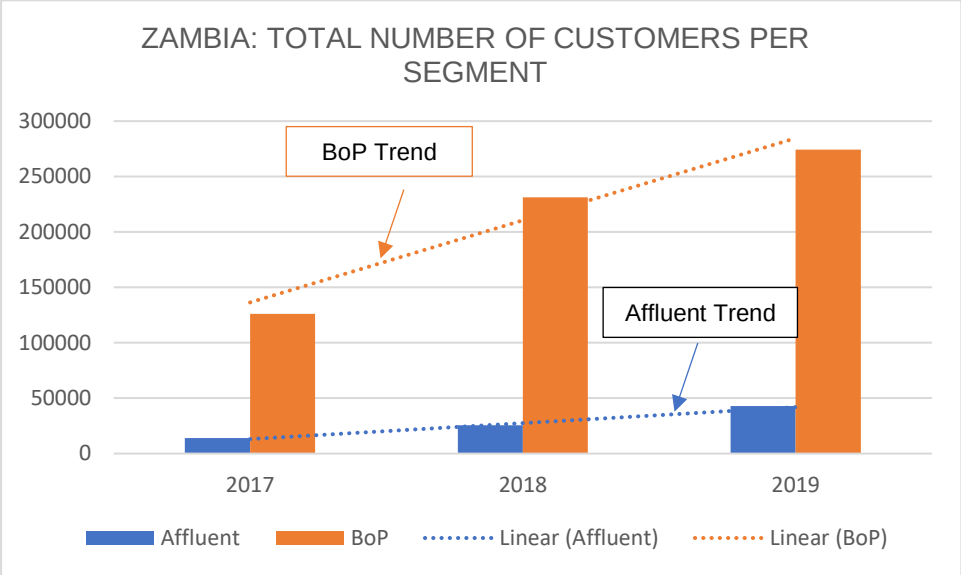
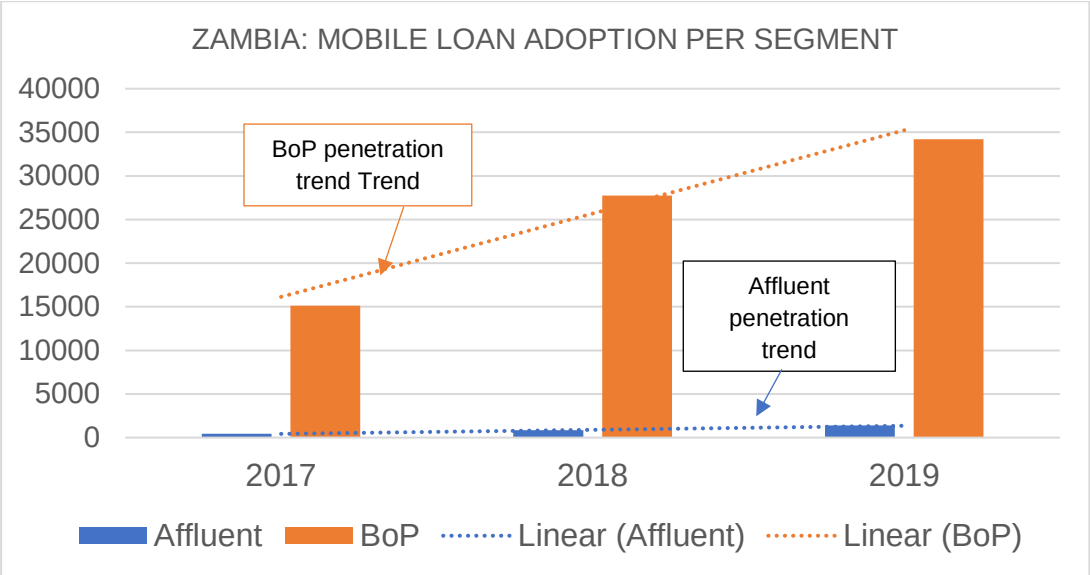


Figure 9. Mobile loan penetration per segment



KENYA

The total number of active bank customers per segment for 2017, 2018 and 2019 are presented in Table 5. The affluent customer segment accounted for 9 percent of

the total active customer base in 2017 and 2018 and increased by 6 percent in 2019 to 15%. The BoP customer segment accounted for 91% of the customer base in both 2017 and 2018 and decreased by 6% in 2019 to 8%.

Analysis of mobile lending adoption by the active bank customer base was conducted in Table 6. To further explore the mobile lending adoption by the bank customer base, the number of mobile loans customers per segment were analysed from 2017 – 2019 to identify any emerging trends.

In 2017, there were 28 670 affluent and 276 330 BoP customers with mobile loans. This indicates that mobile lending adoption by the affluent segment was 9 percent while mobile lending adoption by the BoP segment was 91 percent. In 2018, there were 36 660 affluent and 353 340 BoP customers with mobile loans.

This suggests that mobile lending adoption by the affluent segment was 9 percent while mobile lending adoption by the BoP segment was 91 percent. In 2019, there were 78 523 affluent and 448 477 BoP customers with mobile loans. This indicates that mobile lending adoption by the affluent segment was 15 percent while mobile lending adoption by the BoP segment was 85 percent.

Table 5. The total number of active bank customers per segment

Active bank customers	2017	2018	2019
Affluent	28 670	36 660	78 523
BoP	276 330	353 340	448 477
Total	305 000	390 000	527 000
% Affluent customers to total	9%	9%	15%
% BoP customers to total	91%	91%	85%

Table 6. The total number of mobile loans per segment

Mobile loan customers	2017	2018	2019
Affluent	2038	2257	23085
BoP	12523	13863	34628
Total	14560	16120	57714

% Affluent customers to total	13.9%	14.00%	39.99%
% BoP customers to total	86%	85.99%	59.99%

Figure 10. Segment contribution to the total customer base

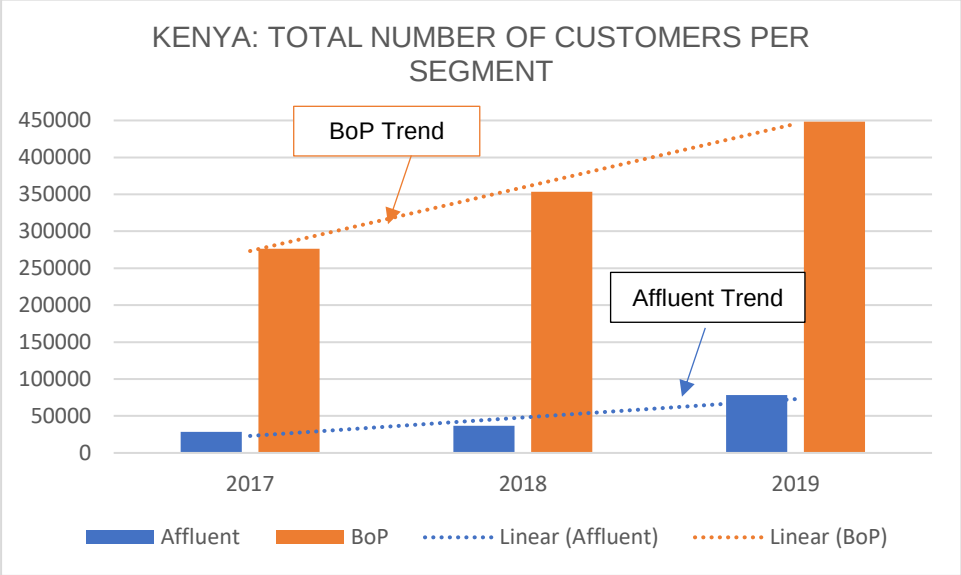
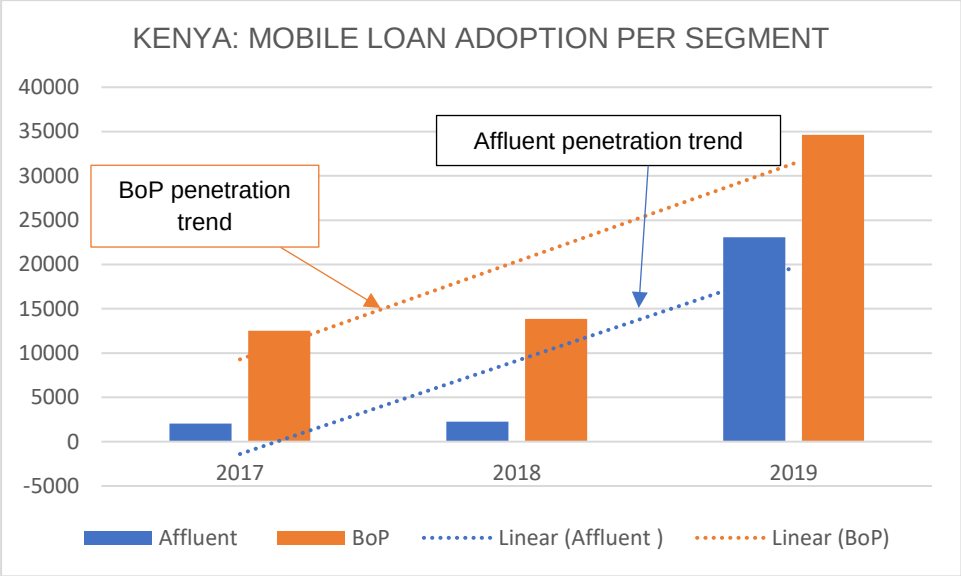


Figure 11. Mobile loan adoption per segment



4.3.2 QUALITATIVE PHASE

4.3.2.1 RESULTS PERTAINING TO RESEARCH QUESTION 1

Does mobile lending function as a complementary innovation for BoP customers? If so, to what extent?

MOBILE LENDING ADOPTION BY THE BoP SEGMENT

1. Interview question: What is your view on the overall mobile lending adoption by the BoP in your market?

   All participants from Strategy, Risk; Finance and Product Innovation indicated that mobile lending adoption by the BoP segment is very high in their various markets because it's convenient and has expanded financial services to the low-income segment. This is evidenced by the mobile lending penetration rates as well as the size of the loans that are disbursed from regular workers and SMEs. The pricing of the product is typical microfinance and is very high so it is still very much in the low-income segment.

   The key themes which emerged in accordance with high mobile lending adoption by BoP customers are:

High adoption

P5 (Kenya): *"We are currently disbursing more loans on virtual lending than on conventional lending. So, the mobile lending portfolio has a wider market whereas conventional lending is streamlined and has a lot of parameters."*

P10 (Zambia): *"The primary target was the unbanked. About 7% of the conventional customers are now users of mobile lending as well."*

Meets short term lending needs of the market

P3 (Kenya): *"Mobile lending has managed to close the gap and offer short term lending that's not offered by conventional lenders*

P6 (Zambia): *"Mobile lending has enabled banks to avail loans and financial services to the mass market."*

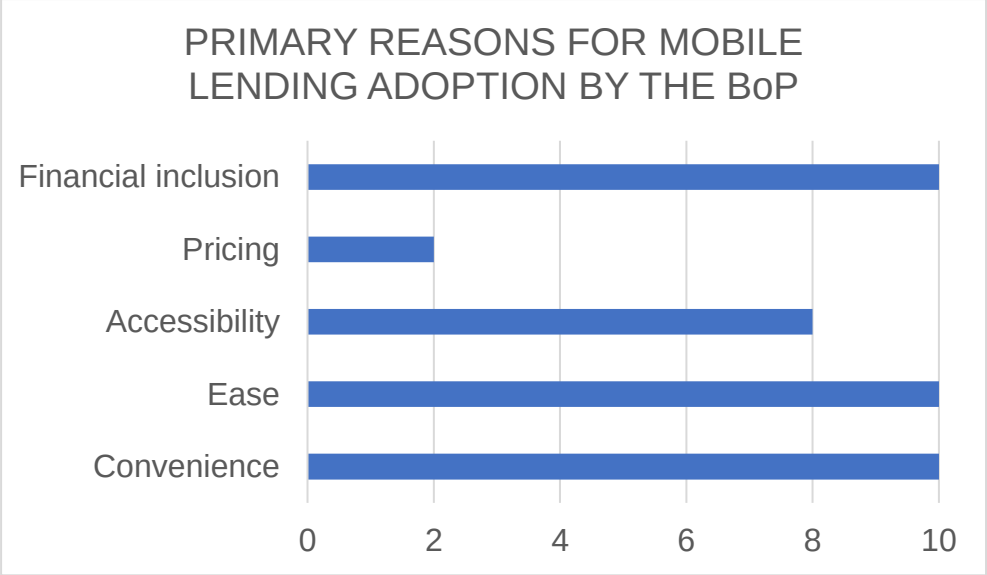
Financial Inclusion/Social Responsibility

P7 (Zambia): *"The bank was able to disburse a lot of loans to low-income earners within a short space of time as there were a lot of BoP customers interested in the product."*

P2 (Kenya): *"There was a big push by the regulators for banks to find ways to offer banking services to the unbanked- mobile lending has enabled banks to fulfill that ask."*

2. Interview question: What do you think are the primary reasons for mobile lending adoption by the BoP customer segment?

   All participants indicated that customers like it because it is quick, convenient, and accessible to all. Some 80% of the participants further stated that traditional lending parameters are rigid and entail an onerous process whereas mobile lending is easily accessible to all. Some 20% of the participants also highlighted that pricing also plays critical role in the high mobile lending adoption as the interest paid on mobile loans is cheaper than what customers would have paid had they acquired a loan from a money lender. The remaining 80% of the participants indicated that although pricing plays a critical role in the high adoption rate, the other three reasons are more significant than pricing.



The key themes which emerged in accordance with the adoption of mobile lending by BoP customers are:

Convenience

P6 (Zambia): *"It is quick – we see many customers using it because it provides them with finance when they need it."*

P4 (Kenya): *"Mobile money wallet plays an important role in terms of convenience. You can pay for everything with your mobile wallet (airtime, electricity). The transactional business has migrated to mobile wallet. Increasingly, some employers are sending salaries to mobile wallets. Their lives center around the mobile wallet. The requirements are laxed because of that and there's a lot that can happen in that space without talking to someone. It's convenient and it gives them everything that they want."*

P3 (Kenya): *"It is available to any wallet with USD capability."*

Accessibility/Speed

P6 (Zambia): *"Instead of customers releasing money from long term investments, they opt for mobile loans."*

P9 (Zambia): *"It is a very convenient product that is perceived as being there to improve financial services access."*

P5 (Kenya): *"Customers can apply for mobile loans anywhere, anytime"*

Ease

P10 (Zambia): *"There is a high acceptance of mobile lending in our market because of how easy it is for a person to get access to credit."*

P8 (Zambia): *"The mobile lending proposition is much easier than the conventional lending proposition where you have to go through a strenuous process for you to access credit."*

P5 (Kenya)*: "A customer can have a loan disbursed in under one minute."*

Pricing

P4 (Kenya): *"The interest on mobile loans is better than the interest that customers would have to pay if they borrowed money from a money lender."*

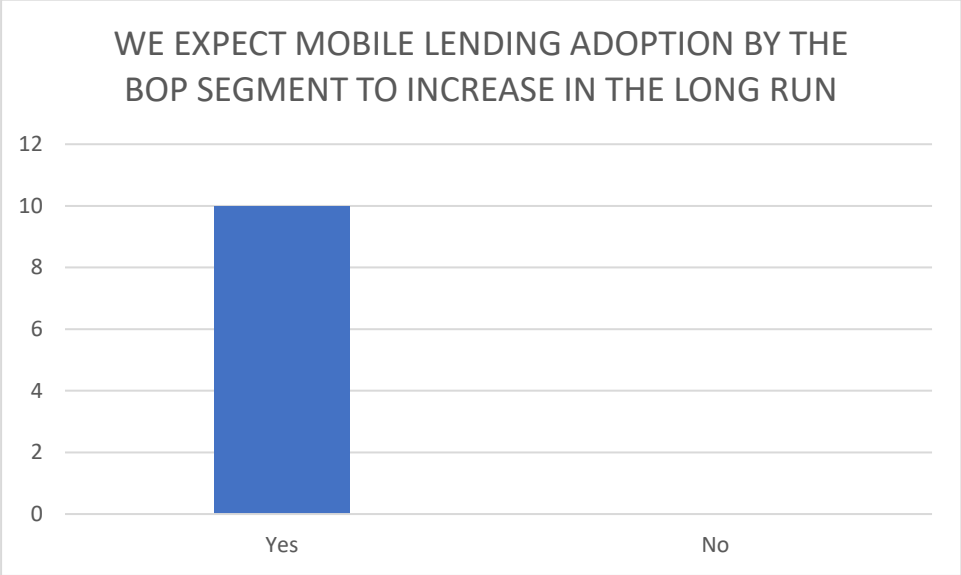
Financial Inclusion

P7 (Zambia): *"A lady running a market can readily borrow money at 05:00 when she wakes up and pay the loan back at the end of the day whereas previously, the bank could not lend to."*

P1 (Kenya): *"Mobile lending is there to answer to the low-income and irregular earners' financial requirements."*

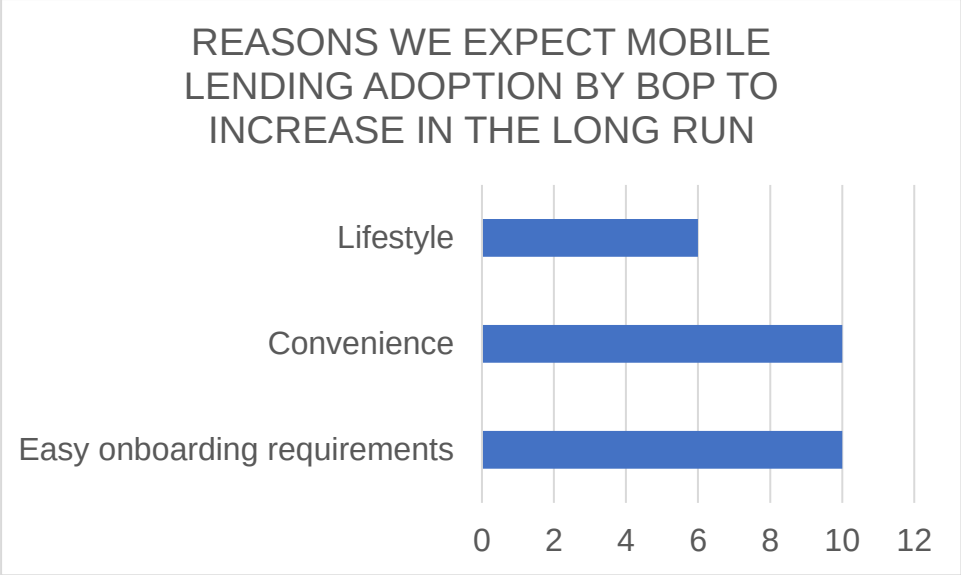
3. Interview question: Do you expect mobile lending adoption by the BoP customer segment to increase in the long run?

   All respondents expect mobile lending adoption by the BoP customer segment to increase in the long run.



4. Interview question: Why do you expect mobile lending adoption by the BoP customer segment to change in the long run?

   All respondents indicated that they expect mobile lending adoption by the BoP to change in the long run because of the easy onboarding requirements, ease of use and convenience. Some 60% of the participants pointed out that mobile banking platforms are also becoming part of customers lifestyle and as such, the adoption by the younger generation will grow and the capacity to grow across all segments is still there



The key themes which emerged on why mobile lending adoption by the BoP segment is expected to change:

Easy onboarding requirements

P6 (Zambia): *"Mobile lending will increase because of how convenient and easy it is to take out a mobile loan – it has easy requirements."*

P1 (Kenya): *"The requirements are laxed and there's a lot that can happen in that space without talking to someone."*

Lifestyle

P7 (Zambia): *"Mobile lending adoption will increase as it helps support and maintain a certain lifestyle."*

P5 (Kenya): *"Mobile lending will grow because people are using phones for access and financial services providers are willing to lend to the BoP based on that."*

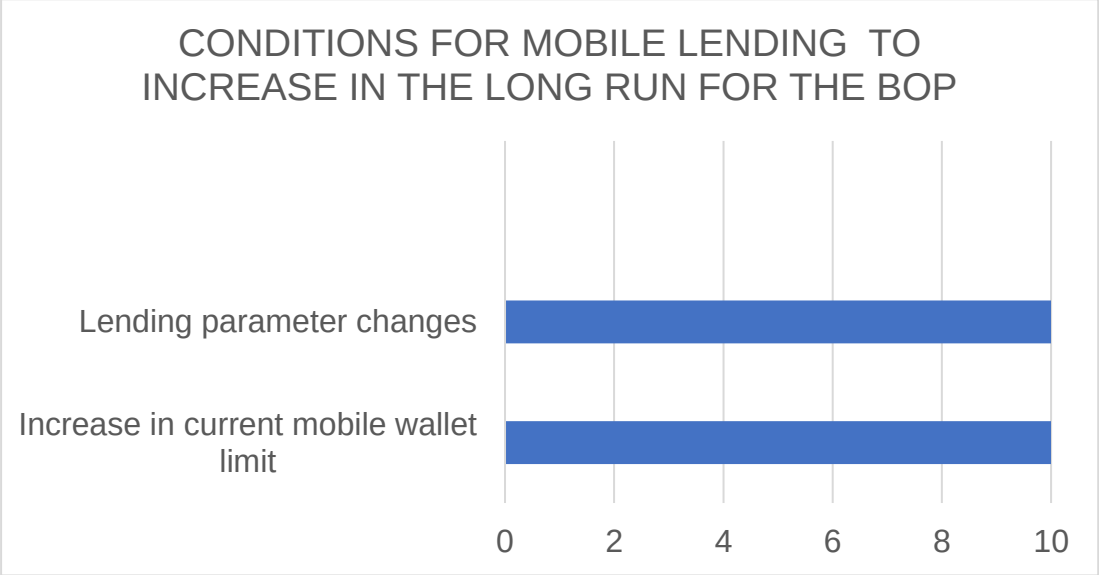
P3 (Kenya): *"The transactional business has migrated to mobile wallet and employers are increasingly sending salaries to mobile wallets. So mobile lending will increase as the lives of the customers are starting to center around the mobile wallet."*

Convenience

P2 (Kenya): *"It's convenient and it gives them everything that they want."*

5. Interview question: How do you expect mobile lending adoption by the BoP customer segment to change in the long run?

   All respondents indicated that they expect mobile lending adoption by the BoP to increase in the long run. They also specified that this will only be true if the current mobile lending wallet is increased. Furthermore, 90% of the participants also highlighted that mobile lending adoption will increase if the current mobile lending parameters are amended



The key themes which emerged

Different lending parameters

P4 (Kenya): *"Mobile lending will increase if there are different lending parameters"*

P8 (Zambia): *"The market has plateaued over the current structure of mobile lending platforms i.e. the current scoring system."*

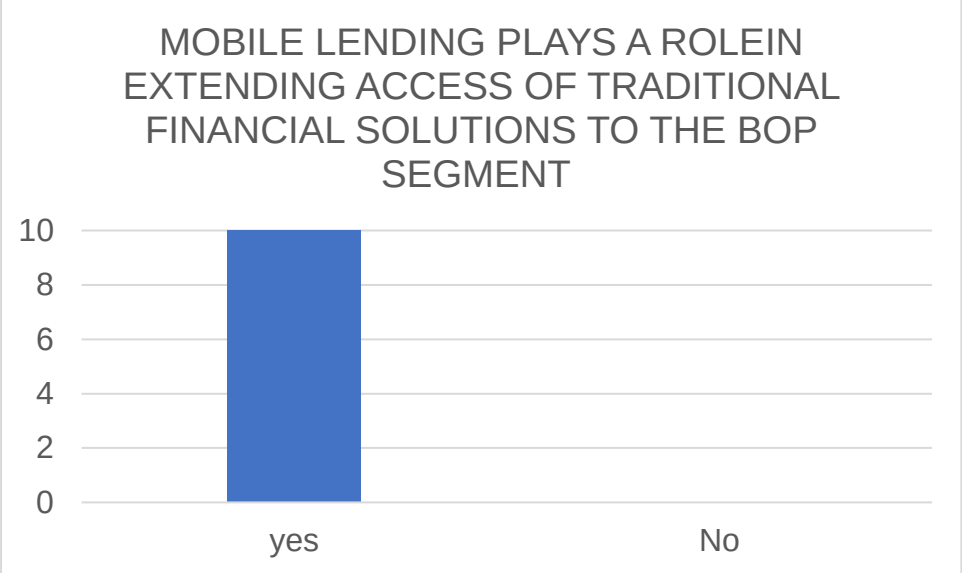
Increase in current mobile wallet

> ***P9 (Zambia):*** *"There is appetite and opportunity for mobile lending to increase as long as the wallet increases."*

THE ROLE OF MOBILE LENDING IN EXTENDING ACCESS OF TRADITIONAL FINANCIAL SOLUTIONS TO THE BOP SEGMENT

1. Interview question: Does mobile lending play a role in extending traditional financial solutions to the BoP customer segment?

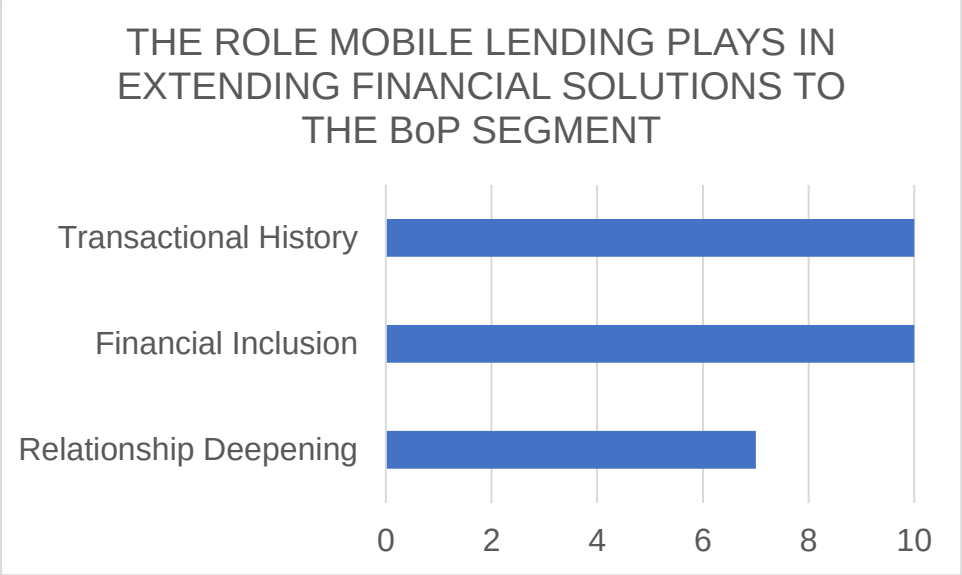
All respondents agree that mobile lending plays a role in extending traditional financial solutions to the BoP customer segment



2. Interview question: How does mobile lending play a role in the extension of traditional financial solutions to the BoP segment?

All participants agree that mobile lending complements the financial offering to both the BoP and the salaried customers.

The key themes which emerged in accordance with how mobile lending plays a role in the extension of financial solutions to the BoP segment are:



Transactional/Credit history

P10 (Zambia): *"Most BoP customers were unable to open a transactional account as they could not provide the required documentation for them to be onboarded. Mobile lending has provided these customers with a financial history that can now be used to access/open other banking products."*

P3 (Kenya): *"These are customers with thin files- no credit history. We only require your transactional activity on your mobile wallet, so these people are getting access to finance that they didn't have access to in the past."*

Relationship Deepening

P9 (Zambia): *"When mobile lending was initially launched, the focus was on acquiring as many customers as possible. Now that the acquisition on those customers has already happened, the banks are focusing on deepening their relationships with customers who already have mobile loans with them. This entails the cross selling of other financial solutions to customers, resulting in BoP customers having multiple products with the bank."*

Financial Inclusion

> ***P2 (Kenya):*** *"Customers who were previously excluded from lending products as well as other financial solutions due to the stringent lending and onboarding parameters are now able to acquire those solutions as the mobile lending technology has enabled bank to score low-income customers."*

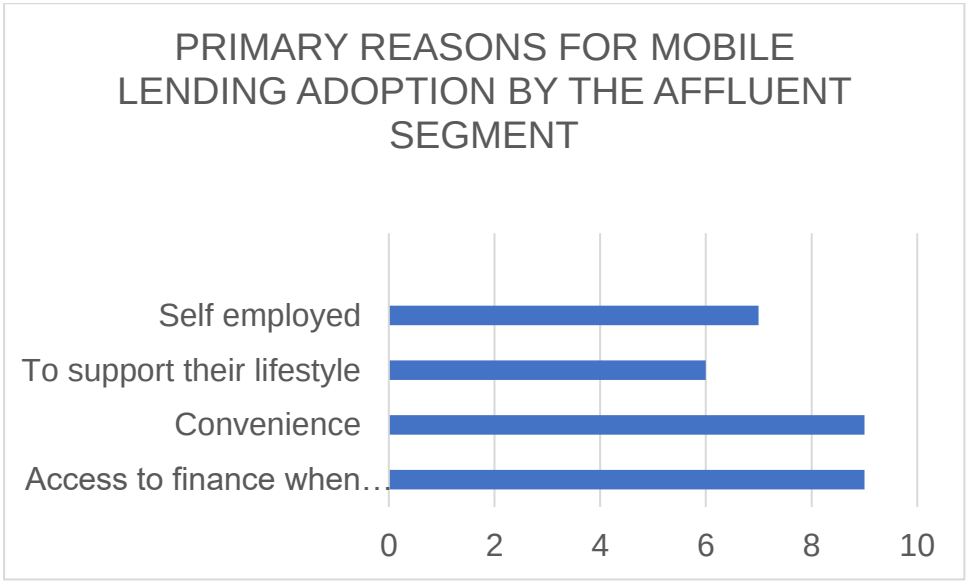
4.3.2.2 RESULTS PERTAINING TO RESEARCH QUESTION 2

Does mobile lending function as a disruptive innovation for the affluent customer base? If so, to what extent?

MOBILE LENDING ADOPTION BY THE AFFLUENT CUSTOMER SEGMENT

1. Interview question: What do you think are the primary reasons for mobile lending adoption by the affluent customer segment?

   90% of the participants indicated that convenience and access to finance whenever needed are the primary reasons for mobile lending adoption by the affluent segment. Some 60% of the participants also cited that some affluent customers use mobile loans to support their lifestyles and that most affluent customers who utilize mobile loans are self-employed (they utilize mobile loans to deal with unexpected cash flow problems)



The key themes which emerged in accordance with the primary reasons for mobile lending adoption by the affluent customer segment:

Self-employed (high turnover)

> ***P5 (Kenya)**: "Affluent customers who take out mobile loans are the self-employed and have very high turnover. They use mobile loans to meet their businesses short term credit demands when needed."*

Lifestyle

> ***P2 (Kenya):** "High end personal and affluent. This segment wants to sustain a certain lifestyle (Mass affluent) as they are spenders and conduct most of their transactions on their wallet, so they would also qualify for bigger ticket sizes than the mass."*

> ***P6 (Zambia):** "This is the segment that likes status, so the product needs to cater for what the customers feel is right for them."*

Convenience

> ***P8 (Zambia):** "Convenience and flexibility are important as customers don't have to engage their bankers for small loans."*

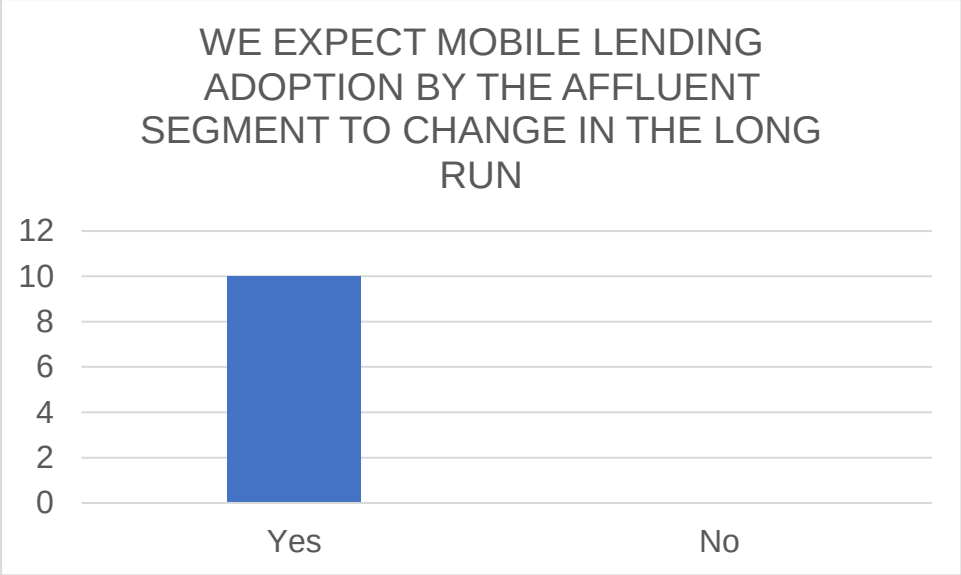
Access to finance when needed

> ***P7 (Zambia):** "Conventional lending is too much work for customers, especially when they require small loans so many affluent customers opt for mobile loans because of the ease of accessing the facility."*

> ***P1 (Kenya):** "Given the credit scoring model that the mobile lending technology uses, it's the affluent customers who stand a better chance of qualifying for loans when compared to the BoP."*

2. Interview question: Do you expect mobile lending adoption by the affluent customer segment to change in the long run?

   All the participants indicated that they expect mobile lending adoption by the affluent segment to change in the long run



3. Interview question: Why do you expect mobile lending adoption by the affluent customer segment to change (or not change) in the long run?

The key themes which emerged in accordance with the primary reasons for mobile lending adoption by the affluent customer segment:

Strategic Partnerships

P10 (Zambia): *"Our next partnership will be with an MNO that is an affluent network which will enable the bank to tap into that customer base."*

P2 (Kenya): *"The bank has adopted a strategy around growing partnerships to tap into markets that they couldn't tap into before."*

P1 (Kenya): *"The partnership has enabled the bank to get into the mass market without needing brick and mortar."*

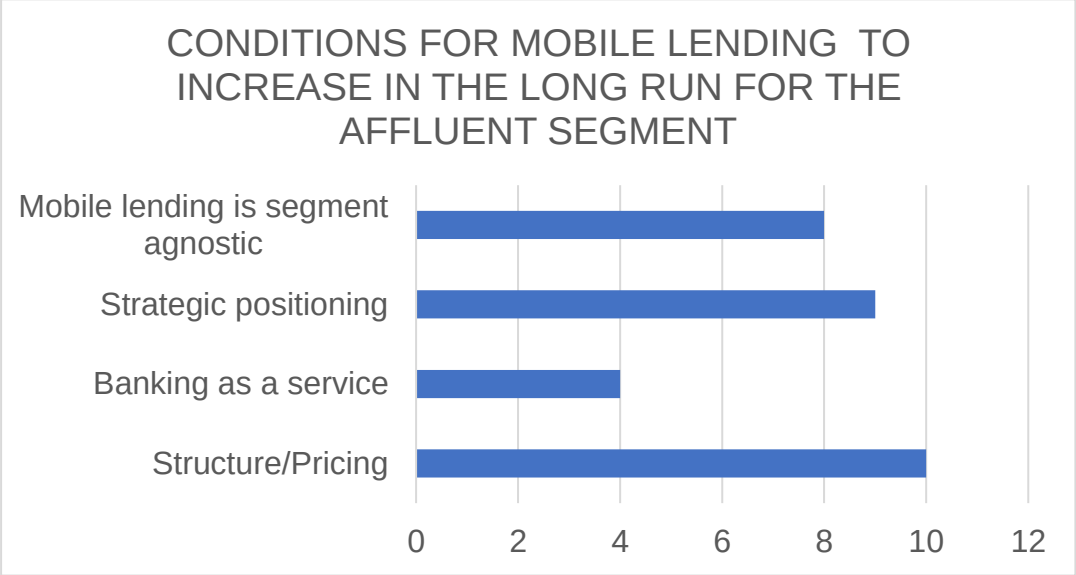
Product Innovation

P5 (Kenya): *"Product innovation will be a determinant of how far this can go in including affluent customers. Adoption of new customers (high-end) will be determined by the product evolution of mobile lending. The ticket sizes need to increase and be more suitable for people with high income."*

P3 (Kenya): *"A lot of customers like the 30-day loan as it coincides with their income cycle."*

4. Interview question: How do you expect mobile lending adoption by the affluent customer segment to change in the long run?

   Although all the participants indicated that they expect mobile lending adoption to increase in the long run, they highlighted that this can only happen if certain changes are made to the current mobile lending model. The changes that need to be made include lending parameters and pricing



The key themes which emerged in mobile lending adoption changing in the long run by the affluent customer segment are:

Structure/Pricing

P1 (Kenya): *"Mobile lending will increase if the pricing and the structure of the mobile loans is changed and automated. If it stays in the current form then no, mobile lending adoption by the BoP will not increase."*

Banking as a service

P9 (Zambia): *"Banking as a service is becoming an expectation and a need and not a value add anymore. This means that the demand for more digital offerings such as mobile lending will be expected to e part of the standard banking proposition for the affluent segment."*

Strategic positioning

P5 (Kenya): *"An increase in mobile lending adoption by the affluent segment will depend on how the different banks package it as part of their affluent customer value proposition."*

P6 (Zambia): *"Mobile lending is also complementary to the affluent segments as the relationship will be reserved for more complex transactions."*

Mobile lending is segment agnostic

P8 (Zambia): *"In this day and age, the profiles of the customers has evolved. The need does not change just because you are earning a premier salary. It's about ensuring that the same service is provided to all customers who are at the same life stage and have the same need."*

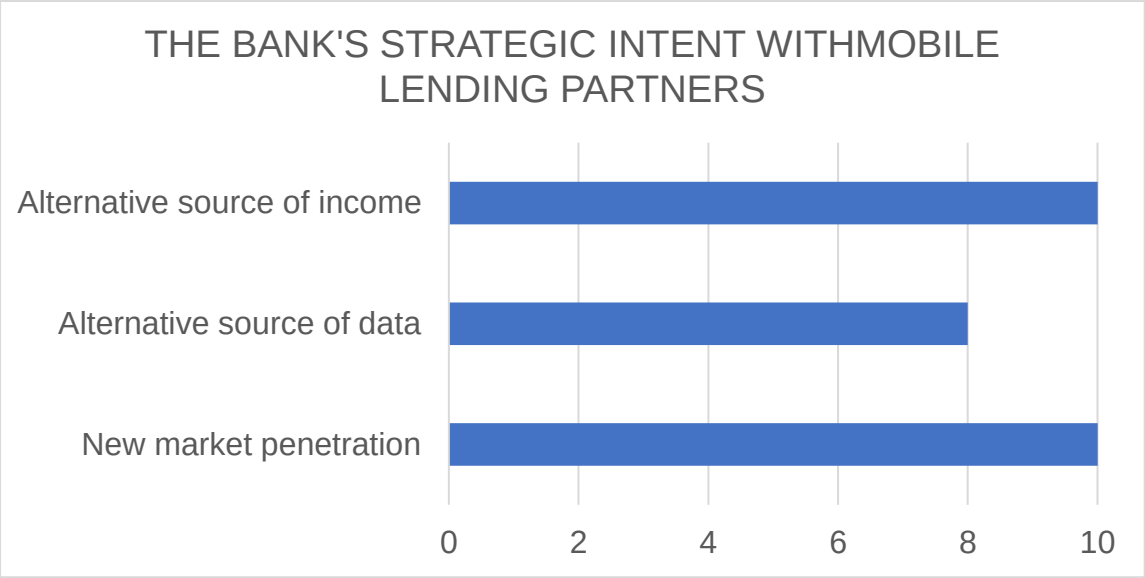
4.3.2.3 RESULTS PERTAINING TO RESEARCH QUESTION 3

Is mobile lending following the cannibalization trajectory that other disruptive innovations follow? If so, to what extent?

MOBILE LENDING TRAJECTORY IN THE LONG RUN

1. Interview question: What is the bank's strategic intent with mobile lending partners?

All participants conveyed that the banks intent with mobile lending partners was to penetrate new market segments that they would not have had the appetite and technology to serve. Furthermore, the bank wanted to participate in the growing ecosystem by providing a different service to what we traditionally offer.
The key themes which emerged with the bank's strategic intent with mobile lending partners are:



Penetrate new markets

> ***P3 (Kenya):*** *"Looking for a pool of customers that we were having difficulty in tapping into."*

Alternative source of data

> ***P6 (Zambia):*** *"MNOs have a wider pool of customers than we would have originally had so our partnership with them has given us access to a wider pool of customers."*

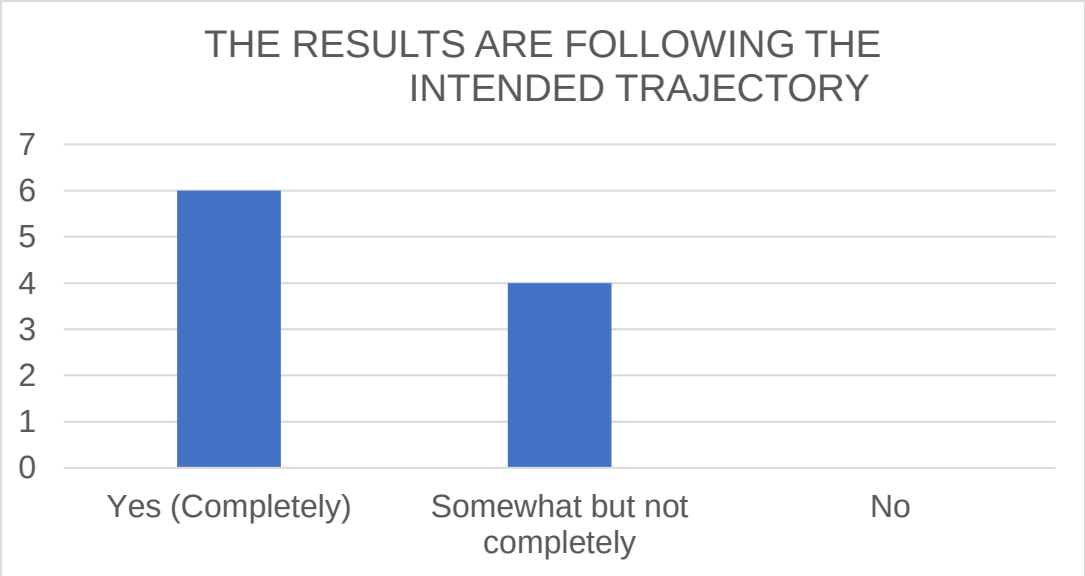
Alternative source of income

P8 (Zambia): *"It's a low balance sheet footprint product and a key income earner."*

P9 ***(Zambia)***: "*Mobile lending has provided new revenue lines by making it easier to increase non-interest income from the transaction fees."*

2. Interview question: Are the results following the intended trajectory?

60% of the participants indicated that the results are following the intended trajectory. Furthermore, the results have exceeded the bank's expectations from a financial perspective. However, 40% of the participants have indicated that although the financial expectations have been met (and in some instances exceeded), they were not expecting any affluent customers to use mobile loans as it was intended for very low-income earners.



The key themes which emerged on whether the results are following the intended trajectory are:

Yes (Exceeded expectations)

P5 (Kenya): *"We had a great first year of operation and were on a trajectory of growth."*

P7 (Zambia): *"The results have exceeded expectations – the cost of risk was very high in the early days (12%) and the 14% point has never been reached. We are actually sitting on 6%. The non-performing loss rate is better than expected and the yields have improved (the cost of risk has significantly improved over time)."*

Somewhat but not completely

P6 (Zambia): *"I'm very worried that there are any affluent customers taking out mobile loans as this is an indication that they are not able to handle their finances well – there shouldn't be any affluent customers taking out mobile loans under the current lending structure."*

3. Interview question: Can you elaborate on the above?

   The key themes which emerged on why the results are following (or not) the intended trajectory are:

Yes (Exceeded expectations)

P9 ***(Zambia)*****:** "Adoption of digital channels has increased."

P3 (Kenya): *"The average age profile has dropped because of mobile lending (we were able to tap into the younger customer segment). The digital channel has provided the simplistic digital channel that younger customers are looking for."*

New revenue lines

P4 (Kenya)*: "Mobile lending has made it easier to increase non-interest income from the transaction fees."*

New markets penetration

> ***P7 (Zambia):*** *"Mobile lending has enabled us to enter new markets that we were having difficulty in tapping into."*

Alternative source of data

> ***P8 (Zambia):*** *"MNOs have a wider pool of customers than we would have originally had so our partnership with them has given us access to a wider pool of customers."*

Somewhat but not completely

> ***P10 (Zambia):*** *"Mobile lending is targeted at customers who prioritize convenience over financially savviness - there shouldn't be any affluent customers taking out mobile loans under the current lending structure."*

Partnership Costs

> ***P3 (Kenya):*** *"There is an opportunity to increase customer base acquisition. The cost can be optimized further- the cost of these partnerships is enormous."*

4. Interview question: Do you have any additional insights / important take-aways?

> ***P2 (Kenya):*** *"There's an opportunity for customers beyond the bank. There's a growing number of income-earning customers who are interested in mobile lending."*

Platform Amendments

P3 (Kenya): *"The current mobile lending platforms in their current form do not to cater for the financially savvy and affluent customers who care about the price of money. It appeals to customers who care more about convenience than the cost of borrowing."*

Mobile lending evolution

P5 (Kenya): *"In future, move from just being pure lending but be used for other products and open to other segments as well as the technology is fabulous."*

Regulation

P10 (Zambia): *"One of the things that will ensure the success of Mobile lending success will hinge on how open-minded regulators are and how quickly they are able to adapt to new ways of customer transactions. There's a lot of conventional thinking that comes into play, so regulators need to be more open – minded, which is what has made Mobile banking successful in Kenya."*

CHAPTER 5: DISCUSSION OF RESULTS

5.1 INTRODUCTION

The results presented in Chapter 4 provided an overview of the data along with the fieldwork conducted. This chapter will focus on presenting the findings from the quantitative and qualitative data collection and analysis. The discussions are guided by the conceptual framework and are organized by the research questions. The existing theoretical findings obtained from the review of literature, which aided in the development of the conceptual framework and research propositions, will be discussed in accordance with the findings of this study. The interview results provide an opportunity to establish the relationship between the findings in the literature, and practice in the specific context of mobile lending in Zambia and Kenya.

Studies show that customer segmentation models allow for the effective allocation of marketing resources by enabling companies to target specific groups of customers (Hofstede et al., 1999; Melnic, 2016).Most incumbent banks still use the traditional income segmentation as this enables banks to know where to focus their acquisition and marketing efforts to target customers who yield the highest return on investment. The income segmentation definition used in this study is standard to the biggest retail banks in Africa, despite the variation in income bands per country. The variation in income bands is due to the diverse economic conditions in the different countries. By grouping customers according to their similarity on key dimensions, we gain an understanding of how banks can develop and plan business and investment strategy accordingly.

The paper focused on two retail banking customer segments, namely, BoP customers and affluent customers. The personal banking segment in this study is defined as customers who earn between $505 - $2k in Zambia and $196 - $982 in Kenya while the affluent segment is defined as customers who earn $2k - $3.5k in Zambia and customers who earn more than $982 in Kenya.

5.2.1 RESEARCH QUESTION 1: DISCUSSION

Does mobile lending function as a complementary innovation for BoP customers? If so, to what extent?

The first research question intended to establish whether mobile lending is a complementary innovation for BoP customers. Secondly, this question sought to determine how mobile lending has enabled BoP customers access to traditional banking solutions

The proposition is that mobile lending adoption is very high in the respective markets because it is a very convenient product that has enhanced financial services to the low-income segment. In Chapter 2, researchers indicate that the advent of digital technologies has provided access of a wider range of financial services to the unbanked (Haider, 2018; Ozili, 2018; Stella, 2019). When asked about the primary reasons for mobile lending adoption by the BoP segment, 80% of the participants stated that traditional lending parameters are rigid and entail an onerous process whereas mobile lending is easily accessible to all. It was also noted that 20% of the participants highlighted that pricing also plays critical role in the high mobile lending adoption as the interest paid on mobile loans is cheaper than what customers would have paid had they acquired a loan from a money lender. The responses are in line with the findings by (Ozili, 2018), which indicate that mobile lending has extended financial services access to the previously excluded.

5.2.1.1 MOBILE LENDING ADOPTION BY THE BOP SEGMENT

Scholars in Chapter 2 emphasize that social needs can be seen as business opportunities for which to serve new markets and solve long-standing business problems (Anderson & Markides, n.d.; Kanter, 1999; Prahalad & Hart, 2002).Furthermore, the conditions that BoP innovations need to fulfil in order to successfully create financially viable and socially beneficial business opportunities include the affordability of products and services and solutions that offer some additional value to the living standards of people faced with poverty cycles.

On analysis of questions around mobile lending adoption by the BoP segment, all participants reported that mobile lending adoption by the BoP segment is very high in their various markets because of the access and convenience that it offers to the low-income segment. This is line with findings from researchers in the literature, which state that mobile financial services have provided rural users access to low cost financial services in remote areas where formal banking is deemed unfeasible (Karjaluoto & Shaikh, 2015). The findings together with responses from the previous sub section on key themes which emerged in accordance with the high mobile lending adoption by BoP customers are in line with Bachas et al.'s (2018) view that the advent of digital technologies has provided access of a wider range of financial services to the unbanked.

In terms of the rationale for high mobile lending penetration by the BoP, the literature spoke to financial inclusion resulting from low-cost financial services. The literature also spoke to the BoP being able to deal with financial shocks (Ozili, 2018).

On financial inclusion, both the banks and regulators had the same goal of identifying ways in which the unbanked and low-income earners can get access to financial solutions as part of their social responsibility strategy. Mobile lending seems to be one of the ways in which this will be achieved.

On prompting participants to provide the primary reasons for the high mobile lending adoption by the BoP, 100% of the participants indicated that customers like it because it is quick, convenient and accessible to all. Some 80% of the participants further stated that traditional lending parameters are rigid and entail an onerous process whereas mobile lending is easily accessible to all. This is in line with the findings by scholars that mobile loans have transformed the process for both borrowers and lenders as the traditional lending application process often required unattainable collateral documents from borrowers and the process was very costly for banks (Agarwal et al., 2009; Tang, 2019).

Accessibility and convenience were mentioned by most of the study respondents as the core primary reasons for the high BoP mobile lending adoption rates. Previous research had also acknowledged that existing processes and financial instruments

are not suited to the BoP lifestyle needs. When discussing important takeaways, most of the respondents further emphasized that the transactional business has migrated to mobile wallet and the requirements are lax because of that.

Some 20% of the participants mentioned that pricing also plays critical role in the high mobile lending adoption as the interest paid on mobile loans is cheaper than what customers would have paid had they acquired a loan from a money lender. The literature review points to the heavy dependence of BoP households on a wide variety of informal community-based financial arrangements to meet their financial needs (Brau & Woller, n.d.).

When prompted on whether mobile lending adoption by the BoP segment will increase in the long run, all respondents indicated that they do expect it to increase. They attributed the expected increase to easy onboarding requirements, convenience, and lifestyle.

Some 60% of the participants pointed out that mobile banking platforms are also becoming part of customers lifestyle and as such, the adoption by the younger generation will grow and the capacity to grow across all segments is still there.

Some 20% of the participants mentioned that the market has plateaued over the current structure of mobile lending platforms. When discussing important takeaways, all participants pointed out that there are conditions that need to be in place in order for BoP mobile lending adoption to increase in the long run. Different lending parameters and increased mobile wallet were stated as such.

5.2.1.2 THE ROLE OF MOBILE LENDING IN EXTENDING ACCESS OF TRADITIONAL FINANCIAL SOLUTIONS TO THE BOP SEGMENT

In their research, Haider (2018) and Ozili (2018) stated that mobile lending can lead to greater financial inclusion, expansion of financial services to non-financial sectors and the expansion of basic services to individuals. This is similar various research

studies that call to attention the significance of mobile lending in improving the welfare of individuals and expanding banking solutions to low-income customers.

All respondents agree that mobile lending plays a significant role in extending traditional financial solutions to the BoP customer segment by complementing the banking financial offering. *Relationship deepening, credit history and financial inclusion* are exactly how mobile lending achieves this. Prior to digital financial solutions like mobile lending, most BoP customers were unable to open a transactional account as they could not provide the required documentation for them to be onboarded. Mobile lending has provided these customers with a financial history that can now be used to access/open other banking products.

Most participants also shared that although the initial focus on acquiring as many customers as possible, the banks are now focusing on deepening their relationships with customers who already have mobile loans with them as the acquisition on those customers has already happened. This entails the cross selling of other financial solutions to customers, resulting in BoP customers having multiple products with the bank.

The results in Chapter 4 and the discussions to Question 1 indicate that mobile lending adoption by the BoP segment is very high. The results further confirm findings by Ozili (2018), that when mobile lending is applied to the lives of low-income and poor people, their access to basic financial services will improve and lead to greater financial inclusion. The results are also in line with the proposition.

5.2.2 RESEARCH QUESTION 2: DISCUSSION

5.2.2.1 MOBILE LENDING ADOPTION BY THE AFFLUENT SEGMENT

Does mobile lending function as a disruptive innovation for the affluent customer base? If so, to what extent?

The second question is intended to better understand mobile lending adoption by the affluent customer segment in Zambia and Kenya.

The widespread ownership of mobile phones and the ever-increasing geographical coverage of networks means that the use of mobile phones has the potential to be able to offer a cost effective and simple means of making financial transactions to service various segments of the bank and market.

According to Hoffman (2006), the mobile lending market entry strategy will vary according to the vision of the organization and the market potential in the relevant country. In other words, the mobile banking may be a substitute or a supplement for the existing banking offering. Some organizations may see the advantages in adding an additional electronic channel to an existing account providing either informational and/or transactional services, while others may be interested in creating a banking service centered on the cell phone which will be a whole new relationship with the customer.

Participants were prompted to provide reasons for mobile lending adoption by the affluent segment. On examining their responses, 90% of the participants indicated that convenience and access to finance whenever needed are the primary reasons for mobile lending adoption by the affluent segment, while 60% of them cited that some affluent customers use mobile loans to support their lifestyles. They further shared that most of the affluent customers who apply for mobile loans to support their lifestyles are the high end personal and mass affluent segment, who like to conduct most of their transactions on their wallet, leading them to qualify for bigger ticket size loans than the mass / BoP market.

It was also shared that another reason for affluent customers using mobile loans is the flexibility as customers do not have to engage their relationship bankers for small loans. Furthermore, the present credit scoring model that the mobile lending technology uses gives affluent customers a better chance of qualifying for loans when compared to the BoP.

When discussing important take-aways, it was emphasized that there are sub-segments within the affluent segment whose behaviour is different from the rest of the segment. One such sub-segment is the self-employed, who have very high

turnover and use mobile loans to meet their businesses short term credit demands when needed.

On prompting the respondents to give insights about mobile lending adoption by the affluent segment in the long run, all respondents shared that they do expect mobile lending adoption by the affluent segment to change in the long run. Furthermore, they expect it to increase. *Strategic partnerships and product innovation* were mentioned by most of the study respondents as the primary reasons for the expected increase in mobile lending adoption rate by the affluent segment. They however, highlighted that the product evolution of mobile lending along with strategic partnerships will be the key determinants of the increase in mobile lending adoption by affluent customers. This is in line with social network research which states that much of the most successful innovation occurs at the boundaries of organisations and industries where the problems and needs of users, and the potential of technologies can be linked together in a creative process that challenges both (Reguia, 2014).

Most of the respondents in Zambia mentioned that the bank has adopted a new mobile lending strategy around partnerships which entails partnering with an MNO that is an affluent network, enabling the bank to tap into markets that they could not tap into before, including the affluent customer base. This acquisition strategy will also result in an increase in the mobile lending adoption by the affluent segment in the long run.

When asked to identify the conditions for mobile lending adoption by the affluent segment to increase in the long run, the respondents individually made mention of pricing, strategic positioning of mobile lending, banking as a service and segment agnosticism as conditions for mobile lending adoption to increase in the long run for the affluent segment. All the respondents recognised the need for the current mobile lending pricing and structure to be amended as pricing and loan ticket sizes play critical role in attracting a wider segment of the population. This echoes the views of multiple researchers who have highlighted that the current credit options do not always satisfy the needs of purpose-driven borrowers because the loan limits do not align with the capital amount that borrowers need (Ogada & Hammond, 2021).

Some 40% of the participants highlighted that customer expect banks to be digitally transformed both online and retail and hence banking as a service is becoming an expectation and not a value add anymore. Furthermore, the demand for more digital offerings such as mobile lending will be expected to be part of the standard banking proposition for the affluent segment. The customer experience banking report also mentions that the key customer expectations when it comes to digitized banking experience are easy accessibility, real time assistance and personalised services.

Most of the participants expressed that the strategic positioning of mobile lending as part of the affluent value proposition will have a significant impact on mobile lending adoption by affluent customers in the long run. They also stated that mobile lending can be positioned as complementary channel to the existing affluent value proposition by reserving the face-to-face mobile lending engagements for complex applications and transactions.80% of the participants also expressed that the profiles of the customers has evolved, and their needs do not change just because they are earning a premier salary. It's about ensuring that the same service is provided to all customers who are at the same life stage and have the same need.
There were diverse responses as to why there is mobile lending adoption by some affluent customers.

5.2.3 RESEARCH QUESTION 3: DISCUSSION

Is mobile lending following the cannibalization trajectory that other disruptive innovations follow? If so, to what extent?

5.2.3.1 MOBILE LENDING TRAJECTORY IN THE LONG RUN

The third research question is intended to better understand the mobile lending trajectory and whether it is exhibiting characteristics of disruptive innovations.
As mentioned, the continuance and persistence of any company depends on its capacity to maintain its marketplace by exploring various strategies and adopting new mind-sets toward partnerships. Creating and maintaining a healthy bottom line is the biggest goal for most financial institutions.

This can be difficult as customers are consistently asking for a more robust product suite with high-tech payment options. Banks can alleviate the pressure by finding new ways of generating revenue while retaining existing customers. This can often lead to proactive cannibalization as part of an organisation’s customer retention strategy.

The strategic reasoning underlying this concept is offering an improved solution to a need currently being satisfied. Critical to this concept is the fact that changes in market requirements and customer value opportunities will create threats for existing products and technologies. Although proactive cannibalisation is not always a feasible strategy, management’s reluctance to consider cannibalisation fails to acknowledge impending competitive threats (Cravens et al., 2002).

According to Cravens et al. (2002), proactive cannibalisation can also yield positive benefits. Furthermore, one of two proactive cannibalisation initiatives may be necessary: incremental innovation or value migration strategy. Proactive cannibalisation is defined as the pursuit of a deliberate, ongoing strategy of developing new products and processes that will attract buyers of existing products or replace existing processes of the same firm.

When asked about the banks intent with mobile lending, the respondents conveyed that the banks intent with the mobile lending partnership was to penetrate new market segments that they would not have had the appetite and technology to serve. Furthermore, the bank wanted to participate in the growing ecosystem by providing a different service to what is traditionally offered as well as develop new revenue lines. Most of the participants also indicated that MNOs have a wider pool of customers, so this partnership has provided banks with an alternative source of data. Moreover, mobile loans have provided an alternative source of income for banks as it is a low, balance sheet footprint product that has made it easier to increase non-interest income from transaction fees.

On prompting the participants to give insights on whether mobile lending is following the intended trajectory, 60% of the participants indicated that the results are following the intended financial trajectory and, in some instances, have exceeded the bank's expectations, with a few revelations.

For those who shared that the mobile lending partnership has exceeded expectations, they explained that the cost of risk has significantly improved over time; in the early days the cost of the risk was very high at twelve percent but decreased considerably to six percent. The non-performing loss rate is better than expected and the yields have improved.

Some 80% of the respondents also revealed that mobile lending has provided the simplistic digital channel that younger customers are looking for. As a result, customer digital channel adoption has increased, and the average age profile has dropped as they were able to tap into the younger customer segment.

Results regarding the respondent's perception of mobile lending trajectory are mixed. Some respondents shared that although the financial expectations have been met (and in some instances exceeded), they were not expecting any affluent customers to use mobile loans, as it was intended for very low-income earners. They also expressed that mobile lending in its current form is targeted at customers who prioritize convenience over financial savviness and as such, there should not be any affluent customers taking out mobile loans under the current lending structure.

Christensen(1997) highlighted that executives in established product markets tend to dismiss the relevance of disruptive technologies as the initial value offerings may be lower in quality compared to existing products. This may lead to disruption, as innovations based on a new technology which is outside the scope of an existing technology, may attract customers of existing products with superior value offerings.

The respondent's perceived drawback of mobile lending should not cause them to ignore the potential competitive threat presented by mobile lending. This is particularly true as the respondents have highlighted that mobile lending is not segment agnostic and as a result, the boundary between the BoP and affluent is fluid as their needs overlap. As such, we see some evidence of an unintended bank led disruption which would accelerate the change in portfolio of services affluent customers have access to.

One respondent also noted that the partnership cost is enormous and therefore should optimise the partnership even further by increasing the customer base acquisition.

5.2.4 RESPONDENTS THOUGHT PROVOKING INSIGHTS

Respondents provided some thought-provoking insights regarding important takeaways related to mobile lending. These insights include platform amendments, mobile lending evolution, regulation, and banking as a service.

> ***P2 (Kenya):*** *"There's an opportunity for customers beyond the bank. There's a growing number of income-earning customers who are interested in mobile lending."*

Platform Amendments

> ***P3 (Kenya):*** *"The current mobile lending platforms in their current form do not to cater for the financially savvy and affluent customers who care about the price of*

money. It appeals to customers who care more about convenience than the cost of borrowing."

Mobile lending evolution

***P5 (Kenya)**: "In future, move from just being pure lending but be used for other products and open to other segments as well as the technology is fabulous."*

Regulation

***P10 (Zambia):** "One of the things that will ensure the success of mobile lending success will hinge on how open-minded regulators are and how quickly they are able to adapt to new ways of customer transactions. There is a lot of conventional thinking that comes into play, so regulators need to be more open – minded, which is what has made mobile banking successful in Kenya."*

5.3 CHAPTER SUMMARY

This study aims to take a pre-emptive look at mobile lending innovation as either a complementary innovation to the BoP segment or a disruptive innovation for banks affluent segment in the long run. To achieve this understanding, this study explores the role that mobile lending plays in extending financial solutions to the unserved and underserved customer segments, also referred to as the BoP segment. Secondly, it examines the reasons for mobile lending adoption by the affluent segment. Lastly, it investigates whether mobile lending is following the trajectory of disruptive innovations. Following an explanatory sequential mixed-method design, the study used secondary quantitative data, which was then be followed by in-depth, semi-structured interviews.

Respondents acknowledged the use of mobile loans by banks to tap into new market segments. In addition, mobile loan adoption by the BoP segment was found to be high. The participants indicated that customers like it because it is quick, convenient, and accessible to all.

Mobile lending has enabled previously underserved and unserved markets access to credit. It was also found to play a significant role in expanding traditional financial solutions to the BoP customer segment by complementing the banking financial offering. This is mainly attributed to relationship deepening, credit history and financial inclusion

The results of the study indicate that the reasons for mobile lending adoption by both the BoP and affluent segments are the same, which are accessibility, convenience, and simplicity.
The reasons underpinning mobile lending adoption by the affluent segment were discussed and outlined. Several reasons were provided by the respondents, including short term credit needs, simplicity, convenience, and lifestyle choices. These have been determined to correspond with rationales for mobile lending adoption by the affluent segment outlined in the literature.

While stressing the importance of understanding the reasons for mobile lending adoption by the affluent segment, respondents had varying perceptions as to why this is the case. In most cases, affluent customers who apply for mobile loans appear to belong to the self-employed sub segment.

The respondents consider the current mobile lending platform construct integral to adoption by the affluent segment. The results of the study indicate that the current mobile loan sizes are too small and would have to be amended for adoption to increase in the long run. Strategic positioning, product innovation and banking evolution were viewed as important for long term adoption by the affluent segment. All respondents unanimously regarded pricing as very important.

The respondent’s perceived drawback of mobile lending should not result in the ignorance of the potential competitive threat presented by mobile lending to affluent customers. This is particularly true as the respondents have highlighted that mobile lending is not segment agnostic and as a result, the boundary between the BoP and affluent is fluid as their needs overlap. As such, we see some evidence of a bank led disruption which would accelerate the change in portfolio of services affluent customers have access to.

The intent for the mobile lending partnership with MNOs includes new market penetration, the acquisition of an alternative source of data and establishing an alternate revenue source. Most of the respondents indicated that the partnership has exceeded financial expectations, with some stating increased digital channel adoption and greater non-interest income. There were strong views as to whether mobile lending adoption by the affluent segment was part of the strategy or not.

In this chapter the responses regarding mobile lending adoption by the BoP and affluent segments, expansion of financial products to the BoP and the mobile lending trajectory were recognised and discussed.
Respondents to this study unanimously expect mobile lending adoption by the BoP to increase. There is a further perception that mobile loans also act as introducers into the broader financial services domain for the BoP.

There was a unanimous view that mobile lending adoption by the affluent segment will increase in the long run. This is on condition that the pricing of the mobile lending platform is amended and that there is an evolution of the current platform architecture.

The results of the first question and sub-question have a high degree of correlation with existing literature. The results of the second question highlight the different sub-segments within the same segment have diverse needs. There were diverse views on the third question and therefore warrant further study. This also provides an opportunity for banks to consider proactive cannibalisation as part of their retention strategy given that increased mobile lending adopting by the affluent segment is inevitable and the boundary between the BoP and affluent customers is fluid.

CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS

6.1 INTRODUCTION

The previous chapter discusses research findings of the study. This chapter is meant to describe key findings, provide potential answers to each research question, as well as present recommendations to parties who will benefit from this study. The chapter also covers suggestions for future research.
The need for strategic partnerships to manage disruption and remain relevant in present-day global economies have intensified. Banks that compete in global economies continuously face challenges as traditional channels with limited servicing models have been proven inadequate. As such, financial institutions need to find innovative ways to retain existing customers while expanding into new markets.

Mobile lending innovation is one of the ways in which banks are intending to accomplish this. Although the amount of peer-reviewed literature on the topic of mobile banking has been growing over the years, studies on mobile lending tend to focus on mobile lending from a financial inclusion perspective and less on the potential transcendental impact that adoption of other mobile banking functions, such as mobile lending, might have on the banks' affluent customer segment. More specifically, knowledge on whether mobile lending is a complementary or disruptive innovation for banks in the long term remains unclear.

The study intended to contribute to a new understanding in the field of financial innovation in the mobile lending context by banks in Africa.
This research set out to explore mobile lending's potential transcendental impact on the banks' affluent customer segments. To attain this, the objective of the study was addressed through an exploration of the following questions:

1. Does mobile lending function as a complementary innovation for BoP customers? If so, to what extent?
2. Does mobile lending function as a disruptive innovation for the affluent customer base? If so, to what extent?

3. Is mobile lending following the cannibalization trajectory that other disruptive innovations follow? If so, to what extent?

In the second qualitative phase, we used in-depth, semi-structured interviews to help elucidate on the primary reason for customer adoption of mobile lending. For this phase, ten participants were purposefully selected

6.2 MAJOR FINDINGS

It has been determined, in line with the existing literature, that the formation of strategic partnerships and development of digital solutions is part of the strategic approach undertaken by incumbent banks in Africa, in response to digital disruption and growing customer expectations.

Mobile lending innovation is one of the many ways in which incumbent banks can address the growing challenge of new customer acquisition. Access to credit is considered integral in the context of financial inclusion as it helps address the needs of the unbanked. In the context of a disruptive environment, customers may have additional needs currently not met, or the old manner of satisfying their needs may no longer be sufficient. Through mobile lending innovation, incumbent African banks attempt to remain competitive while penetrating new markets. In addition, the high mobile lending adoption rate by the BoP allows underserved and unserved markets access to credit anytime, anywhere.

In terms of whether mobile lending is a complementary innovation, the results of the study supported that mobile lending plays a significant role in extending traditional financial solutions to the BoP customer segment by complementing the banking financial offering. Relationship deepening, credit history and financial inclusion were perceived by respondents to be of importance in growing mobile lending innovation. Accessibility and convenience were found to play a role in the high mobile lending adoption rate, with financial inclusion given high priority. The high adoption by BoP was determined to be underpinned by pricing, ease, and speed.

The results of the study indicate that mobile lending adoption by the BoP is expected to grow in the long run. Easy onboarding requirements and convenience were unanimously viewed as important by the respondents. The notion that mobile lending adoption by the BoP will increase as it helps support and maintain a certain lifestyle was also recognised as essential. Furthermore, as the lives of customers are starting to centre more around the mobile wallet, so will mobile lending.

Conditions for mobile lending adoption to increase were highlighted as lending parameter amendments as well as an increase in the current mobile wallet limit. According to the respondents, the market has plateaued over the current structure of mobile lending platforms and there is an opportunity for mobile lending to grow if the wallet increases.
It was also shared that the banks' initial plan when mobile lending was launched was on attracting as many customers as possible. The strategy has now evolved to relationship deepening through cross sell to foster customer loyalty and increase customer retention.

In terms of mobile lending adoption by the affluent segment, lending needs are segment agnostic and there is a growing need for digital solutions across various customer segments. As such, we see some evidence of a bank led disruption which would accelerate the change in portfolio of services affluent customers have access to.

With regards to the main reasons for mobile lending adoption by some affluent customers, the participants unanimously emphasized that convenience, flexibility, and access to finance whenever needed are critical. While some respondents also highlighted lifestyle as another reason for affluent adoption, there were varying perceptions as to whether these customers are truly affluent customers or not. They further shared that most of the affluent customers who apply for mobile loans to support their lifestyles are the high end personal and mass affluent customer segments. These segments also like to conduct most of their transactions on their wallet, leading them to qualify for bigger ticket size loans than the mass / BoP market.

What is worth noting is there are sub-segments within the affluent segment whose behaviour is different from the rest of the segment. One such sub-segment is the self-employed sub-segment, who have very high turnover and use mobile loans to meet their business short term credit demands when needed. Most respondents mentioned that the present mobile lending credit scoring model correspondingly gives affluent customers a better chance of qualifying for bigger ticket loans than it does the BoP. They also highlighted that lending needs are segment agnostic and so affluent customers with lending needs will use the mobile lending platform even if they have other options.

Several respondents also indicated that the flexibility of not having to engage bankers for small loans makes mobile loans even more appealing to all segments. An opportunity here could be for incumbent banks to leverage on the mobile lending platform as an affluent lending channel for simple, low value loans and reserve the relationship engagements for more complex loan applications.

Strategic partnerships and product innovation were two elements mentioned as critical to growth in mobile lending adoption by the affluent segment. These can be addressed through deliberate expansion partnership plans as well as modifications to the current product parameters. It should be noted that some of the proposed modifications would not require significant structural changes to the current lending framework.

Some capabilities were recognised frequently across multiple dimensions of the discussion with participants. For example, the need for bigger ticket sizes was acknowledged for both segments. The requirement to meet hidden, unmet or outside the scope of current lending services, was also acknowledged for both segments. In addition, customers across all segments are increasingly expecting digital lending to be part of their standard banking proposition.

The banks' strategic intent with the mobile lending initiative were identified as (1) financial inclusion (new market penetration); (2) alternative lead source; and (3) an additional source of income. This enables the bank to diversify its portfolio into

different market segments, thereby enriching its segment portfolio while increasing digital channel adoption.

The results of the study indicate that the mobile lending partnership exceeded the bank's financial, growth and risk expectations. The cost of risk and the non-performing loans loss rate were unanimously viewed as better than expected. Adoption of mobile lending by some affluent customers was the most unanticipated outcome of this study.

High partnership costs and tension resulting from the Covid outbreak were two additional elements mentioned that were not expected. For example, when covid started, the bank wanted to lower their risk appetite and make their lending parameters stringent. This affected the MNO's degree of trust and created some reservations going forward.

6.3 OVERALL RELEVANCE

The study intended to assess the impact of mobile lending innovation as either a complementary or disruptive innovation on one of the four large multinational African banks in Zambia and Kenya. To understand this, three research questions were formulated to help guide the author in exploring possible answers to the research problem and propositions were formulated based on the insights uncovered from the available literature. The income segmentation definition used in this study is standard to the biggest retail banks in Africa, despite the variation in income bands per country. By grouping customers according to their similarity on key dimensions, we gain an understanding of how banks can develop and plan business and investment strategy accordingly.

The focus was on two retail banking customer segments, namely, BoP customers and affluent customers. The personal banking segment in this study was defined as customers who earn between $505 - $2k in Zambia and $196 - $982 in Kenya while the affluent segment was defined as customers who earn $2k - $3.5k in Zambia and customers who earn more than $982 in Kenya. The income segmentation definition

used in this study is standard to the biggest retail banks in Africa, despite the variation in income bands per country. The variation in income bands is due to the diverse economic conditions in the different countries. By grouping customers according to their similarity on key dimensions, we gain an understanding of how banks can develop and plan business and investment strategy accordingly

This sub-section provides answers to the research questions based on the analysis and findings from the study.

6.3.1 Conclusions to research question 1: Does mobile lending function as a complementary innovation for BoP customers? If so, to what extent?

The research question was intended to establish if mobile lending is a complementary innovation for BoP customers. Secondly, the question explores how mobile lending has enabled BoP customers access to traditional banking solutions.

Based on the findings from this study, the conclusion to the research question is that mobile lending does function as a complementary innovation for BoP customers. The most cited ways in which this is achieved is through relationship deepening and the establishment of a credit history. Customers are able to apply for other traditional banking products as mobile lending provides them with the credit history that is required for mainstream product application. It was also shared that the bank has a strategy to create stickiness with customers by cross selling additional products to the BoP, such as current accounts and savings accounts, in order to foster customer loyalty is also important to note that the reasons for the significant diffusion of mobile lending by the BoP are convenience, accessibility, pricing and speed.

All the respondents indicated that they expect mobile lending adoption by the BoP to increase in the long run.

6.3.2 Conclusions to research question 2: Does mobile lending function as a disruptive innovation for the affluent customer base? If so, to what extent?

The question was intended to better understand mobile lending adoption by affluent customers in Zambia and Kenya.

The findings from this study uncovered that there is a group of affluent customers who utilize the mobile lending platform instead of engaging their relationship bankers. They were classified as the self-employed sub-segment, and primarily use mobile loans to meet their short-term credit demands when needed. Convenience, flexibility, and access to finance were cited as the main reasons why they prefer mobile loans to traditional channels.

6.3.3 Conclusions to research question 3: Is mobile lending following the cannibalization trajectory that other disruptive innovations follow? If so, to what extent?

The question was intended to better understand the mobile lending trajectory and whether it is exhibiting characteristics of disruptive innovations.

The findings of this study showed that mobile lending performance exceeded the bank's expectations for the BoP segment. Customer digital adoption by the BoP and younger demographic expanded, cost of risk improved over time and the non-performing loss rate was better than expected. In terms of mobile lending adoption by the affluent segment, lending needs are segment agnostic and there is a growing need for digital solutions across various customer segments. As such, we see some evidence of a bank led disruption which would accelerate the change in portfolio of services affluent customers have access to.

In terms of whether mobile lending is exhibiting characteristics of disruptive innovations, the findings from this study uncovered that mobile lending has all the four attributes of a disruptive innovation as described below:

i. The niche segments that initially find the disruptive innovations attractive can be either the price sensitive segment (low end disruptions) or the less price sensitive segment (high end disruptions):

The findings of the study showed that mobile lending is highly adopted by the BoP segment as well as some affluent customers. The BoP customers who use mobile loans are price sensitive and need an alternative solution to traditional products. The group of affluent customers who utilize the mobile lending platform instead of engaging their relationship bankers were classified as self-employed and use it to meet their short-term credit demands when needed.

ii. Disruptive innovations underperform on the dimensions' mainstream customers value:
Most respondents highlighted that the value of the loans is too small, the interest rate is high and that the lending parameters are not suitable for affluent customers.

iii. Disruptive innovations introduce new dimensions of benefits that the niche segment finds more attractive;
Both segments cited convenience, flexibility, and access to finance as the main reasons why they prefer mobile loans. This is particularly important to affluent customers as it resonates with their lifestyles and business needs

iv. Disruptive innovations pose a dilemma for the incumbent
Although the mobile lending channel has presented an opportunity for banks to lower the cost to serve affluent customers from the reduction of client - banker engagements, less client engagements also means reduced opportunity to cross sell other solutions. The present mobile lending credit scoring model also favors affluent customers over the BoP and thus provides affluent customers with a better chance of qualifying for bigger ticket loans than it does BoP customers. The reason is that affluent customers like to conduct most of their transactions on their wallet, which is a key determinant of the mobile loan approval.

6.4 RECOMMENDATIONS FOR BUSINESS/ STAKEHOLDERS

The research outcomes discussed in this document have managerial implications incumbent banks offering mobile loans in Africa

- Mobile lending adoption by the BoP segment

  It is recommended that the bank considers increasing the loan limits and provide more flexibility around the loans repayment structure despite having managed to achieve high mobile lending adoption by the BoP segment. Scholars have emphasized that social needs can be seen as business opportunities for which to serve new markets and solve long-standing business problems, thus allowing for these suggested changes will lead to further expansion into untapped segments and increased revenue. This will also be vital if the bank wants to retain new acquired customers and maintain their current digital adoption momentum.

- Mobile lending as a complementary innovation to traditional banking solutions

  The benefit of banks offering mobile loans to BoP customers has been ascertained. If they are not doing so already, decision-makers should consider the potential presented by this offering for market expansion and other revenue streams threatened by digital disruption. Particularly, if they are struggling with BoP market penetration and increasing customer engagement costs, mobile lending is thought to address these issues. This is because customers find mobile lending convenient, accessible, and easy to use. They also find it to be complementary to their lifestyle.

- The role of mobile lending in extending traditional financial solutions to the BoP customer segment

  Mobile lending has been demonstrated to play a critical role in providing access of banking solutions to previously excluded customer segments by enabling BoP customers with an opportunity to create credit history, which is essential in gaining access to other banking products and solutions.
  It is recommended that decision-makers make use of the potential presented by the availability of credit history to offer qualifying customers other banking products. This can form part of their customer retention strategy.

- Mobile lending adoption by the affluent customer segment

It has been emphasized that any firm's market entry strategy will vary according to the vision of the organization and the market potential in the relevant country. In the context of the current study, adding mobile lending to the affluent value proposition may be complementary to the existing banking offering

- Recommended requirements for increased mobile lending adoption

  It has been highlighted by scholars that the current credit options do not always satisfy the needs of purpose-driven borrowers because the loan limits do not align with the capital amount that borrowers need (Ogada & Hammond, 2021).
  It is recommended that banks realise that customer needs are segment agnostic, consequently, future customer value propositions should be differentiated by customer life stage and lifestyle instead of salary profile.

  It is also recommended that mobile lending be added as an additional electronic channel for existing affluent customers. This can form part of the bank's proactive customer retention strategy. In this way, engagements between affluent customers and their respective relationship bankers will be reserved for more complex loan applications only while addressing the affluent need for digital solutions. As a result, the cost to serve customers will be significantly reduced while providing a convenient lending platform for affluent customers.

- Mobile lending adoption trajectory in the long run

  It was highlighted that the evolution of the current mobile lending offering is critical for the expansion of mobile lending adoption by affluent customers. It is recommended that pricing and loan value be reviewed as they are critical to attracting a wider segment of the population. Furthermore, the boundary between BoP and affluent customers is fluid as their needs overlap. As such, increased mobile lending adoption by affluent customers is inevitable.

- Recommended strategies for affluent segment

  It is recommended that the bank be deliberate about collaborating with partners who target affluent customers, so the value proposition resonates with them instead of trying to market a BoP value proposition to the affluent them. Some of these changes do not require significant changes to the current mobile lending platform.

  It is also recommended that decision makers explore proactive cannibalization as a customer retention strategy given the pervasive impact of digital technologies.
- Additional capability development for affluent adoption

  It has been highlighted by scholars that the current interest rate on loans is very high and as a result, does not appeal to financial savvy customers (de Roure et al., 2017; Melzer, 2011). It is suggested that banks in partnership with MNOs establish a pricing structure that appeals to affluent customers.

  It is also recommended that the mobile lending platform technology be upgraded in such a way that banks go beyond low-cost users (BoP customers) to capture a wider market (affluent customers).

6.5 SUGGESTIONS FOR FUTURE RESEARCH

1. While this study explored the reasons for mobile lending adoption by the self-employed sub-segment, case studies examining reasons for mobile lending adoption by the various affluent sub-segments would allow for a greater understanding of the degree to which the various sub-segments differ, and whether proactive cannibalization is a viable strategy for customer retention
2. The researcher was unable to find enough research on banks mobile lending innovation strategy in developing countries. It is, therefore, recommended that more research is undertaken within this context

3. Due to the affiliation of the researcher with a specific bank, the researcher was unable to include other banks operating within Africa in the study. It is thus recommended that the scope of the research be extended to include a comparative study of more than one bank in Africa
4. No previous studies were found examining Disruptive Innovation in the context of mobile lending in Africa. Further research in this area could provide context and insight into alternative theoretical frameworks which may be relevant
5. The role of regulation was deemed to be beyond the scope of this study. This should be considered in further research
6. The researcher was unable to find enough research on a comparative study of Mobile Lending Innovation in emerging markets and compared Mobile Lending Innovation in advanced markets. It is, therefore, recommended that more research is undertaken within this context
7. Due to time constraints, the researcher could not investigate in detail the implication of mobile lending adoption by the affluent segment in the long run. Thus, a further study is recommended
8. Further studies should consider the role of the various lending regulatory requirements.
9. Given the onset of Covid, research should be undertaken to examine its impact on the bank's risk appetite and how that affected the relationship between the bank and MNO partner
10. No previous studies were found examining the mobile lending platform amendments required to expand the lending scope to a wider market. Further research in this area could provide insight into the various levers that can be used to capture a wider market.

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APPENDICES

APPENDIX A: INTERVIEW QUESTIONS

I. Preamble

This interview should take approximately 15 – 20 minutes of your time.

My dissertation is about assessing the impact of mobile lending on banks in the long run.The study is specifically focused on the adoption of Jumo in Zambia and Timiza in Kenya by BoP and affluent customers in the two markets.

The reason for conducting this research is to gather more insights into the results of the quantitative analysis that was conducted on the Jumo and Timiza data.
Your responses will remain confidential and will not be shared without prior consent

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II. Preamble

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III. Interview Questions

Respondent Information

Date:		
Location:		
Interviewee's Name:		
Job Title:		
Business Unit's Name:		
	Mobile lending Adoption in Zambia:	
If the null hypothesis is accepted	**Question**	**Category**
	1.1 What is your view on the overall adoption of mobile lending in Zambia? 1.2 The quantitative data shows a x% mobile lending adoption by the personal banking segment in x years. What do you think is the primary reason for this? 1.3 Do you expect mobile lending adoption by the personal customer segment to increase in the long run? [Yes / No] 1.4 Why do you expect mobile lending adoption by the BoP customer segment to change in the long run? 1.5 How do you expect mobile lending adoption by the BoP customer segment to change in the long run?	*A: Mobile lending adoption by the BoP customer segment*
	2.1 Given the quantitative data results, do you think that this represents a shift towards mobile banking? [Yes / No]	*B: BoP access to traditional*

	2.2 If yes, how does mobile lending play a role in the extension of traditional financial solutions to the BoP segment?	*banking solutions*
	3.1 The quantitative data shows a x% mobile lending adoption by the affluent banking segment in x years. What do you think is the primary reason for this? 3.2 The data also shows that the adoption rate has been constant since inception. Do you expect mobile lending adoption by the affluent customer segment to change in the long run? [Yes / No] 3.3 Why do you expect mobile lending adoption by the affluent customer segment to change (or not change) in the long run? 3.4 How do you expect mobile lending adoption by the affluent customer segment to change in the long run?	*C: Mobile lending adoption by the affluent customer segment*
	4.1 What is the bank's strategic intent with mobile lending partners? 4.2 Are the results following the intended trajectory? 4.3 Can you elaborate on the above? 4.4 Do you have any additional insights / important take-aways?	D: *Mobile lending trajectory in the long run*
	<u>Mobile lending adoption in Kenya:</u>	
	1. 1 What is your view on the overall adoption of mobile lending in Kenya? 1.2 The quantitative data shows a x% mobile lending adoption by the personal banking segment in x years. What do you think is the primary reason for this?	*A: Mobile lending adoption by the BoP customer segment*

	1.3 Do you expect mobile lending adoption by the personal customer segment to increase in the long run? [Yes / No] 1.4 Why do you expect mobile lending adoption by the BoP customer segment to change in the long run? 1.5 How do you expect mobile lending adoption by the BoP customer segment to change in the long run?	
	2.1 The quantitative data shows a x% mobile lending adoption by the personal banking segment in x years. Do you think that this represents a shift towards mobile banking? [Yes / No] 2.2 If yes, how does mobile lending play a role in the extension of traditional financial solutions to the BoP segment?	*B: BoP access to traditional banking solutions*
	3.1 The quantitative data shows a x% mobile lending adoption by the affluent banking segment in x years. What do you think is the primary reason for this? 3.2 The data also shows that the adoption rate has been x since inception. Do you expect this to change in the long run? [Yes / No] 3.3 Why do you expect mobile lending adoption by the affluent customer segment to change (or not change) in the long run? 3.4 How do you expect mobile lending adoption by the affluent customer segment to change in the long run?	*C: Mobile lending adoption by the affluent customer segment*
	5. What is the bank's strategic intent with mobile lending partners? 6. Are the results following the intended trajectory? 7. Can you elaborate on the above? 8. Do you have any additional insights / important take-aways?	D: *Mobile lending trajectory in the long run*

	Mobile lending adoption in Zambia:	
If the null hypothesis is rejected	**Question**	**Category**
	1.1 What is your view on the overall adoption of mobile lending in Zambia? 1.2 The quantitative data shows a x% mobile lending adoption by the personal banking segment in x years. What do you think is the primary reason for this? 1.3 Do you expect mobile lending adoption by the personal customer segment to increase in the long run? [Yes / No] 1.4 Why do you expect mobile lending adoption by the BoP customer segment to change in the long run? 1.5 How do you expect mobile lending adoption by the BoP customer segment to change in the long run?	*A: Mobile lending adoption by the BoP customer segment*
	2.1 Given the quantitative data results, do you think that this represents a shift towards mobile banking? [Yes / No] 2.2 If yes, how does mobile lending play a role in the extension of traditional financial solutions to the BoP segment?	*B: BoP access to traditional banking solutions*
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	3.3 Why do you expect mobile lending adoption by the affluent customer segment to change (or not change) in the long run? 3.4 How do you expect mobile lending adoption by the affluent customer segment to change in the long run?	
	4.1 What is the bank's strategic intent with mobile lending partners? 4.2 Are the results following the intended trajectory? 4.3 Can you elaborate on the above? 4.4 Do you have any additional insights / important take-aways?	D: *Mobile lending trajectory in the long run*
	<u>Mobile lending adoption in Kenya:</u>	
	1. 1 What is your view on the overall adoption of mobile lending in Kenya? 1.2 The quantitative data shows a x% mobile lending adoption by the personal banking segment in x years. What do you think is the primary reason for this? 1.3 Do you expect mobile lending adoption by the personal customer segment to increase in the long run? [Yes / No] 1.4 Why do you expect mobile lending adoption by the BoP customer segment to change in the long run? 1.5 How do you expect mobile lending adoption by the BoP customer segment to change in the long run?	*A: Mobile lending adoption by the BoP customer segment*
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