The Impact of Mobile Money on Financial Inclusion in Lesotho

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A field study submitted to the UFS Business School
in the
Faculty of Economic and Management Sciences
in partial fulfilment of the requirements for the degree of
Magister in Business Administration
at the
University of the Free State

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November 2015

Bloemfontein

DECLARATION

I declare that the field study hereby submitted for the Magister in Business Administration at the Business School, University of the Free State, is my own independent work and that I have not previously submitted this work, either as a whole or in part, for a qualification at another university or at another faculty at this university.

I also hereby cede copyright of this work to the University of the Free State.

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SIGNATURE DATE

(Mr) A Tsemane

ACKNOWLEDGEMENTS

I would like to express my gratitude to the following people:

- To my supervisor, Mr Van Wyk, for all the support and overwhelming encouragement he has offered me during the field study;
- To my wife, ‘Mamolapo Violet Tsemane, for the support she gave me through the entire MBA programme;
- To my mum, my sister – Dr Tsemane, my brother – Dr Moletsane, who have supported me throughout the entire journey;
- To my son, Molapo Tsemane, and daughter, Veronica Tsemane, for the overwhelming joy they have given me;
- To my whole family and friends who have wished me well throughout.

ABSTRACT

The key purpose of the research was to find the positive effect that the advent of mobile money brought to Lesotho with regard to financial inclusion. The research was prompted by the increasing integration of mobile money service in the everyday lives of Lesotho citizens from bill payments to mobile top-up to transfers and many other services which were traditionally available through mainstream banks. Many Basotho had been excluded from the formal economy due to the high cost of conventional banking. The government, together with other world NGOs, have tried to increase the levels of financial inclusion but not according to their targets. Thus the arrival of mobile money has been hailed as the ideal solution for Lesotho given its level of economic development and its hard-to-traverse mountainous terrain. Various challenges and benefits of mobile money were also investigated alongside the primary objective.

A quantitative approach was followed in this study in order to unravel the extent of mobile money adoption in the country. Structured questionnaires were distributed to both the lowlands, semi-lowlands, and highland parts of the country. Various tools were used to find elements such as frequencies of major variables and the interrelation between them in order to understand more about this great East African innovation in Southern Africa.

It was found out that most Basotho use mobile money to perform key services such as bill payments, cash-ins and cash-outs. It was also found out that larger sums of money were transacted across the platforms despite the general perception that the mobile money service was formulated for small amounts of money. It was also found that mobile money offered many advantages. These included safety, privacy, convenience, ease of use and registration. The greatest challenge to this innovation was found to be liquidity problems at the agents which are vital for the success of mobile money.

It was concluded that mobile money is gaining momentum to become part of the cashless society that is so popular in developed countries. In addition to the system

being popular, there are indeed challenges for the platform which can be overcome through some or part of the recommendations. This would then considerably increase the uptake of mobile money in Lesotho.

Keywords: *Mobile money, financial inclusion, mobile money agent, phone, mobile network operator, telecommunications, banking, subscriber, regulator*

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LIST OF ABBREVIATIONS

AGOA	African Growth and Opportunity Act
AML	Anti-money Laundering
ATM	Automated Teller Machine
DFID	United Kingdom Department of International Development
EFT	Electronic Funds Transfer
FNB	First National Bank
GDP	Gross Domestic Product
GSM	Global System for Mobile
IMF	International Monetary Fund
IT	Information Technology
KYC	Know-Your-Customer
LCA	Lesotho Communications Authority
LDC	Least-developed Country
LTC	Lesotho Telecommunications Corporation
MNO	Mobile Network Operator
MSISDN	Mobile Station International Subscriber Directory Number
PIN	Personal Identification Number
RICA	Regulation of Interception of Communications and Provision of Communication-Related Information Act (2002)
SACU	Southern African Customs Union
SADC	Southern African Development Community
SIM	Subscriber Identity Module
SME	Small and Medium Enterprises
SMS	Short Message Service
SMSC	Short Message Service Centre
SPSS	Statistical Package for Social Scientists
STK	SIM Toolkit
SUFIL	Support for Financial Inclusion in Lesotho
UN	United Nationals
USSD	Unstructured Supplementary Services Data
VCL	Vital Cellular Link

CHAPTER 1
INTRODUCTION

1.1 INTRODUCTION

The Kingdom of Lesotho is a landlocked country completely surrounded by the Republic of South Africa. With a population of two million people, the country had a Gross Domestic Product (GDP) of $2.616 billion in 2013 (IMF, 2013). The Kingdom is also the highest country in the world, mainly due to having its lowest point higher than any other country on the planet. It is this topography that makes it harder for some people in the highlands to actively participate in the formal economy of the country. This is due to the fact that some parts of the country are inaccessible due to a lack of roads and bridges.

A modern solution was therefore needed to engage the rural and highlands populace of the country to be part of the formal economy. The concept of mobile money, with origins in East Africa, was started in 2013 to address the aspect of financial inclusion for the unbanked and under-banked Basotho (people living in Lesotho). Part of the success of mobile money is mainly based on the increasing mobile operator subscriber base and the improving network coverage across the country. Since mobile money makes use of the present mobile network operators' (MNOs) infrastructure, together with subscriber handsets, it has become a solution for cash transfers and payments of low to medium-value transactions within the country. There are benefits both from a subscriber perspective and from the mobile network operators' (MNOs) perspective.

The benefits to subscribers include the convenience of sending or receiving money in the comfort of their own homes, transacting anytime of the day, and ease of access to agents through their extensive network. Another benefit is the ability to transact at awkward hours when mainstream banks are closed. In addition to subscriber benefits, the MNOs also benefit from the commissions charged from the transactions performed,

as well as the growing subscriber base due to the registration of mobile money subscribers.

There are two mobile operators in Lesotho; namely Vodacom Lesotho and Econet Telecom Lesotho. Both of these MNOs have mobile money products as part of their product spectrum.

1.2 BACKGROUND: VODACOM LESOTHO

Vodacom Lesotho is a mobile network operator offering telecommunications services in Lesotho. The company is a subsidiary of the Vodacom Group Limited which offers mobile network services to subscribers in five countries in Africa: Tanzania, The Democratic Republic of Congo, South Africa, Lesotho, and Mozambique. Vodafone Group is the parent company of Vodacom Group which operates in 21 other countries is based in the UK.

The company began operations in 1996 with the government of Lesotho as the main shareholder. It was then known as Vital Cellular Link (VCL). The government was represented through the Lesotho Telecommunications Corporation (LTC). However, in 1999, the government decided to privatise its shares in the company. It was at this juncture that Sekha-Metsi Consortium won the share bid to own 20% of VCL. The residual shares are held by the Vodacom Group.

The year 2014 saw Vodacom Lesotho reach a staggering one million subscribers. This enabled the company to be the leading mobile network operator in Lesotho with 80% of the market share. Not only did the company increase in market share, it also invested half of its 2013 annual profits in improving network coverage. This allowed Vodacom Lesotho to increase its national mobile penetration which is the percentage of the population with mobile phones to 65% (Vodacom, 2015a).

Vodacom Lesotho offers prepaid and post-paid voice and data services to both individuals and companies. The mobile money product offered by Vodacom is called M-Pesa and is analogous to the Kenyan product M-Pesa offered by Safaricom. The word “pesa” means “money” in Swahili, and the “M” stands for mobile (or cellular) phone. M-Pesa was introduced in July 2013. Within six months, there were 325 000 customers registered on the platform (Vodacom, 2015a).

1.3 BACKGROUND:ECONET TELECOM LESOTHO

Econet Telecom Lesotho (ETL) is the other mobile network operator in Lesotho and owns the remaining 20% market share. The company is a subsidiary of the Econet Group. It was formed as a result of the merger between Telecom Lesotho and Econet Ezi~Cell Lesotho in 2008. Before the merger, Telecom offered fixed data and voice services, while Econet offered mobile telecommunication services.

The amalgamation was an outcome of Eskom Enterprises (Pty) Limited selling its shares to Econet Wireless Global. Subsequently, this led to Econet Wireless becoming the biggest shareholder of Econet Lesotho. The Lesotho government retained its 30% of the shares, while Econet garnered 70% shares from Eskom. This union positioned ETL to offer fixed-line and mobile services under one operating license (Econet Telecom Lesotho, 2015a).

The mobile money product offered by Econet is called Eco Cash or *sepachefono*, which translates to mobile wallet. The product was the first mobile money product in Lesotho when it debuted in September 2012. This is despite Vodacom Lesotho having been the first mobile network operator in Lesotho.

1.4 MOBILE MONEY BACKGROUND

Nick Hughes, who was the head of Social Products and Enterprises at Vodafone, a United Kingdom-based international mobile network operator, became intrigued by the

concept of mobile money after attending the World Summit on Sustainable Development in 2003 (Hughes & Lonie, 2007, p. 66). He was introduced to the Financial Sector Deepening Challenge Fund, which was sponsored by the United Kingdom Department of International Development (DFID). The main objective of the DFID is to provide grants to organisations in the private sector which are concerned with projects intended for making financial services more accessible to the poor people of the world.

Vodafone had fortunately been conducting research into mobile interpersonal funds transfer. It was during this summit that Vodafone presented the idea to DFID, which consequently adopted it. Vodafone subsequently received funding to perform a pilot project called the person-to-person funds transfer. The identified region was East Africa, specifically Kenya. Safaricom, a mobile network operator in Kenya, in which Vodafone had commanding shareholding, was identified as the mobile network operator to pilot the project in Kenya. Development of the mobile money platform kick-started in 2005. In March 2007, the platform was rolled out for mass usage.

The reason behind the selection of Kenya was that the country was found to have one of the most advanced financial systems in sub-Saharan Africa (Kane, Holmes, & O'Grady, 2007, p. 235). The Fin Access Survey of 2006 found that only 18.6% of the Kenyan population used formal financial services in 2006 (Ndung'u, 2013, p. 11). The formal financial services included regulated banks, the Kenyan Postbank, and societies.

The survey also found that the Kenyan society preferred to transfer money from one person to another than using a bank account. It was found that 58% of people preferred to transfer money through a travelling family member. Moreover, 27% preferred using a bus company that had regular routes to the remote parts of the country (Kane et al., 2007, p. 235).The advent of M-Pesa changed this form of funds transfer dramatically by offering people without bank accounts access to financial services using their mobile phones.

In the first 18 weeks of the rollout, an excess of 200 000 clients registered to utilise the system. This averaged to approximately 1 500 customers per day. In addition to the registered customers, 150 000 unregistered users of the system received funds through M-Pesa. Safaricom had initiated negotiations with some breweries to afford their customers the ability to pay the breweries using M-Pesa. A year into the operations, the service had two million clients and grew to 6.5 million users by 2010. In June 2007, the business-to-consumer (B2C) sector was growing at a fast pace, following the aggressive corporate marketing strategies of Safaricom (Napier, 2010, p. 189).

1.4.1 Mobile money usage

A customer willing to use mobile money must first register by supplying his or her personal information such as name, surname, and identification number. After this, the customer is prompted to enter a personal identification number (PIN), which is used for authentication purposes when performing transactions. The Mobile Station International Subscriber Directory Number (MSISDN), commonly called the phone number, is tied or linked to a mobile money. In Kenya, the recipients do not necessarily have to be Safaricom clients, and only the sender of the funds needs to be a registered M-Pesa customer. Registration for this service is free. In addition to free registration, no bank account is needed prior to registration.

An agent network across the country exists with the aim of accepting deposits and giving out cash to the users of the platform. In October 2008 there were more than 3 000 M-Pesa agents in Kenya; thus surpassing the number of bank branches in the country. Larger retail outlets, the post office, filling stations, and other banking/financial service partners formed part of the agent network.

South Africa and Zambia, on the other hand, developed mobile banking as far back as 2005. Mobile phones are also used to access the platform, but in a different fashion. In the two countries, a customer must have a bank account with a local bank before registering for mobile banking. Mobile banking allows the account holder to transfer

funds from one account to another of the same bank or to other banks. For example, MTN introduced MTN Banking in partnership with the Standard Bank Group to provide its subscribers with banking services through their mobile phones (Napier, 2010, p. 193).

In Lesotho, Econet Telecom was the first MNO to offer mobile money (Ecocash) to its subscribers, in September 2012. Vodacom Lesotho later launched Vodacom M-Pesa in July 2013. In March 2013, there was a 62% increase in mobile money usage compared to a 0% usage in September the previous year. Thus, usage had dramatically increased in the first six months of operation (Central Bank of Lesotho, 2013, p. 4).

1.5 PROBLEM STATEMENT

The high costs associated with conventional banking coupled with limited operating hours, transportation to the nearest bank, and lengthy paperwork prevent many Basotho from engaging in formal financial activities within Lesotho.

1.6 RESEARCH QUESTIONS

This study wishes to address the following research questions:

- What challenges do mobile money users encounter?
- What demographic trends exist for mobile money users?
- What advantages or benefits exist for mobile money users?

1.7 PRIMARY RESEARCH OBJECTIVES

The primary research objective is to assess the success of mobile money in increasing financial inclusion in Lesotho.

1.8 SECONDARY OBJECTIVES

The following secondary objectives were constructed from the research questions raised in Section 1.6:

- To assess the challenges faced by mobile money users.
- To determine mobile money user demographic trends.
- To define the benefits enjoyed by mobile money users.

1.9 CONCLUSION

The purpose of this chapter was to provide a background of Lesotho and its status in as far as mobile money is concerned. Not only was the background of the country and that of mobile money provided, but also the problem statement and research objectives of the study.

CHAPTER 2
LITERATURE REVIEW

2.1 INTRODUCTION

This chapter starts by introducing financial inclusion in Africa. It proceeds to give a detailed description of the different mechanisms that are being used to address financial inclusion in Africa. These include microfinance, saving clubs, and mobile money. It goes further to discuss the mobile money platform; its setup, the agent network, and interface with the mainstream banking sector. The chapter finally discusses the regulatory aspect of mobile money, its benefits, as well as the challenges it faces. Since mobile money uses the existing mobile network, mobile penetration in Lesotho is also discussed as part of the literature.

2.2 FINANCIAL INCLUSION

Financial inclusion refers to the provision of financial services at affordable cost to people who are disadvantaged or who are low-income earners. Financial inclusion helps with better monitoring and control of financial services in a region or country. Without it, people usually develop complex financial instruments that can serve their financial demands. In South Africa, savings clubs, commonly referred to as *stokvels*, are common in the townships, whereby club members save and borrow money without a real need of a bank account to store the funds (Donovan, 2012, p. 62).

According to the World Bank Global Financial Inclusion Database (2012), 50% of the world's adults possess an account at a formal financial institution. However, the level of account penetration (the number of people with accounts) is different when compared amongst countries, regions, income groups, and individuals. Of the world's adults, 22% report to have used a savings account in the past 52 weeks. Nine per cent (9%) of these reported to have acquired a bank loan or a loan from a micro-lender or credit

union. The study found that half of the world's adults remain unbanked. Of these unbanked adults, 35% cited various barriers associated with formal banking institutions as the reasons for their non-use. These included physical distance from the nearest bank, lack of appropriate documentation for account transactions, and the high costs associated with conventional banking (Demirguc-Kunt & Klapper, 2012, p. 19).

Poverty, although highly endemic in Africa, is not only caused by a lack of funds or liquid cash, but mostly by the inadequacy of access to formal financial instruments through which the poor people of the world could substantially improve their livelihoods (Donovan, 2012, p. 62). Some of these formal instruments include a bank account. A bank account enables one to have access to savings products, access to credit, the ability to repay debt, and the ability to responsibly manage the risks associated with funds in that account. It has thus been realised for some time that access to a bank account offers an individual access to credit – thus leading to the growth of the individual and that of the nation at large.

2.1.1 Financial inclusion through microfinance

There are other tools that can be used to increase the level of financial inclusion in a country or region. One such financial instrument is micro-loans. These are small loans which are targeted at the low-income earners of society. They usually have longer payment periods to make it affordable to the low-income earners and those who live off the land; i.e. farming. Micro-loans have been introduced extensively on the Indian subcontinent as a way of offering affordable means to financial services while at the same time creating small economic activities. The loans enable farmers in the rural areas to buy seeds or livestock, thus improving their productivity and quality of life. Since the 1950s, the government of India has implemented drastic measures to help the financially excluded members of the population to be part of the formal economy. These included the nationalisation of some of the banks, the creation of rural banks, and the establishment of rural branches across the country (Morduch, 1999).

According to the National Sample Survey Organisation of 2003, 48.6% of the total number of cultivator households had received credit both from informal and formal sources in India. Of these, 29% had received microfinance for small agricultural projects from the formal sector – thus from banks and cooperatives (Shetty, 2008, p. 3). This, in turn, enabled the rural populace to demand more goods and services, while at the same time providing a boost for their agricultural produce, which had an impact on the overall national economy. The Indian microfinance landscape is a true reflection of the positive impacts of micro-lending on an economy in the developing world. However, this financial instrument is prone to high levels of risk due to the fact that the people who receive the loans do not have regular or uniform wages or salaries. The risk of defaulting is therefore high and it requires proper vetting of recipients and regular contact with them in order to assist in repayments schedules, should defaulting occur.

2.1.2 Financial inclusion through affordable savings

The second tool to enhance financial inclusion is affordable savings. This is common in sub-Saharan Africa. The channels used in this regard are the local associations in the rural areas where members of the community have societies which receive and lend money from and to their members on interest during the year. The members each contribute a certain amount of money per month. It can be deposited into a local bank account or be kept by a trusted member. In the townships of South Africa, these are called *stokvels* (Donovan, 2012:62). There are two forms of *stokvels*: the accumulating and the rotating types. The accumulating type involves the deposit of funds to the treasurer and then sharing the accumulated funds at a later stage. The rotating type involves contributing funds each month and then giving them to a certain member according to a predefined schedule (Nedbank, 2011).

This form of saving has benefits and drawbacks. The benefits include convenience and increased response time for a member wanting to borrow money from the savings. This is because the members are usually in the same locality, therefore no transport is necessary in order to have access to the funds. Because the members are in a group,

there is a level of trust amongst the members and a knowledge of each member's payment history, thus lengthy vetting is not necessary as compared to local banks. The interest may be high but there are no monthly charges compared to local banks. Another advantage, especially for the accumulated type, is that at the end of the year, members each receive their contribution together with the accumulated interest during the year (Irving, 2005, p. 11). Members usually buy groceries, school uniforms for their children, or reinvest the savings back into the club for the next year.

Despite these advantages, there are drawbacks to this system. The treasurer sometimes gets tempted and uses the society's funds for his or her own benefit without first consulting the group. This often leads to disputes, court cases, and loss of trust between the members. The collapse of the savings club often follows.

The following table from the Old Mutual Savings and Investment Monitor (Nedbank, 2011) indicates the different statistics for *stokvels* in South Africa for the year 2011. It shows that 36% of the overall black households had at least one savings club membership. This was a decrease of 12% from a 48% membership in July of the same year. The table shows a trend of a general increase of membership for households earning between R0.00 and R20 000.00 per month. A decrease in membership is, however, observed for household earnings more than R20 000.00 per month.

Table 2.1: *Stokvels* data in South Africa: 2011

Monthly Income	July 2011	Nov 2011
Overall black households	48%	36%
Households earning less than R6 000 per month (p/m)	48%	31%
Households earning between R6 000 and R13 999 p/m	49%	38%
Households earning between R14 000 and R19 999 p/m	62%	47%
Households earning between R20 000 and R40 000 p/m	37%	37%
Households earning R40 000 or higher p/m	29%	35%

(Source: Old Mutual Savings and Investment Monitor, Nedbank, 2011)

When an accumulating model is used, the average interest charged per borrowing is 29%. This is higher than the average interest for a personal loan at a local bank in South Africa. Thirty-six per cent (36%) of the borrowings are done by members of the society, while 13% of the borrowing is done by non-club members (Nedbank, 2011).

2.1.3 Remittances and financial inclusion

In sub-Saharan Africa, the receipt of remittances from relatives working abroad plays a big role in the economy of the countries. These remittances are very crucial to keeping the economies of some states afloat and for the survival of the recipients. These countries include Swaziland, Mozambique, Lesotho, and Botswana; where there is labour migration to the South African mines. The banks also offer credit – although on a smaller scale – to the account holders due to the fact that they view the remittances as reliable sources of income capable of paying off debt. Interestingly, countries with unstable political and security situations are amongst some of the highest users of accounts to receive remittances. These include countries such as Somalia and Zimbabwe where mass migrations occurred due to political and security unrests and caused people to flee and then later send money back home to their families for survival (Demirguc-Kunt & Klapper, 2012, p. 25).

Lesotho is classified as a least-developed country (LDC) by the United Nations Conference on Trade and Development (2012). It ranks at number 149 of the 185 countries with a Gross Domestic Product (GDP) per capita of US$1 289 for approximately 1.1 million adults. In addition to a low GDP per capita, the country is facing a decline in the export sector due to the expiry of the AGOA Act in the United States. The garments industry produces most of the designer jean labels in the United States such as Levi Strauss and Guess. In the peak of the industry in the early 2000s, the sector for the first time employed more workers than the Lesotho government, making it a key employer (Demirguc-Kunt & Klapper, 2012, p. 27). Currently, 80% of the workforce in manufacturing works in the textiles industry. The key industrial areas are

Maputsoe (75 km from Maseru) in the north, and Maseru Central and Mafeteng; 80 km south of the capital.

The decline in the textiles sector has had secondary effects according to which a sizable amount of the Basotho workforce leaves annually to neighbouring Southern African Development Community (SADC) countries to seek employment. A majority of jobseekers seek employment in the Republic of South Africa in the various economic sectors such as mining and agriculture. Most women work in the homes of the middle class as housemaids where they clean the houses and care for the children. Men work mostly in the mining sector in the North West, Free State, Gauteng, and Mpumalanga provinces. Some work as labourers in the construction industry, such as building sand roads construction. It is this migration that makes it possible for people left behind at home to receive remittances from their loved ones working abroad. The remittances amounted to $490 million in 2010 (Migration Policy Institute, 2011).

Figure 2.1 shows remittances received in Lesotho in aggregate to account for more than 20% of the GDP of Lesotho.

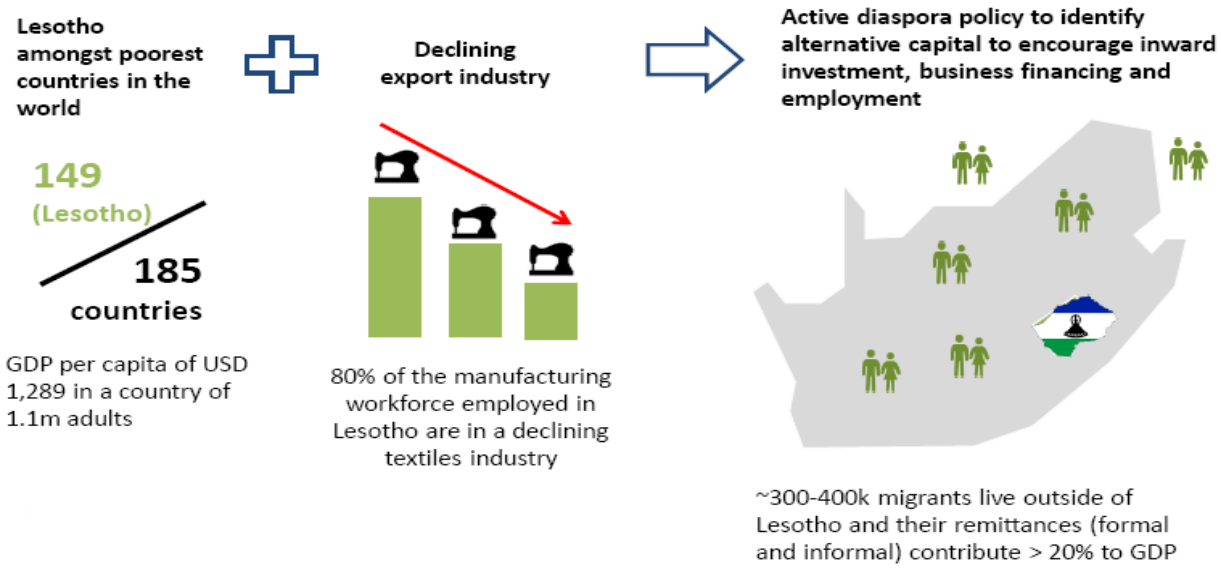

Figure 2.1: Lesotho's employment and migrant labour

(Source: Bester & Chamberlain, 2014, p. 7)

The cost of remittances transferred between countries in the sub-Saharan region is very high when compared to other regional and intercontinental transfers around the world. Figure 2.2 clearly depicts this difference in that the cost of transferring remittances from the United Kingdom to Pakistan is much less than the cost of transferring funds from Tanzania to Kenya. It therefore costs ten times more to transfer money from Tanzania to Kenya than to transfer money from the United Kingdom to Pakistan – despite one transaction taking place in one region and the other between continents (Donovan, 2012, p. 62). This goes to show that many international barriers need to be softened in order to enable greater levels of financial inclusion since higher transaction costs lead to less appreciation and usage of mobile money. A conducive environment that takes cost into consideration between countries, and especially in the same regions, is crucial for the success of mobile money.

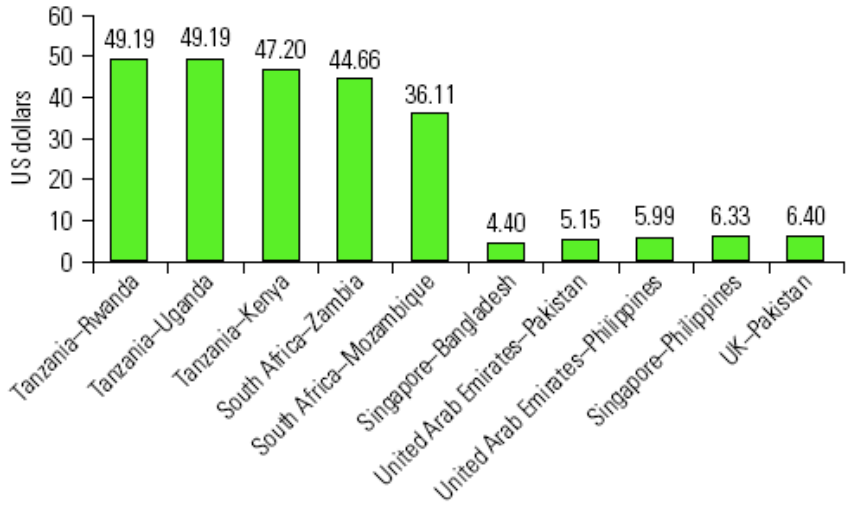

Figure 2.2: Cost of remittances

(Source: World Bank – Remittances prices: Third quarter of 2011, cited by Donovan, 2012, p. 69)

2.1.4 Financial inclusion through mobile money

A significant transformation is evident in the emerging markets of the world with respect to the manner in which members of the population used to conduct their business financial activities. These members of the population are the formerly unbanked and

underserved people who have been the actors behind financial exclusion. By the end of 2011, mobile money transactions had reached a staggering US$44 million. This goes to show how successful the facility is in addressing the reduction in financial exclusion in all of the United Nations member states. One other key reason for the great success of mobile money is that the platform is the first choice for already-banked individuals (Kurkinen, 2012, p. 4).

There are two main forms of mobile money adoption. One is the bank-led approach, and the other is the mobile network operator-led approach. The former is whereby the bank offers its customers access to its banking systems through mobile phone, while the latter is driven by the MNO for its subscribers to have access to a mobile money account. The MNO simply provides the telecommunications infrastructure and services that the bank customers use. The MNO-centric model affords the existing subscriber registration and access to a mobile money account on the platform without the need for a bank account. MNO-led models are commonplace in developing countries where the financial system is not yet mature. On the other hand, bank-centric models are prevalent in countries with advanced financial infrastructure and regulation development (Mauree & Kohli,2013, p. 17).

In Haiti, the notion of physical cash transfer proved to be an unsuitable option after the 2011 earthquake. The earthquake destroyed physical infrastructure; roads, buildings, banks, automated teller machines (ATMs), and bridges. Conventional means of transporting cash to rural areas was therefore almost impossible due to the damaged infrastructure. There were NGOs that ran programmes to help people receive funds and remittances after the devastating earthquake. The conventional methods included the receipt of funds from the sender, packaging the funds into envelopes, and transporting the funds to the different destinations around the country (Hausman, Shakhovskoy, Watson, & Bernasconi, 2012, p. 5).

The process of collecting the stipends and packaging them into different envelopes proved to be time-consuming, prone to error, and vulnerable to robberies. The advent of

mobile money made the process of funds transfer over the dilapidated infrastructure much quicker, safer, and cheaper compared to conventional cash transportation. For the first time, NGOs such as the Bill &Melinda Gates Foundation were able to transfer funds to more beneficiaries in less time, thus enabling them to better adapt and cope with the humanitarian crisis (Hausman et al., 2012).

2.2 MOBILE MONEY IN LESOTHO

The introduction of mobile money in Lesotho has had a dramatic impact on the financial sector. The product was introduced to Lesotho in the last quarter of 2012 and has seen a vast increase in the number of subscribers possessing mobile money accounts. The trust account for mobile money in aggregate of the two mobile network operators has increased from R0.00 in 2012 to R8 million in the first quarter of 2014 as can be seen in Figure 2.3.

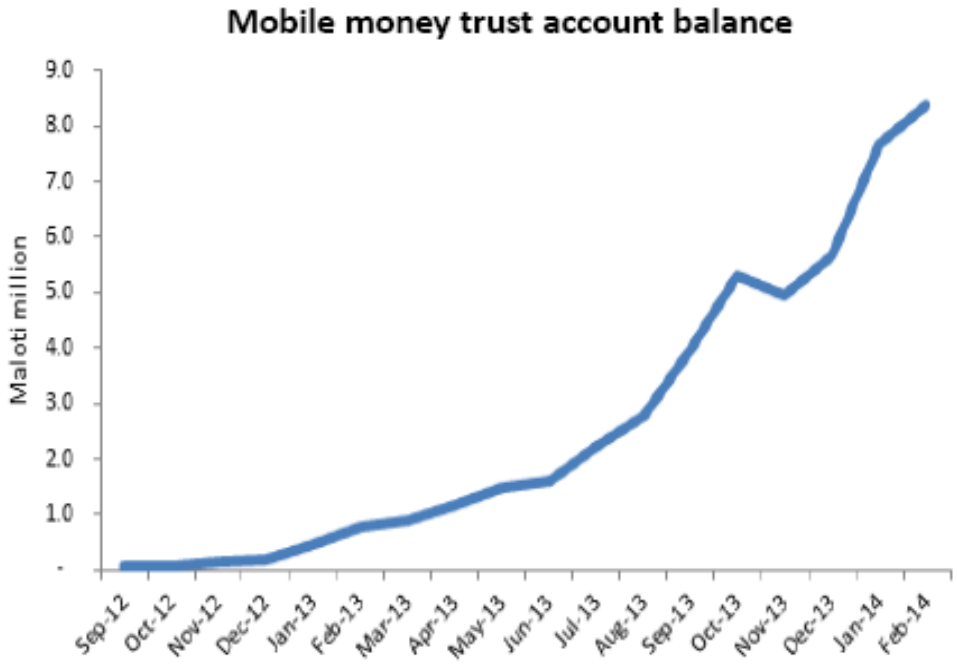

Figure 2.3: Mobile money trust account balance

(Source: Bester & Chamberlain, 2014, p. 3)

Between December 2013 and July 2014 there was a 200% increase in the rate of employment arising from digital financial services increase. These digital financial services include electronic funds transfer (EFT), Internet banking services, and mobile money services. The number of agents in the same period increased twofold from approximately 1 600 agents to approximately 3 000 agents countrywide as can be seen in Figure 2.4.

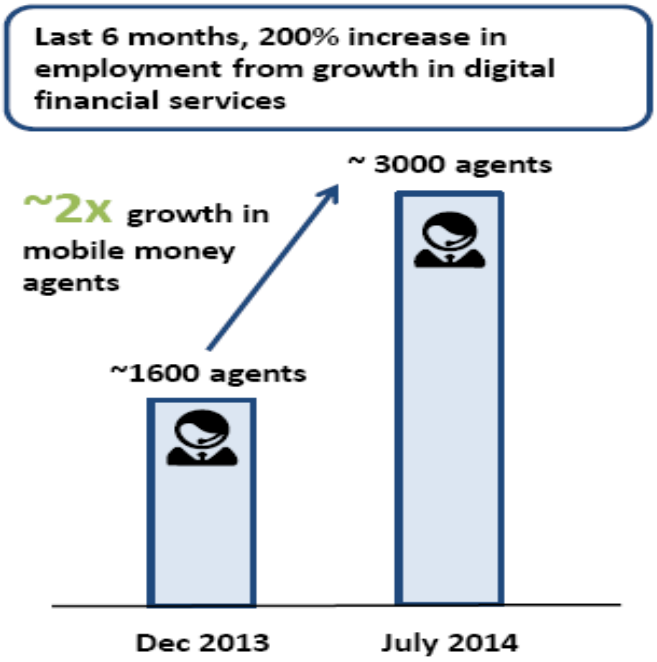

Figure 2.4: The growth of mobile money agents

(Source: Bester & Chamberlain, 2014, p. 3)

Figure 2.4 shows a correlation in that during the same period between December 2013 and July 2014, the level of the trust account increased, as well as the number of agents. It therefore shows that an increase in the use of mobile money has other benefits such as a reduction in the level of unemployment.

2.3 MOBILE MONEY AND DEMOGRAPHICS

The use and uptake of mobile money depends on some demographic patterns such as urban dwelling, age, and the types of devices used by subscribers. The Ernst & Young (EY) Global Mobile Maze Consumer Survey found that young urban dwellers using smartphones were the leading adopters of mobile money services in the different regions of the world (Dharmapalan, Forst, Ekstrom, Sachdeva, Droogenbroek, & Baschnonga, 2014, p. 14). Young people use smartphones for social networking and for entertainment; therefore a service such as mobile money makes all services available on a single device, which is highly convenient.

The survey, as evident from Figure 2.5, shows a higher proportion of smartphone users utilising mobile payment services more frequently than their counterparts without smartphones. However, this does not mean that there are more smartphone users than non-smartphone users. The survey found that the proportion of potential users of the system is similar across all category of devices; which implied a strong demand in the future for mobile payment irrespective of a mobile subscriber's device type.

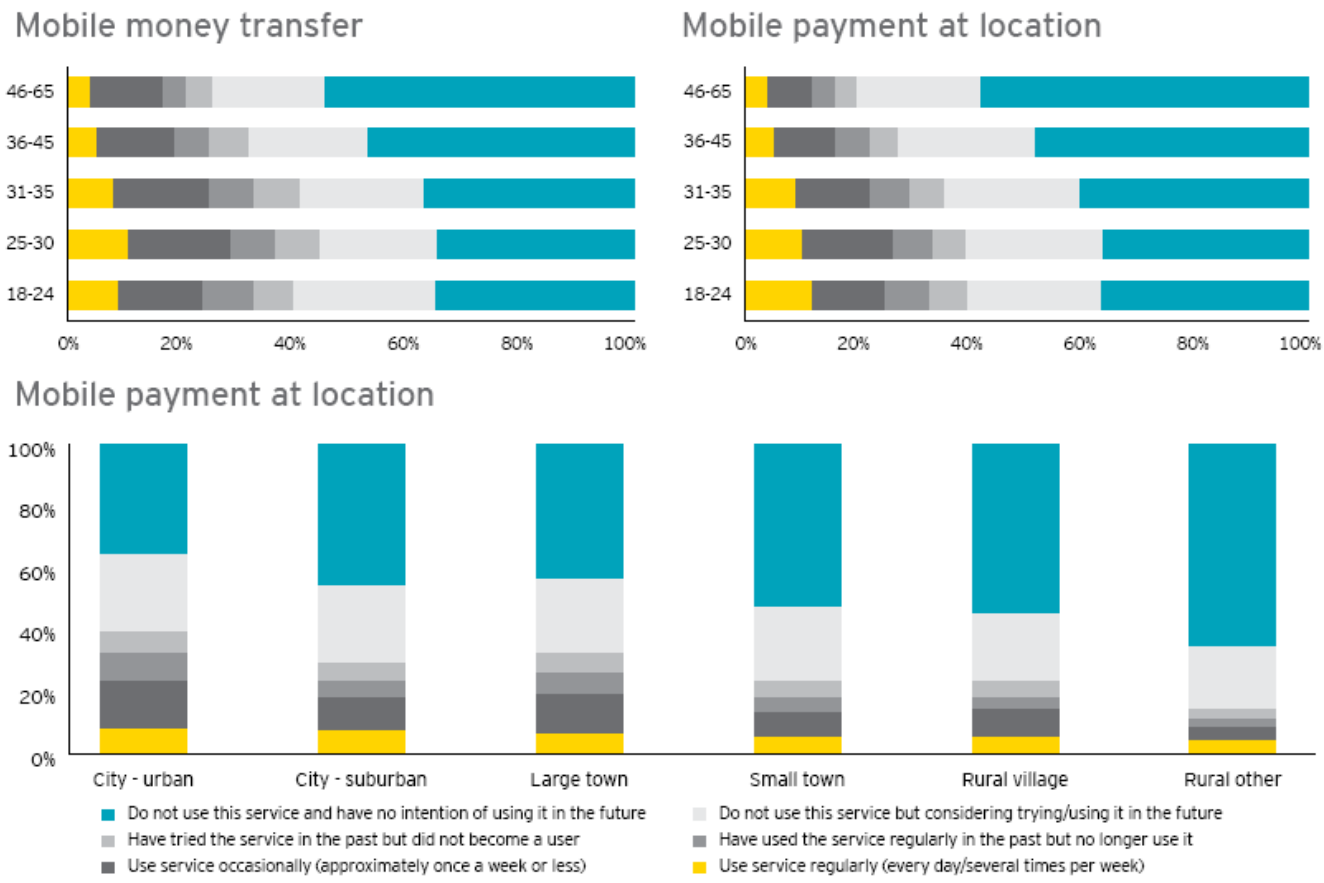

Figure 2.5: Various aspects of mobile money usage

(Source: EY Global Mobile Maze Consumer Survey Report, 2014)

The survey found that the uptake of mobile money services was the highest in the 18 to 35 years of age bracket. The usage was found to be best established in the 25 to 30 years of age group for both mobile payments at location and mobile money transfers. The willingness to utilise mobile payments at location was found to increase further among city dwellers as compared to rural dwellers (Dharmapalan et al., 2014, p. 14). The study found that 29% of city dwellers used the services compared to 23% of all mobile money users.

2.4 THE MOBILE MONEY PLATFORM

The mobile money platform is constructed in such a way that it interfaces seamlessly with the existing mobile network operators' Information Technology (IT) infrastructure. There are servers that host the mobile money data (account, balances, customer info, etc.), which then interface with the core Global System for Mobile (GSM) networks. The subscriber uses his/her mobile station, which can be a cellular phone, a tablet, or a smartphone, to access the mobile money service through the Subscriber Identity Module (SIM) card, which is inserted into the phone.

The system uses Short Message Service (SMS) together with Unstructured Supplementary Services Data (USSD) to communicate with the subscriber. SMS technology allows for messages to be received and sent to and from the mobile phone using a store-and-forward facility. A Short Message Service Centre (SMSC) is a server that is charged with the storing and forwarding of the short messages.

USSD is a service offered by the MNOs which provides for fast communication between the subscriber's mobile station (cell phone) and the mobile money system (application). USSD is session-based, whilst SMS is transaction-based. That is to say that a session with a lifespan is created when a USSD communication is initiated, usually through the use of the "*" key on the mobile station. The initiation string often ends with "**#**" (i.e.*191# for mobile money options). The communication is in real-time as the system expects user interaction during the session. However, for SMS communication, the SMS is first stored and then forwarded to the mobile station at a later stage if needed. Both these technologies usually complement each other for a complete mobile money transaction (Napier, 2010, p. 192).

In other instances, a SIM Toolkit (STK) is used. This is a program that is stored on the SIM card. STK is a GSM standard invented in 1998 for the securing of mobile phone applications mainly for privacy and mobile banking. A PIN code is usually required to access the application. Security is guaranteed by means of encryption between the

mobile phone and the mobile network (Mauree & Kohli, 2013, p. 17). Unlike SMS and USSD, the information is not in plaintext but in cipher text, thus it cannot be read if intercepted between the phone and the mobile operator.

2.4.1 The agent network

The interface between the mobile money system and the customer is the agent, which is sometimes called a merchant or retailer. This is the person responsible for the physical interactions between the subscriber and the system, and usually involves the exchange of cash. There are super agents and normal agents, whereby the normal agents buy value from the super agents. The super agents buy value from the MNO through the actual deposit of funds at a local bank. The activities carried out by the agent include subscriber registration, cash-in, cash-out, bill payments, and transfers. Thus the acceptance of cash and its conversion into mobile money and the conversion of electronic money into cash and its subsequent disbursement to the customer happens through the agent. Other services include inducting new users of the system, and assisting in troubleshooting when there are payment problems (Chipchase, 2009, p. 7). With some services, such as bill payments or buying electricity, the agent actually performs the transaction on behalf of the customer; in which case the customer provides cash and a meter number to the agent for the agent to buy electricity on the customer's behalf.

The agent usually runs his/her own business apart from providing mobile money services. The mobile network operator selects agents based on their cash flow state, which is submitted to the MNO. Retailers with large levels of liquidity are therefore preferred agents of the system. Once registered, the agent receives an agent number together with signage displayed at the premises which identifies him/her as a mobile money agent. For cash-in transactions, the agent accepts cash and credits the mobile money account of the relevant customer, which is followed by an SMS sent by the system to the user informing him/her of the transaction. Agent liquidity availability is of great importance in order for cash-in and cash-out to be performed swiftly without

problems (Baptista & Heitmann, 2010, p. 18). When a withdrawal is made, the user initiates the withdrawal process and then enters the amount of money to withdraw together with the agent code. Upon the receipt of the SMS by the agent, the agent can then disburse funds to the customer from cash, which is present from the running of the core business of the agent.

The super agent periodically deposits cash into the mobile network operator's bank account in order to buy more value. This is done by travelling to the nearest branch and making a cash deposit. The MNO then credits the super agent's mobile money account with the same amount. Lower-tier agents can now buy value from the super agent following such a transaction.

One of the challenges faced by agents includes spikes in the demand for cash. At month ends the demand increases sharply, which usually disrupts the liquidity of the agents. People who are salaried through mobile money therefore tend to withdraw funds the same day that their salaries or wages are deposited into their relevant mobile money accounts. Such rushes were evident in Haiti after the earthquake where non-governmental organisations (NGOs) together with MNOs introduced the mobile money service. On the day of the deposit to the destitute beneficiaries, the agents were overwhelmed by the sheer number of customers queuing for withdrawals of their donated stipends (Hausman et al., 2012, p. 16). Not only were rushes causing challenges to the agents, but the reconciliation process with the super agents also proved to be problematic.

2.5 MOBILE MONEY AND THE FINANCIAL SYSTEM

A typical financial perspective of mobile money is one in which there is a float or a trust account held at a local bank. This account is the one in which super agents deposit or withdraw funds from. The funds in the bank accounts at any given point are the mirror image of the value within the mobile money system (Mauree & Kohli, 2013, p. 20). The central bank of the concerned state is highly interested in the dealings of this trust

account. The key focus is to avoid the creation of money outside the control of the central bank, which has the potential to increase money supply, which leads to inflation due to the abundance of money. It is therefore the role of the central bank to ensure that the money in circulation is equal to the funds in the trust account.

If the mobile service provider were to fail, the subscribers would be able to redeem 100% of the value stored in their mobile money accounts due to presence of this account. In contrast to this, mobile money users' accounts do not earn them interest but are mere channels to transfer value from one point to another (GSMA, 2010, p. 2).

2.6 A TYPICAL MOBILE MONEY REGISTRATION PROCESS

For both services, the user must first own an active SIM card of the relevant MNO before the registration process can begin. For registration, a subscriber will usually dial a commonly advertised string by the mobile network operator such as "*111#" for Vodacom M-Pesa or "*191#" for Econet Telecom's EcoCash. Thus, the USSD session first initiates the transaction process.

2.6.1 Vodacom registration

For Vodacom M-Pesa, after dialling *111#, a menu is displayed whereby M-Pesa is one of the options. Upon selecting the services, the system requires the users to enter their name and surname. The system then requires the subscribers to enter their date of birth in the day-month-year format (DD-MM-YYYY) and the village name. Finally, it requires the subscribers to enter their preferred language for future use.

After the user inputs his/her biographic information, the system sends an SMS instructing him/her to register the Personal Identification Number (PIN). After initiating another USSD session, the system requests the user to select a secret question and then to provide a relevant answer to that question. This is to help in PIN recovery in the future in case the user forgets his/her M-Pesa PIN. When this is done, the system

ultimately requests the subscriber to enter the PIN and then to re-enter it. If the PINs match, the system sends an SMS to the user informing him or her that the account has been successfully created and is now active (Vodacom, 2015b).

2.6.2 Econet registration

Econet Telecom offers a slightly different process than Vodacom. The user dials *191# to register. Unlike Vodacom, this USSD code is dedicated for the mobile money service. The system requests the name and surname of the applicant. Upon successful entry, it requests either an identity number, a driver's license number, a voter's card number, or the passport number of the subscriber. When the information has been entered correctly, the system sends an SMS to the subscriber confirming the activation of the electronic wallet (e-wallet). In addition to the confirmation, the system also sends a four-digit default PIN code via SMS. Part of that SMS instructs the user to establish another session to change the PIN to a unique and memorable one for the subscriber. After this is done successfully, the first transaction can be initiated by going to the agent to deposit cash into the e-wallet. The MSISDN becomes the account number of the subscriber. Each time a transaction is made, the system will request a PIN to be entered by the user (Econet Telecom Lesotho, 2015b).

2.7 AVAILABLE SERVICES

Mobile money affords the customer the following services: save or deposit money into a subscriber's mobile money account, send and/or receive value from the same network or from other networks, buy airtime, and buy electricity. With the latest advances, users can now buy prepaid electricity, pay for DStv channels, water bills, insurance, salaries, school fees, and even buy goods from shops which allow the usage of mobile money. A newly innovative service has been rolled out by Vodacom called "Airtime to M-Pesa". This allows subscriber to use their airtime to buy M-Pesa credit.

Figure 2.6: An advert depicting services payable through M-Pesa

(Source: Vodacom Lesotho, 2015)

2.8 REGULATION AND MOBILE MONEY

Mobile money inherently straddles between two key industries in an economy: the finance industry and the telecommunications industry. Both industries are closely regulated by relevant bodies enacted by the state. In South Africa, for example, it must comply with the laws and provisions of both the South African Reserve bank and the Independent Communications Authority of South Africa (ICASA); while in Lesotho mobile money must comply with the regulations of the Central Bank of Lesotho and the Lesotho Communications Authority (LCA).However, in most emerging markets, such as Kenya and Lesotho, there are no specific regulations governing mobile money. The monitoring is on an ad-hoc basis (Mauree & Kohli, 2013, p. 21). The aim is to allow greater flexibility for the uptake of the service with the key aim of reducing financial exclusion.

It is imperative that regulations must exist in order for mobile money to develop with the objective of encouraging financial inclusion, whilst at the same time keeping fraud and other risks low. The regulations must be proportional, whilst at the same time be incremental due to the fact that mobile money is an innovative industry which is associated with uncertainty. It is also crucial that caution be exercised when enhancing the mobile money platforms since the platform administers the limited capital of the majority of the poor society (USAID, 2010).

Proper controls must be enforced in order to prevent the system being used for money-laundering activities. This is possible if a launderer deposits ill-conceived proceeds into the mobile money platform and then withdrawing those funds as legitimate money. The finance industry across the globe has for some time been on the lookout to curb such practices happening through the mainstream banking sector. Financing of terrorism is another threat that must be minimised in the mobile money system. In this case, a user in one part of the country, region, or continent sends money to another party in order to assist him or her in terrorism activities. Other illegal acts such as bribery, tax evasion, fraud, theft, holdups, kidnapping, piracy, and gambling must be prevented through proper controls and the enacting of laws or the amendment of laws in order to cater for this new technology (Hausman et al., 2012, p. 16). Anti-money laundering (AML) laws and initiatives also assist in curbing money laundering, although mainly through mainstream banking. The curbs, when applied to mobile money platforms, include placing daily limits on deposits or withdrawals.

From the Central Bank's perspective, such controls include the Know-Your-Customer (KYC) requirements. These dictate that a financial institution must be able to identify its customers from records and must also be able to know the common location or address of its clients. The records are also given a minimum lifespan, which is ten years in Lesotho. In most mobile money deployments, the system will ask for a passport or identification number in order to at least satisfy the key requirements of the KYC requirements for large sums, i.e M15 000. One other outstanding feature of mobile money is the fact that mobile money is classified as a payment method. By this notion,

the bearer of the account is denied the opportunity to gain interest on his/her deposit (Ehrbeck & Tarazi, 2011, p. 5).

In the Republic of South Africa, significant legal strides have been made with the introduction of the Regulation of Interception of Communications and Provision of Communication-related Information Act of 2002 (RICA). This act ensures that each SIM card operating on a network has its owner's details stored on a national database. This addresses the issue of anonymity in that SIM card activity can be traced to its owner since the name, surname, ID number, and physical address are inserted into the system prior to the use of the card. Thus mobile money activities can be tracked from a financial perspective and from an IT infrastructure perspective – enabling detection and prosecution of money launderers and people using the cellular network for illicit purposes.

2.9 THE BENEFITS OF MOBILE MONEY

The following section discusses the different benefits or advantages of mobile money as compared to conventional banking.

2.9.1 Lower cost

The success of mobile money is mainly due to its inherent low cost to transact. There are no costs associated with opening an account. With a bank, a customer must have money to open an account and to maintain it. Contrary to opening a bank account, opening a mobile account is totally free. Moreover, a customer must travel to the bank to perform the action of opening an account, which in itself adds to the total cost of opening an account. A study by McKay & Pickens (2010, p. 6) discovered that on an international footing of 26 banks, branchless banking (which mobile money is a part of) is 19% cheaper than other services. It was found that for low-value transactions, such as the ones happening over the mobile money platform, the differences doubled, thus making mobile money a cheaper and preferred alternative for the poor.

Banks usually have different accounts that have been tailor-made for different classes of people. For example, there is a normal savings account for low-income earners, a gold account for middle-income earners, and a platinum account for high-income earners. However, for mobile money platforms, there are no distinctions or levels of accounts. For the purpose of comparison, the fees of a low-cost account called Mafube savings account from First National Bank of Lesotho are compared to M-Pesa and Ecocash fees:

SEND MONEY TO UNREGISTERED SUBSCRIBER	
RANGE (M)	CHARGE (M)
0 - 200	4.00
201 - 500	5.00
501- 1000	7.00
1001 - 3000	12.00
3001 - 5000	18.00
CASH OUT BY A REGISTERED SUBSCRIBER	
RANGE (M)	CHARGE (M)
0 - 200	2.00
201 - 500	3.00
501- 1000	5.00
1001 - 3000	10.00

Figure 2.7: Mobile money tariffs for Econet Telecom

(Source: Econet Telecom Lesotho,2015c)

M-Pesa Fees

Transactin Range	Airtime Purchases	Withdrawal for Registered M-Pesa user	Send Money to Registered M-Pesa user	Send Money to Unregistered M-Pesa user	Bill payments
M5 - M9.99	M1.00	-	-	-	-
M10 - M50	M1.50	M1.50	M1.00	M2.50	M1.85
M51 - M100	M2.25	M2.25	M1.50	M3.75	M3.00
M101 - M250	M3.38	M3.38	M2.25	M5.63	M4.50
M251 - M500	M5.06	M5.06	M3.38	M8.44	M6.00
M501 - M1000	M7.59	M7.59	M5.06	M12.65	M8.00
M1001 - M5000	M11.39	M11.39	M7.59	M18.98	M12.00

Figure 2.8: M-Pesa fees

(Source: Vodacom Lesotho,2015c)

Table 2.2: Transaction fees for FNB savings account

Transaction	Fee
Cash withdrawal ATM	R21.40
Cash withdrawal – in branch	R25.85 + 1.40% withdrawal amount
Transfer linked account	R5.60
Balance inquiry	Free
Cash deposit	R4.80 + 1.34% deposit amount

(Source: First National Bank Lesotho Mafube savings account pricing – 2015)

One difference from the above tables is that mobile money prices are flat for specific ranges. In contrast to this, banking prices have a fixed component and a variable component. For example, an urban dweller sending R500 to his rural parent would pay R3.00 if using Ecocash. If the same amount of money is sent using M-Pesa, R3.38 would be the cost of such a transaction. However, if the same amount of money is to be sent through the bank, R11.50 would be charged upon the deposit of such funds. The receiver will also be charged R21.40 if the money is cashed at an ATM. The total cost of the transfer of money is therefore R32.90. This is approximately ten times the cost of transferring the same funds using mobile money.

Mobile money also allows users to withdraw very low amounts of money which would otherwise not be possible through the bank as banks usually have a minimum fee to charge for specific transactions, making low-value withdrawals expensive. With M-Pesa, R8.00 can be cashed out from an agent. In addition to low-cash withdrawals, airtime worth R5.00 can be bought from a mobile money account. Alternatively, a subscriber can buy electricity from as little as R4.75. It is thus evident that mobile money affords the customer the ability to exhaust almost all value from the account. There are also no monthly fees related to the mobile money account, unlike with the mainstream banks where monthly banking charges apply.

2.9.2 Increased security, privacy, and autonomy

Mobile money is much safer than cash since the value is not physically present. A person can receive a sizable amount of money and use it for a payment without ever getting hold of physical cash. A person is spared the risks (e.g. mugging) associated with carrying cash around, especially in crime-ridden areas of a village, city, or metropolitan area. Mobile money has also increased privacy and financial autonomy. Mobile money also affords women the opportunity to have personal funds free of their husbands' control due to its private nature (Morawczynski & Pickens, 2009, p. 2). The fact that a PIN is required for all transactions greatly improves the privacy of the bearer's finances.

In Haiti, mobile money substantially decreased the levels of cash transfer thefts by 50% (Hausman et al., 2012, p. 5). A study conducted by Mercy Corps (2011) found that 82% of the interviewed beneficiaries of the funds preferred the use of mobile money due to its increased level of security. This also had a ripple effect in that non-users of mobile money resorted to using the service due to its perceived high level of privacy compared to the old way of queuing in lines in full view of robbers.

2.9.3 Improved speed and agility

The ability to send funds over long distances in a matter of seconds is one key advantage of mobile money. A sender only needs to know the mobile number of the receiver before effecting a transfer or before paying an agent to perform the transfer on his or her behalf. The transaction happens at "SMS speed" in that as soon as the receiver receives a deposit notification, the account is already credited with the value in the SMS.

Not only is speed an advantage, but the swiftness of converting mobile money into cash is also key. Poor people often have value vested in their harvests and livestock. These may be quite challenging to convert into cash should an emergency needing cash

manifest itself in a household. For such a situation, the value can be cashed out at an agent or be transferred to a person offering the service during an emergency. Thus mobile money is a better alternative of storing value should a need for liquidity arise unexpectedly in a family (Donovan, 2012, p. 63).

2.9.4 Benefits of large-scale usage

Communities using mobile money can trade much easier and quicker than those without mobile money usage. When more households use mobile money, the demand for the agent service increases and the liquidity holdings of agents increase in order to cater for the increase in the number of mobile money users. An increase in the liquidity means that more people can perform cash-outs, while it also allows to cater for spikes in demand. Also, should a negative outbreak occur, be it political riots, a drought, or disease affecting a region and causing livestock to die, households using mobile money are able to receive remittances from their relatives based in the urban areas, thereby helping them to be more resilient (Jack & Suri, 2011, p. 7). Mobile money became the only channel for people to receive remittances in Kenya in the informal Kibera settlement during the 2007 Kenyan political turmoil which caused the displacement of people and the loss of valuable assets and property (Morawczynski & Pickens, 2009, p. 4).

Network operators realise a boost in revenue when more people use the mobile money service. The aggregate commission received by service providers is quite significant, despite individual transactions having low commission charges. Safaricom reported revenue of $90 million from commission fees resulting from the use of M-Pesa in the first half of 2011 (Donovan, 2012, p. 64). Not only did the MNOs notice a boost in revenue, but the agents also received an increased share of the commission. This boom also created increased employment for agents.

2.9.5 Innovation- benefits

Mobile money platforms are able to interface with systems from different economic sectors. These include insurance, credit, bill payments, and utilities. Mobile money offers a channel to provide these services under one roof. In Lesotho, Alliance Insurance has partnered with Econet Telecom to offer Ecosure, which is funeral cover targeted at low-income earners. Subscribers can pay using their mobile money funds once or they can configure standing orders to periodically debit their accounts with payments for the insurance cover. Water, prepaid electricity, and Digital Satellite Television (DStv) users are also able to pay using either M-Pesa or Ecocash.

In Kenya, a micro-insurance product called Kilimo Salama works with M-Pesa to offer pay-outs to smallholder farmers who did not have a good harvest. After a year, 12 000 farmers had been insured. Approximately 1 200 farmers had received pay-outs ranging to up to 50% of their insured inputs (Sen & Choudhary, 2011). Still on that note, Equity Bank in Kenya partnered with Safaricom to deploy M-Kesho. M-Kesho offers credit, insurance, and micro-savings to M-Pesa users. Access to credit usually follows at a later stage when adequate histories of customers have been collected and analysed, thus enabling the assignment of scores or ratings to M-Kesho holders. Once scores are assigned, appropriate levels of credit can be provided to the clients (SoftKenya, 2015).

2.10 MOBILE MONEY CHALLENGES

A number of challenges exist for mobile money, especially in the developing world. One of the challenges is that mobile money services are geared towards the poor part of the population, who may be located in remote locations or be dispersed due to wars. The challenges with this type of clientele is that their transactions are of very low value and thus it may take time to reach specific targets. Also, the poor tend to withdraw their accounts to nil at the first transaction, thus the demand for cash tends to peak at specific periods of the month, such as month end and thereafter the accounts are not actively utilised until the next month end.

The second challenge faced by mobile money arises from the fact that the platform works with two different industries using different business models. A balance must thus be achieved between the two for innovation to take place. Banking is a float-based industry, thus value is acquired through the withholding of deposits. The banks usually take customer funds and deposit them elsewhere in order to earn interest in which a fraction of the interest is passed onto the customer. On the other hand, telecommunications, together with payments, are transaction-based, which means revenue is gained through transactions. Thus for a new product, both models must be merged or adequately addressed, while at the same time conforming to the laws and cultures governing both sectors (Donovan, 2012, p. 64).

Thirdly, mobile money makes business sense when transactions happen in large volumes, predominantly due to the low fees charged for the service. Convincing and recruiting enough customers and agents can be a daunting task. The agents represent the supply perspective, while the customers represent the demand perspective. After the deployment of agents, trust of customers in the system is of utmost concern.

2.11 MOBILE PHONE PENETRATION IN LESOTHO

The number of people using mobile phones in Lesotho has been increasing since the inception of mobile phones in the year 2000. The number of people using mobile phones per 100 inhabitants is referred to as teledensity. Figure 2.9 shows a steady rise from around 1% in 2002 to 84% in the year 2013 (LCA, 2014, p. 17). In contrast to mobile phone increase, the fixed-line service does not show an increase for the past ten years, therefore indicating a preference for mobile network services. Fixed-line services are used extensively by corporate, government departments, and NGOs.

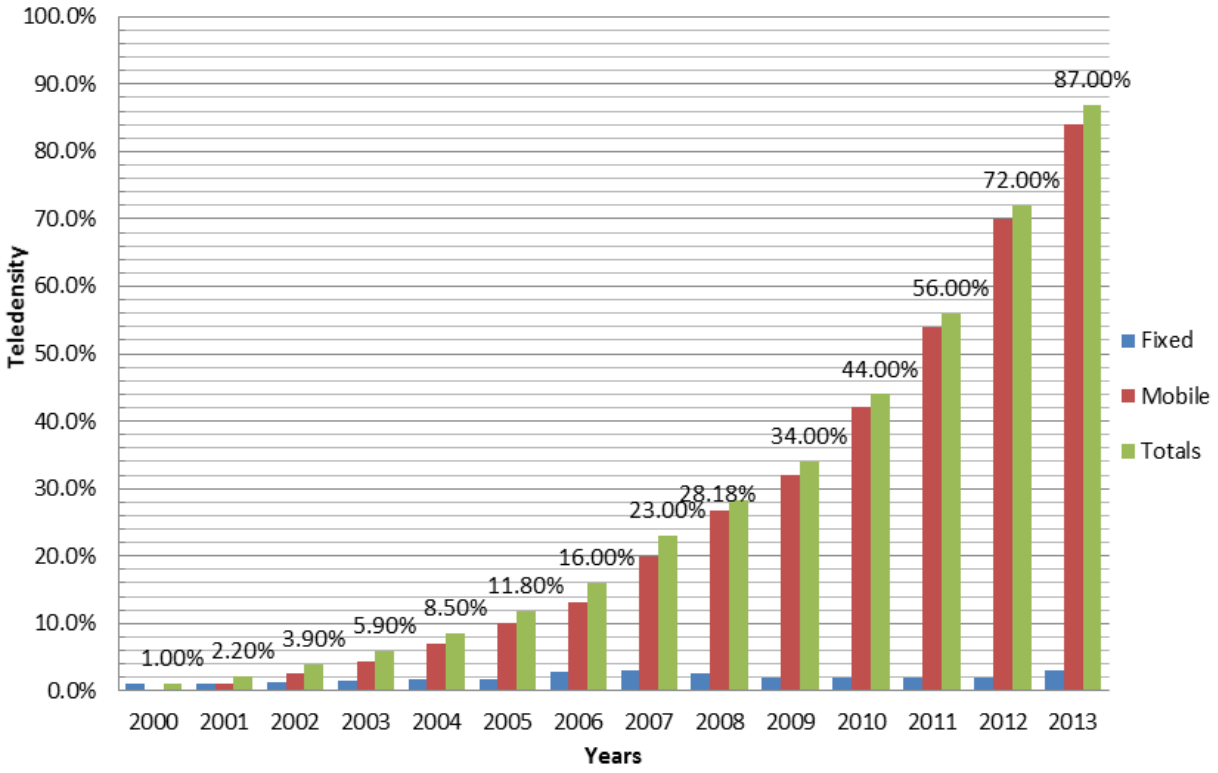

Figure 2.9: Lesotho Teledensity of the two key types of telecommunications

(Source: Lesotho Communications Authority Annual Report 2012/2013)

The projected increase in the number of people using mobile phones in Lesotho shows a growing potential of mobile money use. Thus, more people using mobile phones increase the chances of more people registering and using the mobile money platform.

2.12 CONCLUSION

Mobile money portrays the promise of widespread benefits to communities and societies in general and specifically for the unbanked and under-banked populace of a country. A concerted effort involving governments, non-governmental organisations, and mobile network operators is needed in order to help absorb more and more unbanked individuals into the formal economy through mobile money, thus reducing financial exclusion. This platform has the potential to expand markets and other industries and has the ability to create jobs, and thus build a sizable middle class.

CHAPTER 3
RESEARCH METHODOLOGY AND DESIGN

3.1 INTRODUCTION

The purpose of research methodology is to describe the plan for carrying out the research so as to afford the researcher the opportunity to respond to the research questions raised in the first chapter and therefore adding to the existing body of knowledge. Sekaran and Bougie (2013, p. 95) described research design as an outline for data collection, its measurement, and analysis guided by the questions of research within the study. The research questions to be addressed were raised in the first chapter.

This chapter starts by explaining the research design, which includes the target population of the study, the sampling method, and sampling size. In addition to the research design, the chapter introduces and elaborates on the data-collection method that will be used in the study. It further explains data analysis and the data-analysis tool that is to be used in the study. The chapter ends by discussing the ethical considerations that are to be followed when undertaking the study, together with the limitations thereof.

3.2 RESEARCH DESIGN

The research will be conducted in the Kingdom of Lesotho. The country is composed of both the highlands and the lowlands. This leads to different challenges faced by the different population groups in these geographical areas. As such, the questionnaires will be distributed to both lowlands and highlands populations of the study in order for the researcher to learn about the preferences, challenges, and uses specific to each group.

There are three types of studies: exploratory studies, descriptive studies, and casual studies. Each is used for a specific type of study. The descriptive study will be used in this research. The reason behind this choice is because the descriptive study affords the researcher the opportunity to collect valuable data which can reveal a lot of information regarding mobile money trends in Lesotho. The study can either be quantitative or qualitative in nature. In this study, a quantitative approach will be taken through the use of questionnaires.

3.2.1 Descriptive study

A descriptive study is usually characterised by plainly stated investigative questions or hypotheses (Blumberg, Cooper& Schindler, 2008, p. 206). In addition to their clearly stated questions and hypotheses, such studies have an element of correlation within them; that is to check whether one of the different variables indeed correlates to other variables.

The following are the reasons outlining the motive behind the use of this type of study. A descriptive study enables the researcher to understand specific characteristics of a certain group in a stipulated situation. It further enables the researcher to thoroughly think of the various dimensions of a study. Further ideas and thoughts for future research can also emanate from descriptive studies. In addition to the above-stated reasons, specific decisions can be made or can result from the undertaking of a descriptive study (Sekaran & Bougie, 2013, p. 97).

3.2.2 Quantitative data

A quantitative approach was chosen for this study. Quantitative research enables the identification of features that best describe a story about the collected data. In addition to feature identification, this type of study also enables pattern identification in data, which can be crucial in drawing conclusions with regards to the research questions.

This is normally called the making of inferences with regard to the population, based on the sample data collected (Easterby-Smith, Thorpe & Jackson, 2008, p. 234).

An outstanding feature of quantitative data is that evidence is articulated in numbers and in large quantities. Quantitative data are normally expensive when compared to qualitative data-collection methods. The expense comes from the time it takes to collect the large amount of data that are needed, together with the finances needed in the acquisition of such data. Finances may involve logistics in terms of the delivery of questionnaires and the collection thereof. Therefore, the norm is to collect as much information from each participant as possible. As a result of the sheer amount of data, large samples are used to try and approximate the population as much as possible.

Quantitative data have the advantage of the usage of quantitative data-analysis techniques. These techniques may include regression or structural equation modelling. In as much as the research is quantitative in nature, it must be emphasised that the majority of social science studies – of which this study is one –are qualitative in nature, although represented quantitatively or using numbers. The numbers only act as labels, which are related to each respondent's personal evaluation of the issue or topic that is inquired. Thus, more often than not, the underlying variable that is being investigated, despite being represented on a scale of numbers, remains qualitative (Bhattacherjee, 2012, p. 53).

3.3 SAMPLING

A sample is a part or a subset of the entire population that is being studied. A census is a count of all the elements of a population. A sample offers more advantages over a census in that it offers the option of lower cost. In addition to lower cost, it offers increased speed in the collection of data. The availability of the elements of the population is another reason for undertaking a sample of the entire population. Convenience sampling will be used in this study.

3.3.1 Target population

A population is the total of all the elements of a study (Blumberg et al., 2008, p. 228). In this study, the population is composed of both the mobile money users of Vodacom Lesotho and those of Econet Telecom Lesotho. Therefore, the elements are the individual mobile money users within the subscriber bases of the two companies. It must also be noted that some subscribers belong to both service providers.

The population size for mobile money users in Lesotho is estimated at 400 000 users. This number comprises mobile users living in the urban and rural areas of Lesotho of the two network operators.

3.3.2 Sample size

A sample size of 140 mobile money users was selected. This sample size was chosen since it is the most convenient sample size for the researcher with respect to logistics. This is based on the logistics of taking the questionnaires to and collecting them from the respondents, which was found to be expensive to undertake by the researcher without external funding and the given timeframe of the research. This sample included mobile money users from the lowlands and the highlands, men and women, the youth, the self-employed, and the employed. The aim was to try to find as many users of the platform with different preferences as possible. There are approximately 700 000 registered M-Pesa users and approximately 200 000 registered Ecocash users (central bank 2015). In total there are approximately 900 000 registered mobile money users in Lesotho.

3.3.3 Sampling method

The sampling method that was implemented in this study was non-probability convenience sampling. This method was used due to its quick turn-around time of the questionnaires, given the limited time of data collection. Moreover, this sampling method is very efficient since the respondents are conveniently available to provide information (Sekeran & Bougie, 2013). People such as street vendors and rural dwellers were given the questionnaires in various parts of the country.

Non-probability sampling was chosen due to the fact that the population elements, which in this case are the mobile phone subscriber users, do not have predetermined probabilities of being selected as respondents. Unlike in probability sampling, whereby the random selection of elements is done, non-probability sampling uses subjective methods to select potential respondents. The selection was based on the availability of the subjects at the time when the researcher was issuing the questionnaires. The challenge with this sampling method is that it cannot be generalised to a larger population. The findings of the sample thus cannot be generalised to the entire Lesotho population with confidence.

3.3.3.1 Advantages

The advantages of non-probability sampling include the flexibility to choose persons to act as respondents in the study by the researcher on the ground. It thus offers a degree of flexibility, especially when time is of the essence. It can thus be used for preliminary data findings when the requirement to prove a hypothesis urgently for future work is applicable. It is also more cost-effective when compared to other probability sampling methods.

3.3.3.2 Disadvantages

The disadvantages associated with non-probability sampling include the introduction of bias. Since the selection of persons to take part in the study is done by the researcher, this introduces an element of bias in the results in that preferential respondents can be chosen in order to prove a specific hypothesis. This method is therefore subjective in nature and thus rests upon the attitude of the researcher during the data-gathering process. In addition to bias introduction, convenience sampling has limited controls to ensure the precision of data collection.

3.3.3.3 Bias correction

The range in which the parameter of the population is expected to fall cannot be estimated with a high degree of certainty. To correct the element of bias in non-probability samples, two types of scoring are used. These are post-stratification and propensity scoring. The former method has a prerequisite that must be satisfied, which is the availability of certain information about the general population. This information may include personal information such as gender and age, together with the demographics of the total population (Blumberg et al., 2008, p. 250). Sometimes a difference in distribution can emerge between the sample and the population, thereby introducing contrast. Correction can be made by the calculation of weights to rectify the underrepresentation or the overrepresentation of the specific characteristics in the study.

The second method, which is propensity scoring, requires a sample from previous research and not information from the entire population. This uses the notion that the second sample from the entire population is a more accurate representation of the population than the sample that is used in the current research. The comparison of the two samples allows for the calculation of propensity scores, which then portray that a subject of the secondary sample would also likely be included in the primary sample.

3.4 DATA-COLLECTION STRATEGY

The use of questionnaires formed the basis of data collection in this study. These were structured questionnaires which were dispersed to mobile money users in the highlands and the lowlands. Lesotho consists of ten districts: Butha Buthe, Leribe, Berea, Maseru, Mafeteng, Mohales Hoek, Quthing, Qacha, Thaba Tseka, and Mokhotlong.

Maseru, Mafeteng, and Berea were classified as lowlands, while Mokhotlong, Qacha, Thaba Tseka, and Semonkong which is a mountainous part of Maseru were classified as highlands. Semi-lowlands were added for those people living on the peripheries of the highlands. These included Mohales Hoek, Leribe, Quthing, and Butha Buthe.

3.4.1 Questionnaires

As mentioned earlier, questionnaires form the basis of data collection. These were self-administered in nature. The advantage of the questionnaires being self-administered is that it freed the respondent of the influence which might emanate from the researcher. One other advantage of the self-administered questionnaires is that they were dropped off and collected at a later time. This gave the respondents the time to think about the questions without being in a hurry to complete the exercise.

Questionnaires were also seen as an inexpensive way of data collection from the respondents and researcher's' perspective. The element of expensiveness arose from the fact that questionnaires, unlike other collection methods such as online surveys or e-mail responding, do not require sophisticated equipment such as computers, tablets, smartphones, and Internet access for the respondents to participate. Thus printed questionnaires were seen to not be as complicated as electronic surveys.

The questionnaires included five key sections: Biographic Information Gathering, Mobile Money Use Specific Section, Mobile Money Challenges, Mobile Money Trends, and Benefits of Mobile Money. A five-point Likert scale was used to gather data for the

Benefits of Mobile Money section to rate how users perceived mobile money. In the Mobile Money Challenge section, the options were (1) Strongly Agree, (2) Agree, (3) Neutral, (4) Disagree, and (5) Strongly Disagree. The reason for the choice of this scale is that the degrees of challenges could be gauged precisely in order to determine the degrees of satisfaction among all users of the platform or only to some. This can be demonstrated by including the lack of electricity as a determining factor in performing a mobile money transaction. One user may have electricity at home, while another may have a solar panel to recharge a battery to power the cell phone, while another may use a car charger, and another may not use any form of recharging his/her cell phone to perform a transaction. Thus, the degree or impact of electricity availability at home would vary across the respondents.

This scale was chosen for this section since responses relating to a specific concept within the questionnaire could be analysed individually. Moreover, it offers the possibility of aggregating the score for each respondent by simply summing across the items (Sekaran & Bougie, 2013, p. 220).

A nominal scale was used to assess all other sections. This is because nominal scales are always used for the acquisition of personal information. In addition to usual usage, it allows for the categorisation of respondents into groups or categories. Categories are labelled using numbers in order to distinguish between the groups. However, the numbers themselves do not hold any intrinsic value, but only to associate a subject to mutually exclusive categories. This will include information such as gender, which will be (1) male and (2) female. The nominal scale thus offered the researcher an insight into the frequency distribution, but not much about the groups or categories.

3.4.2 Questionnaire guidelines

The following guidelines were adhered to when constructing questionnaires for this study (Sekaran & Bougie, 2013, p. 150):

- Appropriate language and wording: The questions were written in the approximate level of understanding and interpretation of the respondents.
- Avoidance of double-barrelled questions: These are questions covering two concepts within them. Each of these two concepts could have a response totally different from the other, depending on the person.
- Avoidance of open-ended questions: These are questions which can be answered in anyway the respondent feels appropriate. Closed-ended questions were used. These force a respondent to make a choice of a response from a listed set of answers. However, for some questions, an option of “other” was included in order to learn from the respondents any other information which was not covered in the options. This proved to be vital.
- Use of positively and negatively worded questions: The combination of these reduced the chances of the respondent circling or choosing one part of the scale throughout the questionnaire, thereby leading to elements of bias or lack of concentration.
- Avoidance of leading questions: These are questions which lead the respondent to answer in a way that is favourable to the researcher.
- Short questions: These are preferred to long questions due to their easy interpretation. A maximum of 20 words per question was adopted.
- Proper sequencing of questions: The follow-up of questions is such that the questions started from those of a general nature to those which were very specific to the concept. In addition to generalisation, the questions also progressed from simple to difficult.

3.5 DATA ANALYSIS

After the data were collected, they were prepared for analysis. The preparation included, amongst others, the creation of a grouping scheme. It was decided how outliers, blank responses, and inconsistencies were to be treated across the questionnaires. For example, if more than one response was chosen, the first response was taken. When this was completed, data coding followed by typing the data into a system and then editing the data. The coding of the data entailed the assignment of a number to the participants' answers as a prerequisite to database entry on a separate sheet or in Microsoft Excel. Data entry was subsequently followed by data edition, in which the data were checked for inconsistencies, blank responses, illogical responses, and outlier responses. This is to check that the data are logically correct.

Frequencies were used in the analysis of data. Data-mining techniques such as cross-tabulation of various variables were also implemented in the study to learn more about the interrelations between the different variables.

3.5.1 SPSS

Data analysis was performed using the Statistical Package for Social Scientists (SPSS). After careful verification, the data were inserted into the package for further processing. Frequencies, plots, charts, and lists were produced from the package. The analysis of variances were also calculated using this package.

3.6 RESEARCH ETHICS

The following ethical considerations guided this study:

- Voluntary participation of respondents was maintained,
- The anonymity of the respondents was assured,

- A clear explanation of the purpose and objectives of the study was given to the respondents,
- No incentives or rewards were given to the respondents,
- Accurate data collection without data misrepresentation was observed, and
- The information and responses from the respondents were treated as highly confidential and for the purpose of this study only.

Sekaran and Bougie (2013, p. 93) have encouraged these high levels of ethics when conducting scientific research.

3.7 LIMITATIONS

One of the limitations of this study was that the study was performed in Lesotho. The country is home to only two service providers and has a total population of two million people. Thus mobile money users will be those from the two providers in Lesotho. Further study is recommended in other countries within the SADC region, where there is a larger population with more mobile network operators competing for the same subscribers.

3.8 CONCLUSION

In this chapter, the design and methodology of the study were discussed. A quantitative approach to data collection was followed with the aim of answering the research questions in the first chapter of the study. Non-probability convenience sampling was used in this study with a target population of all the mobile money users in Lesotho. The reasons for the choice of sampling methods were highlighted together with best practices for compiling questionnaires. The ethics and limitations of the study were finally discussed in this chapter.

CHAPTER 4
RESULTS AND ANALYSIS

4.1 INTRODUCTION

This chapter is a presentation of the results and the analysis thereof. The chapter continues from the methodology that was tabled in Chapter 3 and will discuss these findings with incorporated tables, graphs, and descriptions. In addition to the presentations, the analysed data will be interpreted and compared to the literature in Chapter 2.

The different objectives from the first chapter will be addressed in this section of the field study. The first objective, which is the main one, is what impact mobile money introduction has brought to financial inclusion in Lesotho.

The analysis shall consist of four parts, with each section representing a total of four objectives (one primary and three secondary objectives). The first part is of vital importance since it gives an indication of the penetration of mobile money in the formal economy of the country. Thus the achievement of the key objective rests upon the first section of the discussion.

Pie charts, bar charts, and tables will be utilised in this chapter for the presentation and analysis of data. Most importantly, cross-tabulations will be used in the data analysis. Fuguo et al. (2011, p 5) emphasised the significance of cross-tabulation in statistical data analysis and the data mining thereof since it gives a detailed picture of the interrelation of the different variables that are studied.

4.2 GENERAL DATA

A total of 140 questionnaires were issued in this study. Of these, 121 questionnaires were received and satisfactorily completed. A capturing template was constructed and the questionnaires were coded into the template, and further processed using SPSS analysis software. The sections that follow display and discuss the results.

4.3 MOBILE MONEY USAGE

Of the total number of questionnaires issued to mobile money users, 98.3% of the respondents stated that they had a mobile money account. There were indeed some outliers, constituting 1.7%. The fact that both mobile service providers in Lesotho were viewed in totality increased the availability of people possessing mobile money accounts. It should also be noted that some mobile phone subscribers have both Econet Telecom Lesotho and Vodacom Lesotho mobile money accounts. One other factor is that some people do not frequently use the service, but have registered or opened their accounts.

Table 4.1: Mobile money usage

Usage	Frequency	Percentage
Yes	119	98.3
No	2	1.7
Total	**121**	**100.0**

4.4 BIOGRAPHIC RESULTS AND INTERPRETATION

Gender distribution indicates an interesting finding in that roughly 50.4% of the respondents were males and the 49.6% were females. This shows an almost equal gender distribution of respondents.

Table 4.2: Gender distribution

Gender		Frequency	Percentage	Valid Percentage
Male		61	50.4	50.4
Female		60	49.6	49.6
Total		**121**	**100.0**	**100.0**

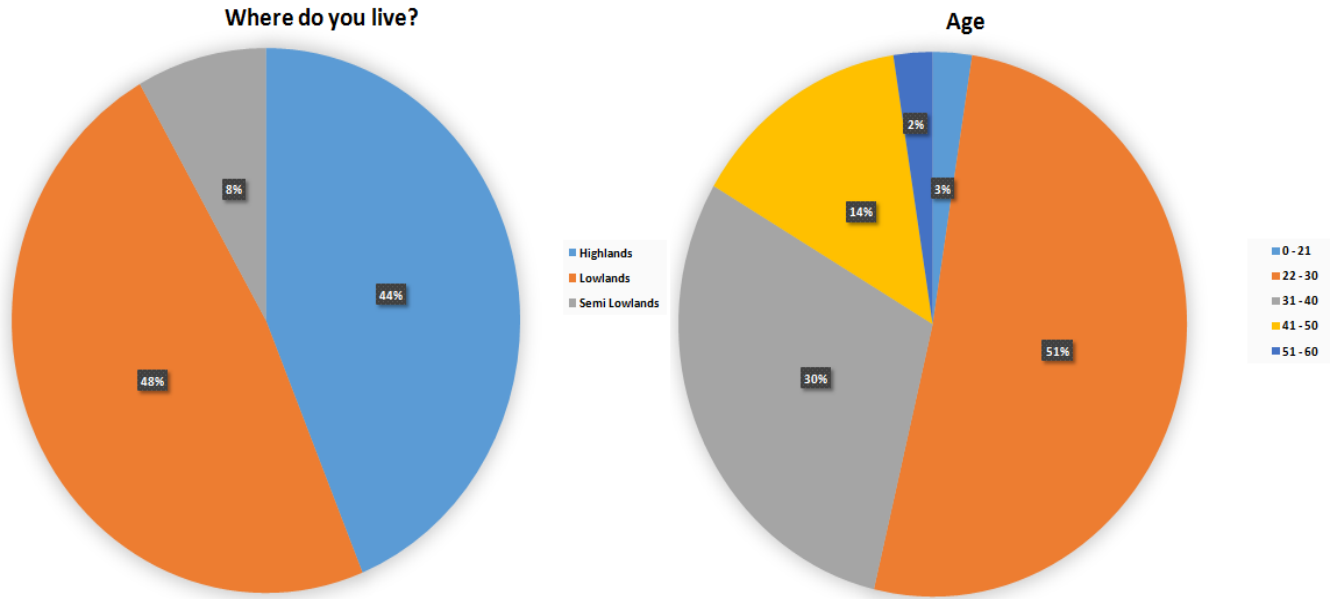

Figure 4.1: Age distribution and place of residence

From the study, 48% of respondents showed to be residing in the lowlands, while 44% were from the highlands. Only 8% of the respondents were from the semi-lowlands. The semi-lowlands can still be classified as lowlands, which would in turn result in 56% of respondents being from the lowlands. In Lesotho, the lowlands have a higher population density than the highlands. Businesses are also vibrant in the lowlands. Thus a higher proportion of respondents from the lowlands indicates more people using mobile phones and thus the tendency to use mobile money. The age distribution shows the greatest number of mobile money users being within the 22 to 30 age group, which accounts for 51% of the respondents. The next age group in this band is the 31 to 40 age group at 30%.

4.5 TRANSACTIONS VOLUME

The greatest number (49%) of the respondents performed between one and four mobile money transactions in a month. Between five and nine transactions were performed by 23% of the respondents. A very small fraction (1%) of mobile money users had inactive accounts. These maybe subscribers who are content with other financial services or people who only needed an account for a single transaction, e.g. to receive a transfer.

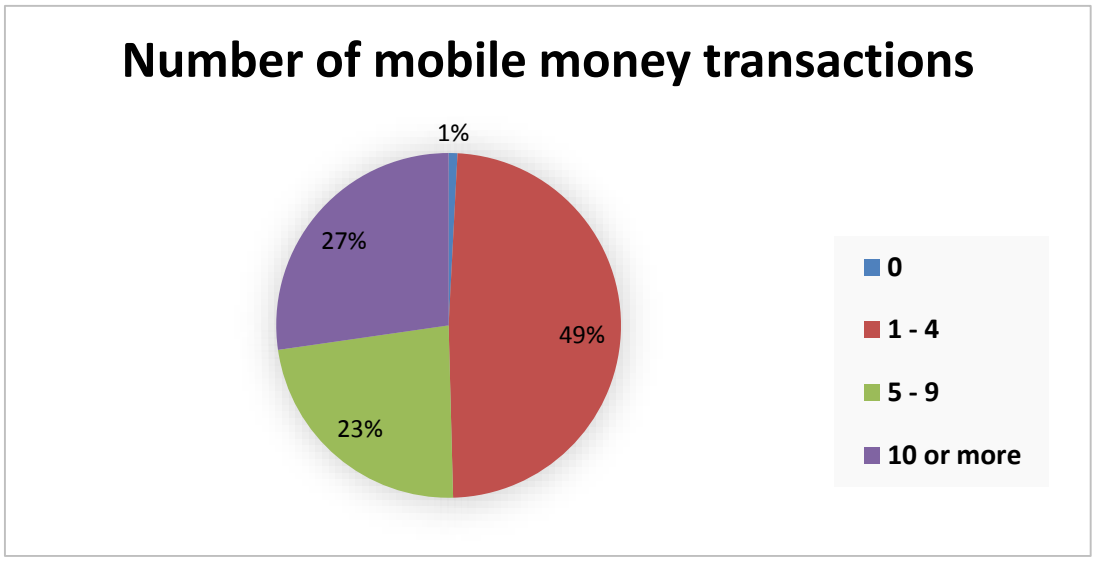

Figure 4.2: Average transaction volumes per month

A cross-tabulation of the transaction volume and the gender in Table 4.3 shows that 50% of females perform one to four transactions per month, compared to 47.5% of males. In the five to nine per month volume group, 26.2% of the males and 20% of females performed this number of transactions. There is a slightly higher composition of females (30%) than males (24.6%) in the more than ten transactions per month group.

Table 4.3: Gender against transaction volumes

Transaction volumes per month per individual	Q1-Gender		Total
	Male	Female	
0	1.6%	-	**.8%**
1 –4	47.5%	50.0%	**48.8%**
5 –9	26.2%	20.0%	**23.1%**
10 or more	24.6%	30.0%	**27.3%**
Total	**100.0%**	**100.0%**	**100.0%**

4.6 BANK ACCOUNTS

Banking has been available in Lesotho for decades. A national bank called Lesotho PostBank was founded in 2005 to address the issue of financial inclusion for the unbanked and under-banked. Other banks have also created products (accounts) targeted at these groups. The study found that 63% of the respondents possessed two or three bank accounts. Twenty-seven per cent (27%) possessed one bank account, while 4% had more than four bank accounts. A mere 6% did not have a bank account at all. The number may indicate that mobile money is used for day-to day transactions, while bank accounts are used periodically.

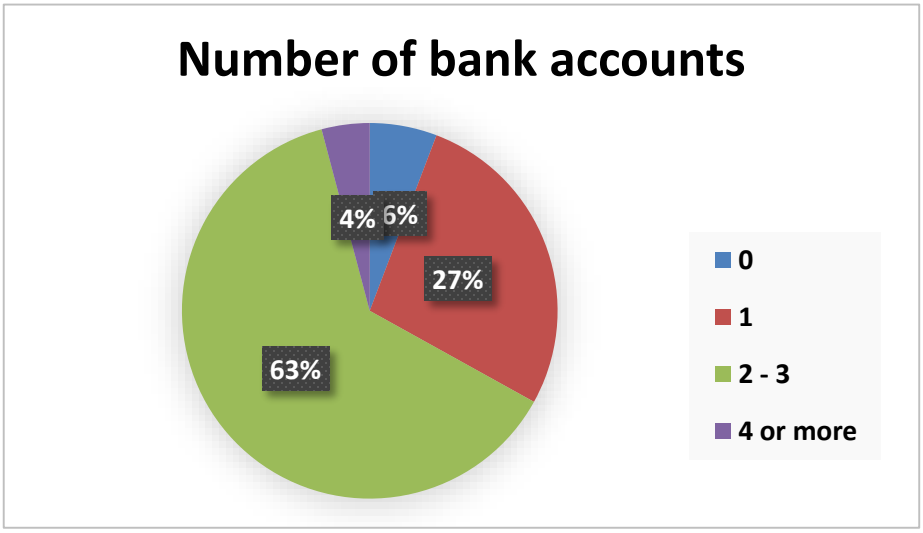

Figure 4.3: Bank accounts per individual

A cross-tabulation of the age against the number of bank accounts reveals that older people in the 41 to 50 age group comprise the largest group (70.6%) to have two to three bank accounts. This age group is old enough to have opened multiple bank accounts both locally and internationally in their lifetime.

Table 4.5: Age distribution against number of bank accounts

Bank Accounts	Q3-Age					Total
	0 - 21	22 - 30	31 - 40	41 - 50	51 - 60	
0	0%	4.8%	11.1%	0%	0%	5.8%
1	100.0%	29.0%	22.2%	17.6%	33.3%	27.3%
2 - 3	0%	61.3%	66.7%	70.6%	66.7%	62.8%
4 or more	0%	4.8%	0%	11.8%	0%	4.1%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

One other revelation is that as people get older, they tend to have more and more bank accounts.

4.7 REASONS FOR INFREQUENT USE OF BANK ACCOUNTS

In addition to the ownership or non-ownership of bank accounts, certain factors influence people to use mobile money more frequently. The top reason for the use of mobile money is that conventional banking requires much documentation (i.e. payslips, chief letters for residence, etc.). Twenty-eight per cent (28%) cited the need for documents as the top deterrent to opening bank accounts, followed by 24.79% of the respondents citing unavailability of a branch or ATM in their locality. The same number of respondents indicated hefty banking fees as deterrents to using banks accounts. Carriage of cash accounted for 14.05%, and time spent in queues accounted for 2.48% of the respondents' reluctance to open a bank account. In essence, it means that bureaucracy within the banking system is the key factor that influences the use of mobile money as an alternative financial system.

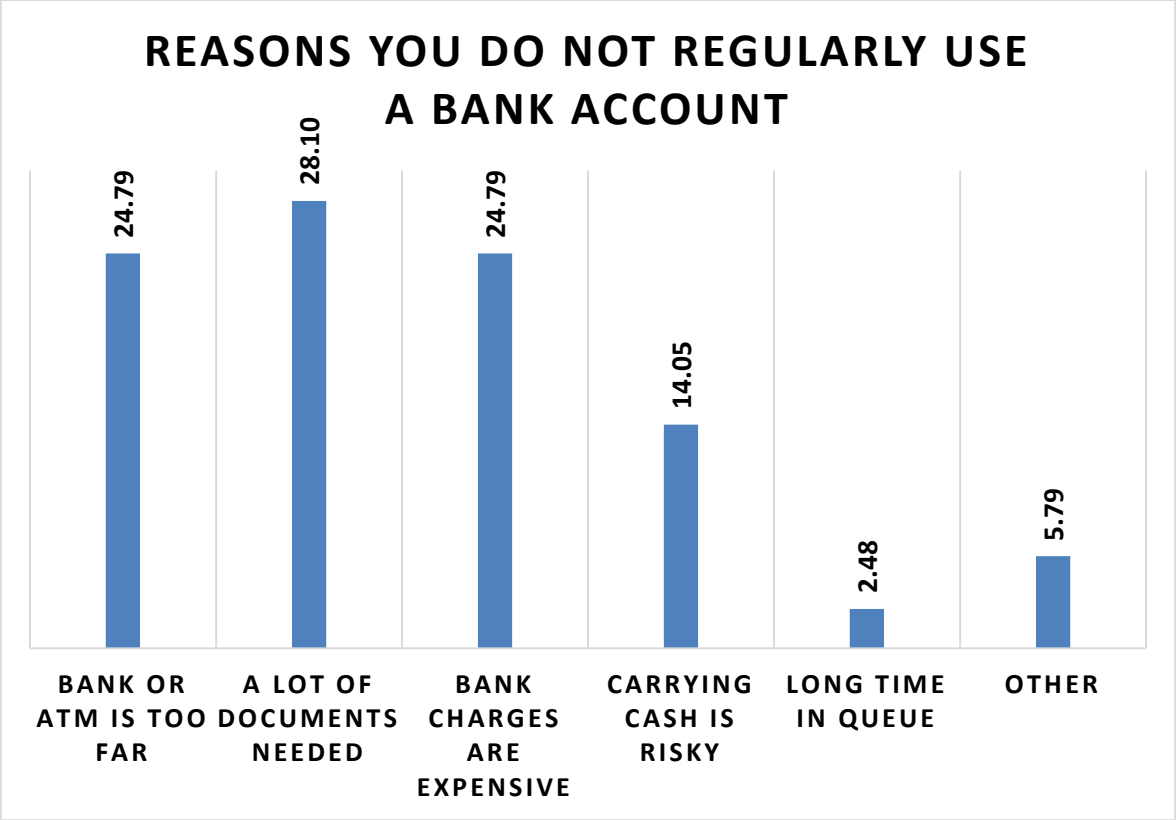

Figure 4.4: Reasons for infrequent banking

4.8 SOURCES OF INCOME

It was found that 55.37% of the respondents were self-employed. These were mostly small and medium enterprise (SME) owners and sole traders. This group accounted for the majority of the respondents. Employed people accounted for 16.53% of the respondents; while remittances, farming, and parental support accounted for 4.13%, 7.44%, and 4.96% respectively. Other sources of income accounted for 11.57%.

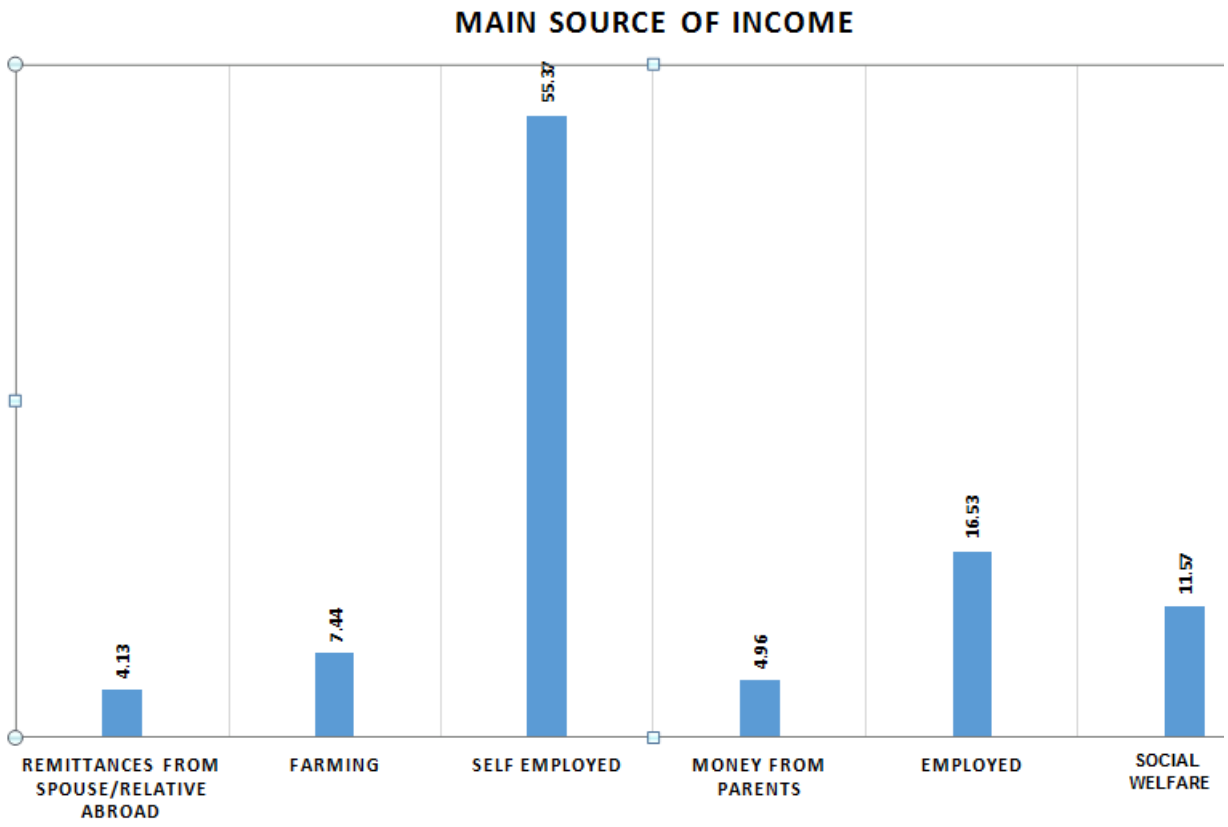

Figure 4.5: Key sources of income

A cross-tabulation of the place of residence and the deterrents to the use of bank accounts is presented in Table 4.6. The majority (30.2%) of highlanders cited distance from the nearest bank or ATM and the many documents needed as the main contributors to the low utilisation of the bank. Of the lowland dwellers, 27.6% also cited the many documents needed by conventional banking as the key deterrent. For all the regions (1.9% highlanders, 3.4% lowlanders, and 0% semi-lowlanders), the length of time spent in queues did not deter the users.

Table 4.6: Cross-tabulation of geographic location and reasons for low bank usage

Reasons for Bank use	Location			Total
	Highlands	Lowlands	Semi-lowlands	
Bank or ATM is too far	30.2%	24.1%	0%	24.8%
A lot of documents needed	30.2%	27.6%	20.0%	28.1%
Bank charges are expensive	24.5%	22.4%	40.0%	24.8%
Carrying cash is risky	5.7%	17.2%	40.0%	14.0%
Long time in queue	1.9%	3.4%	0%	2.5%
Other	7.5%	5.2%	0%	5.8%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**

4.9 MOBILE MONEY CHALLENGES

The mobile money platform comes with challenges, just like any other financial system. Cash shortages at the agents accounted for 63.64% of the reason why people cannot use mobile money effectively. The unavailability of agents accounted for 15.7%, while lack of electricity accounted for less than 1% (0.83%) of the cases. Fewer people (1.65%) do not own mobile phones.

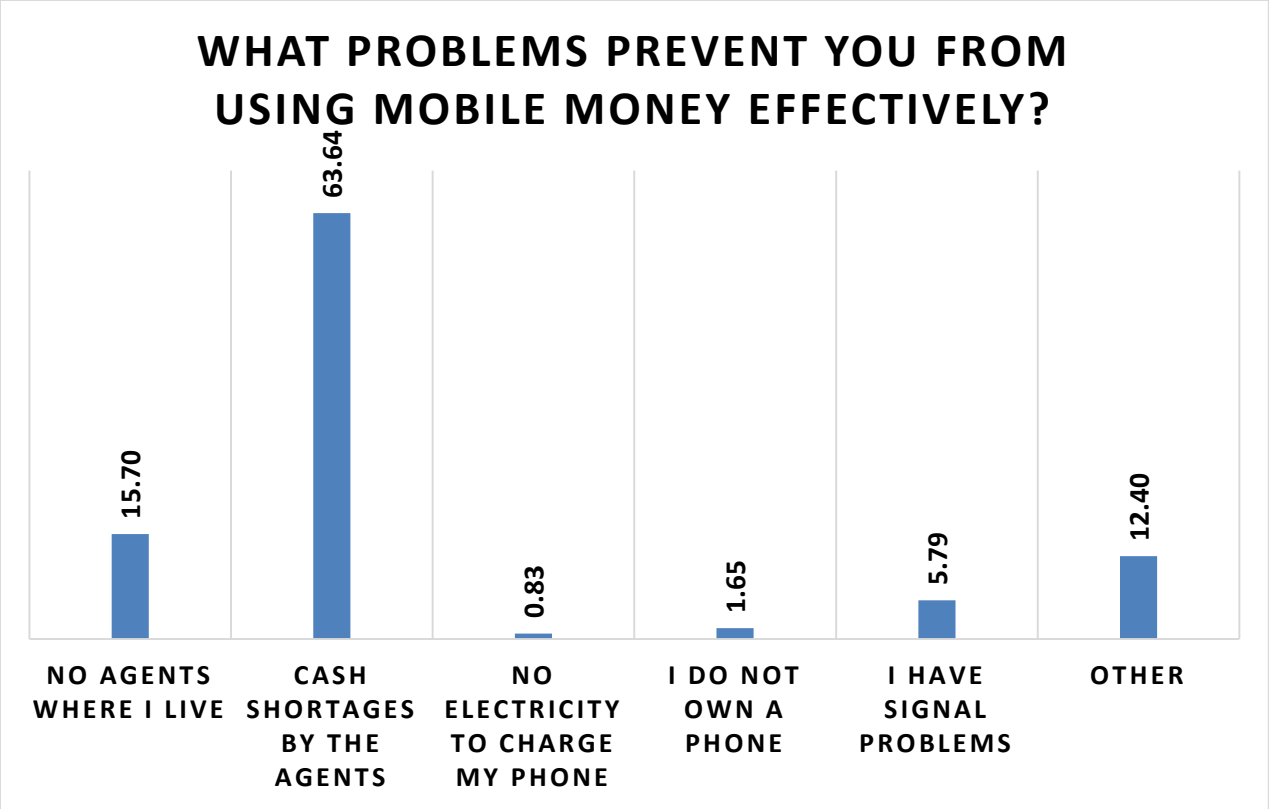

Figure 4.6: Mobile money challenges

The mobile money platform is heavily dependent on the mobile money agents. Their service level may impact negatively or positively on the uptake or wider acceptance of mobile money in the country. Once again, cash shortages ranked at 60.3% as the biggest problem faced by mobile money agents. This finding also coincides with the literature review in Haiti and many other parts of the world that indicated that cash shortages were the key barrier to effective mobile money implementation. This is followed by availability of agents at 10.7%. Sometimes an agent may be sick or unavailable to due having travelled to the super agent or for core business reasons. It seems poor quality of service is not a problematic issue with the agents since it carries the lowest percentage at 3.3%. It may also happen that the agent indeed has liquidity but lacks corresponding mobile value in order to facilitate cash dispensation. This constitutes only 9.1% of the respondents' reasons.

Table 4.7: Challenges related to mobile money agents

Agent challenges	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Too little cash (liquidity)	73	60.3	60.3	60.3
Lack of signal	5	4.1	4.1	64.5
Agent unavailable	13	10.7	10.7	75.2
Long queues at agent	8	6.6	6.6	81.8
Agent inexperienced or poor customer care	4	3.3	3.3	85.1
Agent has no mobile value (cannot debit or credit account)	11	9.1	9.1	94.2
Other	7	5.8	5.8	100.0
Total	**121**	**100.0**	**100.0**	**-**

4.10 DISTANCE TO THE NEAREST AGENT

One other interesting aspect of mobile money agents is their level of dispersion within the communities. The distance between an individual and a mobile money agent may impact the effectiveness of the service.

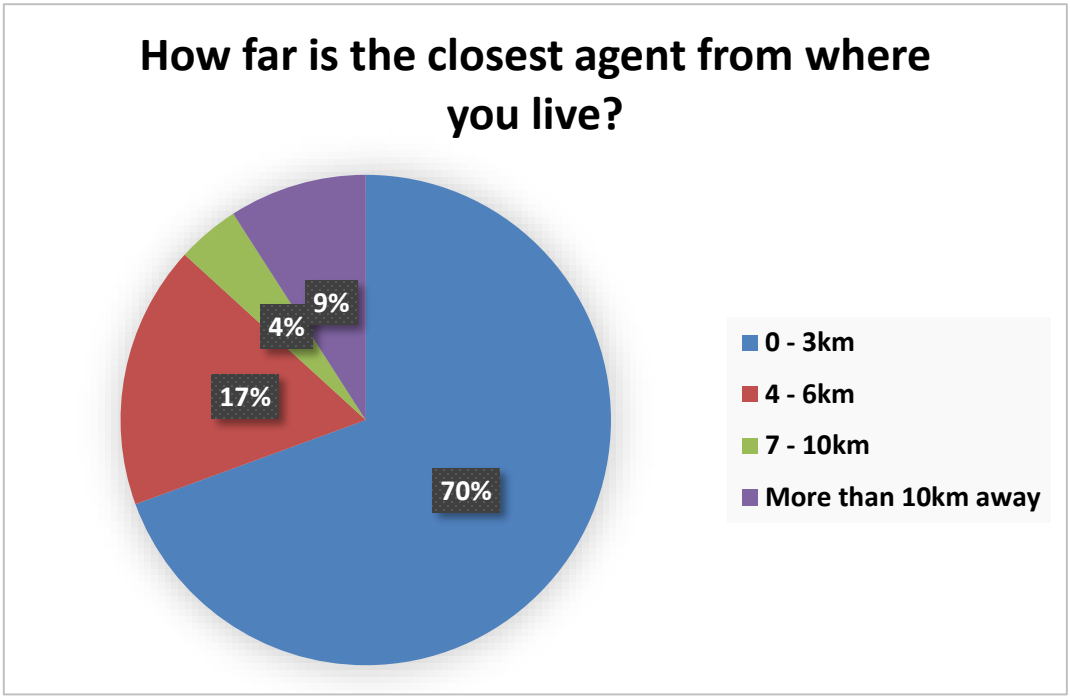

Figure 4.7: Distance from an agent

Figure 4.7 shows that the majority (70%) of the respondents were located less than four km from the nearest mobile money agent. People who were between four to six km accounted for 17%, and those between seven and ten kilometres accounted for 4%. People living furthest from an agent accounted for 9% of the responses.

Table 4.8: Cross-tabulation of geographic location and the distance from the nearest agent

Distance from the nearest Agent	Live			Total
	Highlands	Lowlands	Semi-lowlands	
0 – 3km	69.8%	69.0%	70.0%	69.4%
4 – 6km	9.4%	22.4%	30.0%	17.4%
7 – 10km	3.8%	5.2%	0%	4.1%
More than 10km away	17.0%	3.4%	0%	9.1%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**

From Table 4.8 it can be seen that the distance between the respondents' place of residence was almost the same for lowlands, highlands, and semi-lowlands dwellers. This may indicate a near homogeneous distribution of agents both in the highlands and in the lowlands.

4.11 MOBILE MONEY TRENDS

One of the most important issues about the study is what people use the platform for. Mobile top-up is the most commonly used service on the platform, with 38% of the respondents citing it as the main service used, while 27.7% of the respondents indicated that they used mobile money for paying bills. The bills include electricity and water payments, as well as insurance payments. Money transfers accounted for 19.83%, while bulk payments accounted for 1.65%.

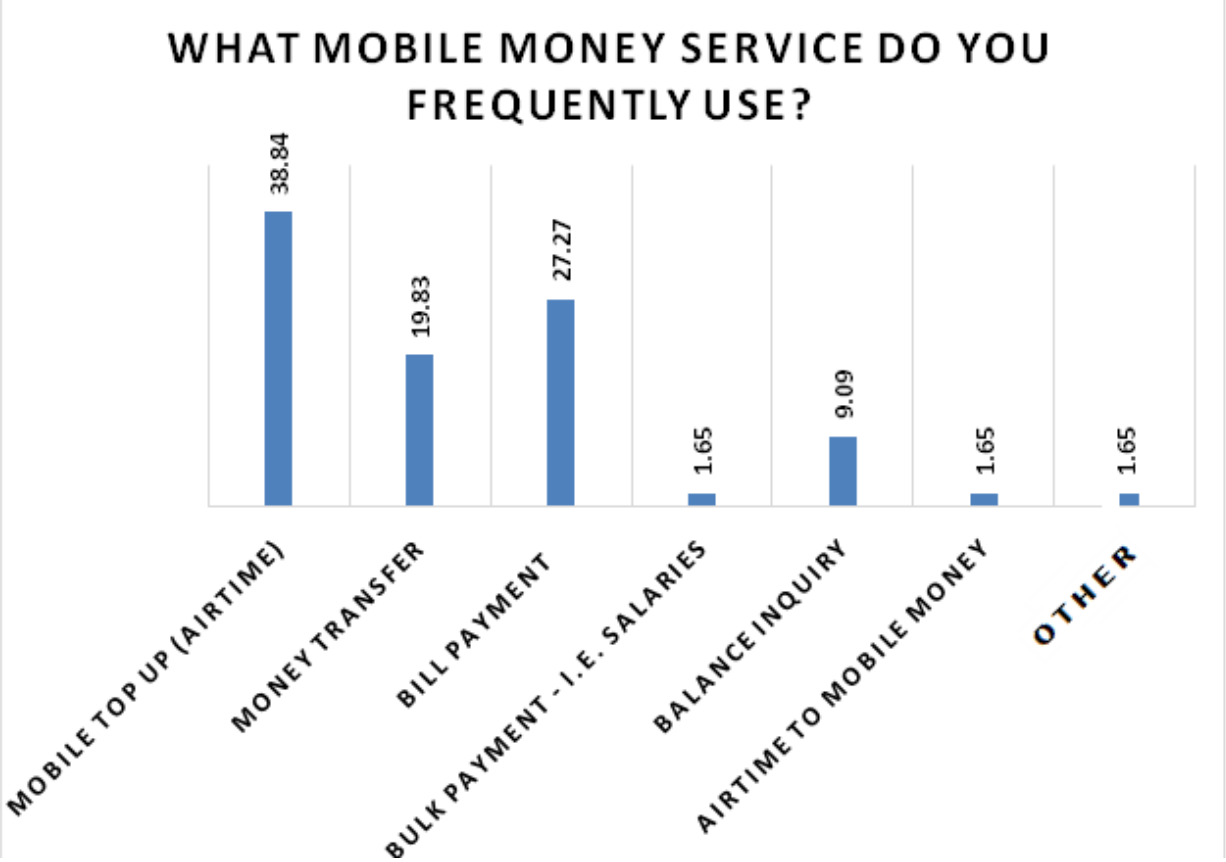

Figure 4.8: Services frequently used

A cross-tabulation of the geographic location and the service reveals that more people (43.4%) in the highlands used the platform for airtime purchases. This is followed by people in the semi-lowlands at 40% and those in the lowlands at 34.5%. This may be due to the fact that people in the highlands call more often than use data services such as Internet, thus prompting them to buy more airtime than lowlands dwellers.

Table 4.9: Cross-tabulation of common services against the geographic location

Commonly used services	Highlands	Lowlands	Semi-lowlands	Total
Mobile top up (airtime)	43.4%	34.5%	40.0%	38.8%
Money transfer	22.6%	12.1%	50.0%	19.8%
Bill payment - Insurance, electricity, DStv	13.2%	44.8%	0%	27.3%
Bulk payment - i.e. salaries	3.8%	0%	0%	1.7%
Balance inquiry	9.4%	8.6%	10.0%	9.1%
Airtime to mobile money	3.8%	0%	0%	1.7%
Other	3.8%	0%	0%	1.7%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**

It was also realised that the majority of the lowlands dwellers (44.8%) used bill payments more often than the highlands dwellers (13.2%). The lowlands dwellers frequently used bills payments for prepaid electricity and for paying of Television (DStv).

4.12 USAGE PERIODS

A large percentage (51.24%) of the respondents used mobile money continuously throughout the month. This is followed by 30.58% of the respondents who indicated using the service mostly at the end of the month. This figure may indicate salaried users who use the service at month end. Beginning-of-the-month usage accounted for 12.4% of the respondents, while users of the system during the middle of the month show the lowest figure at 5.79%.

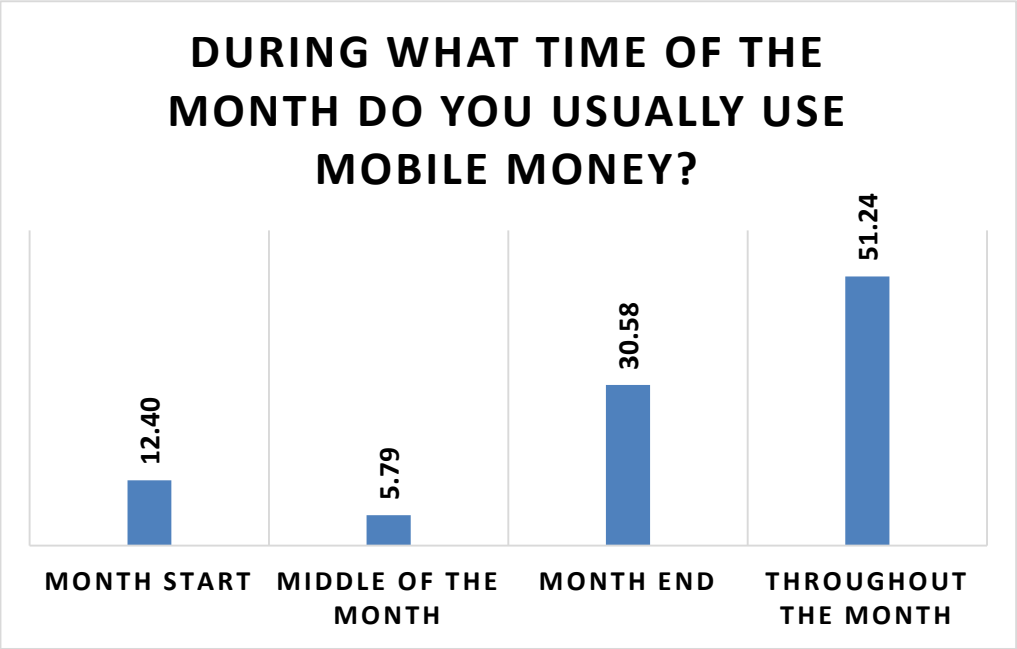

Figure 4.9: Usage of mobile money within the month

4.13 METHOD OF TRANSACTING

Performing transactions goes hand in hand with privacy. A total of 86.78% of the respondents preferred using mobile money alone on their mobile phones. People would rather trust an agent to perform a transaction on their behalf than to be assisted by a family member or friend. This was shown by 8.26% of users needing agent assistance, while 2.48% needed a close friend or relative to transact on their behalf.

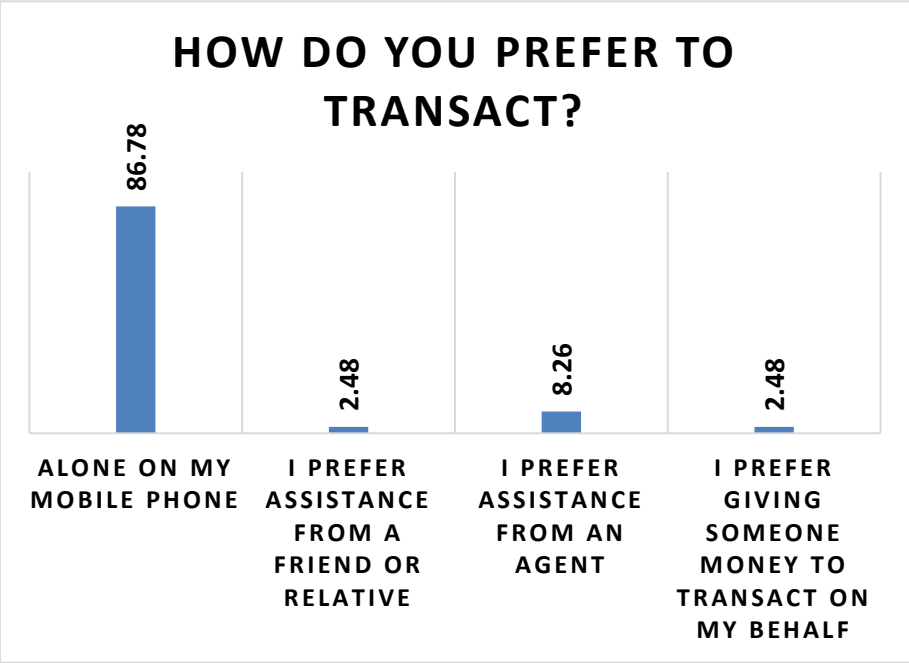

Figure 4.10: Method of transacting

The above methods of transacting were mapped against the age of the respondents. All people across all ages preferred to transact alone on their mobile phones. A total of 66.7% of the 0 to 21 year range, 79% of the 22 to 30 year range, 94% of the 31 to 40 year range, and 100% of the 40+ ranges preferred transacting privately. What is interesting is that it would be expected that the older generation would need help from a relative or close friend. However, this was not found to be the case, since all respondents preferred transacting in private. The second most favourable way of transacting was being assisted by an agent, ranging from 33.3% for the 0 to 21 age group and declining to 11.3% for the 22 to 30 age group.

Table 4.10: A cross-tabulation of age against method of transacting

Way of transaction	Age					Total
	0 - 21	22 - 30	31 - 40	41 - 50	51 - 60	
Alone on my mobile phone	66.7 %	79.0%	94.4%	100%	100%	86.8 %
I prefer assistance from a friend or relative	0%	4.8%	0%	0%	0%	2.5%
I prefer assistance from an agent	33.3 %	11.3%	5.6%	0%	0%	8.3%
I prefer giving someone money to transact on my behalf	0%	4.8%	0%	0%	0%	2.5%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

4.14 CELL PHONE TYPES

Knowledge of the type of cell phone is crucial for future improvements to the system, as has been done by Safaricom in Kenya. This Kenyan service provider introduced a mobile application for Android phones called M-Ledger, which allows mobile money users to view their transaction history and other account information (Safaricom, 2015b). On this issue, the study found that the majority of the users of the system transacted using smartphones. This accounted for 68.6% of the respondents, while 18.18% indicated using the basic second-generation (2G) phone. The tablet is the least used device type at 4.13%. Close to 10% of the respondents used the three phone types interchangeably.

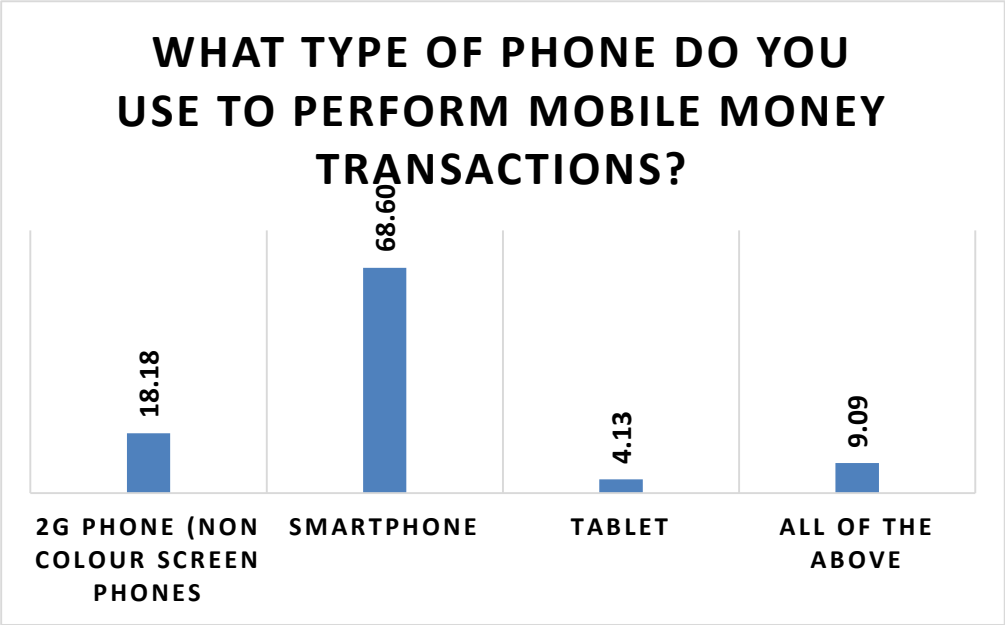

Figure 4.11: Types of phones used

Females tended to use smartphones more than males. Females who used smartphones accounted for 71.7%, while men using smartphones accounted for 65.6%. This may be that women are more social than men, hence they need phones to conveniently engage on social media sites. Smartphones are also the most sold cellular phone type today, thus leading to more people using them than any other phone type. Second-generation phones followed, with 23% of men owning 2G phones, and 13.3% of women owning 2G phones.

Table 4.11: Cross-tabulation of phone type against gender

Phone Type	Q1-Gender		Total
	Male	Female	
2G phone (non-colour screen phones)	23.0%	13.3%	18.2%
Smartphone	65.6%	71.7%	68.6%
Tablet	4.9%	3.3%	4.1%
All of the above	6.6%	11.7%	9.1%
Total	**100.0%**	**100.0%**	**100.0%**

A further cross-tabulation indicates that 0% of the youngest population group (0 to 21) used second-generation phones. This may be that the younger generations are active on social media, so they either need smartphones or tablets and do not need 2G phones. The greatest users of 2G types of phones were people in the 31 to 40 and 51 to 60 age groups, both at 33.3%. The tablet has been found to be used by the 22 to 30 age group by 8.1% of the respondents. These are the trendy groups which are most probably working and able to afford the latest phones.

Table 4.12: Cross-tabulation of age against the type of cellular phone

Phone type	Age					Total
	0 - 21	22 - 30	31 - 40	41 - 50	51 - 60	
2G phone (non-colour screen phones)	0%	9.7%	33.3%	17.6%	33.3%	18.2%
Smartphone	66.7%	74.2%	61.1%	76.5%	0%	68.6%
Tablet	0%	8.1%	0%	0%	0%	4.1%
All of the above	33.3%	8.1%	5.6%	5.9%	66.7%	9.1%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

4.15 LENGTH OF TIME

This section discusses the length of time that the respondents have been with the two systems. The majority (48.76%) of mobile money users cited to have been using the systems between six and 12 months. A little more than 71% of the respondents have been using this service for a year or less, while 28.93% of the respondents claimed to have been using this service for more than a year. Mobile money was introduced in 2012 by Econet Telecom and in 2013 by Vodacom Lesotho. What this means is that an aggregate of 30% of the platform users are indeed loyal for more than a year.

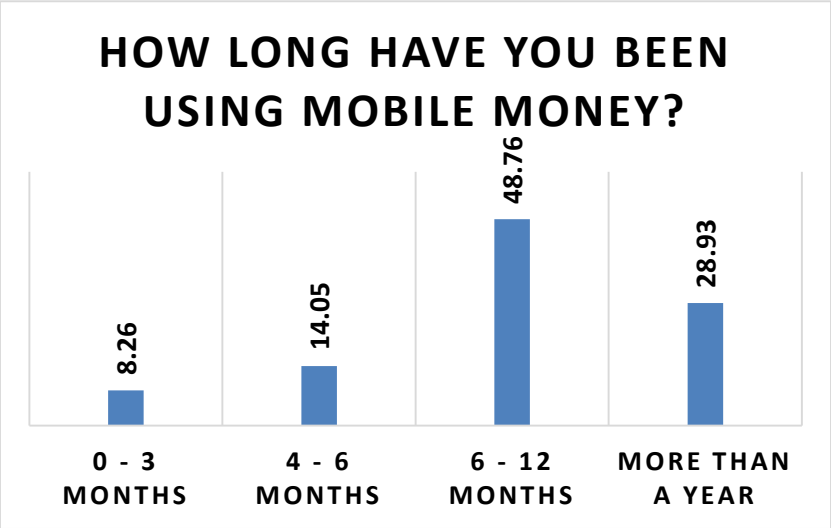

Figure 4.12: Length of time using Mobile Money

Table 4.13: Cross-tabulation showing usage period against geographic location

Usage Period	Live			Total
	Highlands	Lowlands	Semi-lowlands	
0 - 3 months	0%	13.8%	20.0%	8.3%
4 - 6 months	9.4%	19.0%	10.0%	14.0%
6 - 12 months	56.6%	44.8%	30.0%	48.8%
More than a year	34.0%	22.4%	40.0%	28.9%
Total	**100%**	**100%**	**100%**	**100%**

Table 4.13 shows that the majority of highlands people (56.6%) have a six to 12 months usage period, while a lower proportion (44.8%) of lowlands dwellers have been using the service for the same period. For the semi-lowlands dwellers, the highest percentage of 40% were those who have used the service for more than a year. It is thus evident that people in the highlands tended to use the service for extended periods of time.

4.16 AMOUNT OF MONEY SENT/RECEIVED OVER THE PLATFORM

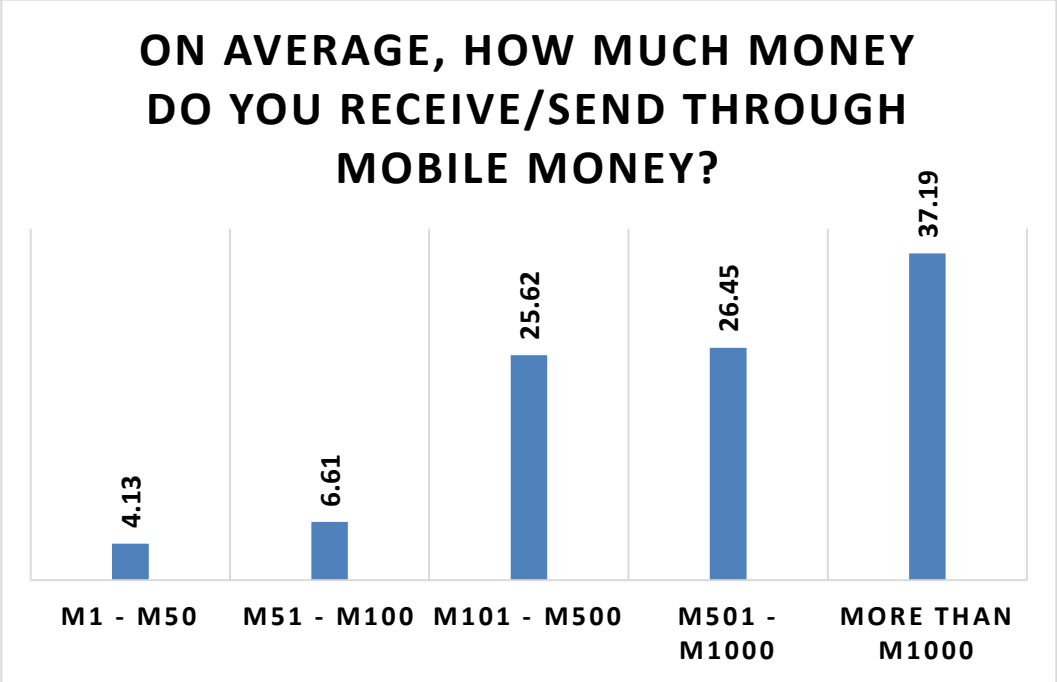

Figure 4.13: Average value of funds transacted

The highest percentage (37.19%) of people using the service sent or received on average more than M1000.00 (R1.00 = M1.00) through the platforms. The lowest number of people (4.13%) used the system for funds ranging from M1.00 to M50.00. More and more people tend to use the platform for larger sums of money. Due to its affordability, it was expected that mobile money would be used for transactions for less than M1000.00. It is also worth noting that once a transaction is in excess of M10 000, the Central Bank of Lesotho, through the mobile network agent, requires Know-Your-Customer (KYC) documents to curb money laundering through the system. These documents include the National Identity Document or passport and proof of residence.

Table 4.14: Cross-tabulation of the source of income and the transacted amount

Amount Transaction	Q Source(income)						Total
	Remittances	Farming	Self-employed	Money from parents	Employed	Other	
M1 - M50	0%	0%	7.5%	0%	0%	0%	**4.1%**
M51 - M100	0%	0%	4.5%	50.0%	0%	14.3%	**6.6%**
M101 - M500	0%	66.7%	22.4%	0%	35.0%	21.4%	**25.6%**
M501 - M1000	20.0%	22.2%	26.9%	50.0%	25.0%	21.4%	**26.4%**
More than M1000	80.0%	11.1%	38.8%	0%	40.0%	42.9%	**37.2%**
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

The cross-tabulation in Table 4.14 shows that 80% of remittances used on the mobile money platform were over R1000.00. This may be due to the fact that significant amounts of money are received as remittances from miners working abroad and thus such families tend to have more disposable income. Of those earning a living through farming, 66.7% transacted between R100 and R500. The majority of Lesotho farmers are subsistence farmers, which is why there are lower transacting amounts. A total of 38.8% of self-employed people transacted funds in excess of R1000.00. Most (40%) employed people also sent or receive larger (more than R1 000.00) sums of money through the platform.

4.17 FUNDS USAGE

From Figure 4.14, the lowest number (0.83%) of mobile money users used the funds on the platforms for loan repayments. Buying groceries accounted for 31.40% of the respondents and investment of funds accounted for 3.31% of the respondents, which corresponds with the fact that the Basotho do not have a saving culture.

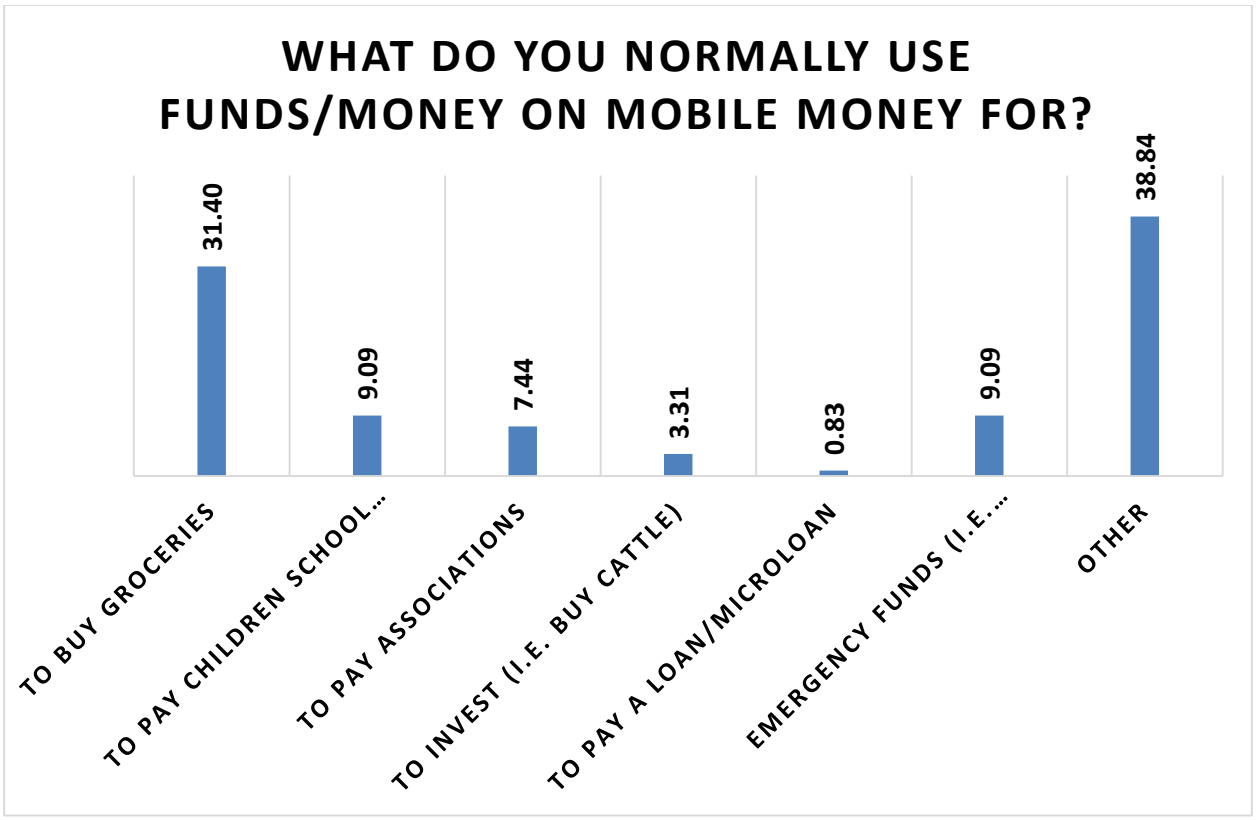

Figure 4.14: Usage of mobile value funds

The majority of the users (38.84%) responded that they used the mobile money funds for other uses. These included the following:

- to pay for DStv,
- to buy electricity, water, and
- for funds transfer.

These are cashless transactions. This therefore indicates convenience as an advantage of mobile money since these listed services would need someone to queue for such service be at a utility company premises or at a bank for a transfer.

From Figure 4.14, 31% of the respondents claimed to use mobile money funds to buy groceries. It must be noted that buying groceries directly in stores using mobile money was currently not an available service during the conducting of the study. That is to say

that the users literally have to withdraw the funds from agents and then purchase groceries. This is in contrast with Lipana M-Pesa, which is a spin-off of Kenya's Safaricom that allows M-Pesa users to buy and pay for services in stores (Safaricom, 2015b). Data mining of the usage of funds and gender revealed that 45% of the female respondents used the funds to buy groceries, while 18% of the males used the funds for the same reason. This is logical since women are more concerned with matters of the home (basic needs), which include groceries. The majority (54.1%) of males claimed to use the platform for paying their DStv subscriptions, thus indicating the preference of men regarding entertainment.

Table 4.15: Cross-tabulation of gender against usage of funds

Funds Usage	Gender		Total
	Male	Female	
To buy groceries	18.0%	45.0%	**31.4%**
To pay children's school fees	8.2%	10.0%	**9.1%**
To pay associations	4.9%	10.0%	**7.4%**
To invest (i.e. buy cattle)	3.3%	3.3%	**3.3%**
To pay a loan/micro-loan	0%	1.7%	**0.8%**
Emergency funds (i.e. hospital)	11.5%	6.7%	**9.1%**
Other	54.1%	23.3%	**38.8%**
Total	**100.0%**	**100.0%**	**100.0%**

4.18 MOBILE MONEY BENEFITS

The users of the systems were required to portray their perceived benefits of mobile money on a scale of one to five (1=strongly agree, 2=agree, 3=uncertain, 4=disagree, 5=strongly disagree). The stated benefits were speed to transact, convenience, ease of registration, ease of use, level of security, and affordability.

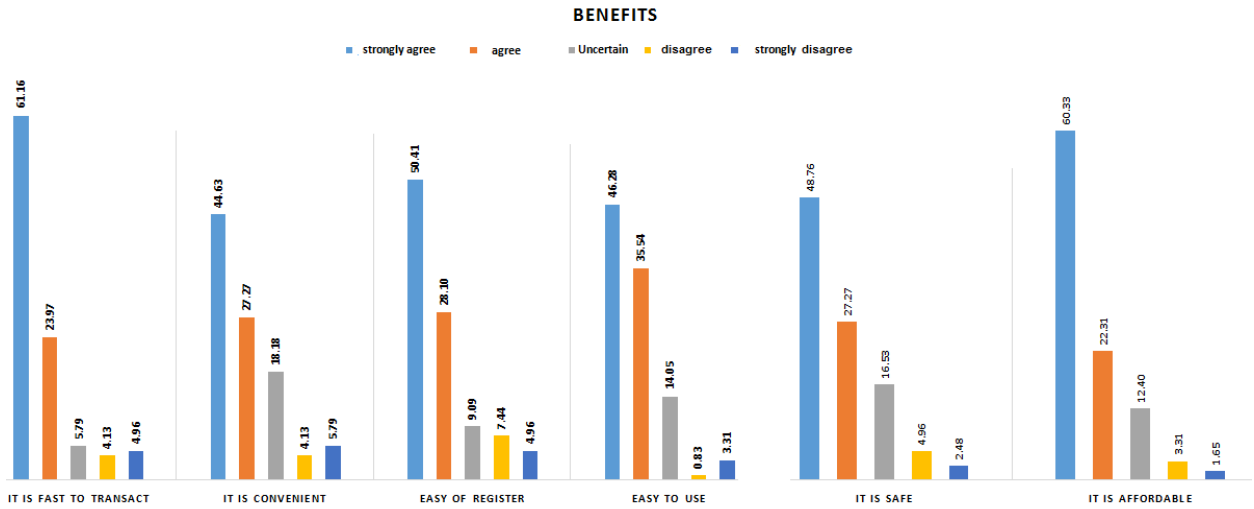

Figure 4.15: Perceived benefits of mobile money

The users claimed to very strongly agree with all the benefits of mobile money. This is indicated by the blue bars in the figure having the highest values. The majority of the respondents (61.16%) claimed that transaction speed was the biggest benefit that is earned from the system. Affordability followed with 60.33% of the users strongly agreeing that the systems are affordable to transact with. Ease of use showed the lowest level of dissatisfaction with a combination of 4.14% (disagree + strongly disagree).When combining strongly agree with agree ratings, more than 70% of the respondents agreed to the benefits (85.13% – speed, 71.9% – convenience, 78.51% – ease of registration, 81.82% – ease of use, 76.03% – safety, and 82.64% – affordability). When ease of registration is high, it is more likely to help increase the uptake and prolonged usage of mobile money since people build a perception that transacting on the system is not complicated.

4.19 AWARENESS OF THE PLATFORMS

The respondents were also required to show their levels of understanding about the various aspects of the service. The degree of agreement with the various aspects of the system far exceeds the discontent with the same characteristics. In aggregate, 79.34% (strongly agree + agree) agreed to know all the options available for mobile money

services, while 73.55% of the users in aggregate agreed to know all the services offered by the services. In addition to knowledge of the offered services, 66.94% of the users claimed to understand the tariffs of the systems.

A large proportion (21.49%) of the respondents claimed to be neutral in as far as fees were concerned. This shows that some people are not aware of the charges, thus their methods of transacting may not be efficient at times (i.e. repeating a transaction many times rather than doing one large transaction). Of the users, 86.78% agreed in aggregate with mobile money assisting them greatly in their daily lives. Of the users, 75.21% in aggregate agreed that mobile money fees were indeed reasonable, while 19.83% of the respondents indicated that they did not know how reasonable the fees were. This coincides with the understanding about the fees since 21.49% were unaware of the fees concerned with the services.

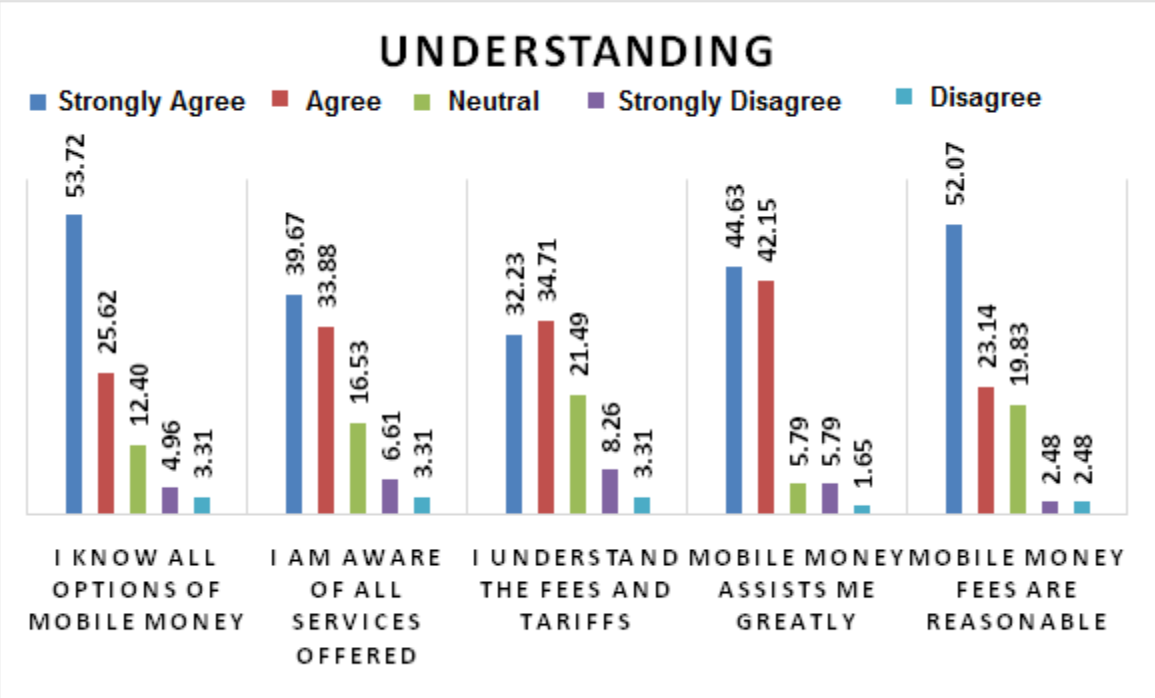

Figure 4.16: Degrees of mobile money understanding

The final part of the questionnaire asked the respondents to rate the actions they believed would greatly increase the popularity of mobile money. The level of customer care which includes, amongst others, the availability of liquid cash at the agents was selected as the most important factor in advancing the uptake or use of mobile money services. This is evident with 93.39% of respondents in aggregate agreeing with this factor. A reduction in the number of steps had the lowest levels of agreement at 65.29%, while also having the greatest level of disagreement at 18.18%.

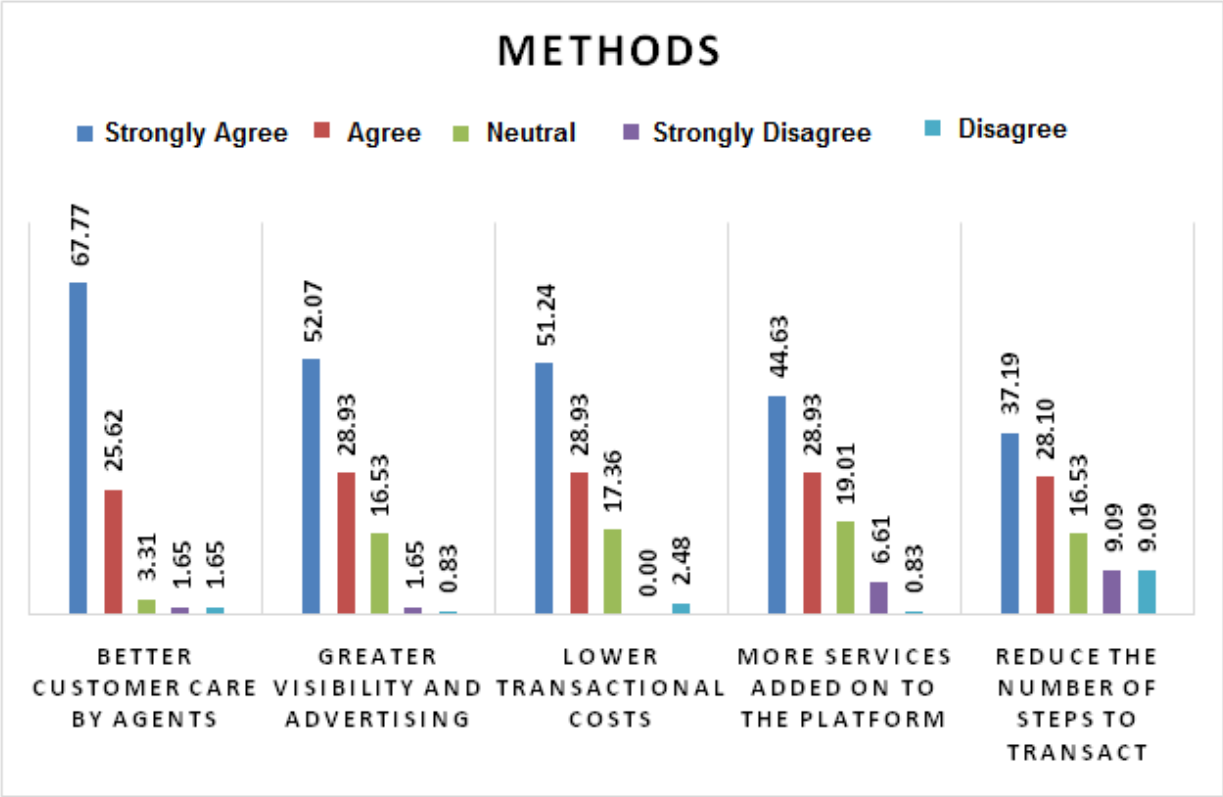

Figure 4.17: Proposed methods for increasing mobile money uptake

Other methods such as greater visibility and increased advertising by the agents had 81% of the respondents in aggregate agreeing that it would increase the popularity of the mobile money service. Lowering of transaction costs had 80.17% of the respondents agreeing that it would increase the service's popularity. The addition of extra services to the platform had 73.56% of the respondents agreeing that it would increase the uptake of mobile money. In summary, the level of service between the

mobile money users and the agents was ranked as the top factor that impacted the popularity of mobile money.

4.20 CONCLUSION

It has been shown from the responses that the mobile money service is equally used by both males and females, especially those of the working age groups. The majority of the respondents were from the lowlands. It was also further noted that the majority of the respondents were self-employed. The majority of the mobile money service users transacted amounts in excess of R1000.00.

For the challenges, it was noted that the greatest challenge faced by mobile money users was the liquidity challenges of the agents in the communities. In terms of the trends, it was found that the majority of the respondents owned and used smartphones, although the mobile money service does not necessarily require modern cellular devices such as tablets and smartphones.

A great majority of the respondents used the mobile money services for bill payments and for funds transfers from one account to another. It was also noted that the majority of the respondents had been using the system for six to 12 months.

The respondents ranked the improvement or resolution of issues and challenges around mobile money agents in the communities as the key factor for the increased popularity and wider acceptance of the service in society.

CHAPTER 5
CONCLUSION AND RECOMMENDATIONS

5.1 INTRODUCTION

The preceding chapter presented the results of the study that was conducted. In addition to the presentation, it provided the analysis of the data, as well as the probable reasons why different variables that were studied varied as they did. The different challenges associated with mobile money were discovered together with their degrees of impact on the service.

This chapter will start by giving the major findings, then proceed to provide the recommendations which arose from the gaps identified within the study. The recommendations will be of utmost importance to MNOs since part of their targets is to have as many subscribers on their networks as mobile money users as possible. The chapter will further make recommendations for further research before ending by discussing the limitations of the study.

5.2 FINDINGS

The main objective of the study was to gauge the success of mobile money on increasing the level of financial inclusion in Lesotho. Mobile money was found to be gradually becoming part of the daily lives of the Basotho. This was affirmed by the majority of the responses highlighting the usage of the service throughout the month. Larger sums of money than previously expected are also transacted over the platform thus indicating the service being used for large and small financial activities by the masses. The usage of funds is also important in establishing the success of the system. It was found that apart from bills payments a significant portion of mobile money users used it to buy groceries which form part of the everyday lives of Basotho.

The greatest challenge associated with mobile money was found to be mostly related to the interface the users have with the system, which are the mobile money agents. This was also seen as a major hurdle from the literature review that in many countries where mobile money has been implemented, available cash for dispensation was a challenge. In general, liquidity availability relies squarely on the vibrancy of the core business of the mobile money agents.

There is a strong link between people's lifestyles and the way they spend their income or earnings. People living in the lowlands tend to be part of the popular culture who watch television on a daily basis and use whatever convenient form to pay for their TV subscriptions through mobile money.

Some of the key advantages brought by mobile money is that of the ability to transact in private, as well as the convenience of transacting. People of the lowlands depend on municipal water and electricity. Thus for lowlanders to pay their bills via the mobile money platform is not surprising since they depend heavily on such utilities.

5.3 RECOMMENDATIONS

This section puts forth the recommendations which can greatly assist the uptake of mobile money in Lesotho:

- Mobile Network Operators must enhance and develop the business skills possessed by the mobile network agents. Such business training must be tailor-made for the various mobile money agents in their agent networks. This will greatly enhance the levels of liquidity available that the mobile money platform so heavily depends on. Formal forms of support must be put in place to enable the growth of the mobile money agents. This will undoubtedly be of mutual benefit to both parties.
- Secondly, in order to increase the liquidity of the mobile money agents, the provision of credit to the agents can greatly assist them with growth in their

businesses. This can be done in part by the mobile network operators offering credit to the agents or being channels through which the agents can access credit at the banks or from credit unions. Such initiatives can help transform smaller agents into super agents, thus enabling larger transactions through the platform. The mobile operator has the advantage of assessing the risk profiles of the different agents since the MNO has a full record or history of the volumes driven by the various agents.

- It is recommended that mobile money platforms in Lesotho must integrate with those in the Southern African Customs Union (SACU), especially in South Africa. This will ease the transfer of remittances from workers in South Africa to their relatives in Lesotho. Mineworkers from Lesotho have cross-border challenges associated with the transfer of funds from South Africa to Lesotho. Although this has been a steadily declining form of review from Lesotho's economic point of view (Gross National Product), tapping into this field can bolster a lot of revenue for MNOs, while also assisting greatly with convenience for the users. This is given the fact that some of the remittances recipients reside in the mountainous part of the country, thus currently making it costly for them to gain access to the funds.
- It is recommended that the mobile money operators take advantage of the advances in cellular phones technology. The majority of phones were found to be smartphones, which feature faster data transfers. The MNOs can implement such services as Mobile Ledger by Safaricom to afford the users of the system the opportunity to view their transaction history and use other features which can be added on. Such innovations can help the mobile agents greatly in monitoring their mobile accounts, while at the same time such advances can statistically help in assisting better planning and decision making.
- The MNOs are advised to increase the number of services offered on the platform. The MNOs can team up with various retailers in order to afford their customers the ability to do shopping with their cell phones more conveniently. Paying for groceries at supermarkets, fuel top-up at filling stations, and paying for medicines at pharmacies must be possible through the use of mobile money.

- The MNOs must have better customer retention strategies in place in order to retain the majority of their customers after a year. The MNOs must devise strategies to retain their existing customers. This may be achieved through incentives for those mobile money users who have been using the platform for a long time. It can also be achieved through frequent customer communication and selling more products and services to existing clients. In essence, relationship management must be greatly enhanced by both network operators in order to have more "cash cows" in the subsequent periods following the initial registration.

5.4 LIMITATIONS OF THE STUDY

This study was subject to some limitations. That is to say that the findings must be read along with the limitations applicable to this study. The limitations of the study are:

- Only a sample of the total population was considered when making the analysis and the assumptions. Therefore, generalisation to the entire mobile money population cannot be safely done.
- The observations were carried out in Lesotho. The revelations do not necessarily predict or portray the same findings in other parts of the region, continent, or the world.

5.5 FURTHER RESEARCH

A comprehensive study focused on the mobile money agents can be conducted. This would determine the key reasons why they experience cash shortages, as well as the types of businesses they operate, and how certain factors such as seasonality affect their levels of liquidity. This would enable a better understanding of the challenges they face directly from their perspective, and how best to solve them or turn them into opportunities.

5.6 CONCLUSION

Chapter 5 offered a key summary of the study findings, together with the recommendations. The conclusions were constructed from the primary data results of the preceding chapter, which highlighted the levels of penetration of mobile money, challenges associated with mobile money, trends across the platform, as well as the fruits enjoyed by the users of the service. Further research and the limitations of the study were also discussed in this final chapter.

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APPENDIX 1: QUESTIONNAIRE

Biographic Information Gathering

QUESTION 1

What is your gender?

1. Male ☐ 2. Female ☐

QUESTION 2

Where do you live?

(Highlands : Mokhotlong, Thaba Tseka, Qacha,Semonkong

Lowlands : Maseru,Berea,Mafeteng

Semi-Lowlands: Mohales Hoek, Leribe, Quthing, Butha Buthe)

1. Highlands ☐ 2. Lowlands ☐ 3. Semi Lowlands ☐

QUESTION 3

What is your age?

1. 0 – 21 ☐
2. 22 – 30 ☐
3. 31 – 40 ☐
4. 41 – 50 ☐
5. 51 – 60 ☐
7. > 60 ☐

Mobile Money Use Specific Section

QUESTION 4

Do you use mobile money (Ecocash or M-Pesa)?

1. Yes ☐ 2. No ☐

QUESTION 5

In a typical month period, how many mobile money transactions (*deposits, withdrawals, bill payments, airtime top-up and transfers*) do you make?

1. 0 ☐
2. 1 –4 ☐
3. 5 – 9 ☐
4. 10 or more ☐

QUESTION 6

How many bank accounts (local and International) do you have?

1. 0 ☐
2. 1 ☐
3. 2 – 3 ☐
4. 4 or more ☐

QUESTION 7

Please indicate whether the following are the reasons you do not regularly use bank account

1. Bank or ATM is too far ☐
2. A lot of documents needed *(proof of residence, ID or passport)* ☐
3. Bank charges are expensive ☐
4. Carrying cash is risky ☐
5. Long time in queue ☐
6. Other (*specify*)…….. ☐

QUESTION 8

What is your main source of income?

1. Remittances from spouse/relative abroad ☐
2. Farming ☐
3. Self Employed ☐
4. Social Welfare benefits ☐
5. Money from Parents ☐
6. Employed ☐

Mobile Money Challenges

QUESTION 9

What problems prevent you from using mobile money effectively?

1. No agents where I live ☐
2. Cash shortages by the agents ☐
3. No electricity to charge my phone ☐
4. I do not own a phone ☐
5. I have signal problems ☐
6. Other ……. ☐

QUESTION 10

What problems do you encounter when using mobile money?

1. Bad quality of service from the Agents (*communication*) ☐
2. Bad service offered by call center attendants (*unresolved issues*) ☐
3. Inexperienced agent ☐
4. Incomplete transactions ☐
5. Too many steps to complete a transaction ☐

QUESTION 11

What challenges do you experience that relate to Money Agents?

1. Too little cash (*liquidity*) ☐
2. Lack of signal ☐
3. Agent unavailable (*i.e. sick, late, undisclosed*) ☐
4. Long queues at agent ☐
5. Agent inexperienced or bad customer care ☐
6. Agent has no mobile value(cannot dr or cr a/c) ☐

QUESTION 12

What do people you know give as reasons for not using mobile money?

1. Lack of trust on the Agents ☐
2. Lack of trust of the system ☐
3. Content with other payments or banking methods ☐
4. Low funds involved ☐
5. Too complex ☐
6. Not convenient ☐

QUESTION 13

How far is the closest Agent from where you live?

1. 0 -3 km ☐
2. 4- 6 km ☐
3. 7 – 10 km ☐
4. More than 10 km away ☐

QUESTION 14

What conclusions do you have concerning mobile money?

1. It is complicated (*difficult to use*) ☐
2. It is convenient ☐
3. It is slow to transact with ☐
4. It is expensive to transact with ☐
5. Language is not appropriate (English vs Ses.) ☐
6. It has lower limits ☐
7. Other …….. ☐

Mobile Money Trends

QUESTION 15

What mobile money service do you frequently use?

1. Mobile top up (*airtime*) ☐
2. Money transfer ☐
3. Bill payment – Insurance, electricity, DStv ☐
4. Bulk payment – i.e salaries ☐
5. To store value (savings) ☐
6. Balance Inquiry ☐
7. Airtime to Mobile Money ☐

QUESTION 16

During what time of the month do you usually use mobile money?

1. Month Start ☐
2. Middle of the month ☐
3. Month end ☐
4. Throughout the month ☐

QUESTION 17

How do you prefer to transact?

1. Alone on my mobile phone ☐
2. I prefer assistance from a friend or relative ☐
3. I prefer assistance from an agent ☐
4. I prefer giving someone money to transact on my behalf ☐

QUESTION 18

What type of phone do you use to perform mobile money transactions?

1. 2G phone (*non-colour screen phones*) ☐
2. Smartphone ☐
3. Tablet ☐
4. All of the above ☐

QUESTION 21

How long have you been using mobile money?

1. 0 - 3 month ☐
2. 4 – 6 months ☐
3. 6 – 12 months ☐
4. More than a year ☐

QUESTION 22

On average, how much money do you receive /send through mobile money

1. M1 – M50 ☐
2. M51 – M100 ☐
3. M101 – M500 ☐
4. M501 – M1000 ☐
5. More than M1000 ☐

Benefits of Mobile Money

QUESTION 23

What do you normally use funds/money on mobile money for?

1. To buy groceries ☐
2. To pay children school fees ☐
3. To pay associations ☐
4. To invest (*i.e. buy cattle*) ☐
5. To pay a loan / microloan ☐
6. Emergency funds (*i.e. Hospital*) ☐
7. Other *(specify*) …… ☐

QUESTION 24

Please rate the benefits of mobile money:

(*Please circle the appropriate level. 1=Strongly agree, 2=Agree, 3=Neutral, 4=Disagree, 5=Strongly Disagree*)

1. It is fast to transact 1 2 3 4 5
2. It is convenient (*can transact anywhere*) 1 2 3 4 5
3. Easy to register 1 2 3 4 5
4. It is safe 1 2 3 4 5
5. It is easy to use 1 2 3 4 5
6. It is affordable 1 2 3 4 5

QUESTION 25

Please rate your understanding of the following

(*Please circle the appropriate level. 1=Strongly agree, 2=Agree, 3=Neutral, 4=Disagree, 5=Strongly Disagree*)

1. I know all options of mobile money 1 2 3 4 5
2. I am aware of all services offered 1 2 3 4 5
3. I understand the fees and tariffs 1 2 3 4 5
4. Mobile money assists me greatly 1 2 3 4 5
5. Mobile money fees are reasonable 1 2 3 4 5

QUESTION 26

What methods do you think can help make mobile money services more popular?

(*Please circle the appropriate level. 1=Strongly agree, 2=Agree, 3=Neutral, 4=Disagree, 5=Strongly Disagree*)

1. Better customer care by agents 1 2 3 4 5
2. Greater visibility and advertising 1 2 3 4 5
3. Lower transactional costs 1 2 3 4 5
4. More services added on to the platform 1 2 3 4 5
5. Reduce the number of steps to transact 1 2 3 4 5
6. Other ……..