ASSESSMENT OF THE FACTORS INFLUENCING THE ADOPTION OF MOBILE MONEY SERVICES:

A CASE OF MOROGORO REGION

ASSESSMENT OF THE FACTORS INFLUENCING THE ADOPTION OF MOBILE MONEY SERVICES:

A CASE OF MOROGORO REGION

By

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A Dissertation Submitted to the School of Business in Partial Fulfillment of the Requirement for the Award of Master of Business Administration in Corporate Management (MBA-CM) of Mzumbe University.

2019

CERTIFICATION

We, the undersigned, certify that we have read and hereby recommend for acceptance by the Mzumbe University, a dissertation/thesis entitled **Analysis of the Factors Influencing the Adoption of Mobile Money Services: The Case of Morogoro Region** in partial/fulfillment of the requirements for award of the degree of Master of Business Administration in Corporate Management

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DECLARATION

AND

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I, **Magreth P Maganga,** declare that this dissertation is my own original work and that it has not been presented and will not be presented to any other University for a similar or any other degree award.

Signature_____

Date_____

ACKNOWLEDGEMENT

Special thanks to my Almighty God for empowering me during my study up to the completion of this Master of Business Administration in Corporate Management (MBA-CM).

This dissertation has been fruitful due to assistances of several people who helped me in so many ways. I wish to direct my heartfelt indebtedness to all. I cannot mention all by names, but I would like to express exceptional thanks to the following;

Dr. Hawa Tundui who has been my supervisor for her supervision and observation that resulted to the accomplishment of my schoolwork as one of the requirements for MBA. I really benefited a lot from her skilful supervision, challenges, ideas and remarks.

However, I would like to thank Mzumbe University, particularly, the School of Business (SOB), for accepting me to join the MBA-CM course. I wish to extend special appreciations to my lecturers for their valuable programme materials during course work which laid a strong base for my study.

Moreover, I thank my parents Mr & Mrs Maganga for encouraging me to join the MBA programme at Mzumbe University. Furthermore, I thank my brothers (Anthony& Edward) and sister (Agnes) for their support, prayers and encouragement throughout. I also thank my friend Victoria Sangali for all her advice and all their contribution and motivation towards completion of this dissertation. In short my many people have been involved in one way or another to make this report complete, however I cannot mention all of them.

Exceptional appreciations to my dearest husband Kevin Rugaimukamu for his prayers, encouragement, moral and financial support in my studies.

DEDICATION

I dedicate this work to my beloved Parents Mr & Mrs Maganga for investing much in my education and showing me the importance of education. I also dedicate it to my dearest husband Kevin Rugaimukamu for his spiritual, moral and financial support throughout my studies.

ABBREVATIONS

MMS	-	Mobile Money Services
MNO	-	Mobile Network Operators
TAM	-	Technology Acceptance Model
PE	-	Perceived Usefulness.
PEU	-	Perceived Ease of Use
PC	-	Perceived cost
PT	-	Perceived Trust
PR	-	Perceived Risk
TPB	-	Theory of Planned Behavior

ABSTRACT

The study investigated the factors influencing the adoption of mobile money services in Morogoro, taking a case study of Morogoro Municipal and Morogoro district. The study specifically assessed consumer attitudes and awareness with regards to perceived ease of use, perceived usefulness, perceived trust, perceived cost and perceived risk of mobile money services in the adoption of mobile money services. Furthermore, the study examined the role of community-based factors such as locality and social amenities and consumer specific factors such as age, gender, occupation, education and income in the adoption of mobile money services. The study employed a quantitative research approach whereby a questionnaire was used for data collection. Data was collected from a sample size of 200 respondents. The study used non probability sampling techniques, whereby purposive and convenience sampling were used. The study employed multiple regression analysis techniques to substantiate the factors influencing the adoption of mobile money services. The results show that consumer attitudes with regards to perceived ease of use, perceived usefulness and perceived trust had significant effect on the adoption of mobile money services while perceived cost and perceived risk had no significant effect on the adoption of mobile money services. Nevertheless, locality was the only community-based factor that had a significant effect on the adoption of mobile money services. The presence of social amenities had no significant effect on the adoption of mobile money services. Furthermore, none of the consumer specific factors had a significant effect on the adoption of mobile money services. The research therefore proposes that the suppliers of mobile money services target specific vicinities and improve the ease of use and trust in relation to their services, also the service providers like Tigo, Vodacom, Airtel and Halotel should make sure there is good allocation of agents in all places and put more emphasize on promotion campaigns so as to make people aware about their services. The telecommunication companies should put more emphasize on the usage of mobile money services particularly in buying goods or services in remote areas and thus the service providers should come up with special offers. Lastly the government should make sure that the transactions charges are well managed by the responsible authorities.

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CHAPTER ONE

BACKGROUND OF THE STUDY

1.0 Introduction

The section introduces problem background, the statement of the problem, the objectives of the research which are categorized into general objective and specific objectives as well as research questions.

1.1Background to the Study

The result of emerging of a new technology, innovation and increased demand from the customer, lead to the change in a business sector. The emergence of mobile money services had led to new challenges and opportunities for the businesses and individuals. Riquelme and Rios (2010) argued that as advancement of technology goes up both financial institutions and consumers are taking advantages of efficiencies it conveys along. For a business to remain competitive the innovation is necessary, therefore among of the areas that have taken this advantage is mobile money technology.

Mobile Money Services (MMS) can be described as a service that uses the mobile phone to access financial services, according to Baptista &Hetmann (2010). Mobile money is also a form of payment and banking services operated under financial regulation and carried out via a mobile phone (Ho-Young, 2012). According to a World Bank (2012) study defined mobile money services as mobile payment, mobile money transfers or mobile wallet, frequently referred to as a joint banking and telecommunications services operated and executed from mobile devices such as mobile phones, credit cards or debit cards.

Mobile money services in Tanzania started in 2008 with the launch of Vodafone M-Pesamarket drive that beset the rich, the unfortunate and the unbanked (Lema, 2014). Zantel Tanzania launched Z-Pesa in the same year and upgraded its EzyPesa service version in 2012.

Tigo, Airtel and then Halotel Tanzania followed. Currently, there are several mobile money services available from telecommunications businesses that are Vodacom M-Pesa, TigoPesa, Airtel cash, EzyPesa and Halopesa. This has made Tanzania's mobile money services very competitively unique by having more than one service for mobile money provider compared to other nations However, adoption of mobile money services varies based on the level of technology they have from nation to nation. Countries such as Kenya have had quicker implementation of mobile financial services than other nations such as Tanzania (Keeler, 2012; Horne and Nickerson, 2013). Despite attempts such as promotion campaigns and services provided by service suppliers, mobile money has been adopted in a very low level. (Castri and Gidvan, 2014). Several studies were conducted to demonstrate the variables influencing mobile money services adoption. In Tanzania, Lema (2014) performed a survey on the variables affecting adoption of mobile financial services. The study hypothesized the following factors to affect mobile financial service acceptance; perceived utility (PU), perceived user-friendliness (PEU), perceived ease of use (PEU), Perceived cost (PC), Perceived trust (PT), Perceived risk (PR) and Social influence. However, the thesis revealed that it initiated perceived usefulness, perceived price, and Social influence to have a major effect on the implementation of mobile financial services. Perceived user-friendliness, perceived cost, and perceived confidence have been initiated to bring an unimportant impact towards implementation of mobile financial services in unbanked regions.

On the other hand, other studies which have been done by different scholars have shown that, apart from mobile money services, consumer-specific characteristics like age, occupation, gender and education sometimes contribute largely in implementing several service innovations which available on a particular country. For instance, Gideon's (2015) research in Kenya.

Thesis was ready to identify the correlation between customer-related variables and electronic banking selection in Kenya, a Kericho branch case of Standard Chartered Bank. The research found that variables such as client information about the presence

of electronic banking affect the electronic banking, demographic factors, education level, level of income; occupation and customer settlement have also a great influence on the choice of electronic banking whereby people have different options on choosing or adopting banking systems.

1.2 Statement of the Problem

The increase of mobile money services is noted for simple access of financial services by the exercise of mobile phone technology. Many individuals choose mobile money services as a way to make their day-to-day transactions easier, Mbamba (2017). While the implementation of a mobile money payment system has been slower for developed countries, the amount of implementation. The study on variables affecting the use of new mobile technologies in low-income households in Kenya, Nyambura et al. (2013) stated that population variables (gender, age, level of schooling and marital status) have a greater impact on the implementation of new technologies. However, Chemingui and Ben lallouna (2013) noted that many clients are encouraged to use the facilities that match their requirements well. With the virtual advantages given, the intention to use the service will also improve. Wessels and Drennan (2010) discussed, however, that perceived usefulness, perceived danger, price and compatibility influence the adoption of mobile money by consumers. Although several studies have shown the factors influencing the implementation of mobile money services, there are still considerations such as absence of knowledge and bad technology that hold back mobile banking clients from accepting them, Nyambura et al. (2013). One of the factors that holds back mobile money service adoption is the absence of understanding of what these services can be used for, this is according Pamela &Eliamani, (2015). Despite several research in Tanzania such as Chale and Mbamba (2015) and Ally and Mbamba (2009), no current studies have been conducted to identify or specifically examine customer-specific variables, community-based variables and consumer attitudes and awareness variables that affect mobile cash services adoption in Tanzania. This has developed a research gap that this study aims to fill this gap by exploring attitudes and awareness variables that

affect the implementation of mobile money services in Tanzania linked to client, community-based and consumer.

1.3 Objective of the study

1.3.1General Objective

The main objective of this study was to analyze the factors influencing the adoption of mobile money services in Tanzania

1.3.2 Specific Objectives

i. Assess consumer attitudes on the adoption of mobile money services
ii. To examine the role of community based factors in the adoption of mobile money services in Tanzania
iii. To analyze the role of customer specific factors in the adoption of mobile money services

1.4 Research Questions

The study was carried out with a quest to achieving the set objectives by seeking answers to the following questions;

i. Do consumer attitudes about mobile money services influence the adoption of mobile money services in Tanzania?
ii. Do community based factors influence the adoption of mobile money services in Tanzania?
iii. Do customer specific factors influence the adoption of mobile money services in Tanzania?

1.5 Limitation of the Research

i. Delay from respondents. This is one of the challenges that have been faced during data collection because the study used questionnaire whereby respondents were provided with questionnaires to fill and thus most of them

kept them until when they were reminded for several times through text messages and calls. Therefore, it was very difficult for a researcher as it consumed a lot efforts and money.

ii. Fear from respondents. Some of the respondents especially from rural places were not ready to provide information as they fear may be they accounts will be hacked or something will happen to them after they have provide some information and thus resulted to some of them to resist to fill the questionnaires even after showing them letter of introduction from the university and from the local government. Therefore, it makes some difficulties as the researcher had to walk extra miles and to use a lot of convincing power to change their perception.

1.6 Scope of the study

Geographically, the research work was done in the Morogoro region particularly on urban whereby Morogoro Municipal was used, peri urban whereby Mlimani Ward was used and rural places which involved Morogoro district particularly Kisaki and Dutumi. Mobile network operators (MNO) collected plenty of information from mobile money services clients. In context, a study focused specifically on three objectives, such as evaluating client attitudes (perceived easy use, usefulness, cost and trust concerning mobile money services, also examining the role of community-based factors like locality and social amenities in mobile money services execution. Tanzania's mobile money services and the role of customer-specific variables such as gender, age, education, occupation and income in mobile money services implementation. The research was guided theoretically by five theories: Technology acceptance model, Planned Behavior Theory, Social Cognitive Theory, Motivational Model, and Innovation Diffusion. All these theories have been explained in literature review.

1.7 Significance of the study

The section explains about fundamental contribution of using mobile money services and they are categorized into four groups, whereby the first group is for theoretical knowledge, the second group is for service providers or suppliers, the third group is for policy makers and the last group is for academicians who can either be students or instructors.

i. The research offers good knowledge of the motives and variables which effect the adoption and implementation of mobile money services in Tanzania as to which variables influences people to adopt or to use mobile money services in their day to day transactions.
ii. The research is essential for suppliers of mobile money services which are like Tigo, Vodacom, Airtel as well as Halotel as it has demonstrated the rank on the usage of mobile money services developed up to now (importance, difficulties and way forward). Therefore, through this study it will help these supplies to come up with new ideas and campaigns.
iii. Policymakers will use the research to make decisions about mobile money services. The research will be very helpful to police developers like government institutions on the analysis of the trend of mobile and come up with new decisions on how service providers of mobile money should conduct their business according to Tanzanians laws and regulations.
iv. Finally, this research is very essential for academics to undergo further research on mobile money services so as to help people who don't understand about the usage, importance, risk and challenges of using mobile money services because most of the Tanzanians are using mobile money transactions without understanding their strengths and weaknesses.

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1.8 Organization of the research

The whole work contains the five chapters, where by every chapter is having some subheadings which is very essential in completing this research work.

The first chapter is comprised with nine sub headings which are; introduction of the chapter which explains what is explained in the whole chapter, then problem background which elucidates the topic background from different perspectives, thereafter statement of the problem which explains on the problem from the ideal situation to the current situations, followed by the objectives of the study which consist of general objective and specific objectives, then research questions which were generated from the research objectives, then scope of the study which shows the coverage of the study, then limitation of the study which explains the challenges which have been faced by the researcher during the work and how it was handled, significance of the study which explains the importance to the government agencies, academicians, service providers and other people at large, also it contains the delimitation of the research

The second chapter is Literature review which consist of several subsections which include introduction part of the chapter which explains in brief what is contained in the chapter, then theoretical review which consist of the concept of mobile money, definition of mobile money which gives a good framework of the work and good understanding of the whole topic, theories of mobile money which explains different theories according to different scholars, empirical review literature review which review related studies which have been done by other researchers, conceptual frame work which explains the connection among variables on which they effect to one another and last subsection is research gap which differentiate the this work from the previous works.

Third chapter is Research methodology which explains about the methods used by the study. It consists of introduction of the chapter which explains the chapter in brief, followed by research design, population of the study, unit of analysis, sample

size and sampling procedure, data collection, reliability and validity and the last sub part is data analysis method which explains about the method used by the study to come up with the conclusion.

The forth chapter is Presentation of the results and discussion of the findings. The chapter is divided into seven sections, where by section 4.1 presents the demographic information of the respondents such as age, gender, occupation and education, section 4.2 presents normality statistics analysis, section 4.3 presents multicollinearity test results, section 4.4 presents multiple linear regression results of factors influencing the adoption of the mobile money services and finally the summary and conclusion of the chapter is presented in section 4.6.

The last chapter is summary, conclusion and policy implication of the study. This chapter consists of the introduction of the chapter which explains what is contained in the whole chapter, followed by summary, finding and conclusion, policy, practical implications, recommendations and area for further studies.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The section grants the review of literature on the adoption of mobile money services in different contexts. It is subdivided in three categories, the first part presents the definitions and a review of theories pertaining to adoption of new services, the following fragment presents empirical literature review while the last part portrays conceptual framework adopted for the study.

2.1 Theoretical literature review

2.1.1 The Concept of Mobile Money

Mobile money services (MMS) is a well-articulated concept in literature, it entails lot of activities together with but not restricted tolong-distance transfers, micro-payments and other casual air-time trading systems that use mobile technology to unbanked economic services. Furthermore, Jenkins (2008) explains mobile money services just as money which can be accessed and being used through a mobile phone. On the other hand, Tiwari &Buse (2007), with the assistance of mobile telecommunication systems, described mobile cash as the provision and accessibility of banking and economic services. Tanzania is one of the world leaders in mobile money transfer compared to other countries with 44% of adults having access to the service and it has 16 million subscribers who use mobile money in their day to day activities. Most of the adults are using mobile money for bills payment, making transfer to friends, family or relatives and to conduct business transactions as we can see in most places now there is policy of “lipakwa m pesa or tigopesa”.

2.1.1.1 Tanzania mobile money providers.

OnMarch 2018 Tanzania had six mobile money providers. These providers were Vodacom with M-pesa which had 43 percent on market share, Tigo with Tigopesa which had 36 percent on the market share, Airtel with Airtel money which had 17 percent market share, Halotel with Halopesa which had 3 percent on market share, followed by Zantel with Ezypesa which owned 1 percent market share andlastly TTCL which had 0.04 percent on market share.

Halotel became Tanzania's fifth mobile money supplier with Halopesa in 2016. Mobile operators in Tanzania give additional mobile financial services and mobile insurance in relation to mobile money.

Tigo introduced the first mobile insurance service in Tanzania, TigoBima, in 2012, providing cover for life and hospitalization. Tigo clients were also the first to use a global mobile money transfer service with immediate present conversion, both in Tanzania and Rwanda.

2.1.1.2 Mobile money Interoperability

In September 2014, mobile money suppliers in Tanzania started interconnecting their services with a bilateral agreement between Tigo and Airtel, formally introduced in February 2015. Then Vodacom announced its link with Airtel and Tigo after joining Zantel in December 2014 and February 2016. Tanzania was considered the first country in the world to achieve full interoperability in 2016, which is the ability of customers of different mobile services to cope directly with one another.

Through the collaboration of mobile money transfer services such as MoneyGram and Western Union, international interoperability is also a reality in Tanzania.

B-Pesa was launched in Tanzania in 2013. B-Pesa is the first prepaid Tanzanian card that allows clients to transact to any B-Pesa member bank or merchant B-PESA. B-

Pesa gives the client the flexibility to transfer cards and cards, dispense cases, deposit money and pay bills.

BitPesa, converting electronic currency like Bitcoin is an internet platform in local African currencies, which was extended to Tanzania in November 2015. Since that moment, BitPesa has offered instant payments to and from seven separate mobile money networks and over 60 banks in Nigeria, Kenya, Uganda and Tanzania.

2.1.1.3 Tanzania mobile money perspective

The GSMA demonstrates that mobile money providers will continue to improve customer experience and improve network agent efficiency, attracting more customers and encouraging greater use of mobile money services. Moreover, the graduation from mobile money services to national interoperability that accelerates transaction development in emerging markets, including Tanzania.

One of the primary problems to mobile cash development in Tanzania, however, is taxation. A mobile money tax was first implemented in Tanzania in 2013 when a 0.15 percent excise duty on transfers exceeding TZS 30,000 was imposed. The tax was substituted by the present m-money fee excise in 2014, which represents a bigger share of the price of Smaller transfers. This tax is therefore regressive and imposes a greater strain on poorer customers which, according to GSMA 2018, could possibly reverse the profits produced in Tanzania from financial inclusion.

2.1.1.4 Mobile financial services penetration in Tanzania

Mobile financial service penetration in Tanzania has been supported by the high use of mobile phone which has been an important feature in most of the developing world. The authorized business models for mobile financial service provision in Tanzania are the bank led model and the non-bankled model (Komba, 2013). Mobile financial service market currently has four products which are offered by mobile network operators (Non-Bank led model) which are Vodacom M-PESA, TigoPesa,

Airtel Money and Easy Pesa (Intermedia, 2013). The banking sector also has mobile payment systems, such as NMB Bank PesaFasta, CRDB Bank PLC SIM Banking Services, Akiba commercial bank, National bank of commerce, Tanzania postal bank, Standard Chartered Bank and DCB bank. Other banks with mobile money products include Exim bank, First National Bank, Eco Bank, Amana Bank and Barclays Bank. According to Intermedia (2013) Financial Inclusion Tracker Survey (FITS) conducted in Tanzania which involved 2980 household 63% of householdpossess or have right to use to a mobile phone and 56 percent of household have at least one active SIM card. The study also revealed that even in the underprivileged household rural, unbanked and poor (living on less than $2 a day) one half of them has handset and owns a SIM card. Agent network penetration has reached134158 and they serve 40% of the population, mobile money subscribers or accountsare 30.3 million, active users of mobile money are 9.9 million which percent of the adults in Tanzania as at 13th September (Komba, 2013). This penetration exceeds the financial institution access points and branches which serve only 12 percent of the population.

They provide a range of services from domestic and international cash transfers, mobile payments (airtime ups, merchant payments, utility bill payments and salary transfers), mobile banking (balance inquiry, withdrawals, deposit and loan services) and limited saving facilities (Intermedia, 2013).

2.1.1.5 Mobile financial service regulation in Tanzania

Mobile financial services in Tanzania are regulated jointly by the Bank of Tanzania and the Tanzania Communication Regulatory Authority (TCRA). The bank of Tanzania is mandated to approve business model, and to ensure compliance with E money issuance, protection of customer funds, Agent management, Audit and licensing of mobile financial service providers (Komba, 2013). TCRA is responsible for the regulation and oversight of the Mobile network operators (MNO) which fall within its jurisdiction under its traditional role.

To safeguard customer money MNO are required to use a trust account at a bank and abide by the BoT account TZS Billion Transaction volume management standards. The partner bank uses house the trust account through which the MNO could issue the electronic value and safely deposit the equivalence of the float (Castri and Gidvan, 2014). The value must be backed by 100 percent liquidity to safeguard the users' money.

2.1.1.6 Mobile Money Services Merits

Mobile money services have the ability to extend services beyond the official economic sector's reach. Mobile money can enhance the national payment system by offering creative methods to satisfy the transaction requirements of ordinary people, in addition to helping to organize domestic money transfers. This success calls for a better comprehension of the requirements of people, present mobile money adoption and use patterns along with associated motivations and perceptions (Drake, John, Doreen &Muyingi, 2008, p. 9).

Williams and Torma (2007) provide further theoretical and anecdotal proof of mobile financial services ' effect. They claim that banking access affects low-income households in two ways. First, access to finance advantages are solely enhancing the quality of people's life, such as saving time, decreasing the risk of crime, and facilitating transactions. The second merit presents extra advantages resulting from the records of economic tracking.

Financial records decrease information asymmetries, enabling for useful financial instruments including debt funding (like mortgages) and long-term savings goods (like pensions). Although the connection between mobile money and more advanced economic products has yet to be systematically documented by scientists, anecdotally there is an improvement in the quality of life resulting from the use of mobile money services.

Heyer and Mas (2009) give a case of South African ranch specialists who recently needed to go for quite a long time, spending impressive entireties, to buy broadcast appointment, however would now be able to do as such "for short of what one rand and kill all the movement time (p. 4)". Versatile cash is valuable as a retail installment stage since it has broad venture into enormous portions of the populace. The portable cash operational outline keeps up that versatile cash has made business open doors for enterprising clients to determine a beneficial wellspring of salary (Jenkins, 2008).

Kleine (2010) recognizes client control as a key component of intelligent advances (p. 8). It is likewise every now and again referenced as an advantage of versatile exchange administrations (Aderonke and Ayo, 2009, p. 20). Client control is characterized as the degree to which shoppers can decide the planning, substance, and arrangement of an exchange. Pickens, Mark, David and Sarah (2009) feature that individuals' view of authority over circumstances improve the probability of their positive sentiments toward the experience (p. 12).

Moreover, client control persuades they can impact their objective fulfillment procedure and along these lines increment their certainty about the result (Kleijen et al., 2004, p. 15). Cash versatile administrations, by giving buyers constant, on-request access to administrations, give benefits that will upgrade their apparent worth.

One of the reasons mobile money has attracted significant attention is the expectation that earlier excluded communities will be able to provide accessible financial services. Financial inclusion literature highlights that "banking the unbanked" can lead to better decision-making, more efficient markets, and other development goals (Lyman, Pickens & Pretorius, 2008). Mobile phones have appeared throughout the developing world as one of the most widespread techniques to replace traditional brick-and-mortar infrastructure, such as bank branches.

Ivatury and Mas (2008) give extra proof about the early employments of cell phones as monetary administration stages. Cost decrease, which can be passed on to the client, is a noteworthy advantage. In the Philippines, a regular exchange through a bank office costs the bank US$2.50; this would cost just US$0.50 on the off chance that it was computerized by utilizing a cell phone. In Pakistan, Tameer Bank evaluated that opening a bank office in a Karachi ghetto would cost multiple times what a retail specialist would cost, and month to month working expenses would be US$28,000, contrasted and US$300 for an operator.

Mobile banking has the ability to provide these services of greater quality. Mobile networks are usually prevalent in developing nations, as opposed to traditional branch banks, enabling low-income and rural population sections to access the service and decrease transaction costs. Electronic transactions of informal financial services are carried out in real time, are monitored and hence reliable.

2.1.1.7 Factors influencing the adoption of mobile money services Reliability

The e-payments must be accessible online 24 hours per day. That is the task arrangement of e-installment ought not present disappointments whenever (Neuman and Medvinsky, 1995). Unwavering quality alludes to the consistency of a measure. A test is viewed as solid in the event that we get a similar outcome over and over. For instance, on the off chance that a test is intended to quantify characteristic, (for example, introspection), at that point each time the test is regulated to a subject, the outcomes ought to be roughly the equivalent. Lamentably, it is difficult to ascertain unwavering quality precisely, however it tends to be assessed in various ways (Cherry, 2011). Therefore, if the mobile money system is reliable it influences people to adopt mobile money services as people will be sure to get service throughout unlike if the system is not reliable people will not adopt the system since they fear not to get services every time they want the it as the system won't be there due to several reasons such as network problem. Also, if an error occur it fears them not to get compensated on time

Latency (Clearing Time and Frequency)

Payments should be transferred at a constant rate even during peak load periods. Customers and merchants should be ready to use e-payment procedures without significant delays in approval and clearing (Schmidt & Muller 1997). In a network, latency, which is synonymous with delay, is an expression of how long it takes to get a data packet from one point to another. In some uses, latency is measured by sending back a packet to the sender and latency is considered to be the round-trip time (Rouse, 2006). The latency hypothesis seems to be that information should be transferred immediately (without any delay) between one stage and another.

Costs

The adoption of e-payment schemes involves two types of expenses: fixed and transaction costs. Installation of payment facilities such as card readers and payment software refer to fixed costs. These transaction costs are incurred by merchants and clients each time a company exchange takes place. Because many online transactions require micropayment, low fixed and transaction costs are critical to e-payment systems ' popularity (Chou, 2002). Thus, the low transaction cost results in the impact of mobile money services as opposed to elevated transaction costs reduce the impact on mobile money services adoption.

Trust

The perceived trust towards mobile money services can influence the adoption either positively or negatively. If people trust the service provider, it is very easy for them to adopt it and influence other people to adopt it but if there is no trust it is very difficult for the people to adopt it and hence, they will discourage others not to adopt the service.

Risk

The higher the risk the lower the adoption of mobile money services and the lower the risk the higher the adoption of mobile services. That is if risk is perceived to be

low by the people it influences them to adopt the service since most people fear to lose money unlike when the risk is perceived to be high it discourages other people to adopt the service

Awareness

If people are familiar with the service on the usage and its advantage the adoption will be very high unlike when people are not aware about the service, it becomes very hard for the them since they don't know the calculated risk and how it is advantageous to them in the performance of their day-to-day operations or transactions.

Locality.

This factor can influence the adoption of mobile money services where by it depends on how individual resides, people from urban areas are more likely to adopt the service since in urban there are a lot of promotions and also agents are everywhere on streets for cash in and cash out unlike when people reside in rural area where they don't get enough promotions and exposure concerning the service it is hard for those people to adopt it, also few agents and inadequate float in rural areas discourage people to join the services.

Social amenities.

These includes social services such as access to tap water and electricity. The presence of these services influence people to adopt mobile money services since it makes easier for them to pay for their bills and the absence of these social services does not influence people to adopt mobile money services since they don't need to make essential transactions like water bill payment or electricity payment.

2.1.1.8 Barriers on the adoption of mobile money services

Despite several efforts which have been done by the government in hand with service providers on emphasizing people to adopt mobile money services there are still factors hindering the adoption of mobile money services.

Insufficient understanding of the services

Most registered m-money consumers regard m-money mainly as a service to send or receive money, regardless of the supplier. Registered consumers kept this perception irrespective of whether they were from rural, urban or urban regions. Fifty-five percent of non-users also believe that the service is only intended to send or receive cash. One in five thinks m-money can be used in various respects, for example, to save money or pay non-remittance bills.

Problems with mobile money agent

In the previous 12 months, 72% of all registered m-money customers have encountered agent-related issues. All suppliers had the same top three issues: the officer was absent, had no / did not have enough e-float, and had no / did not have sufficient money.

Eighty-eight percent of users of Airtel Money, 84 percent of users of Vodacom M-Pesa and 77 percent of users of TigoPesa had issues with agents. A formal complaint was lodged by very few registered consumers, making it hard for suppliers to monitor and resolve the issues.

Nine out of ten rural registered users reported problems related to agents. The proportion of complaining urban consumers was also high: Vodacom M-Pesa 80%, Airtel Money 81%, and TigoPesa 79%.

Technical issues

Most registered customers said it's simple to register and use m-money services. However, one-quarter of all individual registered customers said they needed

assistance from other individuals when carrying out transactions with m-money. Registered consumers use m-money officers most frequently to assist them with transactions. Nine out of ten registered customers of Vodacom M-Pesa, Airtel Money and TigoPesa said that signing up for and using m-money facilities was somewhat or very simple.

Twenty-three percent of registered customers of Vodacom M-Pesa, fifteen percent of registered users of Airtel Money, and 18 percent of registered users of TigoPesa said they could not withdraw cash on at least one occasion. Regardless of the provider, for the majority of users, the problem was solved within half a day; few had to wait longer than a day.

Among the top purposes behind not having the option to pull back cash, three were because of issues with operators which are related with specialist's framework down whereby more often than not clients of portable cash experience this issue for quite a while which dishearten them a great deal as you may find that they truly need to trade out or to money out, inaccessibility of operators and insufficient buoy whereby the majority of the specialists need more money for clients particularly when they need clients need to trade out or out a ton of cash.

Lack of national ID

This is one of the factors that hinder the adoption of mobile services since the simcard registration process requires a national identity card on the registration process where most people do not have identity cards, so this also affects the adoption process as people cannot be registered unless they have an ID card.

Language barrier

This is one of the challenges that people fail to communicate clearly, particularly in rural areas where most people don't talk Swahili instead of speaking their vernaculars and therefore acceptance becomes very small.

Cost

The transactions cost is very high, and hence it discourages people to adopt mobile money services since people are very sensitive to cost. Therefore, any changes in the transactions process discourage other people on the adoption of mobile money services.

Lack of information

This is a very problem in the adoption of mobile services since information concerning the services like new offers and transactions charges are not well communicated to the customers and agents and hence it leads to wrong transactions which results to discourage other people to adopt mobile money services. Also sometimes when wrong transaction is done the responsible department does not provide feedback to the concerned people.

Inadequate of agents especially in remote places

In rural areas there are very few agents with limited amount float and hence it discourages much people in rural areas to adopt mobile money services since the service is not convenience and reliable to them.

Lack of trust or Insecurity

This is another challenge which hinder the adoption of mobile money services where by now days there is a lot bad conduct of these transactions where people are stilling money from mobile money service subscribers by sending them wrong text messages and give them wrong information in order to still from them. Therefore, this make other people fear to join with these mobile money services from service providers.

2.1.2 Theories of mobile money adoption

Different theories were used in the earlier reading to observe the variables that determine in various situations the implementation of mobile money services. The research detects e-payment-related primary theoretical viewpoints. Acceptance of

technology model planned behavior theory, social cognitive theory, motivational model, and innovation diffusion theory. Although most studies have looked into the acceptance of mobile money services in accordance with the technology acceptance model (Lema, 2014; Isaga, 2015), this study discusses this model along with other models that have been used prominently in the study of technology adoption and thus deduce detailed and comprehensive issues that define the acceptance of mobile money services.

2.1.2.1 Technology acceptance model

An acceptance of new service or technology by TAM customers is determined by the intention of the user to use the system, which is in turn determined by the system views of the user (Davis, 1989). TAM further indicates that two convictions perceived user-friendliness and perceived usefulness are crucial in explaining user-intention variances. Where usefulness is considered the degree to which an individual think that using a specific service will make his work easier and the perceived ease of use is described as the degree to which an individual think that using a specific scheme would be effortless (Davis, 1989). These two convictions of conduct, perceived usefulness and perceived ease of use, then led to the intention of individual conduct and real behavior. This model has been extended to include other variable customer behavior affecting to be applicable in other areas concerning technology application and the use of new services.

This model has been extended to include other variable which influences customer behavior in order to be applicable in other field which involves technological adoption and the use of new services.

2.1.2.2 Motivational Model

Motivation is a behavior which deals with the setting, according to Deci (1975), and tends to motivate the need of a person to feel skilled. This intrinsic drive will diminish if the individual does not enjoy the activities. Extrinsic motivation actions,

however, related extrinsic rewards, which subsequently correlated with the fulfillment of the archiving objective set main drives. Likewise, when mobile money services are adopted, induced motivation by promoting accessible mobile money services can be useful in affecting mobile money services.

2.1.2.3 Theory of Planned Behavior

Planned behavior theory indicates that perceived behavioral control should become a critical element of m-payment acceptance as subscribers do not have complete control over their internet payment transactions. There are two elements of perceived behavioral control, namely as "self-efficacy" and "facilitating circumstances" (Mathison, 1991; Taylor & Todd, 1995).

Self-efficacy can be defined as self-confidence of an individual in his or her behavioral capacity (Bandura, 1982); while facilitating circumstances that represent the resources required to participate in conduct (Triandis, 1971). Planned behavior theory captures the inner psychological factors through which countless external factors studied in studies on Information Systems (IS) attain their impact on customer acceptance and can provide a common frame of reference within which to incorporate different lines of investigation (Jhao-Yin Li, 2008).

2.1.2.4 Innovation Diffusion Theory

Rogers (2003) says that it is possible to classify adopters of any fresh development or concept into one of five classifications: innovators, early adopters, early majority, late majority, and laggards. After evaluating a range of prior research on innovation diffusion (Rogers, 1983, 2003) highlighting the primary factors affecting innovation acceptance, five innovation characteristics are identified: Compatibility, Relative advantage Observability, Complexity, and Trialability (see Rogers, 2003). The main problem of diffusion research on innovation is how innovations are being adopted and why innovations are being adopted at separate prices. "(Rogers, 1995) goes on to

state that innovation, time, communication and the social system are four main elements of diffusion.

2.1.2.5 Bandura's Cognitive Theory

Cognitive theory (1986) defines the connection between the behaviors of a person, personal factors like cognitive abilities or attitudes, and the environment. Everyone can be affected and influence each other. The theory of social cognition is a self-confident perspective that allows individuals to exercise control over their ideas, emotions and behavior, "What individuals think, believe, and feel affects their conduct" (Bandura, 1986). As human life is not lived in isolation, in his perspective of human behavior, "No man is an island," individuals are working together on mutual convictions about their skills and common ambitions to enhance their lives. Therefore, environment and social systems have a huge effect on human behavior.

2.2 Empirical literature review

The chapter assess previous research works on factors influencing mobile money services execution in different circumstances. According to Zikmund et al (2010), empirical literature review is a direct search for published work involving books and newspapers. It is a complete survey of previous research-related investigations.

2.2.1 Early Studies on Mobile Money Service Adoption

Lema (2014) investigated factors affecting the execution of mobile financial services for the unbanked population in Tanzania. The researcher used the model of technology adoption as the basis for his research model Using a sample size of 206 participants and using regression analysis methods, the research discovered that perceived usefulness, perceived price, and social influence had a major impact on the implementation of mobile financial services. Nevertheless, the study found insignificant difference in the adoption of mobile financial services between males and females among the unbanked.

Isaga (2015) observed the determinants of mobile money services adoption in revenue collection in Tanzania, specifically looking Confidence and safety, social factors and financial factors affect technological factor. The research used 180 Temeke tax region participants and used a predictive step-by-step assessment. The findings proposed that the application of mobile payment schemes is influenced by non-repudiation, latency, price and safety declaration. In addition, hypotheses based on reliability, customer base, ability to transform money, anonymity, privacy, and transaction processes were negligibly dismissed the results specified that the study supported the technological acceptance model

Mbamba (2017) evaluated the acceptance of mobile financial services in the light technology acceptance model by clients in Tanzania. The research randomly chosen two hundred participants from the Kinondoni district in Dar-es-salaam, made up of both mobile money services customers and non-users, and employed regression analysis methods. The study shown the adoption of mobile financial services is positively linked to employee consciousness, perceived usefulness and perceived profit, but is detrimental to cost impacts. Nevertheless, the research showed that respondents ' population features (gender, age, and revenue level) were among the variables that moderated mobile financial services acceptance.

Maitai and Omwenga (2016) investigated the factors affecting the mobile money transfer strategy in Kenya's telecommunications industry. The study specifically looked into the role of consumer behavior, resource availability, technology and user attitudes in the Adoption of the telecommunications mobile money transfer policy in Kenya. The study used a sample of 156 respondents randomly selected from the target population. Using regression analysis methods, the research disclosed that consumer behavior, availability of resources, and customer attitudes were important considerations in Kenya's implementation of the mobile money transfer policy for telecommunications.

Pako (2015) investigated the factors influencing mobile cash services in Botswana's banking and financial sectors. This study examined factors affecting the execution of mobile money services in the banking and financial industries of Botswana in the light of the Technology Acceptance Model (TAM) and demographic variables (individual age, income, level of education, bank account) from the literature on mobile money service execution. The research used a closed-ended Likert-like questionnaire that was administered from a targeted sample of 200 mobile banking clients and non-users from four Gaborone-Botswana regions to a total of 190 respondents. In terms of population characteristics, stratified random sampling was conducted to ensure diversity. Results assessment indicated that gross revenue and ownership of bank accounts seemed irrelevant in determining the use of mobile money services in Botswana. However, the age of individuals appeared significant in determining whether or not an individual was using mobile money services, with more young people preferring to use mobile money services than older people.

Aboelmaged and Gebba (2013) observed at the implementation of mobile financial services, integrating TAM and the Planned Behavior Theory (TPB) variables in Dubai. The research used a survey layout and was used to obtain information with a sample size of 119 participants. The research used the model of regression as an analytical unit. Planned behavior theory presumed that people were reasonable decision-makers (Li, 2010). Three perceived constructs regulate the behavior, perceived subjective norms, and attitude affect their decisions (Azjen 1991 in Li, 2010). Their mixed model has five constructs perceived to be user-friendly, perceived usefulness, perceived control of conduct, perceived subjective standards, and attitude. Aboelmaged and Gebba (2013) discovered that attitude; subjective norm and perceived usefulness had a major effect on the implementation of mobile banking while perceived user-friendliness and cognitive control had no important effect on adoption.

The study conducted by Hamza and Shah (2014) implemented perceived compatibility and social norms in Nigeria and discovered that social norms are important in anticipating the implementation of mobile financial services along with utility and user-friendliness. In anticipating the implementation of mobile payment, perceived compatibility discovered not important.

Tobbin and Kuwornu (2011) looked at the adoption of mobile financial services in Ghana. Their model investigated the effect of comparative advantage, ease of use, usefulness, trialability, risk and confidence. Risk was the only non-significant factor, but other variables influenced mobile financial services adoption.

2.3 Research Gap

Few studies concerning mobile money services being adopted in Tanzania (Lema, 2014; Isaga, 2015). Moreover, most studies that have been done by many scholars in different contexts and regions in Tanzania, have only emphasized on the factors deduced from the technological acceptance model alone and ignored other factors which also have much influence on the adoption of mobile money services. The study wants to follow Pako (2015) and extend its analysis beyond the technology acceptance model and incorporate community-based factors such as locality and social amenities like access to tap water and electricity and customer specific factor such as social demographics characteristics (age, gender, occupation, income level and education level. Furthermore, the study goes beyond the descriptive analysis and establishes the relationship between variables using multiple regression analysis techniques to analyze on how these factors influences the adoption of mobile money services.

2.4 Conceptual framework

From the literature assessment and for the purpose of this research, the research structure comprises of variables affecting the acceptance as autonomous variable of mobile money services that are consumer attitude and consciousness, community-

based variables and customer-specific variables (age, gender, occupation, income and education) and the implementation as dependent variable of mobile money service.

In this study the independent variables involve consumer attitude and awareness (risk, ease of use, trust, cost &usefulness), community-based factors (locality whether a person resides in urban or rural and social amenities such as access of tap water and electricity) and customer specific factors (gender, age, education, occupation, and income). On the other hand, the dependent variable is adoption of mobile money services. Therefore, changes made in independent variable resulted to either positive or negative effect to the dependent variable.

The independent variables in the conceptual framework are divided into three groups, the first is consumer attitude variables. In this study we check the influence of consumer's attitudes with regards to risk, ease of use, trust, cost and usefulness of mobile money services. That is perceived risk, perceived ease of use, perceived trust, perceived cost and perceived usefulness of mobile money services by the consumers. Perceived risk is uncertainty about the outcome of using technology (Chitungo and Munongo, 2013). Lee, (2009) describes perceived hazard as a potential loss resulting from fraud or a hacker that threatens the safety of an online bank user. Fraud and hacker intrusion can result in economic loss to clients and infringe consumer privacy (Lee, 2009).Lee (2009) identified five perceived facets of risk that include financial risk, risk of security or privacy, social risk, risk of time and risk of performance.

Cost is described as to what extent individual thinks it would cost cash to use mobile banking (Munongo and Chitungo, 2013). Transactional costs may include service charges, mobile network transmission fees (including SMS or data) and expenses for mobile devices (Chitungo and Munongo 2013). According to Lule (2008), the cost benefit pattern is crucial for both perceived utility and user-friendliness. Masinge, (2010) presents low-income individuals with low buying power and sensitivity to cost.

In addition, Micheni, Lule, and Muke (2013) claim that if clients perceive mobile cash's acceptable cost, they will take it easier and then use it. To assess this building, a five-point Likert scale that uses discrepancy, powerful disagreement, either disagreement or disagreement, was used to examine the extent to which participants agree or disagree with the implementation of mobile cash services.

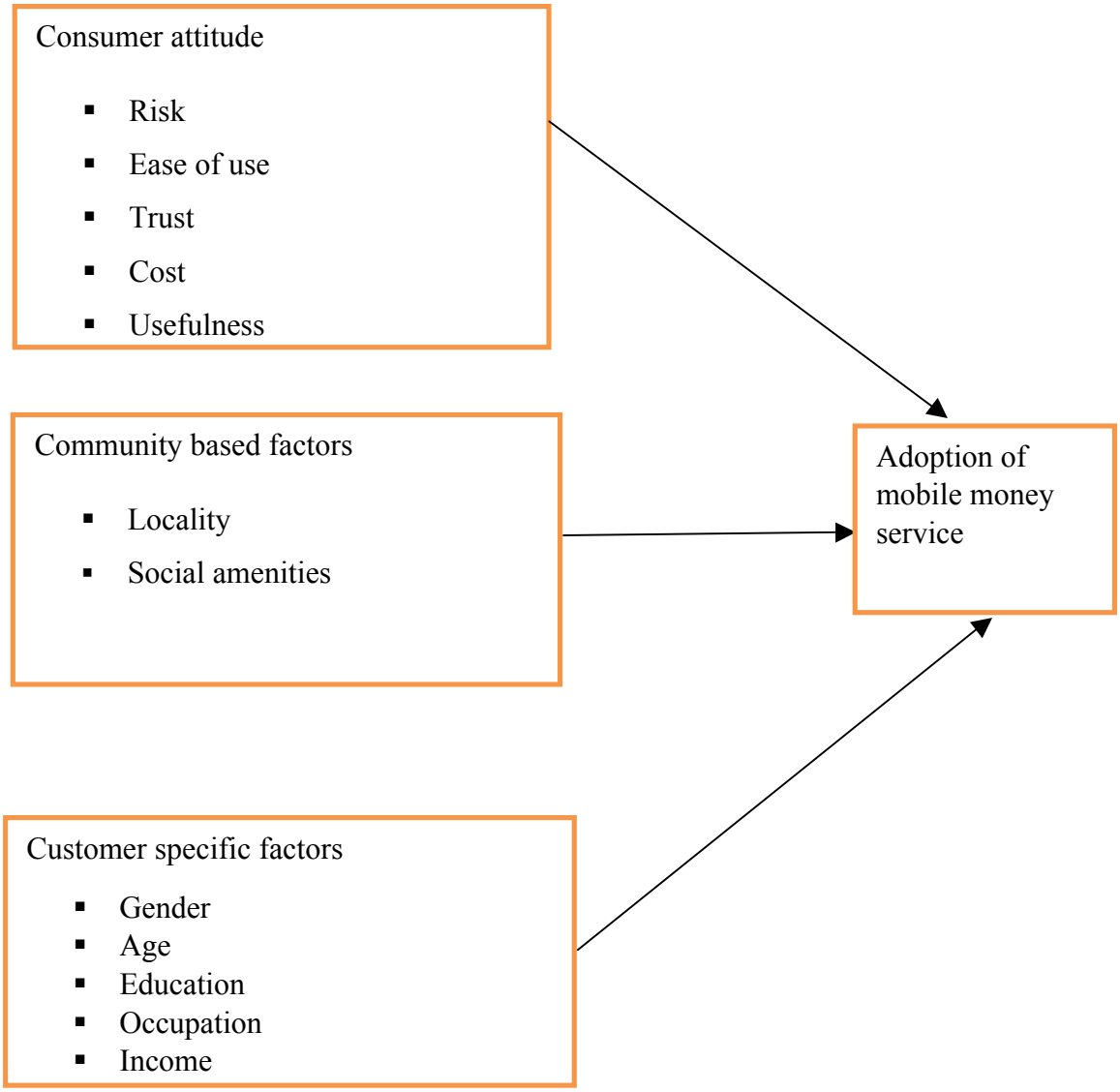
Perceived utility is connected with technology-based efficiency (Aminet al 2007). According to Davis (1989), perceived utility is the degree to which a person thinks it would enhance the effectiveness of his or her job by using a particular system. Several studies discovered that perceived usefulness had a major impact on the adoption of mobile financial services (Aboelmaged and Gebba 2013; Chitungo and Munongo, 2013; Davis, 1989; Li, 2010; Sayid, Echchabi, and Aziz, 2012). A five-point Likert scale will be used to measure this construct. Dass and Pal, (2011) have described confidence as a psychological expectation that a trusted portion will not act opportunistically. Therefore, higher levels of confidence in a service provider will result in a user's greater intention to participate in mobile cash transactions (Masinge, 2010). Therefore, the higher the perceived utility the higher the adoption of mobile money services and the lower the perceived utility of the service leads to decrease in the adoption of mobile money services.

Davis (1989) defined ease of use as the degree to which an individual believes that using a particular system would be effortless. The impact of perceived ease of use on a user's intention to adopt an innovation through perceived utility, either directly or indirectly through perceived utility. Thus, the higher the perceived ease of use influences the adoption of mobile money services which the lower the perceived ease use of a certain innovation leads to decrease in the adoption on that new technology.

The second group of determinants are a community-based variable that is Availability of social amenities like electricity and water supply and locality. The implementation of mobile money services may have a beneficial effect as it facilitates payment for such services as it need payment to be done through mobile

money. The locality may also influence the extent to which mobile money services are adopted as when people shift from urban to rural it influences positively the adoption of mobile money unlike the shift from urban to rural there is a negative influence on the adoption. On the other hand, customer specific characteristics also play a role in the use and adoption of mobile services. For instance, young people are known to adopt new technologies much quicker that old people. A five-point Likert scale will be used to measure these constructs.

Figure 2.1 Conceptual Framework



Source: Researchers own construct (2019)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter's primary aim is to demonstrate the research methods and approaches used to response the study's research questions. The section introduces the techniques of research design, region of study, population of study, sampling, unit of evaluation, sample size and sampling processes for information collection, reliability and validity tools, and processes for data analysis.

3.2 Research design

A research design constitutes the logical link between the data collected and the research questions of the study; moreover, it defines the structure of the inquiry so as to minimize the possibility of drawing incorrect inferences from the data. It portrays in a clear and logical manner the tasks entailed in collecting the data needed and how it has been used to test the key theories of the study (Dawson, 2007; Creswell, 2009; Vaus, 2001). This study employed a quantitative research design that provides the means for testing objectives through examining the relationship among variables. The study used the afore mentioned design to obtain numerical measurements to analyze the determinants of mobile money adoption in Tanzania.

3.3 Study Area

This study was carried in Morogoro Region particularly in Morogoro Municipal and Morogoro district. The area was chosen because it has a well constituted sample that fits well our research design and enables us to response our research questions promptly. Also the area was chosen because Morogoro is having all the service providers which include Vodacom, Tigo, Airtel, Zantel, Halotel and TTCL

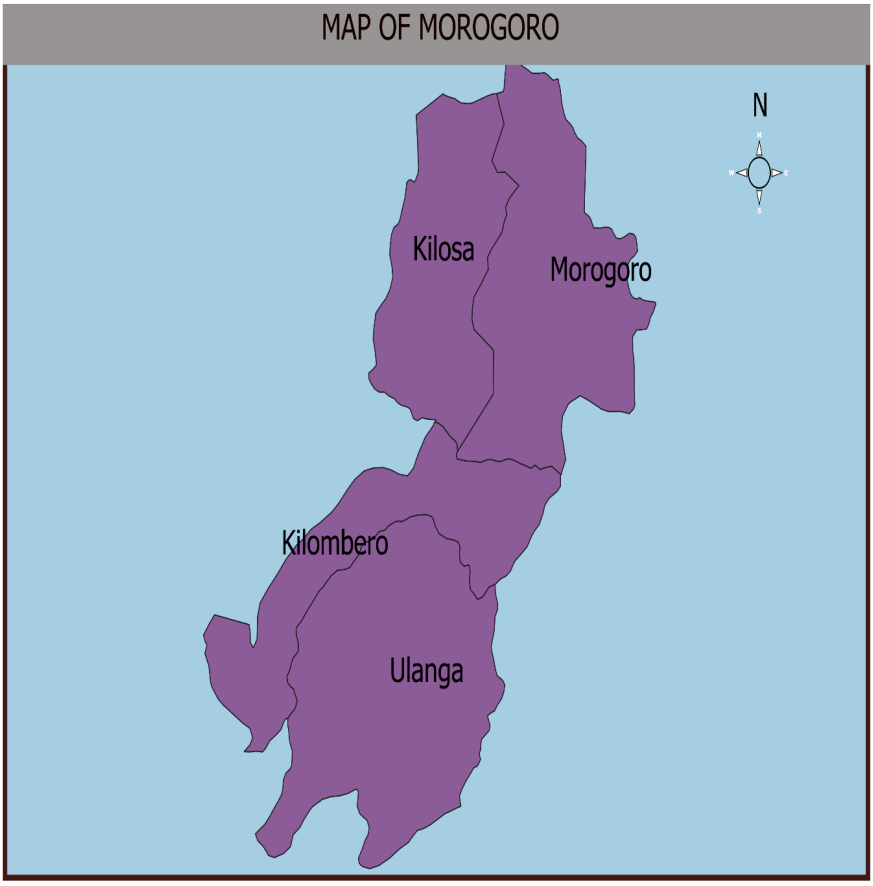


Figure 3.1. Morogoro Region map

3.4 Population of the study

The target population of this study included individuals above 18 years who own and use mobile phones in Morogoro Region. According to Zikmund and Babin (2010), Population is any complete group whose associates share some mutual set of characteristics.

3.5 Unit of analysis

The unit of analysis for this research was users of mobile financial services. It included users of mobile money services of all the telecommunication companies providing mobile money services which include Vodacom Tanzania (M-PESA), Tigo (Tigo-Pesa), Airtel Tanzania (Airtel Money), Zantel (Ezy-Pesa and Halotel (Halopesa). The unit of analysis is the thing or a person about which we collect information and from which we draw conclusion (Vaus, 2001).

3.6 Sample size and sampling Procedures

3.6.1 Sample size

The study used a sample of 200 respondents from Morogoro region. This sample size was chosen due to financial constraints and time limitations of the study. Moreover, as the study employed non-probability sampling techniques the sample size was thus decided upon based on sample sizes used in other studies, resources, level of desired precision, and time in cohesion to what was recommended by Zikmund and Babin (2007). The study thus also follows the rule of thumb provided by Zikmund and Babin (2007), for at least each sub sample to have a minimum of 100 respondents.

3.6.2 Sampling Techniques

In this study non-probability sampling technique was used to select respondents from the population. According to Zikmund et al, (2010) using a non-probability sampling, the sample is selected basing on the personal judgement or convenience and the probability of any individual member of the population being selected is indefinite.

Convenience and purposive or judgemental sampling was used to have respondents who use mobile financial services. In convenience refers to the sampling procedure of obtaining respondents or units that are most conveniently available (Bernard, 2006).

It was the appropriate method to obtain large number of completed questionnaire quickly and economically. In purposive sampling, you choose the reason you want informants (or communities) to serve, and you go out to find some (Bernard, 2006). For both techniques, I used Halotel shop, Vodashop and Tigoshop as a meeting point so as to get desired sample with the desired information.

3.7 Data collection

3.7.1 Types of data

The study only used primary data which was collected from the field. Primary data are those collected fresh from the field (Lewin, 2005). According to Kothari, (2004) primary data are those which are collected afresh and for the first time and they are original in character.

3.7.2 Data collection methods

The research used questionnaires to gather surveys that were distributed in the Morogoro Region to participants. Survey Questionnaire technique offers a quantifiable or numerical description of a population's trends, attitudes, or thoughts by examining a population sample (Creswell, 2009) According to Winter and Dodou(2010), the study technique is commonly used by the Likert scale questionnaire. The investigator used questionnaires face-to-face and self-administered to collect information from the field. Respondents were provided with self-administered questionnaires and they took the obligation of reading and responding to the questions (Zikmund et al 2008).

In this research, self-administered paper questionnaires were distributed by the investigator to Morogoro Region participants and subsequently gathered after filling. Individuals who wanted more explanation and more data on some of the items in the questionnaires were given face to face with respondents were given some questionnaires. Bernard (2006) argues that a conversation style can generate valid,

coherent and accurate information when participants need to clarify uncertain and hard ideas.

3.8 Reliability and validity of the measurement instruments

3.8.1 Reliability of the study

Joppe (2000) describes reliability as the degree to which findings are consistent over time and the accuracy of the total population being studied. If, under the same methodology, the results of a study can be repeated, the research instrument is considered consistent. Reliability was assured in this research in an interview guide with clear issues, direct and precise.

Reliable data was pre-required to answer study questions in order to guarantee accuracy in trustworthiness study examination. Data collection methods have enhanced the study's accuracy and determined whether information sets have been gathered at separate moments (Patton, 2002).

3.8.2 Validity of the study

Validity determines whether the study measures what it was suggested to evaluate correctly or how directly the findings of the study are. The research used triangulation technique, which is the use of various data information sources, to guarantee validity. Guion (2002) claims "Qualitative research validity informs you whether your study results are true or certain." True "reflects the actual scenario properly in the context of your results." Certain "in the sense that proof supports your research, “Certain” means there are no good grounds for doubting the results. Triangulation has been used to check and determine the validity of this study. Content and face validity are based on instrument construction in quantitative studies, while qualitative study depends on fluid flow and structure (Patton, 2002).

3.9 Data analysis methods

Multiple regression analysis methods were used in the research to support the determinants of implementation of mobile money services in Tanzania. The research sought to study and assess the following econometric model in consistency with the theoretical models presented and extensions to such models;

$$Y_i = \propto_i + \beta_i X_i + \varepsilon_i$$

Whereby,

Y= is the dependent variable of an individual's adoption of mobile money services measured by a five Likert scale which are disagree, strongly disagree, neither agree nor disagree, agree and strongly agree to determine on much people agree or disagree on the factors which influence the adoption of mobile money services.

X= is a vector of independent variables, constituted of Consumer attitudes and awareness, Community based factors and customer specific factors. The variables that were used in the three categories of independent variables are explained below;

Consumer attitude variable;

Risk perceived; perceived risk is the result of uncertainty in the use of technology (Chitungo and Munongo, 2013). Lee, (2009) describes perceived hazard as a potential loss resulting from fraud or a hacker that threatens the safety of an online bank user. A 5-point Likert scale has been used to assess this building.
The research will adopt a sequence of Likert type products as adopted by Masinge (2010) and Lee 2009 in order to assess the perceived danger structure.

Perceived usefulness; according to Davis (1989), perceived usefulness is to what extent a individual thinks that using a specific scheme would enhance his or her job performance to evaluate this construction, a five-point Likert scale will be used. The research will adopt a sequence of Likert-type products as introduced by Masinge (2010) and Jayasingh and Eze (2009) to assess the perceived utility structure.

Cost perceived; cost is defined as the extent to which a person believes that using mobile money services would expense money (Chitungo and Munongo, 2013). The fee may include transactional expenses in the form of service charges, charges for mobile network transmission (including SMS or data) and expenses for mobile devices (Chitungo and Munongo 2013).

A five-point Likert scale was used to assess this building. The study launched a series of likert-type products to assess the perceived price structure as introduced by Masinge (2010).

Perceived trust; Dass and Pal, (2011) described confidence as a psychological expectation not to act opportunistically by a trusted portion. To evaluate this construction, a five-point Likert scale was used. The research introduced a sequence of Likert type items which are disagree, strongly disagree, neither agree nor disagree, agree and strongly agree as adopted by Masinge (2010) to evaluate the perceived confidence building. Perceived user-friendliness: Davis (1989) identified user-friendliness as the degree to which an individual think effortlessly using a specific scheme. To evaluate this construction, a five-point Likert scale was used. The research introduced a sequence of Likert type products as introduced by Masinge (2010) and Venkatesh and Davis (2000) to evaluate the perceived user-friendliness construction.

Community based variables

Locality. It is a categorical variable whereby it explains a situation of if a person lives in an urban, peri urban or rural area. This helped us to know if locality of individuals determines the adoption of mobile money services, that is to say a person in rural or urban can be influenced negatively or positively on the adoption of mobile money services.

Social amenities; these are the presence of social services such as access to electricity and water social services that can use mobile money facilities for billing.

Customer specific variables

Age; this variable is continuous, the respondent's age in years. So, in this variable the age of respondents has been looked in terms of years. A question like “what is your age”? Was asked in this variable so as to get or to know the exact age of respondents. This variable is very important as it determines to what extent the age of respondents can influence the adoption that is to say by how much percent youth or elders are influenced to adopt mobile money services.

Gender; This is a categorical variable / dummy variable, which takes the value of 1 if a person is female and 0 if a person is male. So, this variable helped to know number of male and female in the whole population.

Income: This is a continuous variable, self-reported monthly income in Tanzanian Shillings. This helped much to determine on how much each individual earn per month and thus it becomes very easy to know if the higher income earners are influenced to adopt mobile money services and on how low-income earners can be influenced to adopt mobile money services

Education; This is a continuous variable, education level was determined in years and grades; thus, respondents were hence education of respondents was known according to the grades they have like primary, secondary and degree. This variable is very important as it helps a researcher to know by how much level of education influences the adoption of mobile services.

Occupation; life work of an individual is a nominal variable**.** It was determined by looking on what respondents do to earn their living. Thus, it was looking on if a person is student, employed, self-employed and if a person is retired.

3.9.1 Ethical consideration.

In conducting research there must be some ethical issues to be considered in especially when people are involved in that research study. These comprise of gaining the institutional authorization and obtaining guidance from different skilled

researcher to decide whether the study should be done (Mitchell and Jolley, 2010). Slavin (2007) has argued that social researchers are certain to ethical considerations in their studies. In this study work, the administration of research instruments was undertaken after securing a research clearance letter from the office of postgraduate studies at Mzumbe University. Moreover, the letter from the university was used as the basis for requesting the permission to conduct the research from the Regional Commissioner's office which allowed me to collect data at Morogoro Region concerning assessment of issues about the influencing mobile money services adoption. Therefore, respondents' confidential information was protected by the researcher as it was used for academic purposes and not otherwise. Thus, the researcher observed the rights of all respondents including the information given by them was kept confidentially to avoid harming the respondent's privacy. Finally, in order to prevent any kind of plagiarism, the investigator ensured that she acknowledged all the sources of data quoted in this research. Therefore, the study was done ethically by following rules and regulations or by law of Mzumbe university as well as Tanzania laws and regulations which guides in conducting research as the research had to seek introduction letter from local authorities which enabled data collection process to be very smooth and enabled researcher to come up with better results and findings.

CHAPTER FOUR

PRESENTATION OF RESULTS AND DISCUSSION OF FINDINGS

4.0 Introduction

This chapter presents and discusses the empirical results of the study on the factors influencing the adoption of the mobile money services. The chapter is divided into five sections. Whereby, section 4.1 presents the descriptive statistics of selected demographic and non-demographic variables, including age, gender, occupation, income and education level and section 4.2 presents the descriptive statistics on the adoption of mobile money services. Analogously, section 4.3 presents the pre-model test results to assess the normality and co linearity assumptions and post model test results to assess the model fit. Section 4.4 presents and discusses the results on the factors influencing the adoption of the mobile money services and finally the summary and conclusion of the chapter is presented in section 4.5.

4.1 Demographic data of the respondents.

This section presents the descriptive statistics of the demographic and non-demographic characteristics of the respondents in terms of frequencies and percentages. The section gives a picture of the distribution and categorization of the respondents within the sample which may act as a guideline to policy recommendation (Gujarati, 2004). The following subsections analogously present the descriptive statistics of the selected characteristics of the respondents, which were used as independent variables in our regression model presented in the sections ahead.

4.1.1 Age of the respondent

This section presents the description of the age of the respondents used in our study. Most of the respondents were aged between 21 and 30 years old, whereby this group constituted of 40.5 percent of respondents as shown in table 4.1. On the other hand,

only 2.5 percent of the respondents were aged above 60 years. The study obtained information over a whole a range of age groups, which enabled the researcher to provide a snap shot of factors for adoption of mobile money services within a whole range of age groups that is from the youth to the elderly. Moreover, as our sampling was purposive, the fact that the largest chunk of our respondents were within the economically active population ages, that is 21 to 50, gives a spectrum of age groups that use mobile money services in the study area.

Table 4.1: Age of Respondent

Age Of Respondent (Years)	Frequency	Percent
10-20	17	8.5
21-30	81	40.5
31-40	59	29.5
41-50	23	11.5
51-60	15	7.5
60+	5	2.5
Total	200	100

Source: Field data (2019)

4.1.2 Gender of respondent

This section presents the description of the gender of the respondents that have been used in our study. As shown in table 4.2, 52.5 percent of the sample, which constituted of 105respondents, was male while 47.5 percent of the sample which constituted of 95 respondents was female. Although the male respondents seem to be a slight majority within the sample, the sample is more or less balanced in terms of gender which indicates that there are no significant differences in the adoption of mobile money services between the two genders.

Table 4.2: Gender of the Respondent

Gender	Frequency	Percent
Male	105	52.5
Female	95	47.5
Total	200	100

Source: Field data (2019)

4.1.3 Work of respondent.

This section presents the description of the type of work of respondents. Most of the respondents in our sample were either employed or students. Whereby 47 and 30 percent of the respondents as shown in table 4.3 were employed and students respectively. The retirees were least constituted in our sample, as only 3.5 percent of the respondents were retired. The spread of the sample among the different work categories indicates the adoption of mobile money services on non-occupational basis but rather necessity. Whereas the employed and self-employed represent the bread earners of most households, the students and retirees represent a section of dependents within a typical Tanzanian household.

Table 4.3: Work of respondent

Work of the Respondent	Frequency	Percent
Student	60	30
Employed	94	47
Self-employed	39	19.5
Retired	7	3.5
Total	200	100

Source: Field data (2019)

4.1.4 Education level of respondent

This section presents the description of education levels of the respondents. As shown in table 4.4, 95 respondents, that is 47.5 percent of the respondents had achieved a University education while only 9 respondents, that is 4.5 percent of the respondents had education levels other than primary, secondary or university education. Although the data shows that the larger portion of the respondents had advanced education levels in terms of secondary and university level education, the fact that fifteen percent of the respondents that had adopted mobile money services had primary level of education, none or any other level, could be an indication of the ease of use of mobile money services by all consumers regardless of their education levels.

Table 4.4: Education level of respondent

Education level of respondent	Frequency	Percent
Primary	27	13.5
Secondary	69	34.5
University Education	95	47.5
Other	9	4.5
Total	200	100

Source: Field data (2019)

4.1.5 Tap water use of respondent

This section presents the description of access to water services by the respondents. Most of the respondents that constituted our sample had access to water services as shown in table 4.5, whereby about 157 respondents which is equivalent to 78.5 percent had access to tap water. Nevertheless, 21.5 percent of sampled population did not have access to tap water. The fact that most of the respondents had access to water indicates the vast spread of water services within the study area, on the other hand the fact that respondents with and without water services had adopted mobile money services indicate that the availability of social services like water services is not a significant trigger for adoption of mobile money services.

Table 4.5: Tap water users

Tap water	Frequency	Percent
Yes	157	78.5
No	43	21.5
Total	200	100

Source: Field data (2019)

4.1.6 Residential area of respondent.

This section provides the description of the area of residency of respondents. As shown in table 4.6 our sample was largely constituted of respondents from the urban areas, whereby about 110 respondents which is equivalent to 55 percent of the sample resided in the urban areas compared to the 59 respondents which is equivalent to 29.5 percent of the sampled respondents that resided in the rural areas.

This implies that most of users of mobile money services are found in the urban areas as compared to rural areas.

Table 4.6: Residential area of Respondent

Residential Area of Respondent	Frequency	Percent
Rural	59	29.5
Peri-urban	31	15.5
Urban	110	55
Total	200	100

Source: Field data (2019)

4.1.7 Income of the respondent.

This section presents the description of the respondent's income. The results in table 4.7 show that the majority of respondent had an income of less than 500, 000Tsh per month, whereby about 164 out of the 200 sampled respondents equivalent to 82 percent of the sample had income of less than 500000 Tshs. On the other hand, only 3 percent of the sampled respondents had an income above 1000000 Tshs. This gives a rough picture of the income of consumers that use mobile money services, the results indicate that mobile money services are mostly used by consumers in the lower and middle tier of monthly incomes.

Table 4.7: Income level of respondent

Income level of respondent (Tsh)	Frequency	Percent
Less 500,000	164	82
500,001-1,000,000	30	15
More 1,000,000	6	3
Total	200	100

Source: Field data (2019)

4.2 Adoption of mobile money by respondents.

The adoption of mobile money service in our study are captured by five variables which are paying bills through mobile money services, sending and receiving money through mobile money services, saving money using mobile money services, buying goods and services using mobile money services and buying air time through mobile

money services, hence the adoption of mobile money response is an average of all these five variables above.

Each of the above variables was captured using a scale of (1=strongly disagree, 2= disagree 3=neither agree nor disagree, 4= agree, 5=strongly agree).The results in table 4.8 below show that mobile money services are mostly used for sending and receiving money and least used for buying goods and services other than airtime. Whereby, the average score for using mobile money services for sending and receiving money and the use of mobile moneys services for buying goods and services are 4.005 and 2.585 respectively. As per our scale this indicates that most consumers agreed using mobile money services for sending and receiving money while mostly of them disagreed to using mobile money services for buying goods and services. The results imply and confirm the fact that mobile money services are prominently used for sending and receiving money, paying bills and buying air time. Nevertheless, the use of mobile money services for buying goods and services and saving money has not yet been prominent in Tanzania.

Table 4.8: Adoption of mobile money services.

Variable	Observation	Mean Response	Std. Dev.	Min	Max
Paying bills	200	3.38	1.412649	1	5
Send and Receiving	200	4.005	1.100468	1	5
Saving Money	200	3.18	1.290709	1	5
Buying goods and services	200	2.585	1.375586	1	5
Buying air time	200	3.965	1.273532	1	5

Source: Field data (2019)

4.3 Regression analysis

Our study employed the use of multiple regression analysis to establish the relationship between adoption of mobile moneys services and key independent variables of interest to the study. Before estimating our regression model, we checked if our variables to be used in the model satisfied the key assumption of normality and examined the presence of any evidence of multicollinearity.

4.3.1Normality test

Many scientists think that there is a need for normality for various regressions, but not always. Residual normality is only required for valid hypothesis testing, i.e. the normality assumption ensures the validity of the p-values for t-testing and F-testing. To obtain unbiased estimates of the regression coefficients, normality is not required.OLS regression merely requires that the residuals (errors) be identically and independently distributed (Gujarati, 2004). We provide the normality test results for some of the variables used in our regression.

In table 4.9 below, result show that most of variables are normally distributed as p-value are greater than 0.05.

Table 4.9: Shapiro-Wilk W test for normal data

Variable	Obs	W	V	Z	Prob>z
Usefulness	200	0.86511	20.123	6.907	0.09000
Ease of use	200	0.94383	8.379	4.891	0.10000
Cost	200	0.98233	2.637	2.231	0.08285
Trust	200	0.95604	6.558	4.327	0.09001
Risk	200	0.99342	0.982	-0.042	0.51672

Source: SPSS estimation

4.3.2 Multicollinearity test result

The study checked if the independent variables used in our regression model are collinear using the Variance Inflation factor. The Variance Inflation Inflator (VIF) is a test statistic for testing the Multicollinearity problems with a rule of thumb that an explanatory variable is collinear with the other variable if its VIF value exceed 10 or when VIF inverse approaches zero while mean VIF substantially far exceeds 1, say 5 (Mela *et al* .2002).

Our study results in table 4.10 below, show most of our variable have no correlation as VIF values are close to 1 and the inverse VIF are less than 0.20.

Table 4.10: Tolerance and Variance Inflation Factor (VIF)

Variable	VIF	1/VIF
Gender	1.07	0.936972
Age	1.35	0.736223
Work	1.41	0.709032
Education	1.34	0.748775
Income	1.19	0.840527
Residence	1.41	0.710541
Social	1.46	0.686053
Usefulness	1.55	0.643207
Ease use	1.61	0.620491
Cost	1.26	0.796163
Trust	1.26	0.796163
Risk	1.19	0.843519

Source: SPSS estimation

4.3.3 The Model fit

The study used a linear multiple regression model to elicit the determinants of mobile money services adoption. The dependent variable of adoption of mobile moneys services was a construct of several items measured using a Likert scale, which were combined to form one composite scale. The composite scale used was the average of the respondent's responses to the Likert scale items for the adoption of mobile money services, as employed in similar studies. Thus, the adoption variable was a continuous variable which befits the linear multiple regression used in the study, as employed in similar studies (Lema, 2014; Bernard, 2006).

The study used the F-statistics and the R- Square to test the fitness of the model. Whereby the F-statistic was used to test the significance of the model, the R-squared obtained from coefficient of determination which normally varies from 0 to 1, was used to check the percentage of variation in the dependent variable that is explained by the regressors (Gujarati, D. 2004).

Our tests result in table 4.11 shows that Pro>F =0.000 this show that our regression model has strong explanatory power and significant i.e. good estimation model. Furthermore, R-squared result show 38.81% of variation of mobile money services adoption is explained by the explanatory variables in the model variables.

This value is less than 50% normal but, according Heribert R, (1997) if the R-squared value is low but you have statistically significant predictors, you can still draw important conclusions about how changes in the predictor values are associated with changes in the response value. Regardless of the R-squared, the significant coefficients still represent the mean change in the response for one unit of change in the predictor while holding other predictors in the model constant.

Table 4.11: The model summary

Number of Obs	**200**
F (12,185)	20.19
Prob > F	0.000
Adj R-squared	0.3839

Furthermore, similar studies such as Lema (2017) in the area of mobile money services adoption in the unbanked population, also obtained small R- square values, where by only 42.18 percent of the variation in their dependent variable was explained by the regressors, but their model were significant and had significant determinant factors as our model.

4.4 Regression results

Table 12 presents the multiple regression results of model on determinants of mobile money services adoption in Morogoro region. The results are interpreted in subsections to show how individual consumer characteristics and their perceptions about mobile money services influence the adoption of mobile money services

4.4.1 The effect of customers perceived usefulness on the adoption of mobile money services.

The results in table 4.12 above show that p-value for usefulness of mobile money service is 0.000 which is less than 0.05(5%significant level). The perceived usefulness of mobile money services by consumers increases the consumer's likeliness to adopt mobile money services by 42 percent. This was substantiated by Hamza and Shah (2014) in Nigeria, who also found similar results with regards to the

consumer perceived usefulness of mobile financial services and adoption of such services in Nigeria. This shows that people adopt mobile money services because of its usefulness in different activities such as bills payment like water bills and electricity bills, means of saving as it reduces risk of carrying or saving out cash.

Table 4.12: multiple regression results

Variable	Coef.	t-value	P-value
cons	-.0195351	0.26	0.79
Gender	.0213674	0.21	0.84
Age	-.0065021	-0.13	0.90
Work	.0806781	1.08	0.28
Education	.0452437	0.61	0.55
Income	1.09e-07	0.71	0.48
Residential area	-.1702139**	-2.55	0.01
Social amenities	-6.09e-06	-0.00	1.00
Usefulness	.4205395**	6.03	0.00
Ease of use	.1467266**	2.08	0.04
Cost	-.0236211	-1.08	0.28
Trust	.2262142**	2.58	0.01
Risk	-.0950262	-0.96	0.34

4.4.2 The effect of consumer's perceived ease of use on the adoption of mobile money services.

The perceived ease of use of mobile money services statistically and significantly influences the adoption of mobile money with p-value of 0.04 which is less than 0.05 (5% significant level), this means the perceived ease of use of mobile money services increases the adoption of mobile moneys services by 15 percent where by most people prefer things which are friendly in its usage. Most people are familiar with the service menu and application in conducting different transactions such as sending and receiving money, saving, buying things and paying bills. These results echo the results with regards to consumer's perception on mobile money services among the unbaked by Lema (2014). Moreover, Hamza and Shah (2014) in their study which was conducted in Nigeria also found similar results with regards to the ease of use of mobile financial services and adoption of such services in Nigeria.

4.4.3 The effect of consumer's perceived trust on the adoption of mobile money services.

Furthermore, the analysis show that consumer's perceived trust also statistically significantly influences the adoption of mobile money with p-value of 0.00 which is less than 0.05 (5% significant level), this means the consumer's perceived trust of mobile money services increases their adoption of such services by 23 percent. These results are similar to what Lema (2014) found in his study that looked at determinants of adoption of mobile money services among the unbanked population. Moreover, this was also substantiated further by Hamza and shah (2014) in their study on adoption of mobile financial services in Nigeria. Therefore, this means that the higher the perceived trust the higher the adoption of mobile money services where by people tend to adopt things if at all its technology or conduct can be trusted.

4.4.4 The effect of consumer's perceived cost on the adoption of mobile money services.

Nevertheless, the analysis show that consumer's perceived cost was not statistically significant, and thus had no significant influence on the adoption of mobile money services with p-value of 0.28which is greater than 0.05 and 0.1. Nevertheless, it had the expected sign as per theory, that is consumers perceived high cost of mobile money services has a negative effect on the adoption of mobile moneys services in Tanzania. Our results are similar to a few studies that did not find a significant effect of consumer's perceived costs on the adoption of mobile money services in Kenya and some parts of Asia (Micheni et al, 2013; Jeong and Yoon, 2013). These results are contrary to what Lema (2014) found in his study that looked at determinants of adoption of mobile money services among the unbanked population. Whereby consumer's perceived costs were stipulated as a burden with regards to adoption of mobile money services (Luarn and Lin, 2005; Galego and Laukannen, 2010). The use of more controls in our regression model could be the reason that we don't get a

significant effect of consumer's perceived costs on the adoption of mobile money services.

4.4.5 The effect of consumer's perceived risk on the adoption of mobile money services.

Similarly, the analysis show that consumer's perceived risk was not statistically significant, and thus had no significant influence on the adoption of mobile money services with p-value of 0.35which is greater than the critical value of 0.05. Nevertheless, it had the expected sign as per theory, that is consumers perceived high risk of mobile money services has a negative effect on the adoption of mobile moneys services in Tanzania. These results are supported by what Lema (2014) found in his study that looked at determinants of adoption of mobile money services among the unbanked population. Moreover, they are consistent with results obtained in Ghana by Tobbin and Kowornu (2011) but contrary to what Marubwa and Mutsikwa (2013) got in their study. The main difference in the model used in our study and the other studies that obtained significant effect of perceived risk is the number of controls used in the model, whereby, our model included controls for consumer specific factors and community specific factors which could have led to the difference in the outcomes in terms of significance.

4.4.6 The effect of consumer and community specific factors on the adoption of mobile money services.

Our study also looked at the effect of consumer specific factors (age, income, education, work and gender) and community specific factors (Presence of Social amenities and Residential area) on the adoption of mobile money services beyond the consumer's perceptions about mobile money services.

The residential area was the only variable among the consumer and community specific factors that had a statistically significant effect on the consumer's adoption of mobile money services. The residential area significantly influences the adoption

of mobile money with p-value of 0.01 which is less than 0.05 (5% significant level), meaning respondents residing in rural areas were 17.02 percent less likely to adopt mobile money service. This was the only community-based factor in the study that significantly influences the adoption of mobile moneys services in Tanzania. Therefore, the shift from rural to urban area influences the adoption of mobile money services as urban areas give lee way to access of mobile moneys services from different service providers. Moreover, people's awareness about mobile money services in urban areas is much higher due to targeted promotional campaigns done by the service providers, presences of numerous agents with enough cash capital to handle small to mega transactions. On the other hand, the situation is different in the rural areas, with low presence of mobile money services agents, low cash flow and low awareness of the importance and ease of use of mobile money services.

The other consumer specific variables (gender, age, work education and income) and the community factor of presence of social amenities were found to have no significant effect on the adoption of mobile money services by consumers. Therefore, consumer specific factors like age or gender do not have significant influence on the adoption of mobile money services any person can adopt depending on their needs. Our results mirror some of the result in Lema (2014), thus pointing to the fact that consumer's specific factors do not significantly influence the adoption of mobile money services. Males, however, tend to be more positive in evaluating mobile trade than females (Yang, 2005:8). Some surveys show a masculine predominance among mobile banking consumers (Flinders, 2008; Laforet and Xiaoyan, 2005; Laukkanen and Pasanen, 2008). It's possible that although these variables do not have a significant effect as individual controls, they could have significant effects on the adoption of mobile money services effects imbedded in sub samples according to the different categories in the individual variables like age groups, the gender type and income categories as was it was done in Abdinoor and Mbamba (2017).

4.5 Summary and conclusion of the chapter

This section provided the study's results and discussion. As we have seen most of the outcomes of the study are in accordance to the theory. The regression results show that variable such as usefulness, ease of use, and confidence have a beneficial impact on adoption, while variable such as price and risk appear to be irrelevant when mobile money services are adopted. There is also no impact on the adoption of mobile money services by customer-specific variables such as age, gender, occupation, education level and earnings.

CHAPTER FIVE

SUMMARY, CONCLUSION AND POLICY IMPLICATIONS OF THESTUDY

5.1 Introduction

This chapter consists of four sections whereby section 5.2 provides the summary of the study, section 5.3 findings and conclusion, section 5.4 policy implication and recommendations and section 5.5 limitations of the study and endorsement for more studies.

5.2 Summary

The main objective of this research was to assess factors influencing the adoption of mobile money services in Morogoro. As substantiated in literature, the development of the financial services plays a major role in economic development of any country. The study used primary data collected in Morogoro region, 200 respondents were interviewed, and the study used multiple regression model to estimate the results.

Although some studies observed that adoption of mobile moneys services is cost sensitive (cost is statistically significant influencing the adoption of mobile money) and affected by demographic characteristic, our study's findings were contrary to those findings as we did not find any statistically significant effect of costs and other demographic variables used in our study on the adoption of mobile money services. Nevertheless, our descriptive statistics revealed a gender difference in what the mobile money services were used for, whereby on average male respondents used mobile moneys services for buying goods and services; paying bill; sending and receiving money; saving money and buying air time. Furthermore, urban resident respondents, university level of education respondents, middle age respondents, employed respondents and lower- and middle-income respondents were found to have higher mobile money services adoption than others respectively.

5.2.1 Findings and Conclusion

The results showed that consumer attitudes (Usefulness, Ease of use and Trust) have significant influence on the adoption of mobile money services while Cost and Risk were insignificant. With a coefficient of about 0.419337 in absolute value, it meant41. 9337% of adoption of mobile money services accounts from a 100% change in usefulness. This is followed by Ease of use with about 14.7104% from 0.147104 coefficient value and Trust with about 22.5583% from 0.225583 coefficient value. Also, assessment of the priori signs shows that both variable i.e. usefulness, Ease money and Trust have expected signs. So that any increase in value of any independent significant variable favors the mobile money services adoption. The significant variables had the expected signs as per the theory i.e. usefulness, Ease money and Trust have expected signs. So that any increase in value of any independent significant variable favors the mobile money services adoption.

The only community-based factor that had a significant influence on the adoption of mobile money services was the residential area. With a coefficient of about -0.1702 value, it means unit change from urban to rural lead to 17.02% decrease in adoption of mobile money services and vice versa. While factors like social amenities (tap water and electricity) were statistically insignificant. Moreover, customer specific factors like age, gender, work, education and income had a statistically insignificant influence on the adoption of mobile money services.

5.3 Policy/practical implications.

Cellular phone ownership has increased across much of the developing world in recent years, reaching over 75% of the population in sub-Saharan Africa and South Asia (WDI). A report from Tanzania Communications Regulatory Authority (TCRA) shows that users of mobile money in Tanzania exceed 41 million in June 2018. This raises the potential for mobile money to be a key tool to broaden and deepen financial access.

However, as from our results variables like trust were found to have significant effect on the adoption of mobile money service due to several challenges facing the sector, like security distress over the use of money through mobile to mobile, transactions. This is because the platform is relatively new and there was no pre-existing security policy, security models and security framework. This may allow the cypher criminals, fraudsters and attackers who have fresh eyes on this new platform to invade and disrupt the smoothness flow of the mobile money transactions.

Despite these difficulties, and contrary to the dreary results seen under previous micro-financing programs, mobile money is unquestionably having positive impacts on economic outcomes, particularly for women. The study findings on the economic impacts of mobile money reveals it as a route out of poverty for women whereby almost 49 women agreed on the usage of mobile money services for saving compared with male whereby about 47 generally agree (appendix 3 table 11).

5.5 Recommendations

The following are policy recommendations for mobile money services. Firstly, for tap water user, from the results it shows that most of respondent with tap water general agree to pay water bills through mobile money services (appendix 3, table 26), hence the government should make sure transaction charges are controlled by responsible authority to make transaction sustainable. Also, the government should put much efforts on the supply of tap water especially in rural areas so as to increase usage and to influence people to adopt mobile money services

Secondly in rural area, as the results shows that most people generally disagree on use of mobile money on paying goods and services (Appendix 3, table27). Hence the study recommends Telecommunication Company to establish price discrimination policy in mobile money services charges between rural and urban to favor rural area to increase the use of mobile money in rural areas.

Also, the service providers should reallocate more agents and put more emphasis on promotion campaigns so as to make people aware about the services. Furthermore, Telecommunication companies should invite business partners in which they will prefer online payments which in turn will facilitate the adoption of mobile money services.

Thirdly, for households who are well connected with national electricity grid, the results show that majority of respondents agree to pay bills through mobile money service (appendix 3, table 28) but the same population generally disagree on the use mobile money in buying goods and services. Hence Telecommunication Companies should establish market policy strategies to make sure that those who pay electrical bills should also use mobile money services to buying goods and services. This can be done through different marketing strategies like product differentiation and much emphasis on promotion campaigns so as to make subscribers aware on the importance of using mobile money services in both buying goods and services and in paying electricity bills.

Fourthly, the study recommends that the telecommunication firms should emphasize and enhance that the Mobile Money transfer is managed well. They should also ensure that they engage the consumer's views whenever making changes in the systems so that there will be smooth operations of the activities.

Fifthly, the study recommends that a more scientific way of measuring, describing and evaluating the level of their customer perception and satisfaction for the services they deliver should be developed. Customer attitude are considering as important as one may switch other competitor's networks.

Also, customers should also be supplied with procedural training to allow them to carry out transactions without the need for help. As well as providing user assistance through online customer service centers as well as customer service points in a provider's physical office, user support is very essential.

Most clients of mobile money providers complained that there was no customer assistance to make some of them change to other service providers.

Lastly, the results show that most of the high-income earners general strongly agree to use mobile money services, while low income earner general disagree on the use mobile money services in buying goods and services (appendix 3, table 29). Hence there should be more emphasize on use of mobile money services to buy goods and services to low income earner so as to balance the adoption between the high-income earners and low income earners. This can also be done through different promotions to the areas with low adoption of mobile money in buying goods and services by putting special offer to those who will use mobile money for the purpose of buying goods and services by either giving them either bundle or vouchers as offers.

5.6 Limitations of the study and Areas for further research.

This study has attempted to analyze factors influencing adoption of mobile money services at Morogoro region with the specific objectives which were; Assess consumer attitudes in the adoption of mobile money services, to examine the role of community based factors in the adoption of mobile money services in Tanzania and to analyze the role of customer specific factors in the adoption of mobile money services. To accomplish the goal primary data and multiple regression model was used. This study conducted only in Morogoro particularly in Morogoro Municipal and Morogoro district and ignores other regions across the country. Therefore, the study recommends that in the future a similar study should be conducted across all regions of Tanzania main land and Zanzibar in order to come up with the new insights and to generalize the findings of the study.

Secondly area of research interest would be to substantiate social factors that impact on mobile money services. Such researches have been done in different areas of Africa but not Tanzania. Thus, more studies concerning mobile money services should be done to different parts of Tanzania.

The third area would be to establish the relationship between mobile money services and monetary policy. This would help to know how monetary policy would have impact on mobile money services. Monetary policy is like discount rate, reserve requirements, open market operations, and interest on reserves and thus it will facilitate the transactions easily.

Telecommunications businesses have developed the mobile cash product as they see it as one of their customers ' primary services. The challenge facing clients is who the best service provider is. The research demonstrates several variables in choosing the best mobile money service provider that clients consider. The most prevalent factor used in the choice of service providers by most clients is the availability of agents followed by ease of use along with accessibility of networks.

This research proposes that these institutions should adopt mobile money transfer technologies as they are going to be quicker, easier and more convenient. The research also recommends that strategic organizational choices concentrate on critical areas of customer service activities and provide a reasonable basis, valid and deliverable customer value that are aimed at achieving customer satisfaction and loyalty, building long term mutually beneficial relationship with profitable customers.

Future research may focus on defining more variables that predict, moderate, and mediate. In addition, questionnaires should be organized to avoid participants from being biased by attempting to conjecture the intentions of the scientists. The words on the Likert scale in each structure must be distinct in order to prevent confusion.

Future studies can generate samples from different areas of Tanzania, especially rural areas, as well as users from different social classes on this study. In this study, this will further validate the customized and used measurement scales and may also improve the suggested model.

Once all these variables are held in place, the use of mobile cash goods will be simple for clients. All suppliers of mobile money services should ensure that they are aware of their products by investing much on promotion activities concerning the services they offer especially in rural areas, make sure that their products create value in the sense people should perceive it as of important and essential in their day to day activities and have usability features.

Finally, the research also proposes that further research on the adequacy of portable cash benefits as a substitution for installment between governments elements ought to be completed later on. This will be important in judging whether public institutions can adopt this mode of payment for goods and services since it is appropriate and quicker for them to carry out different transactions like payment of different bills like water bills, electricity bills and other bills like those of TRA which can be done through Tigopesa, Halopesa, Airtel money and M Pesa.

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APPENDICES

APPENDIX I: QUESTIONNAIRE

My name is Magreth P Maganga, a Master student from Mzumbe University. I am conducting research on **factors influencing the adoption of mobile money services** as a requirement for partial fulfilment for the award of a Masters of Business Administration in Corporate Management. I kindly ask for your assistance by filling out this questionnaire. Please be assured that the information you provide is for academic purpose only and that your identity will be treated as highly confidential. Your support and participation in this study will be highly appreciated.

Part I

SN	Demographic Data		Mark where applicable (√)
1	Identification Number		
2	Gender	(a) Male	
		(b) Female	
3	Age		…..years
4	Work/Occupation	Student	
		Employed	
		Self employed	
		Retired	
5	Education level	Primary education	
		Secondary education	
		University education	
		Other	
6	Income per month		……..Tshs
7	What best describes your residential area?	Urban	
		Peri-urban	
		Rural	
8	Do you have access to tap water?	Yes	
		No	
9	Do you have access to grid electricity?	Yes	
		No	

Part II

Five point Likert scale Questionnaire on Adoption of mobile money variable.

Please respond to the following question by cycling the choice indicating the level of agreement from 1, strongly disagree, 2. Disagree 3. Neither agree nor Disagree 4 Agree, 5. Strongly agree;

10	I use mobile money for paying my bills frequently	1	2	3	4	5
11	I use mobile money for sending and receiving money frequently	1	2	3	4	5
12	I use mobile money for saving frequently	1	2	3	4	5
13	I use mobile money for buying goods frequently	1	2	3	4	5
14	I use mobile money to buy airtime frequently	1	2	3	4	5

PART III

Five point Likert scale Questionnaire

Please respond to the following question by cycling the choice indicating thelevel of agreement from 1, strongly disagree, 2. Disagree 3. Neither agree nor Disagree 4 Agree, 5. Strongly agree;

15_{PU}	I think that using mobile money services would enable me to accomplish my tasks more quickly.	1	2	3	4	5
16	I think that using mobile money services would make it easier for me to carry out my tasks.	1	2	3	4	5
17	I think that mobile money services are useful	1	2	3	4	5
18	Overall, I think that using mobile money services is advantageous	1	2	3	4	5
19_{PEU}	I think that learning to use mobile money services would be easy	1	2	3	4	5
20	I think that interaction with mobile money services does not require a lot of mental effort.	1	2	3	4	5
21	I think that it is easy to mobile money services to accomplish my banking tasks	1	2	3	4	5
22_{PC}	I think the equipment cost is expensive to use. E.g. mobile phone.	1	2	3	4	5
23	I think it is expensive to access and use mobile money.	1	2	3	4	5
24	I think the transaction fee is expensive to use.	1	2	3	4	5
25_{PT}	Mobile money services service providers have the skills and expertise to perform transactions in an expected manner	1	2	3	4	5
26	Mobile money services providers are fair in their conduct of customer transactions.	1	2	3	4	5
27	Mobile money services providers are open and receptive to customer needs.	1	2	3	4	5
28	Mobile money services service providers make good-faith efforts to	1	2	3	4	5

	address most customer concerns					
29	I believe mobile network providers are trustworthy.	1	2	3	4	5
30	I believe mobile money service provider's wireless infrastructure can be trusted.	1	2	3	4	5
31_{PR}	Mobile money may not perform well because of network problems.	1	2	3	4	5
32	Mobile money may not perform well and process payments incorrectly.	1	2	3	4	5
33	When transferring money through mobile banking, I am afraid that I will lose money due to careless mistakes such as wrong input of account number and wrong input of the amount of money.	1	2	3	4	5
34	When transaction errors occur, I worry that I cannot get compensation from financial service providers.	1	2	3	4	5
35	Fixing payment errors may lead to a waste of time	1	2	3	4	5
36	It would take me lots of time to learn how to use mobile money services.	1	2	3	4	5
37	A network problem causes wastage of time.	1	2	3	4	5
38	I would not feel totally safe providing personal privacy information over mobile money systems.	1	2	3	4	5
39	I'm worried about using mobile money service because other people may be able to access my account.	1	2	3	4	5
40	I would not feel secure sending sensitive information across mobile money services.	1	2	3	4	5

Appendix 3 Table of Statistical Data of Various variable

Table 1: Paying bills by Gender

Gender	Paying bills					
	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree	Total
Male	17	12	7	41	28	105
	50	46.15	41.18	53.95	59.57	52.5
Female	17	14	10	35	19	95
	50	53.85	58.82	46.05	40.43	47.5
Total	34	26	17	76	47	200
	100	100	100	100	100	100

Table 2: Paying bills by Age

	Paying bills					
Age	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree	Total
10-20	7	1	1	5	3	17
	20.59	3.85	5.88	6.38	6.38	8.5
21-30	11	13	1	35	21	81
	32.35	50	5.88	46.05	44.68	40.5
31-40	9	7	6	22	15	59
	26.47	26.92	35.29	28.95	31.91	29.5
41-50	3	2	5	10	3	23
	8.82	7.69	29.41	13.16	6.38	11.5
51-60	4	3	3	2	3	15
	11.76	11.54	17.65	2.63	6.38	7.5
60+	0	0	1	2	2	5
	0	0	5.88	2.63	4.26	2.5
Total	34	26	17	76	47	200
	100	100	100	100	100	100

Table 3: Paying bills by work

	Paying bills					
Work	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree	Total
Student	11	9	2	24	14	60
	32.35	34.62	11.76	31.58	29.79	30
Employed	13	10	15	40	16	94
	38.24	38.46	88.24	52.63	34.04	47
Self employed	8	7	0	10	14	39
	23.53	26.92	0.00	13.16	29.79	19.5
Retired	2	0	0	2	3	7
	5.88	0.00	0.00	2.63	6.38	3.5
Total	34	26	17	76	47	200
	100	100.00		100	100	100

Table 4. Paying bills by education level

	Paying bills					
Education	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree	Total
Primary Education	8	6	1	6	6	27
	23.53	23.08	5.88	7.89	12.77	13.5
Secondary Education	13	10	8	25	13	69
	38.24	38.46	47.06	32.89	27.66	34.5
University Education	12	10	8	41	24	95
	35.29	38.46	47.06	53.95	51.06	47.5
Other	1	0	0	4	4	9
	2.94	0.00	0.00	5.26	8.51	4.5
Total	34	26	17	76	47	200
	100.00	100	100.00	100.00	100	100

Table 5: Paying bills by income level of respondent

	Paying bills					
Income	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree	Total
Less 500,000	30	23	14	57	40	164
	88.24	88.46	82.35	75.00	85.11	82
500,001-1000000	13	10	8	25	13	69
	11.76	11.54	11.76	21.05	10.64	15
More than 1000000	0	0	1	3	2	95
	0.00	0.00	5.88	3.95	4.26	47.5
Total	34	26	17	76	47	200
	100.00	100	100.00	100.00	100	100

Table 6: Sending and receiving money by age

	Send & Receive					
Age	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree	Total
10-20	4	1	1	5	6	17
	50	5.56	5.56	6.49	7.59	8.5
21-30	1	5	4	33	38	81
	12.5	27.78	22.22	42.86	48.1	40.5
31-40	3	6	6	25	19	59
	37.5	33.33	33.33	32.47	24.05	29.5
41-50	0	2	3	10	8	23
	0	11.11	16.67	12.99	10.13	11.5
51-60	0	4	4	3	4	15
	0	22.22	22.22	3.9	5.06	7.5
60+	0	0	0	1	4	5
	0	0	0	1.3	5.06	2.5
Total	8	18	18	77	79	200
	100	100	100	100	100	100

Table 7: Sending and receiving money by gender

	Send & Receive					
Gender	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree	Total
Male	6	9	11	37	42	105
	75	50.00	61.11	48.05	53.16	52.5
Female	2	9	7	40	37	95
	25	50.00	38.89	51.95	46.84	47.5
Total	8	18	18	77	79	200
	100	100.00	100	100.00	100	100

Table 8: Sending and receiving money by work

	Send & receive					
Work	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree	Total
Student	4	3	2	19	32	60
	50	16.67	11.11	24.68	40.51	30
Employed	4	12	14	37	27	94
	50	66.67	77.78	48.05	34.18	47
Self Employed	0	3	2	19	15	39
	0	16.67	11.11	24.68	18.99	19.5
Retired	0	0	0	2	5	7
	0	0	0	2.6	6.33	3.5
Total	8	18	18	77	79	200
	100	100	100	100	100	100

Table 9: Sending and receiving money by education level

	Send & Receive					
Education	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree	Total
Primary education	1	1	1	12	12	27
	12.5	5.56	5.56	15.58	15.19	13.5
Secondary education	4	10	10	26	19	69
	50	55.56	55.56	33.77	24.05	34.5
University education	3	7	7	35	43	95
	37.5	38.89	38.89	45.45	54.43	47.5
Other	0	0	0	4	5	9
	0	0	0	5.19	6.33	4.5
Total	8	18	18	77	79	200
	100	100	100	100	100	100

Table 10:Sending and receiving money by income level

	Send & Receive					
Income	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree	Total
Less 500,000	7	17	13	63	64	164
	87.5	94.44	72.22	81.82	81.01	82
500,001-1000000	1	1	4	12	12	30
	12.5	5.56	22.22	15.58	15.19	15
More than 1000000	0	0	1	2	3	6
	0	0	5.56	2.6	3.8	3
Total	8	18	18	77	79	200
	100	100	100	100	100	100

Table 11:Saving money by gender

	Saving					
Gender	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree	Total
Male	13	25	21	34	12	105
	54.17	55.56	58.33	55.74	35.29	52.5
Female	11	20	15	27	22	95
	45.83	44.44	41.67	44.26	64.71	47.5
Total	24	45	36	61	34	200
	100	100.00	100	100	100	100

Table 12:Saving money by age

	Saving					
Age	Strongly	Disagree	Neither Agree Nor Disagree	Agree	Strongly	Total
10-20	5	1	2	3	6	17
	20.83	2.22	5.56	4.92	17.65	8.5
21-30	7	22	14	28	10	81
	29.17	48.89	38.89	45.9	29.41	40.5
31-40	6	8	12	19	14	59
	25	17.78	33.33	31.15	41.18	29.5
41-50	3	7	6	4	3	23
	12.5	15.56	16.67	6.56	8.82	11.5
51-60	3	3	2	7	0	15
	12.5	6.67	5.56	11.48	0	7.5
60+	0	4	0	0	1	5
	0	8.89	0	0	2.94	2.5
Total	24	45	36	61	34	200
	100	100	100	100	100	100

Table 13: Saving money by working status

	Saving					
Work	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree	Total
Student	7	14	6	20	13	60
	29.17	31.11	16.67	32.79	38.24	30
Employed	13	17	22	29	13	94
	54.17	37.78	61.11	47.54	38.24	47
Employed	4	10	7	11	7	39
	16.67	22.22	19.44	18.03	20.59	19.5
Retired	0	4	1	1	1	7
	0	8.89	2.78	1.64	2.94	3.5
Total	24	45	36	61	34	200
	100	100	100	100	100	100

Table 14: Saving money by education level

	Saving					
Education	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree	Total
Primary education	5	7	4	8	3	27
	20.83	15.56	11.11	13.11	8.82	13.5
Secondary education	11	12	13	19	14	69
	45.83	26.67	36.11	31.15	41.18	34.5
University education	8	25	18	31	13	95
	33.33	55.56	50.00	50.82	38.24	47.5
Other	0	1	1	3	4	9
	0	2.22	2.78	4.92	11.76	4.5
Total	24	45	36	61	34	200
	100	100.00	100	100.00	100	100

Table 15: Saving money by Income

	Saving					
Income	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree	Total
	19	37	32	51	25	164
Less 500,000	79.17	82.22	88.89	83.61	73.53	82
	5	8	4	6	7	30
500,001-1,000,000	20.83	17.78	11.11	9.84	20.59	15
	0	0	0	4	2	6
More 1,000,000	0	0	0	6.56	5.88	3
	24	45	36	61	34	200
Total	100	100	100	100	100	100

Table 16: Buying good by gender

	Buying Good					
	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree	Total
Male	26	34	15	21	9	105
	46.43	59.65	65.22	50	40.91	52.5
Female	30	23	8	21	13	95
	53.57	40.35	34.78	50	59.09	47.5
Total	56	57	23	42	22	200
	100	100	100	100	100	100

Table 17: Buying good by age

	Buying Good					
Age	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree	Total
	6	5	0	4	2	17
10 -20	10.71	8.77	0	9.52	9.09	8.5
	15	35	7	19	5	81
21-30	26.79	61.40	30.43	45.24	22.73	40.5
	18	10	11	10	10	59
31-40	32.14	17.54	47.83	23.81	45.45	29.5
	8	4	3	5	3	23
41-50	14.29	7.02	13.04	11.90	13.64	11.5
	8	1	2	2	2	15
51-60	14.29	1.75	8.7	4.76	9.09	7.5
	1	2	0	2	0	5
60+	1.79	3.51	0	4.76	0.00	2.5
	56	57	23	42	22	200
Total	100	100	100	100.00	100	100

Table 18: Buying good by working status

	Buying Good					
Work	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree	Total
	12	29	1	13	5	60
Student	21.43	50.88	4.35	30.95	22.73	30
	29	19	18	15	13	94
Employed	51.79	33.33	78.26	35.71	59.09	47
	13	8	3	11	4	39
Self employed	23.21	14.04	13.04	26.19	18.18	19.5
	2	1	1	3	0	7
Retired	3.57	1.75	4.35	7.14	0.00	3.5
	56	57	23	42	22	200
Total	100	100	100	100.00	100	100

Table 19: Buying good by education level

	Buying Good					
Education	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree	Total
Primary education	9	5	2	7	4	27
	16.07	8.77	8.7	16.67	18.18	13.5
Secondary education	23	15	10	13	8	69
	41.07	26.32	43.48	30.95	36.36	34.5
University education	24	36	10	16	9	95
	42.86	63.16	43.48	38.1	40.91	47.5
Other	0	1	1	6	1	9
	0	1.75	4.35	14.29	4.55	4.5
Total	56	57	23	42	22	200
	100	100	100	100	100	100

Table 20: Buying good by income level

	Buying Good					
Income	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree	Total
	46	48	19	34	17	164
Less 500,000	82.14	84.21	82.61	80.95	77.27	82
	8	8	3	6	5	30
500,001-1,000,000	14.29	14.04	13.04	14.29	22.73	15
	2	1	1	2	0	6
More 1,000,000	3.57	1.75	4.35	4.76	0	3
	56	57	23	42	22	200
Total	100	100	100	100	100	100

Table 21: Buying air time by Gender

	Buying air time					
Gender	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree	Total
Male	8	8	8	34	47	105
	42.11	61.54	66.67	50	53.41	52.5
Female	11	5	4	34	41	95
	57.89	38.46	33.33	50	46.59	47.5
Total	19	13	12	68	88	200
	100	100.00	100	100	100	100

Table 22: Buying air time by age

	Buying air time					
Age	Strong Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree	Total
10-20	0	0	0	3	9	17
	0.00	0.00	0	4.41	10.23	8.5
21-30	5	5	2	31	40	81
	38.46	38.46	16.67	45.59	45.45	40.5
31-40	4	5	6	17	27	59
	38.46	38.46	50	25.00	30.68	29.5
41-50	2	2	3	11	6	23
	15.38	15.38	25.00	16.18	6.82	11.5
51-60	0	0	1	3	5	15
	0.00	0.00	8.33	4.41	5.68	7.5
60+	1	1	0	3	1	5
	7.69	7.69	0.00	4.41	1.14	2.5
Total	13	13	12	68	88	200
	100.0	100	100	100.00	100	100

Table 23: Buying air time by working status

	Buying air time					
Work	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree	Total
Student	5	2	2	18	33	60
	26.32	15.38	16.67	26.47	37.50	30
Employed	10	7	9	31	37	94
	52.63	53.85	75.00	45.59		47
Self employed	3	3	1	16	16	39
	15.79	23.08	8.33	18.18	18.18	19.5
Retired	1	1	0	3	2	7
	5.26	7.69	0.00	4.41	2.27	3.5
Total	19	13	12	68	88	200
	100	100	100	100	100	100

Table 24: Buying air time by education level

	Buying air time					
Education strongly	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree	Total
Primary education	4	4	1	10	8	27
	21.05	30.77	8.33	14.71	9.09	13.5
Secondary education	10	5	4	23	27	69
	52.63	38.46	33.33	33.82	30.68	34.5
University education	5	4	7	33	46	95
	26.32	30.77	58.33	48.53	52.27	47.5
Other	0	0	0	2	7	9
	0	0	0	2.94	7.95	4.5
Total	19	13	12	68	88	200
	100	100	100	100	100	100

Table 25: Buying air time by income level

	Buying air time					
Income	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree	Total
	17	12	9	58	68	164
Less 500,000	89.47	92.31	75	85.29	77.27	82
	2	1	3	9	15	30
500,001-1,000,000	10.53	7.69	25	13.24	17.05	15
	0	0	0	1	5	6
More 1,000,000	0	0	0	1.47	5.68	3
	19	13	12	68	88	200
Total	100	100	100	100	100	100

Table 26: Adoption of mobile money by Tap water

Tap water	Paying bills	Send and receiving	Saving	Buying Goods and services	Buying air time
Yes	3.573248	4.019108	3.261146	2.675159	3.993631
No	2.674419	3.953488	2.883721	2.255814	3.860465
Total	3.38	4.005	3.18	2.585	3.965

Table 27: Adoption of mobile money by residential

Residential Area	Paying bills	Send and receiving	Saving	Buying Good and services	Buying air time
Urban	3.709091	4.072727	3.427273	2.854545	4.136364
Peri-urban	2.774194	3.967742	2.709677	2.322581	3.548387
Rural	3.068966	3.87931	2.982759	2.189655	3.844828
Total	3.38	4.005	3.18	2.585	3.965

Table 28: Adoption of mobile money by electrical grid user

Electrical grid user	Paying bills	Send and receiving	Saving	Buying Goods and services	Buying air time
Yes	3.564417	4.03681	3.184049	2.668712	4.03681
No	2.567568	3.864865	3.162162	2.216216	3.648649
Total	3.38	4.005	3.18	2.585	3.965

Table 29: Adoption of mobile money by income level.-

Income level	Paying Bills	Sendand Receiving	Saving	Buying Goods and Services	Buying Air Time
Less than 500,000	3.329268	3.97561	3.158537	2.560976	3.902439
500,001 to 1000000	3.5	4.1	3.066667	2.733333	4.133333
More than 1,000,000	4.166667	4.333333	4.333333	2.5	4.833333
Total	3.38	4.005	3.18	2.585	3.965