THE INFLUENCE OF MOBILE MONEY SERVICES USAGE ON SMALL AND MEDIUM ENTERPRISES OPERATIONSIN TANZANIA

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A THESIS SUBMITTED IN FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY OF THE OPEN UNIVERSITY OF TANZANIA

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CERTIFICATION

The undersigned certify that they have read and here by recommend for acceptance by the Open University of Tanzania a thesis entitled:**"The Influence of Mobile Money Services Usage on Small and Medium Enterprises Operations in Tanzania",** in fulfilment of the requirements for the Degree of Doctor of Philosophy (PhD) of The Open University of Tanzania.

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DECLARATION

I, **ElizeusKalugendo John,** do herebydeclare that, the work presented in this thesis is original. It has not been presented to any other University or Institution. Where other people's works have been used, references have been provided. In this context therefore, I declare this work as originally mine. It is hereby presented in fulfilment of the requirements for the Degree of Doctor of Philosophy (PhD).

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Signature

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Date

DEDICATION

To:Norah, Edmund, Evelyne, Emmalyne, Eliness; my parents Paulina and John;

my grandparents: Emmanuel, Leoncia, Eustad and Emilliana

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"**Ad Majorem Dei Gloriam"**

(For the Great Glory of God)

ABSTRACT

The study aimed at finding out the influence of Mobile Money Services (MMS) usage on small and medium enterprises (SMEs) operationsin Tanzania. In line with this broad objective, the study specifically aimed at carrying out investigations on the following aspects: (i) the influence of perceived usefulness of mobile money services in supportingSMEs Operations. (ii) The influence of perceived trust on mobile money services usage in supportingSMEs Operations; and (iii) the influence of perceived risks associated with the use of mobile money services bySMEs Operations. To achieve the three objectives, positivism paradigm aligned with quantitative research approach was adopted. Data were collected using a structured questionnaire that was administered to a sample of 372 SMEs operators inMwanza, Dar es Salaam, and Mtwara. The findings using structural equation modelling on SPSS AMOS version 22 revealed that, Perceived Usefulness andPerceived Riskon MMS usage are significant in influencingSMEs Operationswhile Perceived Trust on MMS were found to be insignificant. This study concludes that Perceived Usefulness on MMS (Increase Profitability, Improve Financial Services and Perceived Ease of Use) andPerceived Risk on MMS(Financial Risk and Performance Risk) have significance influence on SME business operation. This study recommended that SMEs should be encouragedto use MMS in business operation particularly the services, which fit well in their business operations; Mobile Service providers should make sure that risks are minimized. Additionally, the Government should develop and formulate a policy, which would help to scale up the uptake of MMS usage by assuring mobile infrastructure, technological knowledge and affordable transaction cost onMMS usage to enhance SMEs operations in Tanzania.

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LIST OF ABBREVIATIONS AND ACRONYMS

AGFI	Adjusted Goodness Fit Index
ANOVA	Analysis of Variance
AVE	Average Variance Extract
BO	Business Operation
BoT	Bank of Tanzania
C.R	Critical Ratio
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CMIN/DF	Chi-Square Mean/ Degree of Freedom
CR	Composite Reliability
CTT	Consumer Trust Theory
DF	Degree of Freedom
EFA	Exploratory Factor Analysis
EVCP	Electronic Voucher Card Plus
FA	Factor Analysis
FGD	Focus Group Discussion
FIs	Financial Institutions
G2P	Government-to-Person
GDP	Gross Domestic Product
GFI	Goodness Fit Index
GSMA	Global System Mobile Association

ICT	Information Communication Technology
IDT	Innovation Diffusion Theory
IMT	International Money Transfer
IS	Information System
ICT	Information Communication Technology
IT	Information Technology
KES	Kenya Shillings
KMO	Keiser Meyer Olkin
LMICs	Low and Middle Income Countries
M.I	Modification Index
MB	Mobile Banking
MLR	Multiple Linear Regression
MMS	Mobile Money Service
MMSP	Mobile Money Services Providers
MMT	Mobile Money Transfer
MNO	Mobile Network Operator
MSME	Micro, Small and Medium Enterprise
NBS	National Bureau of Statistics
NFI	Normed Fit Index
NMB	National Microfinance Bank
NMP2017	National Microfinance Policy 2017
OECD	Organisation for Economic Cooperation and Development
OUT	The Open University of Tanzania

P2P	Person-to-Person
PCA	Principal Component Analysis
PEOU	Perceived Ease of Use
PIN	Person Identification Number
PR	Perceived Risk
PRT	Perceived Risk Theory
PT	Perceived Trust
PU	Perceived Usefulness
RMSEA	Root Mean Square Error of Approximation
SEM	Structural Equation Modelling
Sig.	Significance
SIM	Subscriber Identity Module
SME	Small and Medium Enterprise
SPSS	Statistical Package for Social Science
SRW	Standardized Regression Weight
Std	Standard
TAM	Technology Acceptance Model
TCCIA	Tanzania Chamber of Commerce, Industry and Agriculture
TCRA	Tanzania Communications Regulatory Authority
TISS	Tanzania Inter-Bank Settlement System
TRA	Tanzania Revenue Authority
TTCL	Tanzania Telecommunication Company Limited
TZS	Tanzania Shillings

UNCTAD	United Nations Conference on Trade and Development
URT	United Republic of Tanzania
US	United States
USAID	United States Agency for International Development
USD	United State Dollars

CHAPTER ONE

INTRODUCTION

1.1 Chapter Overview

This chapter presents the background information, statement of the problem, research objectives, scope of the study, significant of the study, andstructure of the thesis.

1.2 Background of the Study

Businesses, which involve individuals, groups of individuals, companies or corporations in public and private sectors play an important role in the economic development of a given country. In this era of globalization, the demands for goods and services lead to an intense competition especially among Small and Medium Enterprises (SMEs) operations in information technology, which supports efficient functioning of enterprises through management procedures and quality of operations (Januszewska, et al., 2015; John, et al., 2018).

Tanzania Government has strived to support the development of innovativeness in technology deployment in order to improve SMEs operations. The government initiatives in this area include the institutionalization of ICT policy of 2016 whose objective was to accelerate socio-economic development with the potentials of transforming Tanzania into ICT driven middle-income economy and society (URT, 2016). As time passes, mobile technologies continue to improve and attract more business dealers and individuals into making transactions either online or through other media such as mobile phone communications depending on the technology available (Claessens, et al., 2000; Young, et al., 2013). It is evident that the usage of technology has great potential of improving the quality and scope of financial services

through increasing the opportunities of mitigating trading risks, improve access to financial services and hence having more cost-effective delivery of goods and services(Claessens, et al., 2000, Ramdani, et al., 2013).

Empirical studies on mobile money services (e.g. Ngilangwa and Venkatakrishnan, 2013; Ngaruiya, et al., 2014) show that an increase of the usage of ICT by enterprises, as a new way of doing business in the 21st century, has brought benefits to SMEs. Such benefits include; availability of money transfer at lowercoststhan those offered by the traditional banking system. In the latter, some transactions are done within the premises of the bank and hence involve travel at time costs. In related perspective, Mbogo (2010) observes that mobile money services by micro businesses tend to enhance their success and growth. In the same context,Madila and Msamba(2016)argue that business success is facilitated by socio-economic context and the level of science and technology of the time. The state of art technology, which is used in a particular business supports efficient functioning of enterprises through linkages with customers and suppliers and hence attain more business success (Njau and Njuga, 2015).Technology usage can provide an avenue for SMEs to have competitive advantages by either increasing sales volume or customer base, which in turn helps to improve business prospects.

Globally, mobile money services (MMS) usage has increasingly become a facilitating condition for the formation and operation of SMEs, contributing to their progression and eventually becoming profitable income generating entities (Elms and Low, 2013, John, et al., 2018). In the same vein, many economies are getting away from cash payment due to proliferation of financial institutions and the increase in financial

inclusion, which involves the use of credit and debit cards via mobile phones (TCRA, 2018). It is apparent that, MMS usage has widened the chances for business firms to increase their shares in the market, efficiency and effectiveness in the market, and hence promoting business transactions and meeting business prospects (Merritt, 2010; Chale and Mbamba, 2014). MMS usage has enabled new types of money flow, has enhanced interoperability particularly for unbanked members of the society, has led to the emergence of local lending businesses, and hence it has improved the employment level (Dick and Camer, 2014; Gilman, 2016).

Moreover, MMS usage has extended SMEs' business linkages with a broad range of customers and suppliers of various goods and services (Donovan, 2012; Irura and Munjiru, 2013). MMS are available in two-thirds of low- and middle-income countries (LMICs) and have greatly been used by the populationsthat lackdirect access to formal Financial Institutions (FIs) (Ardjouman, 2014; John, et al., 2018). The usage of Mobile Money Services (MMS) in facilitating money transfer transactions is found to have a number of advantages, including (i) improving access to and the use of information, thereby reducing search costs; (ii) improving coordination among agents and increasing market efficiency; enhancing money circulation, reducing economic vulnerability, fostering entrepreneurship, increasing savings, promoting financial autonomy, enhancing money security and facilitating social capital accumulations (Aker and Mbiti 2010, Simiyu and Oloko, 2015). On these grounds, a technology is considered successful when it is well and used by the intended users and or hascontributed to the progression of enterprises into income generating and profitable.

Mobile money services (MMS) usage is a major source of enhancing competitive advantage as well as a cost effective means through which the SMEs can reach customers globally and compete with their global counterparts. In this regard, the Government of the United Republic of Tanzania is committed to actively ensure that the MMS ecosystem is running smoothly and assists SMEs to use it in their businesses operations.

Among the key initiatives already taken include (a) the establishment of the National ICT policy (URT, 2016), (b) the establishment of the Tanzania Communication Regulatory Authority (TCRA) to regulate inter alia money transfer technology and eco-system (URT, 2003) (c) enactment of Electronic Transaction Act, 2015, (d) institutionalization and operationalization of the Cyber Crime Act, 2015 and (e)'empowerment of the Central Bank (BoT) in enhancing smooth running of FIs. These initiatives have created a sound environment to support Tanzania SMEs' financially and promoting the usage of the latest technologies intheir business operations.

In the recent few years, there has been significant growth of mobile money subscription accountsin Tanzania from 18,080,622 mobile money accounts in 2016to 21,889,618 mobile money accounts in December, 2017 (TCRA, 2017). Data from TCRA show that, mobile money subscription accounts dropped to 19,314,067 as of March, 2018 (TRCA, 2018). A government survey in 2012 (URT, 2012) also revealed that about 59% of small business owners owned a mobile phone, the proportion of owners/users was higher in Dar es Salaam (77.8%) and in other urban areas (70.9%), but was much lower in the rural areas (47.2%) (Njau, 2015).

The Tanzania's telecommunication industry has experienced a growth in mobile money transfer within the country and across the borders. Until 2016, there were five (5) telecom companies working as MMS providers namely,Airtel, Halotel, Tigo, Vodacom and Zantel (TCRA, 2016). The number of registered users increased from 360,740 in June 2009 to 49,356,465 in December, 2015. This trend therefore assisted customers to maintain transactional balances in their electronic wallets (URT, 2017). Disregarding of the increase in mobile phone penetration, business transactions in the formal financial sector has not yet gained wide acceptance due to low penetration (less than 45%) of banking and other financial services (TCRA, 2017). It is evident that some of the commercial institutions such as the banks and other financial institutions (FIs) continue to use MMS as the digital means for extending their financial services (URT, 2017).

MMS usage has played a vital role in improving business operation;however there are conflictingopinions about SMEs involvement in mobile business technology. For instance, Salah and Irwin (2010), revealed that although SMEs in Tanzania are aware of the benefits of mobile technology, very few have adopted it and hence they experience low uptake of MMS in business operation. According to Meena (2014),theMMS usage has boosted SMEs business success through reduced cost in performing financial transactions. The benefits have thus influenced their SMEs to continue using MMS in their business orientation.

In the same contexts, theories and studies on technology usage have inconsistent conclusions on factors influencing the usage of mobile technologies in Africa. However, studies done outside Africa have had contrastive findings; for example,

Li's, et al. (2014) study on the adaption of mobile payments shows that the number of merchants, the scope of services, the perceived ease to use, and compatibility of electronic systems have a significant influence on mobile payments in China. In another study on the receptiveness of mobile banking by Malaysian local customers in Sabah (Amin, et al., 2012) it was found that the perceived credibility, the perceived enjoyment, and the perceived self-efficacy are important determinants in predicting the intentions of Malaysia's customers' of using mobile banking.

Furthermore, Al-Fahim, et al. (2014) in a study on the adoption of internet banking services by Small and Medium Sized- Enterprises in Yemen, indicated that competitive pressure was the highest predictor followed by regulatory support and financial institution support while ICT readiness was insignificant. Merrit (2010) also conducted a study on Mobile Money Transfer Services,the Next Phase in the Evolution in Person-to-Person Payments in America and found that Money transfer services for both domestic and international remittances are shifting from traditional providers to wireless carriers who are able to compete for consumer market share on the basis of technological ubiquity and lower costsof services. Given the reflections from these few studies outside Africa it is apparent that there are unique characteristics that influence the adoption of mobile banking and MMT.

In the African context, Kuyoro, et al. (2013) conducted a study on ICT solution to Small and Medium Scale Enterprises (SMEs) in Nigeria.The findings indicate that ICT helped SMEs to create business opportunities, to combat pressures from competition and assisted to cut costs by improving their internal processes. ICT also helped SMEs to improvetheir products through faster communication with their

customers and to promote and distribute their products through online channels. Crabbe, et al. (2009) on their study of usage of mobile banking in Ghana, established that social and cultural factors such as perceived credibility, facilitating conditions; and demographic factors do play a significant role in the adoption of MMS in SMEs operations.

In the East African context, there arestudies such as Makee, et al. (2014) on the effect of Mobile Phone Transfer Services (MMTS) on Performance of Micro and Small Enterprises in Kenya whose findings indicate that MMTS usage helpsto bring more customers in the business and lead to an increase of business income whichcontributes to profits maximization. In Tanzania, a study by Chale and Mbamba (2014) reveals that small and medium enterprises use mobile money services in various ways for business purposes, and these include sales transactions, efficiency in purchase of stock, receiving payment, payment for goods and services, savings as well as money transfer. Such transactions boost business growth. This is in line with Njau and Njuga's(2015)observation that the higher the use of mobile phone services by micro entrepreneurs the higher the success of the business.

Paucity of evidence on the influencing factors of MMS usageamong SMEs has motivated more studies in this particular aspect (Kimani, et al., 2016).The current study therefore aimed at filling the existing gap by identifying and analysingthe factors that influence the usage of mobile money services in SMEs Operations in Tanzania. Thus the study provides a framework for better understanding factors influencing mobile money services usage on SME business undertakings in Tanzania.

1.3 Statement of Research Problem

The increasing trend of banking and Mobile Network Service Providers (MNSP) of investing in mobile money services (MMS) and the governments support to SMEs in up taking MMShave been well documented (e.g. Simiyu and Oloko, 2015, John, et al., 2018)**.**A study by Chale and Mbamba (2014) in Tanzania revealed that the usage of mobile money has contributed to business growth among SMEs by speeding up the transaction process, which significantly influences SMEs business growth. Similar observation is made byKimani, et al. (2016) who reveals that the introduction of mobile money transfers (MMT) services has increased access to banking services among business entrepreneurs and has hence facilitated quick and secure platform for small savings, hasincreased the quality of their services, and has promotedbusiness growth.

In a study byMbogo (2010), it is revealed that the use of MMS has improved the quality of SMEs services delivery and has speeded up their business operations.In the same context, Madila and Masamba (2016),in their study on the effectiveness of MMS applicationconcludes that the mushrooming of MMS delivering centreshas promoted smooth running of SMEs operations through cost-effective and economically efficient method of providing financial services in Tanzania.

Despite the benefits accrued from MMS usage, the majority of SMEs have generally been slow in the uptake of MMS technology. For instance, in Nigeria, the usage of mobile money services among SMEs is still low (Oladejo and Oluwaseun, 2015). Even in the developed economies, though the proportion of the under-banked and unbanked is significant, the uptake of mobile money for different payments and

transfers is limited (Aron, 2015). Similar observation is made by Anthony and Mutalemwa (2014) who hold that despite theMMS usage benefits the technology has not taken off as fast as expected in business operationsof SMEs in Tanzania.

It is therefore paramount to understand the factors that influence MMS usage in supporting SMEs operationsand increase their business prospects. However, it was not clear how SMEs could beinfluenced to fully uptake MMS in supporting their operations. This theoretical andempirical debate rose from the inconsistence that emerged from empirical findings and in the body of theories.Davis (1989) on Technological Acceptance Model (TAM) posits that,the perceived usefulness and perceived ease of use are the major determinants for technology usage. Thismodel however,has ignored the aspects of perceived risk and the perceived trust that can have a positivelyinfluence SMEs operators into using MMS in business operations.Mayer, et al. (1995) in Consumer Trust Theory (CTT) posit that a certain technology will be used in an operation depending on trust that is bounded in competence, integrity, and reputationof such technology. Elsewhere, Bauer (1960) proposes that the degrees of risk that the consumers perceive and their ability to tolerate them are regarded as factors influencing technological usage in business operation. Other scholarshave come up with different conclusions on factors that influence the usage of MMS in SMEs operations.

For example, Madila and Msamba, 2016 concluded that, reduced cost of serving customers and the ease of use of the MMS are the key factors that influences its usage while Mwangwi, 2016 commented that accessibility of MMT had significant influence on MMS usage. Given the conflicting views on the factors thatinfluence the

usage of MMS in supporting SMEs operation, the current study was deemed important. As previously indicated the study analyses the factors, which influence the usage of MMS in supporting SMEs operations and align them in MMS usage by SMEs operations model.The study findings are envisaged to scale upthe adoption of MMS,which would facilitate the growth of SMEs sector in Tanzania.

1.4 Research Objectives

1.4.1 General Objective of the Study

The general objective of the study was to investigate the influence of mobile money services usage in supportingSMEs Operationsin Tanzania.

1.4.2 Specific Objectives

Specific objectives of the study are:

(i) To assess the influence ofthe perceived usefulness of mobile money services in supportingSMEs Operations.

(ii) To examine the influence of the perceived trust on mobile money services usagein supportingSMEs Operations.

(iii) To examine the influence of the perceived risk on mobile money services usageby SMEs Operations.

1.5 Scope of the Study

The scope of the research was confined to the factors that influence mobile money (MMS) services usage to support Small and Medium Enterprises (SMEs) operations in Tanzania. This study was conducted in three regions namely Mwanza (Ilemela), Dar es Salaam (Ilala Municipality) and Mtwara (Mtwara -Mikindani Municipality).As

indicated by Lubua and Semlambo (2017), the nature and size of the small and medium enterprises operations clearly presents considerable potential for the use of new technologies. This means that, SMEs experience their growth resulted on information and communication technology usage. Small and medium enterprises represent the portion of national economic sector characterized by a significantly long value chain influenced, to a great extent, by information, which requires the use of emerging technology. Therefore, in this study it was appropriate to study the usage of mobile money services by SMEs operations in Tanzania.

1.6 Significance of the Study

MMS are widely used to facilitate commercial and other non-business operations in Low and Middle Income countries (LMICs). This study would be significant verifying the research findings on the validity of technology usage theories in SMEs business operations. The model developed is envisaged to be a useful tool in predicting the usage of new technologies in the SMEs context. It would also be a motivational tool for enabling improved usage of new technologies through appropriate interventions of key factors.

SMEs would need to realize the importance of digital usage inSMEs contribution to national income. However, due to limited research and lack of enough data in this area, it has been difficult to provide factual evidence to policy and decision makers on the need to include SME issues in ICT policies, plans, and strategies (Gilman, et al., 2013). Therefore, this study generates new knowledge and serves as data source for policy and decision making on thefactors relating to mobile money service usage in supporting SMEs businesses in Tanzania. This knowledge would enable policy

makers and other actors to make informed decisions onthe various available options. They would also be able to advise operators of mobile money services on the best ways ofadjusting their product portfolio, service delivery, and distribution strategies to best meet the needs of the market.

Thisstudy generate the information which is needed to contribute to the current body of scanty literature on the use of MMS by SMEs and the extent to which such use has facilitated business operation and has established a link between customers and suppliers in Tanzania. Furthermore, the methodology used in this study acts as a guide for future research onMMS usage in SMEs business operations. In this context therefore, the gaps identified in the current study and recommendations for further studies would be used as an eye opener to future researchers interested in this subject for academic and non-academic purposes both in Tanzania and beyond.

1.7 Structure of the Thesis

The thesis is presented in six chapters as systematically described below:

Chapter One introduces a brief background on key issues relating to MMS usage for business purposes, followed by a statement of the problem, research objectives, research questions and significance of the study.

*Chapter Two*presents the conceptual definitions used throughout the document. It also presents an overview of relevant theoretical and empirical literature on some of the key issues discussed by different authors in the field and the gaps in relation to MMS usage in supporting SMEs around the world. This chapter also cites several contextual issues, guided by a number of theoretical and conceptual frameworks related to the study. This chapter also presents the research gap the study intended to bridge.

Chapter Three explains the methodology used in this study by highlighting key issues about datacollection methods. Testing of the parametric assumptions, reliability and validity tests as well as the measurement models are also presented.This chapter also highlights ethicalissuesthat were addressed.

*Chapter Four*Presents the study findingsbeginning with social and demographic characteristics of the respondents. These findings are presented according to the study variables and hypotheses. The presentation is in the form of Tables and other relevant statistics.

Chapter Five involves the discussion of findings, and which hinges on comparing and contrasting previous literature with the findings of the current study. New points of departure are identified and the gaps that have been addressed are presented. In this chapter, new knowledge is generated by stressing the theoretical implications of this study.

Chapter Six, is a concluding chapter, and presents the summary of the main/key findings, and the inferences,which were made out of the data presented, and the present author's arguments which lead to a set of policy recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 Chapter Overview

This chapter examines and analyses literature related to this study. Both theoretical and empirical evidence has been critically reviewed, and knowledge gaps have been identified for further research. This chapter also makes a critical review of several theories accompanied by analytical arguments based on some empirical or anecdotal evidence.

2.2 Conceptual Definitions

2.2.1 Business Operations

The term '*Business Operations*' refers to the administration of business practices to create the level of efficiency possible within an organization. It is concerned with converting materials and labour into goods and services as efficiently as possible to maximize the profit of an organization (Ferrara Consulting Group, 2006). In this study, Business operation was used as the general undertaking of day-to-day business activities.

2.2.2 Interoperability of Mobile Money Services

Dick and Camner (2014) defines interoperability of MMS as the ability of customers to undertake money transfers between two accounts at different mobile money schemes, or to transfer money between accounts at mobile money schemes and accounts at the banks aiming atincreasing financial inclusion of the poor and unbanked.Therefore, interoperability plays an important role in the expansion of MMS

and digital financial inclusion. In the context of Tanzania, interoperability has contributed to market growth by bringing a better understanding on competition that enforces quality services and liquidity as significant determinants for business successes (Gilman, 2016).In this study, interoperability has been used to show the development of mobile money service with the intent of increasing financial inclusion.

2.2.3 Mobile Money Services

The term '*mobile money services*' (MMS) has been defined as electronic money transfer which is essentially digital in attribute in relation to mobility and portability, and is equivalent to mobile-money or mobile-cash services (Diniz, et al., 2011). Marumbwa and Mutsikiwa (2013) define mobile money as the money that can be accessed and used via mobile devices. The term 'mobile money' has also been defined in terms of the money stored using the Subscriber Identity Module (SIM) card that is treated as an identifier of the person storing the money as opposed to one having an account number in the conventional banking sense (Ndiwalana, et al., 2011; Nyaga and Okonga, 2014).

Mobile money services can broadly be categorized into three groups: m-transfers, m-payments and m-financial services. M-payments involve money exchange between two users with an accompanying exchange of goods or services. Mobile money services may be linked to a bank account to provide the user with a whole range of transactions that they would access at a bank branch including insurance and micro-finance among others via their mobile phones (Jenkins, 2008).

MMS providers rely on a network system of electronic technologies with agents employed to distribute the service and linking them to actual and potential customers.

There are always contractual arrangements made and reached between the parent Mobile Network Operators (MNOs) and the middle agents subscribing to offer the services to end users. Therefore, the term 'MMS' refers to the performance of financial transaction(s) using mobile devices through mobile banking, mobile money transfer, and mobile money payment via Mobile Network Operators (Donner, 2005).Considering all the elements used in the various definitions, this study uses the generic definition, namely "mobile money services as the financial services delivered via mobile networks and performed from a mobile device such as mobile phone, credit or debit cards, and or a laptop. In this study, MMS is largely used as the financial communication channel, which has made financial transaction for both business and non-business to take place.

2.2.4 Mobile Banking

Mobile Banking (MB)means the use of a mobile phone (and other mobile devices) to access one's bank account. According to Yakub, et al. (2013), mobile banking is an application of m-commerce which enables customers to access bank accounts through mobile devices to conduct and complete bank-related transactions such as balancing cheques, checking account status, transferring money and selling stocks.

Similar notionis shared by Maina, et al.,(2012) who says that mobile banking facilitatesthe owner of the account to check balance and transaction history, transfer money to other targeted recipients to meet the existing needs, sett utility bills, pay for school fees, and to pay employees, salaries or wages. In fact, it is leapfrogging traditional banking and now many top banks are up and running with mobile banking solutions. In the same way, Claessens, et al. (2000) found that the banks and other FIs

aretaking advantage of the technology and introduce the service as a means of providing fast and efficient services andof assessing their place in the mobile banking world. In the Tanzanian context, the services offered by mobile banking include the Tanzania Inter-bank Settlement System (TISS), which has lead government entities to deliver services with efficiency and effectiveness. In this study, mobile banking is used in conjunction with interoperability, which has expanded financial inclusion. Hence, mobile banking is the part of the ecosystem in mobile money services.

2.2.5 Mobile Money Transfer

Mobile money transfer (MMT) refers to the use of mobile phones or any other electronic device to transfer funds from one end to another end with a broader range of electronic commerce (Ndekwa, 2017). The commonestfeature associated with MMT includes an electronic money issuance of receipts of funds in the amount equal to the available monetary value. M-transfers involve money transfer from one user to another, normally without any accompanying exchange of goods or services (Jenkins, 2008).

In MMT, the electronic value may be accepted as a means of payment by parties other than the issuer, which includes person-to-person (P2P) transfers, retail payments and payment for services, and government-to-person (G2P) transfers. Electronic value of the money is backed up by storage of equivalent funds in one or more banks depending on central banking or other regulations. However, the manner wireless devices (such as mobile phones) changed the business operation in short period of time influences its uptakes (Odera, 2013; John, et al., 2018).This study employed MMT due to its capacity of transferring money from person to person, person to

Government and vice versa. In this context therefore, MMT is used as the corner stone for this study and other similar studies.

2.2.6 Mobile Money Payments

According to Mng'ongose (2017), mobile money payments are a significant component of a mobile commerce that makes the transactions possible, and which involves the exchange of financial values. The term 'mobile payments' shares some characteristics with other electronic payments processed via electronic devices so as to communicate financial transactions by linking mobile commerce and electronic payments (Shuhaiber, 2016).

The mobile money payments process includes initiation, authorization and confirmations of financial values in return of foods and services (Au and Kauffman, 2008). During the payments process via electronic devices, submission (after selecting goods or services) and authentication (sending of the information to the merchant) of financial data must be overseen to minimize the risk that may occur (Ramdani and Kawalek, 2007). In this context, mobile money payment is used to reflect the contactless mobile payment approach via Google Wallet, and MasterCard PayPass and SMS mobile payments, through which the consumer sends a payment request via an SMS text message to a short code and a premium charge is applied to their phone bill or their online wallet.

2.2.7 Mobile Network Operator

According to National Microfinance Policy, Mobile Network Operator (MNO) means a provider of wireless communication services that owns or controls all the elements

necessary to sell and deliver services to an end user including wireless network infrastructure, back haul infrastructure, billing customer care, provisioning computer system, marketing and repair organizations (URT, 2017). In this study,MNO is used to address a number of network service providers in the mobile money ecosystem.

2.2.8 Small and Medium Enterprises (SMEs)

SMEssometimesis used to refer to micro, small and medium enterprises (MSMEs) and cover non-formal economic activities mainly manufacturing, mining, commerce and services (URT, 2003). There is no universally accepted definition of SME to date, simply because different countries use various measures of size depending on their level of development. The commonly used yardsticks are the total number of employees, the total investment and sales turnover (Elly, 2010).

In the Tanzanian context, SMEs include micro enterprises such as those engaging up to four people most of whom are family members or enterprises that employ a capital not exceeding Tshs.5.0 million. These are slightly different from small enterprises that are mostly formalized kind of business undertakings engaging employees ranging from 5 to 49 or have acapital investment ranging from Tshs.5 to Tshs.200 million. However, in the event that one enterprise falls under more than one category, the level or amount of capital investment will be the key deciding factor (URT, 2003). In the context of this study, the number of employees in the enterpriseswas used as the criterion to measure SME category. It was vital to describe the SME in this context due to their nature of business operation and the survival for the fittest in the business operation. Moreover, SME may adjust their business strategy at any time, which may include the usage of technology of the time.

2.3 Review of Theories used in the Study

Mobile technologies are changing economic life in developing countries whereby business enterprises operators have been using mobile money services for executing financial transactions involvingreceiving and sending money from and to different sources (Odienge, 2015). The use of the concept under reference can be accepted or refuted depending on the degree of competition existing in the MMS business environment (Rao and Troshani, 2007). Based on several economic and technological theories relating to MMS, the present study focused on possible predicting variables (determinants) or factors influencing business entitiesin using mobile technology for SMEs operations. The author paid attention to the following: The Technological Acceptance Model (TAM), Consumer Trust Theory (CTT), and the Perceived Risk Theory (PRT) to guide the conceptions and methodological approaches in the current study.

2.3.1 Technological Acceptance Model (TAM)

Several models have been used to investigate the usage of technology in small and medium enterprises operations. Technology usage theories have been developed focusing in predicting variables, which influence organizations or individual into adopting a particular technology.Technology acceptance model (TAM) is widely used theory in examining the usage of a technology by users.

The theory was based on the Theory of Reasoned Action (TRA) by Ajzen and Fisherben, (1980). TAM was first introduced by Davis, (1989) who posits that the perceived usefulness (PU) and the perceived ease of use (PEOU) are the major determinants of using a technology.

The perceived usefulness is the degree to which people believe that the use of a particular system can enhance the chancesof performing particular jobs (Vanketesh, et al., 2003). The perceived ease of use is referred to as the degree to which a person believes that using a particular system would mitigate the waste of much efforts (Dewan and Chen, 2005; Yi, et al., 2006). Attitude towards using an information system and its perceived usefulness jointly determine the behavioural intention that leads to the usage of the actual system (Deventer, et al., 2017).

According to Davis, 1989 sited in Rao and Troshani, (2007), the perceived ease of use has an impact on the perceived usefulness while external variables can influence both the perceived ease of use and the perceived usefulness, with subsequent effect on the usage behaviouramong the previously proposed modelsin the field of information systemsof describing the relationship of the factors influencing ICT usage and operations, TAM seems to be the best in predictingmobile technology acceptance and has been widely used in assessing theenterprise' operations (Davis and Venkatesh, 1996; Bagozzi, 2007). In this context therefore, TAM is the framework that underpins the relationship between the individualresponse towardsmobile technologies usage and the actual usage of the mobile technology.

The applicability of TAM in predicting the acceptance and utilization of various technologies for SMEs operations has been widely acknowledged.For example, Mugo, et al. (2017) used TAM in predicting the acceptance and utilization of various technologies in entities operations. Li, et al. (2014) used TAM to identify the influencing factors on mobile technologies usage and concluded that PEOU and

compatibility have positive and significant influence on the perceived usefulness. Lee and Jun (2007) used TAM to analyse the factors affecting usage of convenience and usefulness of such technology. On the same token, Lin, et al. (2007) used TAMto clarifye-stock users' behavioural intention. Similarly, Daud,et al.(2011) used TAM model to analysethe relationships between variables that influenced the usage of mobile services in Malaysia.

Despite its wide recognition, TAM applicability cannotbe generalized in terms of providing system designers with the information, which is necessary to create user acceptance for new systems (Mathieson, et al., 2001). TAM provides only limited guidance on how to influence the usage through design and implementation (Venkatesh, et al., 2003). As Venkatesh (2000) observe, TAM does not help us understand and explain acceptance in ways that guide development of technology that can impact usefulness and ease of use. TAM is also criticized for having not taken into consideration the effects of social organization such as distribution and delegation of work, different work roles, or joint work routines at the workplace (Micheni, et al., 2013). The model does not take into account the possibility that a technology may be initially accepted, but later on abandoned, or vice versa (Schierz, et al., 2010). For example, Bertrand and Bouchard (2008) argue that, even though TAM is a model, which is applicable to a variety of technologies, it does not provide sufficient information on individuals' opinion about novel systems.

It has been observed that, in technological usage, a rational user needs to focuses on the risk associated with that technology, which are not covered by TAM. It was paramount to find the model, which would align with all constructs in the model and

be able to explain the factors pertaining to mobile technology usage in supporting enterprises operations (Siau, 2003; Maitai and Omwenga, 2016). There are studies, which applied integration of several theories in a particular study to explain the usage of technology for their day-to-day operation. For example, Callum, (2012) integrated Technology Acceptance Model (TAM) with Innovation Diffusion Theory (IDT) in his study of adoption theory and the integration of mobile technology in education.

The study revealed that, compatibility, complexity, and perceived ease of use are the factors, which significantly influence the usage of a technology in education. Yaghoubi and Bahmani (2010) integrated Technology Acceptance Model (TAM) with Theory of Planned Behaviour (TPB) in their study on Factors Affecting the usage of Online Banking.Similarly, Tobbin and John (2011) combined Technology Acceptance Model (TAM) with Innovation Diffusion Theory (IDT) in their study on the usage of Mobile Money Transfer Technology. Their findings reveal that, the perceived usefulness, the perceived ease of use, relative advantages, risk, and transaction costs are the factors that influence Ghanaian consumers' acceptance and use of mobile money transfer technology. TAM is used in this study as a powerful model that explains the relationship between the perceived usefulness of technology (Mobile money Services) and small and Medium enterprises operations. Therefore, TAM was integrated with other models to have a coherent framework in explaining the factors influencing mobile money services usage in supporting SMEs operations.

2.3.2 Perceived Risk Theory (PRT)

As claimed, individuals may face risks when a particular decision or action brings about social and economic consequences associated with uncertainty environment

(Karande and Zinkhan, 1991). The amount of the risk perceived is said to be the function of the stake in the use and individual feelings, which are subjected to uncertainty (Gwahula, 2016).

The concept of perceived Risk (PR) was originally introduced by Bauer in 1960 thatidentified the risk in terms of uncertainty and consequences associated with consumer usage of a given technology. Bauer's initial proposition was that, "Consumer behaviour involves risk in the sense that any action of a consumer will produce consequences *which*he/*she* cannot anticipate with anything approximating certainty, some of which are at least likely to be unpleasant" (Junhua D., 2011; Michael, et al., 2012; Mohammed, et al., 2013) (italics added). PRT was described by looking at the nature and amount of risk when contemplating a particular decision (Cox and Rich, 1964; Chang and Wu, 2012).

It should be noted that the perceived risk is not only related to consumers pre-decision information acquisition and processing activity but also to post-decision processes as well (Ngaruiya, et al., 2014). PRT is a powerful model in explaining consumers' behaviour because consumers are more often motivated with avoiding mistakes than maximizing utility in purchasing a product (Kallamarthodi and Vaithiyanathan, 2011).

As for mobile money service, the perceived risk is defined as the extent to which business operators subjectively believe that the potential losses are caused by uncertainties of using mobile money technology. In the current study, the usage of mobile money services in supporting SMEs operation is influenced by the attributes of perceived risk namely financial risk, privacy risk, psychologicalrisk, performance risk and operational risk. These have been elaborated below:

The theory identifies five types of Risk as discussed below:

1. **Financial risk**: The possible unreasonable financial loss caused by using MMS.
2. **Privacy risk**: The possible loss caused by private information of consumer individuals exposed to MMS
3. **Psychological risk**: The possibility that the consumers bear mental stress of using MMS.
4. **Performance risk**: The possibility that MMS does not work properly or can be used for only a short period of time.
5. **Operational risk**: The nature and amount of risk perceived by a consumer in contemplating a MMS usage

PRT was applied in many studies to investigate the usage of commerce-related technological innovations and that the use of ICT can be viewed as an instance of risk-taking (John, et al., 2018; Wamuya and Maharaj, 2011). The perceived risk theory is widely used a kind of a multi-dimensional construct (Featherman and Pavlou, 2003; Lee. 2009). For instance, Lee (2009) investigated five types of risk in studying the adoption of Internet banking, including performance, social, time, financial and security risk. Featherman and Pavlou (2003) adopted performance, financial, time, psychological, social, privacy and overall risk as key facets of perceived risk in predicting the e-services usage. In another study Ndekwa (2014) observes that, the degrees of risk that the consumers perceive and their ability to tolerate it are regarded as attitudinal factors that affect their technology use behaviours. Moreover in a study by Mitchell (1999),it is revealed that the popularity of perceived risk theory is attributed to the fact that the theory gains advantages as consumers are more often

motivated with avoiding mistakes than to maximizing utility in purchasing and the theory facilitates marketing resource allocation decisions.

In recent years, the perceived risk theory has been widely applied to investigate mobile technologies usage, where users' behaviourtowards mobile usage is viewed as an instance of risk-taking and is regarded as a kind of a multi-dimensional construct (Liu, Y. et al., 2012). For instance, Featherman and Pavlou(2003) adopted performance, financial, time, psychological, social, privacy and overall risk as key facets of perceived risk to predict the e-services adoption. a similar study was carried out by Lee (2009) who used perceived risk theory in studying internet banking adoption, including performance, social, time, financial and security risk.

Despite the highly recognized perceived risk theory (PRT) in explaining the mobile money services usage in supporting small and medium enterprises operations, several weaknesses have been identified with regard to the theory. The identified weaknesses about PRT include the following; the theory did not consider the perceived benefit and the perceived values as the main constructs in mobile technology usage. In addressing this scenario, various studies have integrated more than one model to address all the constructs in explaining technological usage in the operation of enterprises. For example, Li, et al., (2012) integrated three variables namely perceived risk, perceived benefit and perceived value, to predict consumers' intention to use mobile money services. The study found that the perceived value together with the perceived risk and benefit directly affect consumers' intention of adopting the technology in business operation. In another study, Pavlou (2003) integrated trust and risk with the

technology acceptance model in explaining the consumer acceptance of electronic commerce. All constructs were aligned in the framework and confirmatory factor analysis shows that trust and risk are significant in influencing the usage of technology.

2.3.3 Consumer Trust Theory (CTT)

Consumer trust is a substantially important factor for the success of new services such as mobile money services. Mayer, et al. (1995) describe "trust" as the belief of the trustor that the trustee will fulfil the trustor's expectations without taking advantage of the trustor's vulnerabilities (Lee and Jun, 2007). Consumer Trust theory (CTT) considers assorted psychological, technical, technological, cultural and social factors together, allowing the balance of power to shift towards a more cooperative interaction between the MMS provider and the consumers of his/her services (Chandra, et al., 2010). The important element of trust is institution-based trust, which means a person's feeling or believing that the environment in which they transact has appropriate safeguards and protection (John, et al., 2018; Vance,et al., 2008). Thus, trust is bounded with the structural assurance that reduces uncertainty, fear, dimensions and vulnerability with belief in competence, integrity, and reputation (Baganzi and Lau, 2017).

CCT has been applied by many scholars in mobile technologies to predict the ICT usage and the enterprises operations. For example, Siau, et al., (2003) used Trust theory when studying the building customer trust in mobile commerce communications. The authors reveal that the usage of mobile money services (MMS) is influenced by a number of factors namely reliability of wireless services, usability of m-commerce website, usability of mobile devices, information quality, privacy of

customer information, security of mobile transaction, trustworthiness of product vendors, quality of product, and the effect of culture (Siau and Shen, 2003). Chandra,et al., (2010) conducted a study to investigate how consumers develop mobile payment trust with an emphasis on mobile service provider and mobile technology found that trust embodied on MMS have significant influence on SMEs business operations.

Despite its applicability, consumer trust theory has shown some weaknesses on addressing the factors influencing mobile money services usage in supporting SMEs operation. The theory did not consider perceived usefulness as the influencing factor in mobile technologies in supporting enterprises' operation. Some of the studies integrated more than one theory to address the weaknesses noted. For example, Yan and Young (2015) integrated the elements of Technological Acceptance Model (TAM) with Consumers Trust Theory to explain the factors influencing users' intention to adopt mobile payment from a trust perspective. The findings indicate that the perceived ease of use, the perceived usefulness, the structure assurance and ubiquity have significant effect on users' trust, which further influence the user's intention of using the technology.

In the same way, Sonja (2010) integrated perceived trust theory with social network theory, social capital and the role of value in relational exchanges in addressing the role of consumer trust in online shopping. The study revealed that there is a relationship between trusting beliefs and intentions and risk-taking behaviour in network participation. The study concluded that the integration of different trust perspectives and a multi-level and multi-dimensional analysis of research problems

related to trust is allowed. The above empirical findings explicitly indicate that the flexibility of the consumer trust theory in the integrated model suggests that an integrated theoretical framework of trust provides astrong basis for the analysis of factors influencing the usage of mobile money services in the operations of an enterprise. Hence, the consumer trust theory in the current study provides further analysis and strengthens the influence of technological attributes of reputation, competence, and integrity in the use of n mobile money services in the operations of SMEs.

2.3.4 Synthesis of Theoretical Perspective and Summary of the Theories used

In this study, Technological Acceptance model (TAM) was integrated with Perceived Risk Theory (PRT) and Consumer Trust Theory (CTT) in order to align all constructs in mobile money services usage to support SMEs operations. As highlighted, some scholars integrated more than one theory/model to find the attribute of mobile technologies usage in business operations. TAM was used to portray the whole environment of the usage of technology in business operations. The perceived usefulness was determined by the perceived ease of use in the conceptual model.

Gwahula (2018) integrated TAM with IDT in studying the Influence of Perceived Usefulness of GePG on Revenue Collection in Tanzania. The study dwelt on the usage of mobile technology by employing the perceived usefulness and perceived ease of use in addressing the benefits of using GePG in revenue collection as the new innovation which supersedes the previous revenue collecting tools in Tanzania. Elsewhere, Li and Huang (2009) integrated Theory of Perceived Risk (TPR) with Technology Acceptance Model (TAM) to investigate online shopping and found the

need for considering the perceived risk as an antecedent in the Technology Acceptance Model. In addressing the issue of perceived risk and trust, PRT and CTT were employed with their constructs to show how mobile money service could influence SMEs operation. In this case, three theories were combined to increase explanatory power whereby perceived usefulness, perceived risk and trust were used to explain the factors influencing MMS usage in supporting SMEs Operations in Tanzania. In this context, the TAM was strengthened by adding two construct, namely, the 'perceived risk' and the 'perceived trust' that provide better explanation of the technological usage in supporting enterprises operations. Table 2.1 summarises the implications of each theory.

Table 2.1: Summary of Theories and their Implications

S/NO	Name of the Theory	Implication to this study
1	Technological Acceptance Model (TAM)	The usage of MMS depends on the perceived usefulness as supported by perceived Ease of Use and other external factors
2	Perceived Risk Theory (PRT)	MMS usage is associated with technological risk and depends much on the nature of the business. A rational user will hesitate to communicate financial information by fearing to face financial or operational or other forms risks or altogether as embodied in MMS
3	Consumer Trust Theory (CTT)	Trust embodied in MMS may play an important role on the usage of such technology, hence the consumer will achieve their utilities due to usage pattern

2.4 Empirical Literature Review

In this section, several empirical studies related to the current study were examined. The influence of MMS in Tanzania and in Africa at large, motivated different scholars into focusing onthis area as it has significant impact on economic development in Tanzania. In this study, the perceived usefulness on MMS usage, the perceived Trust

on MMS usage and the perceived Risk on MMS usage are used as bases for examining the relationship between these usage and SMEs business operation.

2.4.1 Assessing the Perceived Usefulness of MMS on SMEs Operations

Huang (2008) conducted a study to determine the impact of mobile money services (MMS) usage on SMEs performance in Auckland, New Zealand. The author used a questionnaire to collect primary data. The study findings indicated that most SMEs in Auckland were using mobile technology to conduct their business activities. The study findings indicated further that the use of mobile devices had enabled SMEs to increase their annual turnover due to additional business networking opportunities. In this study, Huang did not ensure validity and reliability of the data. The findings of such a study may therefore be unreliable. This cannot be the case in developing country due to infrastructure and ICT policies binding mobile technologies usage in supporting SMEs operations and hence involves contextual issue in technology usage when crossing from different state of economies for business operations.

Kwakwa (2012) conducted a study on the Mobile Phone Usage by Micro and Small Scale Enterprises in Semi-Rural Ghana. The major findings were that, entrepreneurs/business managers would use more than one mobile phone and/or subscribed to more than one network in order to make affordable calls, to enjoy excellent service from other network providers, for business purposes, and for security reasons. A Chi square test confirmed that mobile phone helped businesses to improve customer services, to improve communication with suppliers/customers, to open up new branch, to keep up with competitors, and to increase profit.

Kimani, et al. (2016) studied a multivariate analysis of the effect of mobile phone money transfer (MMT) on SMEs growth and expansion in Thika town, Kenya. The survey was conducted through administration of questionnaires and interviews to SMEs operators. The findings from the factor analysis using principal component analysis (PCA) focusing on three factors, namely, demographic, accessibility and satisfaction, revealed that the use of mobile devices helped to facilitate a quick and secure platform for small savings among the majority of both rural and urban populations.

The study highlighted that SMEs were increasingly adopting MMT to increase the quality of their services and promote growth; and this helped their business entities to reach their goals. As admitted by the authors themselves, this study was done in one area – Thikaand had some methodological limitations on design, sampling and the like. In the context of Tanzania, the number of mobile network service providers was still increasing, and this demand a systematic study of exploring the usefulness of MMS.

Kirui, et al. (2013) conducted a study on the impact of mobile phone-based money transfer especially in agriculture. The study employed the Propensity Score Matching Technique to examine the impact of MMT services on the use of agricultural input and households' agricultural commercialization, and farm incomes among farming households in Kenya. The study used cross-sectional data,which were collected from 379 multi-stage randomly selected households in three provinces of Kenya. The study findings indicate that the use of mobile phone-based money transfer services significantly increased the level of annual incomes among households. The study

concluded therefore that mobile phone-based money transfer services in rural areas have the potential of helping farmers to overcome market failures; and to increase access to financial services among the rural and non-banked residents. The study recommended for a study to be done on the implementation and the impact of Mobile money service on SME operations. In this regard, it is important to explore the influence of MMS usage in SME Operations in Tanzania.

Mararoand Ngahu (2017) conducted a study on the influence of mobile money services on the growth of SMEs in Nakuru town Kenya. A close ended questionnaire constructed on a 5-point Likert scale was used for data collection. Data were analysed using Statistical Package for Social Sciences (SPSS). Analysis was done using descriptive and inferential statistics. The findings followed by discussions were presented in statistical tables. Regression analysis demonstrated that the three variables had significant influence on the growth of SMEs. Multiple regression analysis indicated that mobile finance has significant variables in explaining the variation in the growth of SMEs. The study concluded that mobile finance has significant influence on the growth of SMEs. The study recommended that mobile money service providers should encourage SMEs traders to adopt the use of mobile money services through enhanced advertisement.

Madila and Msamba (2016) conducted a study on the effectiveness of mobile money application in the development of SMEs in Kilimanjaro region, Tanzania... The study found that majority of SME's that used mobile money included wholesalers, followed by small retail shop owners and these were influenced by the reduced cost of serving customers and the ease of using MMS. The author recommended that the cost of using

mobile money should be reduced to attract more SME's into using MMS and to make these prices affordable to the majority of residents whose standard of living was low. The sample of only 38 SME owners was randomly selected from one locality part of Moshi urban cannot give a generalizable picture of the existing situation in the whole country which is estimated to have more than two million businesses.

Venkatakrishnan and Senso (2013) conducted a study on Challenges of market penetration and expansion by the mobile-phone money transfer services' in Singida District, Tanzania. The study adopted a cross-sectional survey to collect quantitative data from users of mobile money services. Several significant challenges affecting the market penetration, market expansion and regular use of mobile money were identified. Lack of financial capital for agents, unavailability of network coverage and regulatory barriers to the mobile money payment systems contributed to a low penetration level of MMS in Singida. The reduction of transaction charges, ensuring widespread availability of agents in rural areas, stability of network, regular supply of electricity, training and information to users were suggested as the necessary measures required to increase the usage, penetration and expansion of MMS. There is a need to have a national policy, which addresses the challenges noted in order to increase the level of mobile money services usage in supporting SMEs operation.

2.4.2 Examining the Perceived Risk of MMS usage by SMEs Operations

Chittithaworn, et al. (2011) conducted a study on the factors affecting business success of Small and Medium Enterprises in Thailand. The study examined eight factors that influence the SMEs business success namely SMEs characteristic, management and know-how, technology usage and risk associated with business

operation, Customer and Market, the way of doing business and cooperation, resources and finance, Strategy, and external environment. The regression analysis result shown that the most significant factors affecting business success of SMEs in Thailand were SMEs characteristics, customer and market, the way of doing business, resources and finance, and external environment. This study howeverdid not postulate the philosophy used in methodology and validity and reliability tests were not employed to validate the data used in the analysis. Thus an empirical study is required to take intoaccount both contextual issues and improved methodology in assessing the influence of mobile money services usage in supporting SMEs operations in Tanzania.

Ardjouman (2014) studied the factors influencing SMEs in the use of Technology in Cote d'Ivoire. The study aimed at examining the factors hindering the usage of technology for sustainable development and management of SMEs in Cote d'Ivoire. The study based on or guided by two theories - the 'management theory' and the 'technological determination theory', and had adopted a descriptive survey research design. Data were collected from 200 respondents using a questionnaire. The respondents of this study included 50 senior executives, 50 middle-level managers and 100 workers in Abidjan city, purposively selected from SMEs in service and manufacturing industries.

The findings of the study reveal that there is a high level of awareness of the importance of technology in the management of SMEs; ICT and other technologies can be mainstreamed into SMEs development agenda and that technology is a veritable tool for sustainable development of SMEs in Cote d'Ivoire. The study recommended for the formulation and implementation of policies that would enhance

development and deployment of technology in SMEs with the aim of bridging the digital divide in a bid to actualize sustainable development in the country. The latter study has partly been repeated in Tanzania, as currently reported by the present author.

Mwangwi (2016) conducted a study on the effect of security and accessibility of mobile money transfer (MMT) services on transactional lead time of Micro and Small scale enterprises (SMEs) in Eldoret, Kenya. A stratified and random sampling method was used to collect data from a sample of 41 proprietors and 213 staff from 41 SMEs. Primary data were collected through questionnaires while a documentary review was used for collecting secondary data. Multiple regression models were used to test the hypothesis. The study findings showed that accessibility of MMT had a significant effect on transactional lead time among Micro and Small sized enterprises while security MMT had no significant effect on the same. Since this study was done in one area – Eldoret, Kenya, the present author found it worthwhile to conduct a similar study in Tanzania covering several areas located in different regions with different business representation.

Simiyu and Oloko (2015) also conducted a study to assess the MMT role on the growth of Micro and Small sized enterprises in Kenya. The study found out that unlike the formal banking sector, the majority of traders relied on MMTfor their day-to-day transactions. Mobile money transactional costs, convenience and financial accessibility were all found to have an effect and this raised traders' concern. However, the study did not explicitly indicate how the MMT use had influenced the growth of SMEs. The authors in their recommendations argued that a study like this

could be done elsewhere for further investigation and analysis. The current study is therefore a follow up of this recommendation in Tanzania, albeit with somewhat different (or additional) objectives.

Banana and Mature (2015) conducted a study on factors affecting the uptake of MMT services by Micro and Small Enterprises in Pokot Central Sub-County. The study covered a sample of 30 SMEs chosen randomly. It was found that although the risk of sending money to the wrong telephone number is real, the same has not discouraged uptake of MMT service whereby the information on the transfer made can be retrieved and the money received back. One of the limitations reported from this study is that it covered a smaller sample size than initially planned, that is, 30 participants instead of 106 (Sounders, et al., 2015). In view this anomaly, covering a larger sample size would be worthwhile. In this context therefore, the current study was carried out to evaluate the role of MMT services to the growth of SME by looking at the factors influencing MMS usage and their effect or influence on SME operations in Tanzania.

Ngaruiya, et al. (2014) conducted a study on the effect of mobile money transactions on the financial performance of micro and small enterprises in Nakuru Central Business District. The study employed a descriptive research design. The study sampled 120 out of 640 businesses using a purposive sampling technique. A structured questionnaire was used for data collection. The study found out that the inception of mobile phone financial transaction has had several benefits to SMEs. One of such benefits is that, the mobile money transactions have had a significant effect on sales revenue. According to Saunders, et al, 2015, the use of purposive sampling technique in this study was limitation of this study, because it allowed biasness in the

researcher's selection of the respondents leaving out other potential respondents that could be selected e. The present study therefore adopted a random sampling and from a larger sampling-frame in the sample selection from different regions in Tanzania,

Bangers and Cederberg (2011) conducted a study on mobile money transfers and usage among micro- and small businesses in Tanzania. The main focus was on the actual usage and possible effect on the business. The findings revealed that MMS usage among SMEs is 23% of the interviewed SMEs.It also revealed that cash payments of hand to hand still dominated. The authors argued that there were exceptional cases whereby mobile payment systems were still the common means. The study exposed some challenges encountered by SMEs in adopting MMS in three major areas, namely, agents' float and cash levels, knowledge and capacity, as well as security arrangements. Yet, there are several other factors with possible influence on the MMS usage that have an effect on the operations of SMEs. Such factors include for example, the perceived usefulness, trust, and perceived risk in the use of MMS to support SME operations.

2.4.3 Examining the Perceived Trust on MMS usage to SMEs Operations

Saleem and Rashid (2011) conducted a study to examine the relationship between customer satisfaction and mobile banking in Pakistan. The findings revealed that customers concerns about security, authenticity and reliability of technology were significant. These findings imply that firms should focus upon IT application, innovative services, security, and customer trust and risk because they are key indicators of technology adaptation. This study was done out of Africa a long period

of time ago. It is imperative to conduct a similar study focusing on the Tanzania environment.

Fredrik (2014) conducted a study on the impact of mobile money usage on microenterprise in Zambia. The study revealed that developing countries are powered by informal economies that traditionally have had limited access to information technologies and therefore the mobile payment system infrastructure has the potential of transforming the way microenterprises conduct business. Through a pilot study in Livingstone, Zambia, the study examined the effect of mobile money usage on microenterprise profits and employed an instrumental variable strategy using the type of mobile operator as an instrument of addressing selection bias in usage, as mobile money services are available to everyone. This empirical evidence from Zambia justifies the need for undertaking similar studies in other countries with more or less similar objectives as proposed in the current study.

Ali (2013) conducted a study on factors influencing MMT adoption among some Somali students. The study investigated the factors influencing electronic voucher card Plus (EVCP)'s adoption among the students in a private university in Mogadishu, Somalia, based on the extended TAM. By using a proportionate stratified random sampling, 414 students responded to the study. The findings indicate that the perceived usefulness, perceived ease of use and perceived trust had statistically significant and positive effect on the intention to adopt EVCP among the students. Since this study adopted TAM model in MMT focusing on university students, it was found useful to conduct a similar study focusing on integration of various theories in developing and implementing research methods targeting SME operators in Tanzania.

Chale and Mbamba (2014) studied the role of MMS on the growth of micro and small enterprises in Tanzania. Data were collected from respondents in Kinondoni District (Dar es Salaam Region) using a structured questionnaire administered to a selected number of respondents. Multiple regression analysis was performed to test the role of increased volume of sales, efficiency in purchase of stock, reduced time in processing payments, payments of goods and services, improved habit of savings, and money transfer on business growth in terms of market share, and improved revenue and profitability. Based on the study findings, the researchers recommended that SMEs should continue using mobile money in their businesses so as to enhance their businesses and reduce some costs. In this respect, the current reported study was designed and then conducted in different regions in Tanzania involving SMEs operators.

2.5 Research Gap

A number of theories and empirical studies have been used to explore factors influencing the adoption of mobile money and related technologies among SMEs. Most of these theories such as the TAM framework were designed to align the technology available and the behavioural intention of using such technology. In today's dynamic business world, technological development which is promoted by the internet boom has significantly changed the way businesses are done (Andresen, 2013).

Wamuyu (2014) argues that,the use of mobile money, mobile payments and other related mobile financial transactions in Africa and outside Africa vary from one country to another. The author argues further that this variation can be attributed to the

level of technological maturity, a country's level of social-economic development, and the financial transactions. Given this argument, it is not clear whether these theories which, were developed for larger enterprises should also be applicable to capture the unique characteristics of MMS usage by SMEs operations in the context of Tanzania.

Most of empirical studies have used different indictor variables to measure the same construct of theory in different research settings. Thus, it is difficult to judge which item is most appropriate in the usage of mobile money services in supporting SMEs operation in Tanzania. On the other hand, most of the empirical evidence cited was obtained from a different context. For instance Ndekwa (2014) conducted a study on SMEs adoption of mobile money services in tourist sectors in Tanzania, Simiyu and Oloko, (2015) conducted a study on mobile money transfer and the growth of SMEs in Kenya, Mararo and Ngahu, (2017) conducted a study on Influence of MMS on the growth of SME in Nakuru Town-Kenya.

Some of the previous studies used mixed philosophies with qualitative and quantitative approaches in addressing the usage of MMS in SMEs operation.These approaches were complicated and time consuming in data collection. For instance, Sara and Beata (2010) employed mixed philosophies with qualitative and quantitative approach in exploring marketing and relationships in software SMEs at different stages of the investigation.Further, most empirical studies were carried out in SMEs setting while some were carried out in SMEs operating in different industries. For example, Tan, et al., (2012) in their study on the effects of the type of industries on ICT adoption among Malaysian SMEs found outthat SMEs across different types of industries do affect the strength of relationship between some predictor variables and

different ICT usage. This is due to the fact that each industry has unique operations, which suggest unique application of technology.

Hence, it is not clear which empirical studies done in SMEs setting across different types of industries can also be applicable in the setting of SMEs operation in Tanzania. On the other hand, most of prior studies (Kakwa, 2012; Njau and Njuga, 2015) did not perform construct validity test such as exploratory factor analysis and confirmatory factor analysis. Hence, it is not clear whether their findings are reflecting the reality of the relationship between construct of the theory and their underlying indicators as proposed in their studies. Therefore, the current study fills the gap by analysing the factors influencing mobile money services usage in supporting SMEs operations in Tanzania.

2.6 Conceptual Framework and Operational Definitions

A number of theories and empirical studies have been used to explain the factors influencing technology adoption and usage among SMEs as seen in the previous section. In this study, the perceived usefulness, the perceived trust and the perceived risk on MMS usage are used to examine their relationship with SMEs business operation.

2.6.1 Conceptual Framework

In the present era of globalization and competitive business, organizations dealing with business (especially commercial) transactions need to adopt certain strategies to enable them survive and grow in the market of the day by operating in competitive manner. This includes, among other things, the adoption of new technologies that

come into the market, andwhere it is deemed necessary, the utilization of sophisticated or specialized technologies needed for carrying out business operations efficiently and productively. The use of new ICT whether simple or sophisticated, is likely to boost the delivery of higher quality products and make SMEs competitive (Turan andÜrkmez, 2010).

There is need to highlight the internal and external factors influencing SME operators in using MMTs in day to day operations for the benefit of business sector/agents in Tanzania. Entrepreneurs often have short-term time horizons requiring them to make rational decisions in implementing ICTs in response to policy changes and economic conditions in the future for their financial prospects (Pousttchi and Wiedemann, 2007; Tobbin, 2010). It is important to develop an understanding of the behavioural intention of consumers in relation to MMS usage for m-payments for further SMEs progression. In the view of the currently reported study, the decision on using MMS may be determined not only by enterprise's characteristics, but also through economic and financial influences for business development.

Mobile money services usage is gaining importance in the developed and developing countries and has shown to become a solution for money transfer business services. In view of this, MMS require a systematic and reliable environment for its stakeholders to enjoy the services rendered by service providers and at reasonable costs. It is therefore imperative to assess the access channel, security agent network and consumer satisfaction as the determinants of usability of MMS among the targeted stakeholders. Followed by a description of the relationships based on the study hypothesis, this section presents the conceptual model (Figure 2.1) for facilitating the

analysis of the factors influencing the usage of MMT services to support SME operations and development in Tanzania.

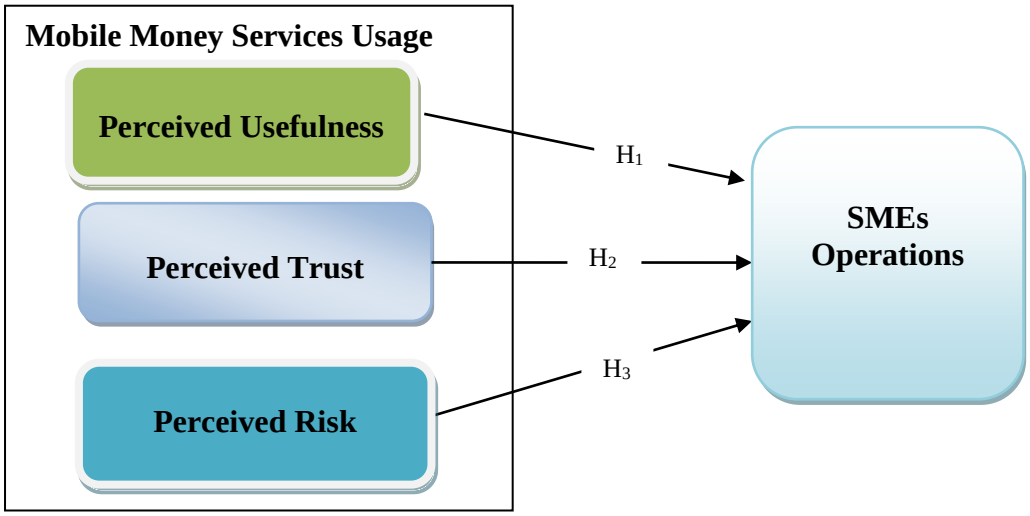

Figure 2.1: Conceptual Framework *(Study Determinants)*

Source: Syntheses of Literature Review (2016)

As detailed in the previous sub-section, the Technology Acceptance Model (TAM) and other technological theories, generally consider the benefit side of using Information Communication Technology (ICT), or the extent to which using an ICT would be advantageous to actual users. Various previous studies done in Tanzania and elsewhere within and outside East Africa used TAM in their conception of the study ideas and upon their implementation; such studies depicted paucity of other variables that can support the technological usage rather than perceived usefulness and perceived ease of use. Thus it seems very crucial to identify other variables that would influence MMS usage in supportingSMEs Operations in Tanzania. These influencing factors need to be investigated in more detail by identifying their significance.

It has been noted that a rational user considers trust and possible risks or the disadvantageous side of the technology in use when looking at their possible effects

on business operations. Based on TAM, Perceived Risk Theory (PRT) and Consumer Trust Theory (CTT) as documented in the literature, the present study proposed four constructs after integrating the afore-mentioned theories in business related information technologies and applied them to investigate the influence of MMS usage in SME business operation. The study constructs considered SME business operation as the dependent variable and perceived usefulness on mobile money services usage, perceived trust on mobile money services usage, and perceived risk on mobile money services usage as independent variables.

2.6.2 Operational Definitions of Study Variables and Hypotheses

2.6.2.1 Perceived Usefulness

In this study, perceived usefulness was used to imply the belief that the use of a particular technology would enhance the potential user's performance that is, focusing on how the advantages of using a new technological innovation would help to motivate users to adopt the innovation (Davies, 1989). It was evidently discovered that the perceived usefulness is an important determinant of ICT adoption among SME in the developed and emerging markets (Alam and Hassan, 2007; Ndekwa, 2014).

In this context, consumers do not ask for technologies, rather they seek for products with specific usefulness to attain the intended objectives. Guided by this reality, the following Research hypothesis was derived with regards to the Perceived usefulness of MMS technology:

H_1: Perceived usefulness of mobile money services usage has positive and significantinfluence onSMEs Operations

2.6.2.2 Perceived Trust

The variable perceived trust is used to imply the level of willingness of consumers to accept the possibility of loss during an Internet shopping process, and this is based on the expectation that online vendors would be able to deliver on their promises (Alqatan, et al., 2012). MMS usage is a new innovation in SMEs operations and which is associated with many uncertainties derived from technological innovation (Chandra, et al., 2010).

It has been reported by previous researchers that, consumer trust as a kind of behavioural intention on e-commerce has a direct relationship with the usage of technology (Liu, et al., 2012). In connection to this, the following study hypothesis was derived in relation to 'perceived trust' in MMS usage:

H_2: *Perceived Trust on mobile money services usage has positive and significant influence on SME's business operations.*

2.6.2.3 Perceived Risk

The term perceived risk was used to mean consumer's level of uncertainty regarding the outcome of a purchase decision, especially in case of high priced item such as a car or a complex item like a computer. Some consumers feel that they are in a vulnerable position because they have no control over transaction made and over their financial prospects, which may put their assets at risk (Liu, et al., 2012). Consumers attempt to reduce their anxiety by collecting more information and by seeking for recommendations of peer groups or an entity (person or consumer advocacy group) who are considered to be experts on the subject matter. In other words, the perceived risk is a belief (whether rational or irrational) held by an individual, a group of

individuals, or a society as a whole about the chance of the occurrence of a risk or about the extent of the magnitude of its effects on the technological usage.

It should be recalled that consumers make a risky decision not for the purpose of taking risk itself, but for obtaining gains or benefits emanating from using new information technology especially where the benefits of usage are substantive (Phan and Daim, 2011; Lai, 2015). Based on these operational explanations, the following hypothesis was derived:

H_3: Perceived Risk on mobile money services usage negative and significant influence on SMEs Operations

2.6.2.4 SMEs Operations

In business undertaking, SMEs require a system, which facilitates the smooth running of their operations (Bagana and Muturi, 2015). In this study, SMEs operations refer to how SMEs operator uses mobile money services in their business undertakings. It includes the whole process of executing business transaction in enhancing prompt payment, the way operators communicate with financial institutions and others stakeholders and money transfers with the objective of smoothing their business operations.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Chapter Overview

Developing a philosophical perspective requires choice and adoption of the appropriate methodology and the research philosophy that would enable the researcher to systematically analyse the phenomena at hand (Goretti, 2008; Burrell and Morgan, 1979). The philosophy has to be related to the problem of the study and it should be imperative in a research undertaking by explaining the philosophical issues in line with methodology. There are various steps that are generally adopted by a researcher in studying a research problem along with the logic behind each step (ibid).

In this perspective, the pursuit of a research takes different methodological assumptions. These assumptions relate to the research philosophical paradigm, research approach, the research design, sampling design, data analysis and the instrument employed for solving a particular problem. Among these, there must be an indication of the assumptions made by the research conceiver about the study, the hypotheses (if any), and means for collecting and analysing data that would be accepted by readers of the research report all over the world (Bryman and Bell, 2008; Gray, 2009; Kothari 2009; Saunders, et al, 2012).

The research methodologies for this study were chosen in order to address the study objectives relating to factors influencing of mobile money services usage to support SME business operation in Tanzania. There are various steps that are generally adopted by a researcher in studying a research problem along with the logic behind each step (Saunders, et al, 2015). In this perspective, the pursuit of a research takes

different methodological assumptions. The rationale for each choice is explained and discussed in terms of research philosophy, research design strategy, study area, study population, sample size selection and data collection tools. This section also explains how the tools were developed and validated, the study variables and their operationalization, data analysis tools used and ethical consideration.

3.2 Research Paradigm

Research Paradigm connotes ideas of mental picture or pattern of thought as a way of examining a social phenomenon by representing a world view that defines the nature of that world and its parts (Guba and Lincoln, 1994). On the other hand, paradigmis referred tocluster of beliefs and dedicates which have an influence on what should be studied, how the research should be done and how the results should be interpreted. Therefore, the researcher must undertake particular inquiries about target respondents' beliefs and experiences and how such beliefs or experiences influence them to behave the way they do in the environments in which they live in.

Positivism philosophy collects data about the study object and searches for causal relationships; and knowledge is developed through objective measurement (Gray, 2009, Kothari and Gaurav, 2014). In this context therefore, the researcher concerned with the need to be crystal clear by stating the choice of the research methodology. In this study, positivism research philosophy was used due to a highly structured methodology (Saunders, et al., 2012).

3.3 Research Approach

It is important to select the research approach after considering the distinction between two main research paradigms in adhering to the research norms (Saunders, et al.,

2012). Creswell (2009) identifies two major research approaches in social research, namely quantitative and qualitative research. Quantitative research is viewed as a research strategy that is builtand emphasizes on the quantification of data while qualitative approach highlights and emphasizes on the words that are qualitative in nature rather than quantifiable numbers. Quantitative approach entails a deductive approach to the relationship between theory (ies) in which the accent is placed on findings, the cause and effect of such constructs built from theories, and the norms of the natural science model (Saunders, et al., 2012). On the other hand, according to Bryman and Bell (2007), qualitative research can be viewed as a strategy that usually emphasizes on words rather than on quantification in data collection and data analysis.

This study used quantitative techniques to test the cause and effect and assessed the significance of each parameter in the model by explaining the relationship between the influencing factors and MMS usage in supporting SMEs business operations in Tanzania. This study relied on the existing literature and empirical studies out of which variables and hypothesis were identified. Moreover, this study was based on various theories from which a study model was developed and validated through empirical data, and theseentailed the determination of the cause and effect of such phenomena (Saunders, et al., 2012). In this approach, the data collected were used to test the hypotheses linked to the existing theories and explain causal relations between the variables and concepts.

3.4 Research Design and Strategy

The present studyadopted an explanatory cross-sectional survey design, which collects data at one time (Kothari, 2009; de Vaus, 2009). Cross- sectional design was selected

based on the nature of the variables or aspects intended to be investigated as per the objectives stated above and as was done in previous studies (e.g. de Vaus, 2009; Gray, 2009). According to Saunders, et al (2009), anappropriate research strategy must be based on research questions and objectives, the extent of the existing knowledge about the subject area to be studied, the time span, the resources availability and the philosophy underpinnings of the research.

A survey is any activity that collects information in an organized and methodical manner about characteristics of interest from some or all units of a population using well-defined concepts, methods and procedures (Franklin and Walker, 2003; Leeuw et al., 2008). A survey compiles such information that gives the researcher the ability to describe, explore and analyse the relationships between a model and theconceptual framework among larger geographically scattered subjects.In this study, the researcher' main objective was to develop a model of testing the relationships of factors using the data collected from larger and scattered population of SMEs in Tanzania. In addition, it was difficult for the researcher to collect data from all three regions involved in the study alone thus the assistants were involved in data collection.

3.5 Research Areas

The study was conducted in three regions, namely, Mwanza, Dar es Salaam, and Mtwara. These regions are located in different country zones. Dar es Salaam is situated in the eastern zone, Mwanza is found in the Lake Zone and Mtwarais in the Southern zone. These areas have been selected from a list of 26 regions found in mainland Tanzania. The selection of these regions for the study was done purposefully

with the aim of having different areas in the country represented. Each of the selected regions has cities that are centres of business connections with other regions located in the same zone.

Dar es Salaam was selected because is the largest city, actually the country's major business hub – the Centre of Business District where there are business undertakings of different kinds, involving diverse business dealers including the banks and non-bank financial institutions of various kinds, manufacturing industries, hotels and restaurants, malls, shops, bars, mobile phone companies, mobile money transfer sales/market agents, and many others. There are also residents and traders of different cultural, political, economic, racial and demographic backgrounds whose beliefs and attitudes are likely to be more diverse as compared with other regions. Dar es Salaam also has until recently been the city hosting private sector corporations and some Government entities.

Mtwara was selected because it is one of the emerging cities in the economy of Tanzania following the discovery and extraction of gas. The city continues to enjoy the mushrooming of small, medium, and large scale factories besides SME business undertakings especially in Mikindani Town. There is a big cement factory, the Dangote Cement Company which was recently established and is currently having cement distribution agents (depots) representing the company both within Mtwara region and in other regions. There are also local and tourist hotels, telecommunication trading agencies dealing with MMT services and other forms of small, medium, and large scale businesses.

Mwanza city is the largest city around Lake Victoria zone and it is actually the second largest city and business centre in Tanzania, with a business orientation similar to that of Dar es Salaam. The region has some geographic advantage; with positive historical business and socio-cultural links with other towns within the great lakes region and hence support national and international trade particularly fishing, quarrying, and forest and agricultural products. These social-economic activities encourage SMEs to use technology in performing business transactions.

3.6 Study Population

The population for this study included business owners/managers who undertake day-to-dayoperations of Small and Medium Enterprises (SMEs) in Dar es Salaam, Mwanza, and Mtwara regions. A survey of SMEs in Tanzania,which was conducted in 2015 by National Bureau of Statistics (NBS)established the status of micro, Micro and Small enterprises in the various sectors of the economy. The target population included individual persons and groups of individuals who run small- and medium-sized business entities. Specifically, SME operators characterized as wholesalers or retailers in different kinds of businesses/trade were the intended study population. These were identified from a sampling frame of a total of 2,558 business owners/managers within the SMEs category of traders many of whom were wholesalers and retailers (Table 3.1).

Table 3.1: Targeted Study Population

S/N	STUDY AREA	SME CATEGORY		TOTAL
		Retail Trade	Wholesale	
1	Dar es salaam	737	296	1,032
2	Mwanza	252	174	426
3	Mtwara	998	101	1,099
	Total	**1,987**	**571**	**2,558**

Source: Extract from NBS Statistical Survey, 2015

3.7 Sampling Design and Sampling Techniques

The sample for this study provided reliable estimates of the indicators for the variables of interest relating to the target population. Pertaining and reasonable margins of error are described in order to build a reliability edge of the research findings. The task was to identify the number of SMEs in the study area through NBS Statistical Survey, 2015 and hence stratified sampling technique was used to stratify the sampling units.

According to Kothari (2009), thestratified random sampling technique involves partitioning of the population into groups called strata and then drawing a sample independently from each stratum. The main objective of the stratified random sampling is to obtain a sample, which is more representative. After settling with the issue of study locality identification, a stratified random sampling procedure was employed to include the targeted population in the study. Within each municipality identified for the study, a *multistage stratified random sampling* technique was adopted in order to reach lower level study localities. The selection of the areas in each region began with the identification of the district, then divisions forming that district, followed by neighbourhoods/streets. This study avoided bias of including respondents from specific and predetermined localities leaving others unrepresented.

The number of the study participants in each stratum was calculated based on the overall sample size for the study as specified below, and depending on the distribution or availability of the categories of the business operators (small or medium, etc.) in a given locality. These were put into sub-groups based on the nature/types of the businesses each was operating (i.e. whole sale or retail trading). A simple random

sampling was used to select a sample from each stratum as recommended, as one of the ways for minimizing bias (Kothari and Gaurav, 2014).

3.8 Sample Size

The determination of the sample sizes for the different categories of the study/research population and their respective localities (sampling units) for the study depended on the category and characteristics of the target population in the present study as recommended (Kothari, 2009). Yamane (1967) provided a simplified formula for computing sample size when the targeted population is formed by less than ten thousand individuals/variables. This formula was employed by Saunders, et al. (2012) in their study while computing the sample sizes for different categories of the targeted populations for study, at a 5% precision level (Table 7.1, page 219). In this context therefore, the same formula was used to calculate the sample size for SMEs under this study, targeting runners of SMEs in the study localitiesare as illustrated below:

$$n = \frac{N}{1 + Ne^2}$$

Where by: n - sample size (Small and Medium Enterprises)

N –Targetedpopulation (Small and Medium Enterprises)

e - Level of precession

From the above formula, the minimum sample size is derived as follow:

$$n = \frac{2{,}558}{1 + 2{,}558\ (0.05)^2}$$

n = 346 (Small and Medium Enterprises)

The sample size of 346 for Small and Medium Enterprises was adjusted by 10% to account for possible non-response rate which might result into a smaller sample than

the targeted one being covered for interviews. Therefore, the addition of 10% of the above stated sample made the ultimate total sample of the owners/ managers interviewees representing the SME operators resulted to 381 (i.e. 110%.*346). To avoid or minimize bias in the sample selection, the ultimate number of the SME included from each region was arrived at based on the sample proportional to the population size criterion (Table 3.2).

Table 3.2: Sample size as Proportional of Respondents from the Unit of Analysis

S/NO	STUDY AREA	SME CATEGORY		TOTAL
		Retail Trade	Wholesale	
1	Dar es salaam	110	44	154
2	Mwanza Region	38	26	63
3	Mtwara Region	149	15	164
	Total	**296**	**85**	**381**

Source: Proportionate of respondent (URT, 2015)

3.9 Data Collection Instrument

This study collected both primary data and secondary data. Primary data were collected through survey questionnaires. Secondary data involved reviews of various documents related to this study. The documents included Journals and publications made by the banks such as the Bank of Tanzania, the periodic and annual reports issued by the TCRA, and documents as it was deemed appropriate for the study. Survey questionnaires were adopted from previous studies on the technology usage which include validating and testing to acclimatize the study environment. The use of different data collection techniques was found important, and for triangulating the findings and for ensuring data validity and reliability as is recommended by experts (Saunders, et al., 2012; Ndunguru, 2007).

3.9.1 Structured Questionnaires

Primary data were collected through administration of questionnaireto SMEs operators(Appendix I) at the first time in the field. The data were original in character. Using questionnaires allows the researcher to organise the questions and receive responses from the respondents even without face-to-faceinteractions (Kothari, 2009). According to May (1997), questionnaire once designed must be tested before using and requiresthe choice of the method for administering them, and indeed, this was done in the presently reported study.

The questionnaire was pretested to a few SME dealers in Dar es Salaam Region before it was taken for further testing through a pilot survey done to twenty (20) SMEs in Ilala Municipality, followed by refining of the instrument to ensure that the questions are clear, well understood and met the needs of the researcher as recommended (Vicent, 2014). That is to say, the pilot survey data were analysed and the information obtained was used to adjust data in the final collection instruments.

The final version of the structured questionnaires was divided into general background information and the usage of MMS by SMEs operations sections. The general background section was set to capture the identities of the respondents, type and level/size of their business enterprise, the demographic characteristics of the individuals concerned (gender, age, level of education and experience in SME business conduction, etc.), place of interview (business locality), and the usage patter of MMS in their day-to-day business operations. Issues relating to the perceived use, trust and risk of MMS usage for supporting SMEs operations in their localities were also investigated, and the respondents were asked to share their suggestions/opinions

as per the study objectives.The questionnaire was translated intoSwahililanguage for easyof comprehension by the respondents.

However, the respondentswho were conversant with using English and Kiswahili while responding to certain questions were allowed to do so and therefore sorting of who answered what and in which language was done later by the study investigator during the data processing and analysis stages. It is through the use of the data collected in structured questionnaire that the testing of the hypotheses was performed using Structural Equation Modelling (SEM) as explained later under the Data Analysis section.

3.9.2 Documentary Review

A review of various documents found during the study implementation period was done. The sources of data include peer reviewed journals where various authors publish previous research works on the same field/topic under study; official documents from the Bank of Tanzania, TCRA and other sources as were deemed relevant, and by reading previous theses and dissertations approved by universities.Documentary review was first used during the exploratory studies in order to increase the level of in-depth insight by capturing data that was used to provide evidence of what was to be collected by means of interviews.

Later, documentary review was used to provide data interpretation, support and evidence to support survey data. Thus, the use of multiple data sources in this study served to triangulate data (Saunders, et al., 2012) and enhance the quality and validity of collected data.

3.10 Measurements of the Model Constructs

This section discusses the model constructs ofoperationalizing the four analytical variables used in the study variables,which included demographic features (age, gender, etc.) and firm characteristics. The variables under this study were retrieved from empirical and theoretical reviews in line with business operators' perceptions towards theirbusiness operations that comprise the following: SME business operation, perceived usefulness, perceived risk, and perceived trust on MMS Usage. Categorical scaling was used for profiling SMEs characteristics by assigning ordinal and nominal scales in order to comply with the requirement of data analysis which were not in Likert scale (Table 3.3).

Table 3.3: Measurement of construct Characteristics of SMEs

Variable	Measurement	Scale
Sex/Gender	Male, Female	Nominal
Jurisdiction	Owners of Small and Medium Enterprises	Nominal
Firm Location	Dar es salaam,Mwanza, Mtwara	Nominal
Firm Category	Wholesale, Retail Trade	Nominal
Education Level of respondents	Primary Education, Secondary Education, Certificate/ Diploma, Degree/Advanced Diploma, Mater and above, Others	Ordinal
Experience in Business	Less than 1 year, 1 to 5 years, 6 to 10 years, More than ten years	Ordinal
Firm's Size (Number of Employees)	≤ 5, 5 - 49, 50 - 99, ≥ 100	Ordinal
Frequency of using MMS	Frequently, Infrequently	Nominal
Usage Pattern	Yes, No	Nominal

Source: Researcher's conception based on synthesis of Literature, 2017

In this study linear factor analysis and SEM were used as data analysis tools. The use of linear data analysis is limited the researcher to use categorical variables in the model. Flora, et al. (2012) argues that a linear factor model is well-suited to the analysis of continuously distributed variables than categorical variable.Within this

context, this study used continuous variables during model development and hypothesis testing. That is the dependent variables and independent variables used likert scale to develop measurement variables. This was agreed with Flora, et al. (2012) points out that, the use of linear model enhances reliability especially when a latent variable is measured by several other variables. Hence, this operationalization of the research model by relating it to the research hypothesis and the main variables studied, the measurement variables were used to gather data as stipulated in the survey research questionnaires (see Table 3.4). All measurements were in Likert scale as follows, 1 for strongly agree, 2 for Agree, 3 for neutral, 4 for disagree and 5 for strongly disagree.

Table 3.4: Model Constructs

Variable	Construct Variables	Items Descriptions		Measurement Scale
Dependent Variables	BO: SMEs Operation	BO1: Linkage with Financial Services	BO4: Management and withdrawal of fund	Likert Scale
		BO2: Prompt Payments	BO5: Linkage with Customers/suppliers	
		BO3: Money Transfer		
Independent Variables	PU: Perceived Usefulness	PU1: Suppliers readiness	PU10: Compatibility	Likert Scale
		PU2: Increase Profitability	PU11: Perceived Privacy	
		PU3: Increase customer base	PU12: Loan Services	
		PU4: Improve Financial Services	PU13: Perceived Ease of Use	
		PU5: Perceived Triability	PU14: Cost Reduction	
		PU6: Data Keeping	PU15: Receipt of Funds	
		PU7: Greater Business Control	PU16: Time saved	
		PU8 Vendor support	PU17: Saving behaviour	
		PU9: Perceived Reliability		
	PT: Perceived Trust	PT1: Perceived reputation	PT4: Data Integrity	Likert Scale
		PT2: Protects Unauthorized personnel	PT5: Regulatory Framework	
		PT3: Perceived competence	PT6: Customer Details Validation	
	PR: Perceived Risk	PR1: Performance Risk	PR7: Psychological Risk	Likert Scale
		PR2: Identity Theft	PR8: Miss allocation of funds	
		PR3: Burglary of Cash floats	PR9: Receipt of Counterfeit Notes	
		PR4: Financial Risk	PR10: Network Failure	
		PR5: Data capture	PR11: Concentration Risk	
		PR6: Operational Risk		

Source: Researcher's conception based on synthesis of Literature, 2017

3.11 Data Analysis and Interpretation

This study used quantitative data analysis, which involves descriptive analysis and inferential statistics which were applied in the interpretations of the Likert scale through the application of point score of 5 to 1 for higher point and lower points respectively after being coded and entered into SPSS version 22. As discussed in the next chapter, multivariate analysis using SEM requires, among other things, fitting the respective variables of interest in the regression model based on the data collected and cleaned ready for analysis (Khademi, 2017; Khine, 2013). The goodness-of-fit was measured basing on the indices or parameter estimates which emerged after running the model (Ullman and Ulman, 2006). However, chi-square and other kinds of tests were looked at for their appropriateness in the analysis depending on the sample size in order to ensure that the findings obtained satisfy the statistical power criteria as per the model requirements (Schreiber, et al., 2006).

3.11.1 Descriptive Data Analysis

Descriptive data were analysedas the initial test of understanding the respondent's feedback using frequency, mean and standard deviation (Andy, 2009). Descriptive statistics including frequency analysis were computed for presenting and analysing the data in numerical terms to determine cause and effects sequence (Mugenda and Mugenda, 2003). The data were presented in the form of frequency distribution tables, graphs and pie charts that facilitate the description and explanation of the study findings. Independent samples t-test was performed to test the statistical significance of the research variables (de Vaus, 2009; Tabachnick, 2007). In this study, percentages and frequencies were used to gain understanding of the respondents and

various firms' characteristics including their age, location, category of the firms, and the like. This assisted the researcher to be familiar with the general characteristics of the SMEs as well as gain other useful types of information on the pattern of MMS usage in undertaking financial and non-financial transactions. This assisted indrawingconclusions and making recommendation in this study.

3.11.2 Multivariate Data Analysis

In this study, hypothesis and analysis of the significant effect of predicator variable was done using Structural Equation Modelling (SEM). According to Hooper,et al.,(2008), SEM has the ability of incorporating observable variables (measured) and the unobservable variables (latent constructs), which outweigh the traditional techniques which were used to analyse measured variables. In this study, hypotheses were formulated using latent variables namely perceived usefulness, perceived risk, and perceived trust on mobile money services to support SMEs Operations. These latent variables were measured by the number of indicator variables (observable variables) in the business statistical model and hence SEM was suitable for analysing this model,which presents latent theoretical construct more realistically than a single variable (Oke, et al., 2012).

In having a valid conclusion at construct level, SEM allows in making several indicator variables per construct simultaneously whereas other methods of analysis would often result in less clear conclusion. In this study, four construct were developed namely perceived usefulness, perceived risk, perceived trust and SME Business operation with several indicator variables. SEM usage was inevitable in order to avoid separate analysis for each construct whereby the variance and

covariance of all observable variables that were not factored systematically (Hooper, et al., 2008).Furthermore, SEM accommodates a set of relationship between one or more independent variables and dependent variables for completeness and test all the relationship between constructs (Byrne, 2010). The testing of a wide variety of possible interrelationships to provide information about the nature of the pattern and interdependence joining the two sets of variables(i.e. dependent and independent) was the stepping stone of making the assumption (Mugenda and Mugenda, 1999).

In order to enhance explanatory power, the research model adopted in this study was developed by linking constructs of Technology Acceptance Model (perceived usefulness and perceived ease of use) with other related constructswhich were found to influence the use and conceptualization of mobile money services in the mobile money service ecosystem. In this study, three hypotheses were formulated in the conceptual framework and analysed simultaneously to determine the significant relationship between them as allowed in the Structural Equation Modeling (SEM) to analyse several equations simultaneously.

SEM permits the measurement of several variables in their interrelationship simultaneously and it is more versatile than other multivariate techniques by allowing multiple dependent relationships between variables. SEM was considered as an appropriate tool due to its ability to perform confirmatory factor analysis test(Jeon, 2015). SEM as tool was able to view the psychometrical soundness of measurement of each latent variable by estimating and removing the error found in the relationship and only leaves the common variance behind. SEM makes the reliability of measurement explicit and leaves the relationship free of measurement error (Oke, et al., 2012).

SEM was employed to address issues related to multicollinearity by involving multiple measures used to describe a latent construct (unobservable variable) by representing distinct latent constructs (Hox and Bechger, 2014). The use of SEM requires appropriate sample size in order to generate the reliable estimate because linear equation modellingis limited to the use of continuous variables only.

Despite the suitability of SEM in this study, the tool is often considered as complicated and difficult to understand. The requirements in the sample size appear to be vague and the interpretation of the results should be labelled with care to handle the mist interpretations of the results (Hox and Bechger, 2014).This means that, SEM requires an appropriate sample size in order to generate reliable and stable estimates. In order to achieve this, the sample size selected was adequate to produce stable results. Similarly linear structure equation modelling is limited only to the use of continuous variables. This was indicated in Hooper, et al. (2008) who advocated that, linear SEM is strictly applicable only when the manifest variables are scaled, andthis is a serious limitation in social sciences where the variables are often categorical. In order to align with this limitation, this study developed a conceptual framework with only continuous variables and has excluded all categorical variables from the original theory.

The amalgamation of TAM,PRT and CTT portrayed more constructs, and this improved the conceptual model on the MMS usage in supporting business operations. Generally, the research model focused on four constructs: SME business operation, perceived usefulness on MMS usage, perceived trust on MMS usage and perceived risk on MMS usage. The model assisted to enhance the explanatory power and hence

the testing of a wide variety of possible interrelationships. It,thus, provides information about the nature of the pattern of interdependence joining the two sets of variables, which was the step stone assumption. Confirmatory Factor Analysis (CFA) was considered beyond exploratory Factor Analysis (EFA) by providing explicit estimates for measuring errors that traditional multivariate procedures were incapable of measuring. CFA usage assured the relationship between constructs are not biased by measuring error and are equivalent to the relationship between variables of perfect reliability. With this context therefore, this study, developed a conceptual framework with only continuous variables, which assured that all variables were scaled. Furthermore, this study used a sample size of 372, which is within the recommended range for SEM.

3.12 Reliability and Validity of Data

3.12.1 Reliability of Data used in the Study

Reliability is defined as the degree to which measures are free from error and to which different operationalization of the same yield consistent results and hence predicate the reliability of the study depending on the procedures reapplied (Ellis and Levy, 2009). Therefore, reliability is the proportion of the observed variable's variance, which is attributable to the effect of unobservable variable such that, the higher the variance of an indicator error the lower is its reliability. It was noted that, the covariance between an unobserved variables and its indicator is the product of the item loading multiplied by the factor variances.

In attaining the reliability of data, the findings was tested to see if they are consistently the same if the study is done and if the results of the study can be reproduced under

the same methodology, the research tool is considered to be reliable (Golafshani, 2003). Reliability is conceived as the assessment of the degree of consistency between multiple measurements of a construct; and this is referred to as a measure of stability of the proposed measure(s) to be used for a given research.

According to Golafshani (2003), there are three types of reliability in quantitative research namely, the degree to which a measurement given separately remains the same, the stability measurement over time, and the similarity of measurement over time or stability of measurement over a variety of conditions. This means that, the use of test-retest method, which implies that the same scale or measure can be administered to the same respondents at two separate points in time. In this study, data were collected at one time and then analysed to generate conclusionand make recommendations.

Based on the above arguments, in order to ensure that data collection tools are reliable, the researcher conducted a pilot study before the main survey so as to make sure that the instruments used were capable of capturing the content variable.The tools were translated into the language (Swahili), which is familiar to the respondentsand hence increased suitability of data collection instrument. But also, the English version was still valid and used for those who were comfortable with this language. To enhance reliability and objectivity, all measures in the construct were repeated and the findings were free from researcher values. Internal consistency was used to assess reliability of the data, andthis yielded acceptable Cronbach's Alpha of of more than .78 across all four constructs (see Table 3.5).

Table 3.5: Reliability Statistics

Construct	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No. of Items
SMEs Operations	0.787	0.792	2
Perceived Usefulness on MMS usage	0.911	0.912	17
Perceived Trust on MMS usage	0.912	0.914	6
Perceived Risk on MMS usage	0.815	0.818	11

Source: Field Data (2017)

Furthermore, the researcher used composite reliability to judge the internal consistency of the variables. Internal consistency is widely used to measure the appropriateness of the instruments and to determine how well a set of items measure a particular behaviour of characteristics within the test (Ndekwa, 2017). In the analysis, a composite reliability (CR) above 0.5 was considered significant while the coefficient that ranged from 0.6 and above was considered more acceptable. In this study, the CR above 0.7 to all constructs as per Table 3.6 indicates that the data and instrument were reliable and met the criteria of being accepted.

3.12.2 Validity of Data used in the Study

Validity involves assessing the measurement instruments and assesses what they aim to measure (Drost, 2012). In this study, to ensure that measurement instruments measured what they aimed to measure, quantitative instrumentswere employed. Construct Validity test was used to ensure that the actual data collection conforms to the theory,which is being studied and hence is used to test validity of the results in order to validate their investigation (de Vause, 2009).

An aggregate of 381 questionnaires was distributed to the SME operators at their work places. About 376 duly completed questionnaires were returned. This comprised a response rate of 98.68% while 5 (five) questionnaires were not returned by the respondents. Out of 376, four (4) questionnaires from the respondents were eliminated due to excessive missing data leaving 372 (97.64%) questionnaires,which were used for further analysis. Names for both respondents and entities were not included in this analysis for ethical reasons. In the current research, the collected data were coded in preparation for a subsequent analysis. The coded data merged into one SPSS file and checked for completeness and consistency.

Validity of the data ensures that another researcher taking the same root will come up with similar conclusions and the results can be confirmed by other researchers doing a similar study (Nimako, et al, 2012). The analyses of the pilot information ensured that the study instruments were validand address the study objectives. According to Green (2008), a test is said to be valid if it measures what it claims to measure. There are different kinds of validity namely, content validity; construct validity, and criterion validity, which are used by various researchers to measure validity in their studies.

Content Validity

Content Validity refers to whether or not the items on a given test accurately reflect the theoretical domain of the latent constructs they claim to measure (Morse, et al., 2002). Content validity helps to identify whether the tools appears to be measuring what they say they measure. To ensure content validity a pilot study of survey was done in Ilala Municipality so as to ensure and test the survey instrumentsto see whether they accurately reflect the theoretical domain of the latent variable.

Construct Validity

Construct validity of measure is directly concerned with theoretical relationship of a variable to other variables. In testing for construct validity, one should examine the scale,which is being used by means of convergent, discriminate and nomological testing of validity (Cohen, 1979).

Convergent validity is concerned with whether a test is similar to those with which it should theoretically be similar. To ensure convergent validity, a loading in measurement model must be at least 0.5 of the variance in the variable (Falk and Miller, 1982). In this study, measurements model loaded not less than 0.5 (seeTable 3.6). It said that the value loaded above 0.5 demonstrates adequacy when using Average Variance Extract (AVE) in testing the convergent validity of the model.

Table 3.6shows that AVE value ranges from 0.587 to 0.923, which ensures adequate convergent validity. In testing constructs validity, discriminate validity was assessed with a view that a given scale can be distinguished from others, which are measuring different concepts or traits. Discriminate validity was assessed by comparing the AVE of each individual construct with the shared variance between the individual construct and all the other constructs. As suggested by Fornell and Larcker (1981), a high AVE than shared variance for an individual construct suggests a discriminate validity. In this study, a comparison of all correlations and square roots of the AVEs on the diagonal indicated adequate discriminate validity.

Furthermore, nomological validity was tested by relating measurements to a theoretical model that leads to further deductions, interpretations and tests which

require all standardized coefficients values of greater than 0.2 (Spiro and Weitz, 1990). In this study all measurement models had standardized coefficients with significant value of greater than 0.2.

Table 3.6: Composite Reliability (CR), Convergent and Discriminant Validity

	CR	AVE	MSV	MaxR(H)	PT	PU	PR	BO
PT	0.960	0.923	0.149	0.962	**0.961**			
PU	0.946	0.898	0.158	0.977	0.370	**0.948**		
PR	0.747	0.587	0.210	0.978	0.386	0.398	**0.622**	
BO	0.741	0.591	0.210	0.980	0.223	0.165	0.458	**0.769**

Source: Field Data (2017)

Data in Table 3.6 show that all variables had Composite Reliability (CR) of greater than 0.74 and scored an Average Variance Extract (AVE) of more than 0.58 which was recommended by Falk and Miller (1982), such that an internal consistent of any variable should score at least composite reliability of 0.60.

Criterion Validity

Criterion validity provides evidence about how well scores on a new measure correlate with other measures of the construct or are similar to the underlying constructs that theoretically should be related (Kimberlin and Winterstain, 2008). Criterion validity measure is pursued in predictive validity or concurrent validity. Concurrent validity uses the already existing and well accepted measures against which the new measure can be compared. In order to ensure concurrent validity, data collection instruments were drawn and developed by considering strong validated literature.

3.12.3 Reliability and Validity issues on Exploratory Factor Analysis

To test sample adequacy for Exploratory Factor Analysis (EFA), the Kaiser Meyer Olkin (KMO) was used as a yard stick in ensuring sample adequacy. The recommended bare minimum by Kaiser Meyer Olkin (1974) was 0.5 and that the values ranging from 0.5 to 0.7 are ordinary, values ranging from 0.7 to 0.8 are good and those ranging from 0.8 to 0.9 are immense while those above 0.9 are excellent. The data collected yielded an overall KMO of 0.902 that falls in the range of immense as per Table 3.7. This was the evidencethat the overall sample size was adequate to enhance factor analysis in this study.

Bartlett's Test results shown in Table 3.7 assist to measure the null hypothesis that the original correlation matrix is an identity matrix. A significant test shows that the matrix is not identity matrix, which showsthat there is evidence of having other relationship between the variable and this was included in the analysis. The Bartlett's Tests of Sphericity were sufficiently large for exploratory factor analysis as suggested by Hopper (2008). In this context, (see Table 3.7)a significant value was less than 0.001, which justifies that there were correlations in the data and hence it provided a guarantee this was an appropriate way for factor analysis.

Table 3.7: Kaiser Meyer Olkin and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.902
Bartlett's Test of Sphericity	Approx. Chi-Square	10876.326
	df	528
	Sig.	.000

Source: Field Data (2017)

In order to perform Exploratory Factor Analysis (EFA), a summary of validity and reliability was developed as per Table 3.8 and become a part of entire analysis.

Table 3.8: Summary of Validity and Reliability in Exploratory Factor Analysis

Criteria for Validity and Reliability	Criteria	Tools and Method used to achieve this study
Nature of the Variable	Continues variable	All variable continues and were checked by supervisors
Nature of the Population	Heterogeneous population	Small or Medium sized were used. Three regions of Tanzania Mainland each with unique consideration on business operation
Sample size	Is at least 300 respondents	Sample of 372 was used with 10:1 sample ration. KMO was used to test the adequacy greater than 0.5
	Each should have at least 5 to 10 observations	
Criteria to retain factor	Eigenvalues greater than 1	All factors retained had eigenvalues greater than 1
	Cutoff points of Cree Plot	All factors retained had cutoff point of Cree Plot
	There must be at least three (3) variables	All factors had at least 3 variables
Criteria for retain items and absence of multicollinearity and singularity	High loading should be 0.8	High loading had 0.8 value
	Low loading should be 0.4	Low loading had 0.4 value
Bartlett's Tests of Sphericity	P-value less than 0.001	Obtained p-value of .000

Source: Adopted from Young and Pearce, 2013; Hooper, 2012

The summary of validity and reliability Table 3.9 was used to evaluate the Confirmatory Factor Analysis (CFA).

Table 3.9: Summary of Validity and Reliability at Confirmatory Factor Analysis

Validity Component	Technique used	Heuristic/ *de facto* standards	Study model validation
Discriminant Validity	CFA as used in SEM	GFI>.90, AGFI>.80, CFI>.90, AVE> share AVE	GFI = .971, AGFI =.938, CFI =.985, see figure 4.6, AVE> share AVE as per Table 3.6
Convergent Validity	CFA as used in SEM	GFI>.90, AGFI>.80, CFI>.90, AVE at least 0.5	GFI = .971, AGFI =.938, CFI=.985, see figure 4.6, AVE are 0.58 and above as per Table 3.6
Content Validity	Literature review	High degree of consensus	Study instrument reviewed and piloted in Ilala Municipality
Nomological validity	SEM	Standardized path coefficients	All Standardized path coefficients have significant value greater than 0.2
Predictive Validity	SEM	Explain variances in the range of 0.40 or above the desired value	Achieved for all unobservable variable
Reliability (*internal Consistency*)	Composite reliability (CR)	All CR > 0.6 or 0.7	CR was above 0.7 as per Table 3.6

Source: Adopted from Straub, et al., 2004; Tabachinck and Fidel, 2007; Hoe, 2008

3.13 Ethical Consideration

Ethical consideration in research concerns with carrying out a research in a proper way, including maintaining high standards, to ensure accuracy of data and mitigate misrepresentation of the collected data so that no one is harmed or is subjective to unwarranted suffering (Kombo and Tromp, 2006). This means that, the researcher must obtain the participants' voluntary consent, address confidentiality and privacy issue in conducting the research and the researcher builds the relationship

withparticipants, and the manner in which the information collected for the entire research is treated. The researcher strives for honesty in reporting data, results, and methodological procedures by not fabricating or misrepresenting data. The researcher avoided biasness and negligence in design, data analysis and interpretation in order to enhance objectivity through critical scrutiny of the data.

The researcher obtained data collection clearance from the Open University of Tanzania and other relevant authorities (as attached Appendix II),which granted permission to undertake this study from the prescribed localities. After obtaining the clearance letter, the researcher started data collection by briefing the respondents on the benefits of the study as well their rights and protection. The target study population wasrequested to give their consentin participating in the study. They were assured that, the researcher would protect their confidential information and personal identities.

The purpose of the researchwas to fulfilthe academic requirements and to contribute towards improvement of mobile money services usage to support SMEs Operations in Tanzania. They were assured that the data are to be collected would be used for academic purposes only and not for any other purposes. The researcher assured the respondents further that the final report would not reveal the names of respondents and their ventures, but rather the variables used would help to answer research questions in addressing the usage of mobile money services to support business orientation in Tanzania (Greener, 2008). Moreover, the researcher acted with sincerity; worked for consistency of thought and action during the research process and all the works from other authors cited in this work were duly acknowledged.

CHAPTER FOUR

FINDINGS OF THE STUDY

4.1 Chapter Overview

This chapter presents the findings obtained from the respondents. Firstly, the chapter starts by presenting data on the respondents' profile; the analysis of the findings provides descriptive statistics of the respondents' information in relation to mobile money services usage. The analysis examines the influence of mobile money service usage in supporting SME business operations. Secondly, this chapter presents the analysis of the survey responses obtained by performing exploratory factor analysis, confirmatory factor analysis and thereafter testing the hypothesis developed for the study. Therefore, this survey presents all important and major factors that influence mobile money services usage on SME business orientation in Tanzania and can be used to estimate the factors entrenched in the MMS usage with the same context of the emerging markets.

4.2 Demographic and other Related Information

In this section, the researcher aimed at understanding the nature and characteristics of the respondents in the study. It reports the descriptive results that helped the researchers in informing the fundamental description of the respondents under the study and in supporting the final analysis. Although this studyfocused on mobile money services usage and SMEs business operation, for the purpose of improving the validity it was also important to consider the profile of the respondents. In this context therefore, the data present the gender of the respondents, management level, region distribution and the location of SME category, education level of the respondents and the level of capital injected in the business:

4.2.1 Gender of Respondents

This study collected data from both males and females who were running business (as small and medium entrepreneurs) at a particular point of time. The consideration of gender of the owners was originated from previous studies which had the evidence that the relationship between performance and intention to use new technology is moderated by gender(Venkatesh, et al., 2003).Statistics shows that 54.8% (204 respondents) were males and 45.2 % (168 respondents) were females with proportional percentage as indicated in Table 4.1. Despite the fact that male respondents were slightly more than female respondents, the proportional percentage indicates that there was at least equal representation of gender in data collection.

Table 4.1: Gender of Respondents

Gender	Frequency	Percent
Male	204	54.8
Female	168	45.2
Total	**372**	**100.0**

Source: Field Data (2017)

4.2.2 Respondent Distribution by Education Level

On examining education profile of the respondents, the study results indicate that among 372 respondentsanalysed, 23%completed primary education, 53% completed secondary education, 18% completed certificate or diploma level of education, 5% had bachelor degree and 1% had postgraduate degrees.At least, there was a representationof the respondents based on all levels of education as per Table 4.2.

Table 4.2: Respondents Education Level

Education Level	Frequency	Percentage
Primary Education	84	23
Secondary Education	196	53
Certificate/Diploma	67	18
Bachelor Degree	20	5
Post graduate	5	1
Total	**372**	**100**

Source: Field Data (2017)

4.2.3 Respondents by Management Level

In this study, each management level was considered responsible for supporting the usage of mobile money services in supporting SMEs as suggested by (Wamuyu, 2014). Among the 372 respondents 58% were owners of the businesses while the remaining 42% were employee of the business (Table 4.3). Owners of the businesseswere the final decision makers on matters related to mobile technology usage and other economic decisions. Most of the ventures were run by the owner and hence the data collected from these respondentswere crucial in projecting the usage pattern of the mobile money services in SMEs Operations.

Table 4.3: Managerial Level

	Frequency	Percent
Owner	217	58
Employee	155	42
Total	**372**	**100**

Source: Field Data (2017)

4.2.4 Respondent Distribution by Location and SME Category

The data were collected in three regions namely, Dar es Salaam, Mwanza, and Mtwara focusing on the wholesale and retail trading. The data show that 269 respondents were on retail trading while 103respondents were on wholesale (see Table 4.4). At least respondents from all the study areas were involved in this study and the findings covered the geographical landscape, whichensured of generalization of the research findings.

Table 4.4: Location and SME Category

Region	SME Category (Frequency)		Total
	Retail Trading	Wholesale	
Dar es salaam	114	35	149
Mwanza	48	14	62
Mtwara	107	54	161
Total	**269**	**103**	**372**

Source: Field Data (2017)

4.2.5 Respondents Experience in Business Operation

According to Venkatesh, et al., 2003, a firm with different experiences in a business moderate and play an important role in influencing the to the decision of using agiven technology.Among 372 respondents, 13.2% had been running the business for less than 1 year, 47.6% ran their business from 1 to 5 years, 29.3% from 6 to 10 years, and 9.9% had been in business operation for more than ten years(Table 4.5). Basing on the percentage distribution, there was a proportional representation of firms in terms of years of the existenceof business operation.

Table 4.5: Experience in SMEs Operations

Duration/Period	Frequency	Percent
Less than 1 year	49	13.2
1 to 5 years	177	47.6
6 to 10 years	109	29.3
More than ten years	37	9.9
Total	**372**	**100.0**

Source: Field Data (2017)

4.2.6 Firm Size

In this study, firm size is represented by the number of employees. This information was easy and less complicated to collect and analyse. This isunlike using other criteria such as the size of the capital which could be difficult to establish(Elly, 2010). Given this situation, it was necessary to use the number of employees to segregate enterprises based on their size as illustrated in Table 4.6. According to the data collected from 372 respondents, seventy eight (78%) percent were from micro enterprises, nineteen percent (19%) were in small enterprises and two percent (2%) were running medium enterprises.

Table 4.6: Respondent Distribution by Number of Employees

Number of employees in the enterprise	Number of Respondents	Percentage
Micro (Less than 5)	291	78
Small (5-49)	72	19
Medium (50 – 99)	9	2
Total	**372**	**100**

Source: Field Data (2017)

4.2.7 Frequency on MMS usage in a Month for Business Operations

It has been observed that the frequency usage of mobile money service depends on a number of factors including the velocity on business operations. Preliminary information shows that among the reasons for such usage are associated with the riskof handling cash in performing business transactions.Some of the risks involve burglary of cash and receipt of counterfeit notes. The data show that 115(31%) of all the respondentswere using mobile money service in their business operation and 257(69%) were not (Table 4.7). This implies that, there is a persistent low uptake of MMS in SMEs operation.

Table 4.7: Frequency in Using Mobile Money Service in a Month for Business Operation

Frequency in using mobile money services in a month	Frequency	Percent
Many times	115	31%
Not at all	257	69%
Total	**372**	**100%**

Source: Field Data (2017)

4.3 Data Analysis on Specific Objective

This section presents the findings related to the interrelationship between the influencing factors on mobile money services usage with the wholesale and retail trading sector business operations. In business operations, wholesale and retail trading are depending on each other regarding with the acquisition of goods and services, and payment for the commodities, which require a systematic way of business communication. The rational business operators need substantive amount of financial services to accomplish business transaction; in this case, the usage of mobile money services seems inevitable. The analysis was done in accordance with specific

objectives in order to understand the factors that influence the usage of MMS in business operations in Tanzania wholesale and retail sub-sectors.

4.3.1 Model Formulation and Validation

The aim of this section was to determine if the data collected reflected the proposed structure as the conceptual framework developed in Chapter Two did not have data to support the model. In order to ensure that constructs suggested aligned with their measures, the researcher employed Factor Analysis (FA) for both Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) by developing the model, which reflects this scenario.

4.3.1.1 Exploratory Factor Analysis

Factor analysis measures the inter-relationship that exists in a large number of items with the intention of reducing them into smaller groups (Factors), which contain the correlated variableshence the Factor Analysis was used to examine the inter-correlations between all variables (Hooper, et al., 2008). The Factor Analysis was also used to refine the number of items on a scale for the purposes of scale development and to generate a new theory by exploring latent factors that explain the variations and interrelationships of the manifesto variable through estimating unknown structure of the data (Ndekwa, 2017).

Therefore, Factor Analysis was appropriate for large sample techniques because the data collected involved a large sample of more than three hundred respondents (Tabachnick and Fidell, 2007).Exploratory Factor Analysis (EFA) was used in order to ensure that the constructs were aligned with their indicator variables. As Babyakand

Green (2010) pointed out, a poor fit model will occur in a situation where there is incongruence between the researcher, the theory, and the data.

In this context therefore, the researcher mixed hypothesized, empirical, and theoretical measures of construct from setting without data. The researcher used EFA as a tool of generating a new theory by exploiting latent variables that best account for the variation and interrelationships of the manifesto variables which were used to align the unknown structure of the data(Matsunaga, 2011). In this study, the researcher used EFA to identify a set of unobservable variables that reconstruct the complexity of the unobservable variables in an essential form.

In this study, the researcher built the conceptual framework by integrating construct and indicator variables from different theories, empirical evidence and technical views as influencing factors on mobile money services usage to support SME business operation in Tanzania. The diagnostic tools were used to evaluate whether the collected data were in line with the theoretical expected pattern. It was used to further assess the structure of the targeted constructs. This wasused to determine if the measures used indeed measured what they intended to measure.

Exploratory Factor Procedure and Output

In performing exploratory analysis, the principal axis factor analysis withVarimaxrotation analysis was done to assess the underlying structure of mobile money services usage in supporting SME operation based on the survey questionnaires.The use of a combination of more than one factor extraction shows that, all four constructs in the model yielded engine value for the correlation matrix of greater than 1 in the model and met the Kaiser’s criterion which led tothe retention of

only factors with confidence interval of greater than one as per Table 4.9. Using a scree test, all the factors above the cut-off point on the scree plot for exploratory factor analysiswere retained while those factors below the cut-off point in the scree plot for exploratory factor analysis were dropped as per Appendix III (a).

The researcher analysed indicator variables in order to see if they fitted their underlying construct by including the suitability of each indicator variable.Dropping or retaining of the factors was done in order to improve the model. The following criteria were used by Yong and Pearce (2013) for retaining or dropping indicator variables:

(i) Those items loaded into their associated factors were retained and those loading to more than one factor were dropped

(ii) Items with KMO greater than 0.5 were retained while those with KMO less than 0.5 were dropped.

(iii) All items with loading ranging from 0.4 to 0.8were retained and those with loading of less than from 0.4 and more than 0.8were dropped.

In fitting the model, some of the indicator variables were dropped with regards to the selected outputs in the SPSS as per Table 4.8.

Table 4.8: Selected Exploratory Factor Analysis Output of Removed Items

Variable	Factor	Item Removed	Reason
Dependent Variables	BO: SMEs Operation	BO5: Linkage with Customers/suppliers	Weak Loading
Independent Variables	PU: Perceived Usefulness	PU1: Suppliers Readiness	Weak Loading
		PU8: Vendor Support	Cross Loading
		PU17: Saving Behaviour	Weak Loading
	PR: Perceived Risk	PR7: Psychological Risk	Cross Loading
		PR10: Network Failure	Weak Loading

Source: Field Data (2017)

Items with high loading (more than 0.4) were not eliminated because they fitted the model as per the extract in Table 4.9. Table 4.10 portrays the construct and their dimensions of the retained factors.

Table 4.9: Exploratory Factor Analysis Rotated Component Matrix[a]

Items	Perceived Usefulness (PU)	Perceived Trust (PT)	Perceived Risk (PR)	SMEs Operation (BO)
PU15	.739			
PU5	.736			
PU3	.713			
PU10	.688			
PU6	.676			
PU13	.672			
PU2	.672			
PU11	.666			
PU4	.657			
PU12	.561			
PU9	.526			
PU7	.508			
PU14	.504			
PU16	.478			
PT3		.734		
PT4		.734		
PT2		.720		
PT6		.702		
PT5		.692		
PT1		.641		
PR1			.766	
PR4			.743	
PR3			.588	
PR6			.584	
PR8			.581	
PR9			.568	
PR11			.566	
PR5			.527	
PR2			.509	
BO3				.708
BO1				.698
BO4				.605
BO2				.599
Eigenvalues	9.835	3.593	3.195	1.919
Variance (%)	29.804	10.888	9.682	5.814
Cumulative Variance (%)	29.804	40.692	50.373	56.188

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
There are 242 (45.0%) non-redundant residuals with absolute values greater than 0.05.
a. Rotation converged in 8 iterations.

Source: Field Data (2017)

During analysing the covariance matrix from the collected data, the initial eigenvalues were the same across the raw and rescaled solution as per Appendix III (b). The data collected yielded a cumulative variance of 56.188percent, which is the acceptable percentage in confirming the rotation sums of square loadings in Exploratory Factor Analysis. Finally, all the retained factors had at least three indicators variables as suggested by Yong and Pearce (2013) such that the retained factor should have had three items.

Table 4.10: Construct and their Retained Factors

Variable	Construct Variables	Items Retained	
Dependent Variables	BO: SMEs Operation	BO1: Linkage with Financial Services	BO3: Money Transfer
		BO2: Prompt Payments	BO4: Management and withdrawal of fund
Independent Variables	PU: Perceived Usefulness	PU2: Increase Profitability	PU10: Compatibility
		PU3: Increase Customer base	PU11: Perceived Privacy
		PU4: Improve Financial Services	PU12: Loan Services
		PU5: Perceived Triability	PU13: Perceived Ease of Use
		PU6: Data Keeping	PU14: Cost Reduction
		PU7: Greater Business Control	PU15: Receipt of Funds
		PU9: Perceived Reliability	PU16: Time saved
	PT: Perceived Trust	PT1: Reputation	PT4: Data Integrity
		PT2: Protects Unauthorized personnel	PT5: Regulatory Framework
		PT3: Competence	PT6: Customer Details Validation
	PR: Perceived Risk	PR1: Performance Risk	PR6: Operational Risk
		PR2: Identity Theft	PR8: Miss allocation of funds
		PR3: Burglary of cash floats	PR9: Receipt of counterfeit notes
		PR4: Financial Risk	PR11: Concentration Risk
		PR5: Data capture	

Source: Field Data (2017)

The Exploratory Factor Analysis (EFA) as tabulated in Table 4.9 was the stepping-stone for Confirmatory Factor Analysis (CFA). In CFA, the explicit model of the factor structure was constructed and the data were statistically tested for their fit by underlying their observed pattern (Matsunaga, 2011)

4.3.1.2 ConfirmatoryFactor Analysis

In this study, the confirmatory factor analysis was used to analyse theoretical constructs through the loading of the measures, error, variances and covariance (Hopper, et al, 2008). The process involves reviewing the EFA in order to ensure that the original variables were reflecting the latent variables by confirming and harmonizing to ensure that they (the original variables) are organized in the Confirmatory Factor Analysis (CFA). The processes of measurement model were developed by testing the specification error and the correlation between the latent variables and thereafter the present measurement models of different variables are as highlighted in the conceptual framework (Young and Pearce, 2013).

The ratio of CMIN value used was relative to the degree of freedom (df) and P-value was used to determine statisticalsignificance of the relationships on the model. Root Mean Square Error of Approximation (RMSEA) were used to test the path model in determining the accuracy of matching the observable input covariance matrix and the predicted matrix of theoretical model (Ndekwa, 2017;Mng'ong'ose, 2017).

In order to have a comprehensive model, the standardized regression weight should be more than 0.5 and the Modification Index (M.I) of high covariance attached by high regression weight between the pinpointed construct errors and the cross loading items

should be deleted (Jackson, et al., 2009). The Goodness of FitIndex(GFI) and the adjusted goodness of fit (AGFI) based upon degrees of freedom was used to determine the proportionate of variance while Comparative Fit Index (CFI)was used to compare the fit of the target model to the fit of then independent variables (Tabachnick and Fidell 2007; Ullman and Ullman, 2006).InRMSEA, a well-fitting model in the lower limit is close to 0 while in the upper limit it should be less than 0.08 (Hooper, et al., 2008).

Measurement model for Perceived Usefulness

IBM Amos 22 was run to test the Perceived Usefulness (PU) measurement model fitness which comprised fourteen (14) parameters namely:PU2, PU3, PU4, PU5, PU6, PU7, PU9, PU10, PU11, PU12, PU13, PU14, PU15 and PU16. In the initial CFA run, the model fit index produced the following results: CMIN/DF = 20.996, P=0.000, GFI = 0.568, AGFI = 0.410, CFI = 0.616 and RMSEA = 0.232 which indicates poor fit of the model and hence it required further improvement in order to minimize Type I and Type II error (Revalle, 2017; Fan and Sivo, 2009).

In the process of improving the model, a run of Amos output was done by deleting the items with high covariance and high value of standardized regression weight (SRW) in the Modification Index (M.I). Amos was run four times and seven items were deleted in sequential order of their M.I including:PU3, PU5, PU6, PU7, PU9, PU11, PU12, PU 14, PU15 and PU16. After completing the process a re-run of Confirmatory Factor Analysis (CFA) yielded the following model fit Index: CMIN/DF referred to as normal Chi-square = 0.537, GFI = 0.999, AGFI = 0.993, CFI = 1.000 and RMSEA =

0.000as per Figure 4.1. All the retained items had a SRWof more than 0.44 in the default model which indicates a good fit model in the Perceived Usefulness.

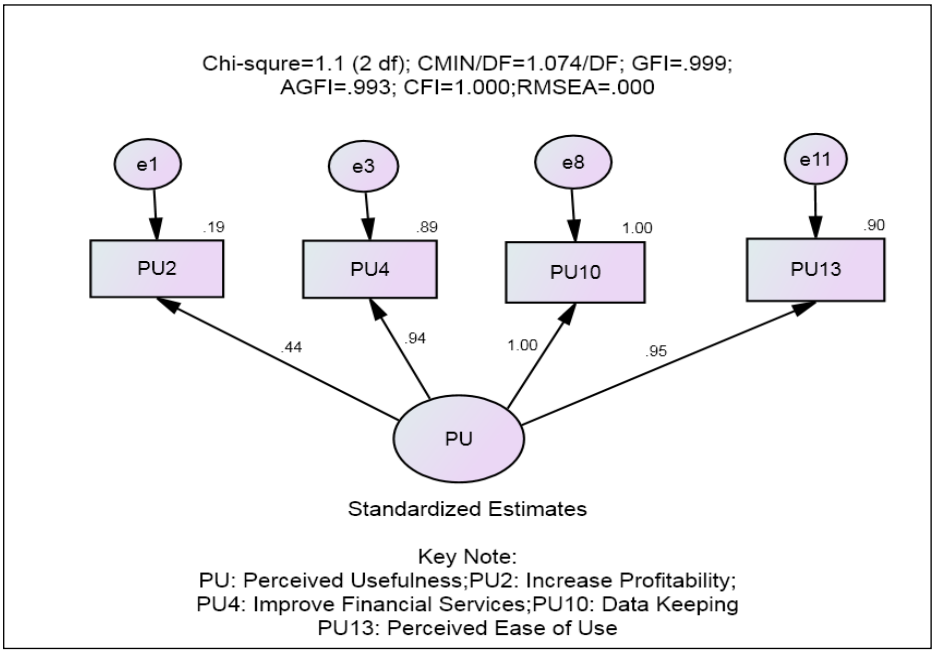

Figure 4.1: Perceived Usefulness Measurement Model

Source: Field Data (2017)

Measurement model for Perceived Trust

IBM Amos 22 was run to test the Perceived Trust (PT) measurement model fitness which comprised five (5) parameters namely: PT1, PT2, PT4, and PT6. In the initial CFA round, the model fit index produces the following results: CMIN/DF = 183.168, GFI = 0.528, AGFI = -0.101, CFI = 0.480 and RMSEA = 0.701 which indicate poor fit of the model and hence required further improvement (Fan and Sivo, 2009). In improving the model, another round of Amos output was made by deleting the items with high covariance and high value of standardized regression weight in the Modification Index (M.I). Amos was run two times which resulted to the deletion of PT4 and PT6. After completing the re-run of Confirmatory Factor Analysis (CFA) the following model fit Index was generated: CMIN/DF = 2.094, GFI = 0.992, AGFI =

0.972, CFI = 0.997 and RMSEA = 0.054 as per Figure 4.2. All the retained items had a standardized regression weight (SRW) of more than 0.42 in the default model which indicated a fair fit model in the Perceived Trust.

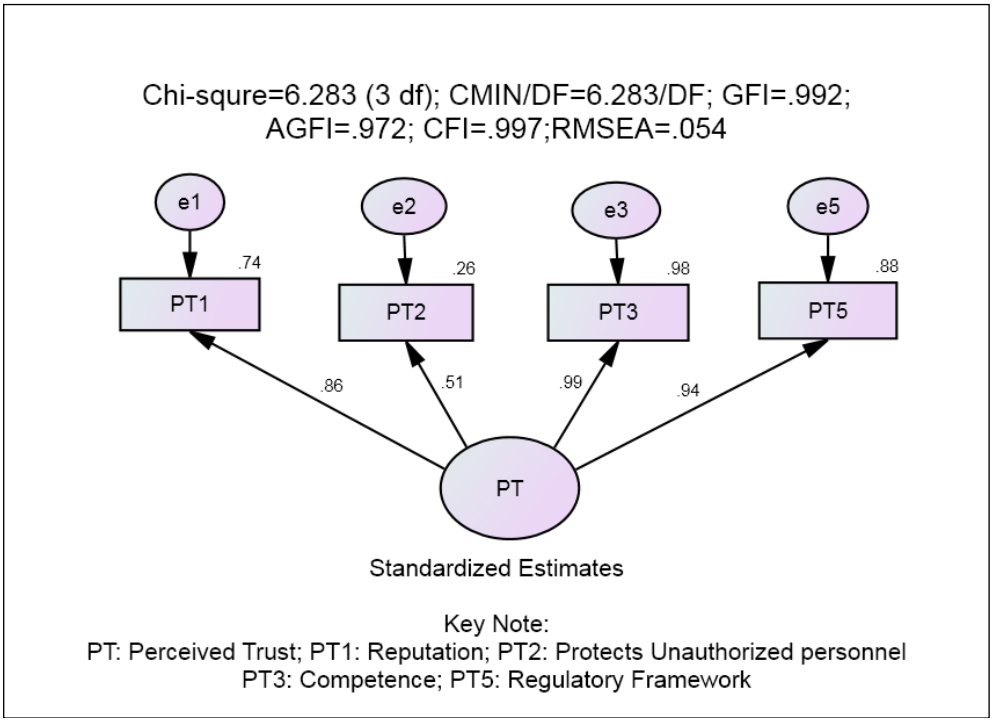

Figure 4.2: Perceived Trust Measurement Model

Source: Field Data (2017)

Measurement model for Perceived Risk

IBM Amos 22 was run to test the Perceived Risk (PR) measurement model fitness which comprised five (5) parameters namely: PR1, PR3, PR4, PR6 and PR11. In the initial run of CFA, the model fit index produces the following results: CMIN/DF = 36.676, GFI = 0.783, AGFI = 0.566, CFI = 0.660 and RMSEA = 0.259 which indicate poor fit and hence required further improvement in order to fit the model.In improving the model, another round of Amos output was made by deleting the items with high covariance and high value of standardized regression weight in the Modification Index (M.I). Amos was run two times and four items were deleted in sequential order of

their M.I namely PR2, PR7, PR9 andPR11. After the re-run of Confirmatory Factor Analysis (CFA) the model fit Index generated the following: results CMIN/DF = 2.568, GFI = 0.990, AGFI = 0.966, CFI = 0.984and RMSEA = 0.065. All the retained items had a standardized regression weight (SRW) of more than 0.45 in the default model which indicates a good fit model in the Perceived Risk as per Figure 4.3.

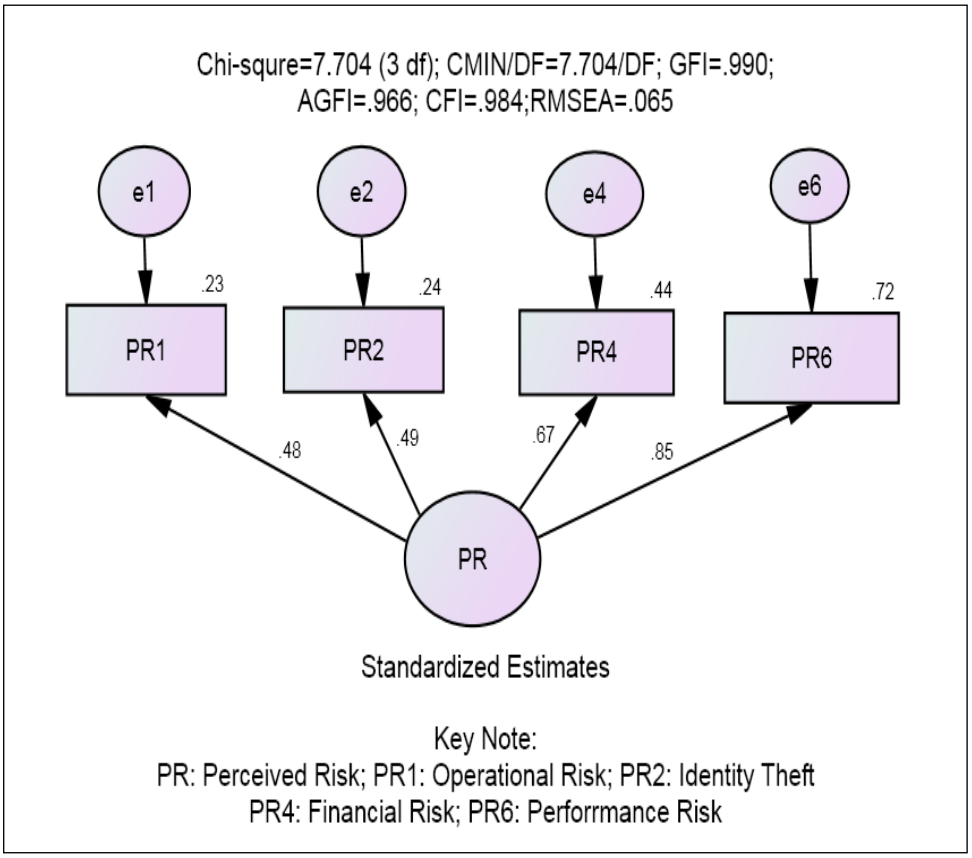

Figure 4.3: Perceived Risk Measurement Model

Source: Field Data (2017)

Measurement model for SMEs Operation

IBM Amos 22 was run to test the SMEs Operations (BO) measurement model fitness which comprised three (3) parameters namely: BO1, BO2 and BO3.The model output

as indicated in Figure 4.6 indicate that the model fit based on Hoe (2008) commonly applied fit indices which require the model to achieve the following minimum requirements (CFI > 0.900, GFI > 0.900, AGFI> 0.900: Indicate good fit), RMSEA (.008: indicate Acceptable fit) and the ratio Chi-square to its degree of freedom (CMIN/DF >3) to designate good fitness of the model.

In the initial CFA run, the model fit index produces the following results: CMIN/DF = 0.847, GFI = 0.998, AGFI = 0.992, CFI = 1.000and RMSEA = 0.000 as per Figure 4.4. All the retained items had a standardized regression weight (SRW) of more than 0.55 in the default model which indicates a good fit model in the SMEs Business Operations.

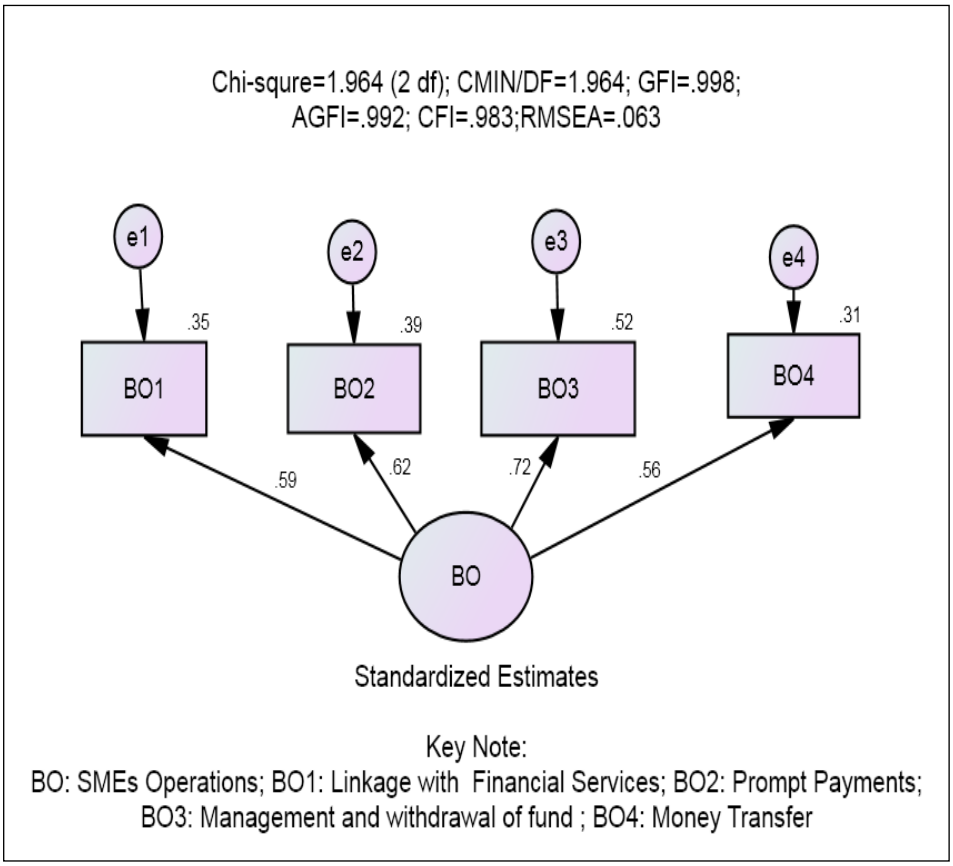

Figure 4.4: SMEs Operation Measurement Model

Source: Field Data (2017)

Measurementfor Baseline Model

In this study, in order to reach the baseline measurement model that fits both components, four individual measurement models were combined and CFA was run with maximum likelihood estimates in the Amos 22 to determine the fitness of the model.In order for the model to fit well,basing on Hoe (2008) commonly applied fit indices the model is required to achieve the following minimum requirements (CFI > 0.900, GFI > 0.900, AGFI> 0.900: Indicate good fit), RMSEA<.008: indicate Acceptable fit) and the ratio Chi-square to its degree of freedom (CMIN/DF< 3) to designate good fitness of the model. Normed Fit Index (NFI) was not used because it is highly used with small sample contrary to the data collected.The initial run showed the unenthusiastic fit with following the model fit Index: CMIN/DF = 5.922, GFI = 0.810, AGFI = 0.743, CFI = 0.887 and RMSEA = 0.115 which requiresan improvement for better fit (Hoe, 2008).

In order to improve the model some of the items that were affecting the significance of the model fitness were removed as proposed by Hooper, et al. (2008).Items with high covariance and high standardized regression weights (S.R.W) in the Modification Index (M.I) were removed in order to improve the model. The removed items include PU10, PU14, PR1, PR2, PT2, PT5, BO3 and BO4 which improved the modelto have a standardized regression weight (SRW) of more than 0.40 in the default model which indicates a good fit model and hence adequate fit with CMIN/DF = 2.415, GFI = 0.971, AGFI = 0.938, CFI = 0.985and RMSEA = 0.062as per Figure 4.5. This

indicates that most of the factor loadings explaining the measurement in the model were adequate which portray very good reliability of the research constructs.

The statistical data show that, the standardized coefficient of more than 0.40 for all relations achieved the critical ratio (C.R) of more than 1.96 using significance level of $p < 0.05$ which proves that there is a strong significant relationship between observable and non-observable variables of the model as per Table 4.11.

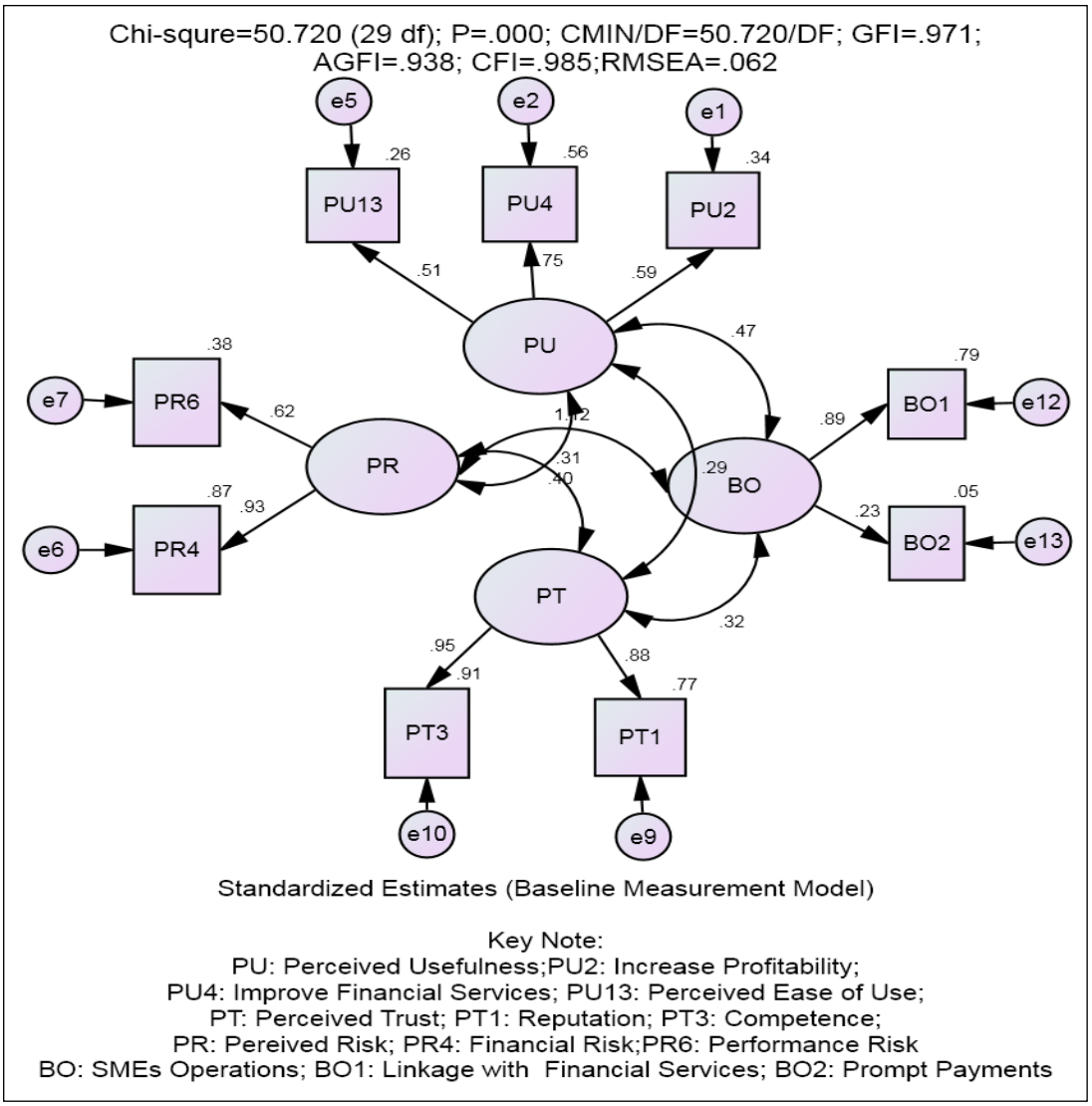

Figure 4.5: Baseline Measurement Model

Source: Field Data (2017)

The significant relationship paved the way for further statistical analysis with the aid of model fit and the relationship on all hypotheses between observable and unobservable variables. These findings therefore formed a very strong framework that assisted another step of hypothesis testing of the study between dependent and independent variables,which is supported by the structural model.

Table 4.11: Model Regression Weights and Standardized Regression weights

Path			Estimate	S.E.	C.R.	P	Label	Standardized Regression Weights
PU4	<---	PU	1.000					0.751
PR4	<---	PR	1.511	0.104	14.496	***	par_1	0.932
PT1	<---	PT	1.000					0.879
BO1	<---	BO	1.000					0.941
BO2	<---	BO	0.311	0.050	4.191	***	par_2	0.226
PT3	<---	PT	1.038	0.096	10.818	***	par_3	0.953
PR6	<---	PR	1.000					0.619
PU13	<---	PU	0.984	0.050	19.766	***	par_4	0.511
PU2	<---	PU	0.901	0.046	8.629	***	par_5	0.582

Source: Field Data (2017)

The model in Figure 4.5 and Table 4.11 yields a chi-squareof the degree of freedom of 1.695and p value = 0.011indicating that the model fitsvery well hypothetical models and the data which were collected from all the respondents reflected the goodness of fit (Byrne, 2006). It has been noted that all model fits indices had more than 0.9 minimum discrepancies which limitedsubstantive improvement of the modeland hence the perceived usefulness, perceived risk and perceived trust accounted for the variance of SMEs Operations in Tanzania.

4.3.2 Analysis of Structure Model

The structure model which hypothesized the relationship between mobile money services (MMS) usage regarding the perceived usefulness, the perceived risk, and the perceived trust on SMEs operations in Tanzania was analysed. The structural model which was retrieved from IBM Amos version 22had a standardized regression weight (SRW) of more than 0.40 in the default model which indicates a good fit model and hence adequate fit as per Figure 4.6.

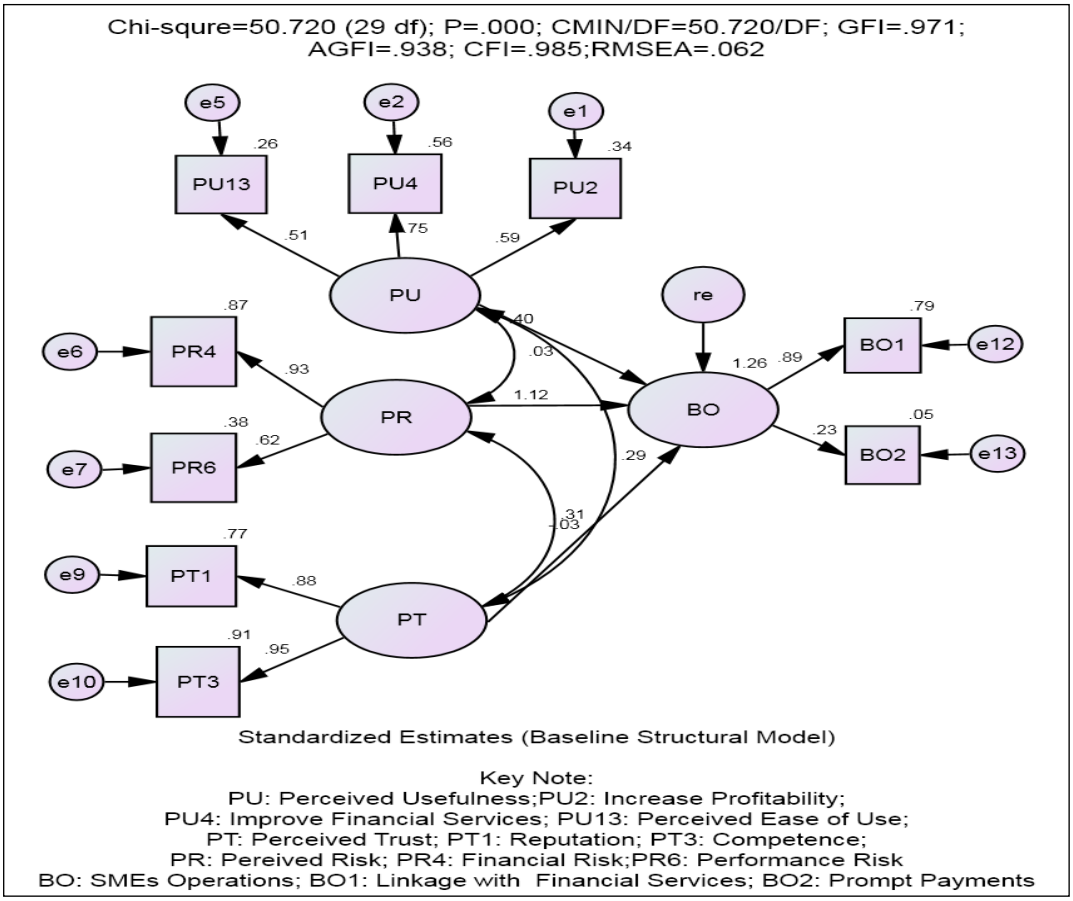

Figure 4.6: The Basic Structural Model

Source: Field Data (2017)

The finding from analysed data show that the ratio of chi- Square to the degree of freedom CMIN/DF which is commonly referred to as the normal Chi- square value

was 2.415which falls in the range of less than 3 as suggestedin the fit model (Cheung and Resnvold, 2002; Schemelleh-Engel, et al., 2003).The fit indices yield the following results: GFI = 0.971, AGFI = 0.938, CFI = 0.985which were obtained from the model fall in the accepted range of fitness of the model and hence indicates excellent fitness of the model. As suggested by Hoe (2008) a RMSEA value of 0.00 indicates perfect fit, the value ranging from 0.05to 0.08 indicates acceptable fit, and from 0.08 to 0.1 indicates ordinary fit while the value greater that 0.1 indicates poor fit. In this study, the RMSEA yielded 0.062 which also fall within theacceptable estimates to indicate a good fit of the model. Having established the good fitness of the structural model as indicated in the indices, the path coefficient and hypothesis testing are evaluated in the next section.

4.4 Basic Model Path Coefficients and Hypothesis Testing

The research hypotheses were formulated based on the broad review of the literature and theories that present the expected relationship between independent and dependent variables (Nimako, et al., 2012). Hypotheses spring from the research problem and these have been tested to generate the results that contributed to the discussion and hence drew potential policy options/recommendations on influencing factors that act as a driver on mobile money services usage to support SMEs Operations (Ndunguru, 2007).

The hypothesized relationships are examined against various coefficients and scores obtained from the analysis. In this research, the hypotheses were tested based on the direction, strength and the level of significance of the path coefficients. A

standardized paths coefficient, critical ratio (C.R) and significant level (p-value) were used in this study to test and evaluate the strength and the level of significance of the hypotheses. The testing of hypotheses at each run was done for comparison purposes.

4.4.1 The Influence of Perceived Usefulness of Mobile Money Services on SMEs Operation

The first postulated relationship in this study hypothesized a positive and strong significant relationship between perceived usefulness of mobile money services usage and SMEs Operationsin Tanzania as per the hypothesis stated below:

H_1: *Perceived usefulness (PU) of Mobile money services usage hasa positive and significant influence on SMEs Operations (BO)*

Descriptive statistical analysis was run first through IBM SPSS version 22 for profiling the attribute of each Perceived Usefulness parameters in estimating the mobile money services usage in business operations as per Table 4.12.

Table 4.12: Perceived Usefulness on MMS usage

Parameters	Sample Size	Minimum	Maximum	Mean
Increase Profitability	372	1	5	4.07
Perceived Ease of Use	372	1	5	4.22
Improved Financial Services	372	1	5	3.75
Valid N (listwise)	372			

Source: Field Data (2017)

Among the three attributes of perceived usefulness of mobile money services usage on SMEs OperationsinTable 4.12, Perceived Ease of Use Services hadhigher impact compared to the Increase Profitability and Improve Financial gains. These factors were found to influence mobile money services usage in supportingSMEs Operations

in Tanzania.The finding shows that perceived ease of use yieldedhigher mean of 4.22 compared to the improved financial services which yielded the mean of 4.07 and increase profitability had 3.75 as argued in the perceived usefulness. In this context therefore, the higher mean shows high influencing impact of the perceived usefulness of MMS in supporting SMEs Operations in Tanzania.

The perceived usefulness' magnitude (Improve Financial Services, Increase Profitability and Perceived Ease of Use) seems to be crucial in explanatory power of usefulness in mobile money services toSmall and Medium Enterprises (SMEs) operations in Tanzania.Further analysisusing Structure Equation Modelling (SEM)was done to determine the significance of the influence of Perceived usefulness of Mobile money services usage to support SMEs Operations in Tanzania as postulated in Table 4.13.

Table 4.13: Structural Model Regression Weights and Standardized Regression Weights on Perceived Usefulness and SMEs Operations

Path			Estimate	S.E.	C.R.	P	Label	Standardized Regression Weights	Results
BO	<---	PU	0.580	0.020	5.635	***	par_6	0.404	Accepted
PU4	<---	PU	1.000					0.751	Accepted
PU13	<---	PU	0.984	0.050	19.766	***	par_12	0.512	Accepted
PU2	<---	PU	0.601	0.046	8.629	***	par_13	0.581	Accepted

Source: Field Data (2017)

The path leading from BO to PU is used to examine the relationship between Perceived Usefulness on mobile money services usage and the SMEs Operations.The results from a standardized path coefficient (γ) in Table 4.13 yieldedpositive standardized regression weights (γ = 0.404).This indicates that perceived usefulness of

mobile money services usage ispositively related to SMEs Operations. In this study, the standardized path coefficient of 0.404is above the recommended value of 0.2 which is considered significant and meaningful for discussion(Hoe, 2008).

The results in the current study confirm a strong positive relationship between perceived usefulness on mobile money services usage and SMEs Operations in Tanzania. In analysing the path toward perceived usefulness, all attributes namely increase Revenue, Improve Financial Services and Perceived Ease of Use hada positive standardized regression weights, which are considered as significant and meaning for discussion.

Apart from standardized regression weights, further analysis was done using critical ratio and p-value to determine the significant influence of perceived usefulness of mobile money services usage on SME business operations. In this study, the findings yielded a critical ratio (C.R=5.635 which is greater than 1.96) and significance level of p=0.000. This concurs with Hox and Bechger (2014)who observed that a relationship which yields a critical ratio more than 1.96 and p-value less than 0.05 is considered significant.This means that the hypothesis H_1 which states that, perceived usefulness of mobile money services usage has positive and significant influence on SMEs Operationsis accepted. This results corroborate other findings (Lubua and Semlambo, 2017) which indicate a strong and significant influence of perceived usefulness on the intention to use mobile money services in SMEs Operations.

4.4.2 The Influence of Perceived Trust on MMS usage inSupportingSMEs Operations

The second hypothesis was stated that perceived trust on mobile money services usage influences SME business operation in Tanzania as being eitherreputation and/ or competence as stated below:

H2: *Perceived Trust (PT) on mobile money services has positive and significant influence on SMEs Operations (BO)*

While testing the above hypothesis, descriptive statistical analysis was run through SPSS version 22 firstto profile the influence of each attribute of perceived trust on mobile money services usage on predicting the SME business operation in Tanzania as illustrated in Table 4.14.

Table 4.14: Perceived Trust on MMS usage

Parameters	Sample Size	Minimum	Maximum	Mean
Reputation	372	1	5	3.79
Competence	372	1	5	3.92
Valid N (listwise)	372			

Source: Field Data (2017)

Table 4.14showsthatout the two attributes of perceived trust on mobile money services usage, competence had slightly higher impact than Perceived reputation on influencing SMEs Operationsinto using mobile money services on their operations. The analyseddata revealed that the perceived competence yieldedthe mean of 3.92whilethe perceived reputation yielded the mean of 3.79. In this context therefore, the greaterthe mean thehigherthe influencing impact on the perceived trust onmobile money services usage in supporting SMEs Operations in Tanzania.

Table 4.15: Structural Model Regression Weights and Standardized Regression Weights on Perceived Trust and SMEs Operations

Path			Estimate	S.E.	C.R.	P	Label	Standardized Regression Weights	Results
BO	<---	PT	(0.018)	0.022	1.303	0.422	par_8	(0.032)	Rejected
PT1	<---	PT	1.000					0.879	Accepted
PT3	<---	PT	1.038	0.096	10.818	***	par_11	0.953	Accepted

Source: Field Data (2017)

This hypothesis was examined using the path leading from PT to BO which establishes the relationship between the perceived trust on mobile money services usage and SME business operation in Tanzania as illustrated in Table 4.15.The results from standardized path coefficient (γ) in Table 4.15 yielded non-positive standardized regression weights (γ = -0.032), which show a weak non-positiverelationship between trusts on mobile money services usage and SME business operation. In this study, the standardized path coefficient of -0.032 is below the value of 0.2 which is the recommended value to be considered for meaningful discussion (Hoe, 2008). This means that Perceived trust on mobile money services usage is not positively associated with SMEs operations. Surprisingly, all attributes namely,perceived reputation and perceived competence on mobile money services usage had positive standardized paths coefficient,which is considered significant and meaningful for discussion as illustrated in Table 4.15.

Furthermore, the analysis of the significant influence of organizational characteristics in Table 4.15 yielded a critical ration of 1.303 and p =0.422. As argued by Hox and Bechger (2014), the relationship, which yields a critical ratio of less than 1.96 and p-value of greater than 0.05 is considered significant. Based on the findings of the

current study, the influence of perceived trust on mobile money service usage in supporting SMEs business operation was found insignificant. The data analysed show that the indicator variables namelyreputation and competence on mobile money services usage were found to be significant as their critical ratio and their p-value fall within the acceptable recommended range. Hence,the hypothesis stated in H_2namely "*Perceived Trust on mobile money services has positive and significant influence on SMEs Operations"* was rejected.

4.4.3 The Influence of Perceived Risk on MMS usage bySMEs Operations

The third postulated relationship in this study hypothesized a positive and strong significance relationship between Perceived Risk on mobile money services usage and SMEs Operationsin Tanzania in wholesale and retail trade sub sectors as pinpointed below:

H3: The influence of Perceived Risk (PR) on mobile money services usage has negative and significant influence on SMEs Operations (BO)

For testing the stated hypothesis, descriptive statistical analysis was run through IBM SPSS version 22 for profiling the attribute of each Perceived Risk parameters by estimating mobile money services usage in supportingSMEs Operations in Tanzania's wholesale and retail trade subsectors. The statistical results are presented in Table 4.16

Table 4.16: Perceived Risk on MMS Usage

Parameters	Sample Size	Minimum	Maximum	Mean
Financial Risk	372	1	5	4.08
Performance Risk	372	1	5	4.10
Valid N (listwise)	372			

Source: Field Data (2017)

Table 4.16 shows the statistical results of the analysis after running the SPSS Version 22. Among of the three attributes of Perceived Risk (PR), performance risk had slightly highermean onperceived risk in influencing mobile money services usage in supporting SME business operation. This means that performance risk yieldedthe mean of 4.10 as opposed to the financialrisks,which yielded a mean of 4.08. According to Ndekwa (2017), the greater the mean the higher the impact or the more the mean is closer to 5, the higher theimpact. In this context therefore, performance risk highly influence mobile money services usage in support SMEs business operation compared to financial risk.

Further analysis using Structural Equation Modelling (SEM) was made to determine significance influence of Perceived Risk on mobile money services usage in supportingSMEs Operations in Tanzania as postulated in Table 4.17.

Table 4.17: Structural Model Regression Weights and Standardized Regression Weights on Perceived Risk and SMEs Operations

Path			Estimate	S.E.	C.R.	P	Label	Standardized Regression Weights	Results
BO	<---	PR	1.529	0.111	13.816	***	par_7	1.122	Accepted
PR4	<---	PR	1.511	0.104	14.496	***	par_9	0.932	Accepted
PR6	<---	PR	1.000					0.619	Accepted

Source: Field Data (2017)

The path leading from PR to BO in Table 4.17 was used to examine the statistical relationship between Perceived Risk on mobile money services usage and SME

business operation in Tanzania. A positive path coefficient of 1.122 using standardized estimate results in Table 4.17 indicates that Perceived Risks on mobile money service usage is positively related to SME business operation in Tanzania.

As argued by Chin (1998), standardized path should be at least 0.2 so as to be considered meaningful for discussion. In this context therefore, a path coefficient of 1.122 implies that the perceived risk on mobile money services usage is positively associated with SMEs business operation. This means that a rational user of new technology will consider its risk before using the service for business transactions.

The analysis also considers the critical ratio and p-values to determine the significant influence of Perceived Risk on mobile Services usage in supporting SME business operation. The finding reveals that Critical Ratio (C.R) was above the required value (C.R = 13.814 which is greater than 1.96) which is recommended by Hox and Bechger (2014) who argue that a critical ratio greater than 1.96 and a p-value of less than 0.05 are considered to be significant in explaining the statistical relationship between the dependent variable and the independent variable.

The analysis shows that the p-value was 0.000, which indicates significant influence of perceived risk on mobile money services usage in supporting SMEs business operations. This means that, hypothesis H3 which states that: "*The influence of Perceived Risk (PR) on mobile money services usage hasnegative and significant influence on SMEs Operations"* was accepted.These results are consistent with other

findings which indicate a negative significant influence of risk on using mobile money services in SMEs business operation (Liu, et al. 2012).

CHAPTER FIVE

DISCUSSION OF RESEARCH FINDINGS

5.1 Chapter Overview

This chapter discusses themain research findingsof the study. The chapter presents the information gathered and analysed in the previous the chapter through summarizing these pieces of information, comparing and contrasting the current findings with what has been established in the literature review on the influence of mobile money services usage as the technological money transfer channel in supporting Small and Medium Enterprises (SMEs) business operations.

5.2 The Influence of Perceived Usefulness on Mobile Money Services Usage on SMEs Operations

One of the key research questions of this study was to considerwhether the perceived usefulness of mobile money services (MMS) usage could have significant influence on SMEs operation in Tanzania.Perceived usefulness as elaborated by Davis (1989) is the degree to which a person perceives the usage of particular mobile money servicesas leading to the achievement of certain objectives. And this is accessed through frequency of the service usage and the advantages gained by the person depending on the service used to the extent of creating a positive user performance relationship.This explains the reality that the bases of using mobile money services in business operationis the nature of the attribute of Information Communication Technology usage(Kramer, et al., 2007). This means that, the technology which has to be used in business operation is required to be useful in the sense of time saving, reducing operating expenses, increasing market share and defining the technological

requirement of the enterprise's operations and technological solution that meet these requirements of the enterprises.

Based on observations, the current study hypothesized that perceived usefulness of Mobile money services usage has significant and a strong positive influence on SMEs Operations. The empirical results in Chapter Four strongly support the hypothesis with a positive and significant contribution of mobile money services usage in supporting Small and Medium Enterprises (SMEs) operations in Tanzania particularly the wholesale and retail sub-sectors which yielded standardized regression weights (γ) of 0.254, critical ratio (C.R) of 5.635 and the acceptable significance level of 0.00. The results reveal that the usefulness of mobile money services (MMS) significantly supports SMEs operations in Tanzania.

It has been highlighted in the National Microfinance Policy of 2017 (URT, 2017), that Mobile money Services have been accredited as the innovation which enables the use of technological devices to facilitate business transactions. The NMP statement postulates that 'the Government and other stakeholders will encourage the usage of technology and availability of innovative financial products and services to bridge the existing gap in business operations'. The policy amplifies that the usage of mobile money services has an impact on access to financial services by the majority of the under banked and unbanked population through maintaining transactional balances in the electronic wallets as a way of enhancing financial inclusion.

The National Information and Communication Technology (ICT) policy of 2016 confirm that ICT usage has become the bedrock for national economic development in

a rapidly changing global environment. Development and implementation of ICT to fit the SMEs business operation need to review the appropriate setting within which this ICT would be implemented for proper operations and better treatment of the emerging opportunities while contending with their associated threats(URT, 2016).

Previous studies on mobile money services usage in supporting business operationsestablished that users were not certain on the actual benefits and ease of use,which could be accrued from MMS usage. This slowed the pace of usingsuch technology as many business runners had no confidence on the services offered (Ali, 2013).Therefore, the actual benefits, improved financial services and ease of use gained through MMS usage in business operations lead to high usage rate of mobile money services. If there are neither benefitsnor improved financial services in the mobile money services usage, rational business operatorswould hesitateto use such technology in performing business transaction and hence find an alternative way of undertaking business transactions.

The significant effect of perceived usefulness of mobile money services is consistent with the findings in previous studies(e.g. Maitai and Omwenga, 2016; Lubua and Semlambo, 2017) which show that the perceived increased profitability, ease of use and improved financial services of the user to influence the intention of using mobile money services is supported by theintention to usebehaviourfrom SME runners. The finding support the arguments made on TAM that the perceived usefulness plays an important role in technological usage which posits that the attribute which fits the SME business operations are better in explaining the mobile money services usage disregarding the nature and the size of the enterprise concern (Davies, 1989).

The findingsof the current study also align with the argument made by Merritt (2011)who found that developments in mobile money transfers, the emerging ecosystem, and its participants and business models indicated that the usage of mobile money services in business operation is influenced by the usefulness and ease of use of such technology. It was explained further that if the technology is easy to learn and use it would assist in its usefulness and hence SMEs business operators would be pushed to use such a technology for promoting their business information. This implies that the perceived usefulness of mobile money services to SME business operationshas a strong significantly influence in technological usage.

In the current study, the research model identified increase profitability, improved financial services and perceived ease of use and the perceived usefulness of mobile money services usage as the variances of SMEs operations. The three attributes of perceived usefulness implies that the benefits offered by theusage of mobile money services in SME business operation strongly influence the usage of such technology. At this juncture, the findings from the study have appreciated the benefits accrued from the usage of mobile money services and how the technology fits well in supporting business operation through expanding their market share with streamlined communication channels. This aligns with the arguments made by Mohammed, et al. (2013)that the mobile money services as an e-commerce offer many opportunities for both small and medium scaled enterprises by defining further expansion of their customer base and nourishing customers relationship.

This study found that SMEs are taking advantages of well-developed infrastructure, regulatory environment and Information Communication Technology (ICT) policy

which enabled them to perceive the significance of mobile money services usage in business operations. It is evident that regulators of mobile money service (BoT and TCRA) perform their regulatory role in ensuring smooth running of the business (TCRA, 2016). Disregarding the network failure and power shortages, financial services were available for 24hors in a day through mobile devices, which integrate the banking services. In this context therefore, mobile money services has many advantages and hence push the business runners to use the facility for their business undertakings.

The findings of the current study concurred with the findings in a study byDeventer, et al.(2017) who found that perceived usualness is significant for predicting the usage of mobile money in business undertaking. These authors advocated that mobile money services were used because they offer convenience and flexibility in supporting business transactions. Furthermore, the findingsin this study are also consistent with the findings of the previous studies such as Li, et al.(2014)who pointed out that, perceived usefulness has a significant influence on the usage of mobile money services in China. They further advocated that mobile money services have a relative advantage over the traditional way of sending and receiving money.This means that the usage of mobile money services influence significantly SMEs business undertakings through reducing operating cost and catalysingan increase in financial inclusion.

The findings of this study show that the use of mobile money services in supporting business orientation would be more meaningful in increasing salesdue to perceived usefulness. This shed light that mobile money services enhance profitabilityand

improve financial service to the SMEs business operations. In a previous studySimiyu and Oloko (2015) also confirm that the use of mobile money services have shown to influence SMEs growth through increased financial transactions resulting in increased sales and therefore perceivable contribution to business growth. In the same vein, Gwahula (2018) recommend that, mobile money services usage is useful in revenue collection, which ultimately increases the capacity of government to deliver services to its citizen. Furthermore, the conclusion drawn in the previous studies concur with the current study such that SMEs found mobile money service as a variation of branchless banking with the delivery of financial services outside the conventional banking which is useful in performing increased business transactions.

The study conducted byWanyonyi, et al.,(2013)concluded that, the significant influence of mobile money services in business operation was drawn primarily on making purchases from suppliers and when customer buys from businesses and debt collection for credit sales have improved SMEs business prospects. This means that the influence of perceived usefulness of usage of mobile money services in supporting SMEs business operation is rewarding and applicable in all contexts.

This study observation aligns with the conclusion provided by Abdinoor and Mbamba (2017)in their study on the significance of consumers' adoption of mobile financial services. They argued that service providers need to play a leading role in influencing individualsnot only in perceived usefulness but also in awareness ofmobile banking while addressing cost effect as one of the barriersagainst the intention of using mobile financial services in business operations. This means that, a rational user of mobile

money services would be cost conscious in selecting the less costbusiness communication channel and the latter would slow its uptake in the technological usage. In this context therefore, buyers and sellers would prefer to use cash during delivery of goods disregarding the risks available in carrying around huge amount of cash.

All aspects of perceived usefulness (increase profitability, improve financial services and perceived ease of use) were found to have a significant influence on the usage of mobile money services among SMEs in supporting business operations. Perceived Ease of use was found to be one of the critical factors as most of the SMEs operators appreciate that mobile money services are useful in terms of facilitating financial transactions, since they are able to perform transaction within a very short time. Further the findings of the current study revealthat, mobile money services are useful since they enhance business performance in terms of profitability and competitiveness during business undertakings.

Ali (2013) in his study on factors influencing mobile money transfer adoption among Somali students found that perceived usefulness of mobile money transfer strongly influenced its adoption among students. This implies that most of the SMEs owners and employees evaluate the contributions of mobile money services to their businesses before adopting the technology; hence there is a need for more awareness raisingon the benefits of MMS among SMEs. Similarly,finding by Ndekwa (2014) in his in study of Factors Influencing the Adoption of Information and Communication Technology (ICT) among Small and Medium Enterprises (SMEs) in Tanzania postulated that perceived usefulness of ICT strongly influence SMEs in adopting ICT

for business purposes. Thus, perceived usefulness in terms of increasing profitability, improving financial services and perceived ease of use strongly influence the adoption of mobile money services among SMEs.

These findings of the current study differ with those of Park (2009) in the study on the Analysis of the Technology Acceptance Model in Understanding Behavioural Intention in technological usage in North Korea. The study revealed that, perceived usefulness had no significant influence on the adoption and usage oftechnology. This implies thatcontextual issues including cultural issues may influence the choice of technology such as mobile money services. This has broughtthe attention on the critical importance of usefulness of mobile money services in Tanzania such that technological usage would push forward SMEs Operations.

While the current study shows that perceived usefulness is the basis for small and medium enterprises to use mobile money services in their business undertakings, it also demonstrated that not all factors endorsed by the perceived usefulness are satisfying in explaining the mobile money services usage to support business undertakings. The findings fall into three attributes whereby increase profitability, improved financial services and perceived ease of use are explaining the significant influence of perceived usefulness of mobile money services usage in supporting business operation. These findings contribute to the understanding that increase profitability, improved financial services and perceived ease of use and perceived usefulness are important in influencing mobile money services usage by SME in supporting their business operation. The findings from this study suggest that

usefulness of mobile money services usage is developed through three elements namely increase profitability, improved financial services, and perceived ease of use as explained in the next subsection:

5.2.1 Increase Profitability

The study shows that, the increase in profitability on business operation had been influenced by the mobile money services usage.One of the previous studies amplified that the usage of technology as such does not directly increase the firm's profitability, yet there is an indirect positive impact on theenterprise's financial performance that emerges through product differentiation and quality which assist the firms to stay competitive in the business for a long period (Buhalis, 2013). This means that the stay in competiveness draws the attention of the existing and new customers' relationship to engage in businesses, which ultimately increase sales of the merchandising from the increase in customer base.

In the current study, the researcher aimed at ascertaining the contribution of increase profitabilityin influencing mobile money services usage in supporting SMEs business operation in Tanzania. The results in this study yielded a standardized path coefficient (γ) of 0.330, critical ratio (C.R) of 8.629 and significant level (p) of 0.00. The results aligned with the results in a study by Miriti (2015) on the role of mobile money services in SMEs Performance in Naivasha.The author confirmed that mobile money services contributed positively to their business growth. It has to be noted that, perceived increase in profitability from mobile money services usage offered to SMEs has great influence on business operation. The means that, perceived increase in

profitability from mobile money services usage are positively and significantly related to SMEs business operation in Tanzania.

This results from the current study aligned with the findings in a study conducted byEsselaar, et al.,(2006)who demonstrated that, technologies are productive input factors and that their use increases labour productivity hence increase the profitability of the venture. They advocated that technologies might exert their influence through product-quality improvements using improved financial communication channel which facilitate SMEs administer their businesses and enhance procurement and marketing processes with minimum cost.

In the current study, mobile money services usage was found to help improve productivity by increasing the efficiency and lowering the cost of transactions, and creating a platform for businesses growth. It can be noted that, revenue increase is the driver of business orientation and hence of an increase of business prospects such that increasing revenue significantly influence mobile money services usage in SMEs operation in Tanzania. This means that the use of mobile money service to communicate business information is now playing the catalytic role within the sectors of the economy in reducing transaction costs and increasing market access which in turn lead to an increase of profitability of an enterprise.

Of the results of the current study aligned with the results of a study by Frederick (2014) who found that, there is a positive net marginal benefit for the microenterprises in using mobile money services that results in an increase in profits. This means that microenterprisesare in need of not only access to finance, but also access to

appropriate payment systems to improve profits and hence leading to the growth of small and medium enterprises through greater financial and economic inclusion.

Similarly, Olise, et al.(2014)found that technological usage by SMEs will have the potential of improving entities growth performance thus improving SMEs productivity and competitiveness which significantly influence organizational performance.In economic sense, profit is the difference between revenue and expenses during the business operation such that the increase in revenue would improve profit while maintaining the same level of expenses. This means that mobile money services usage in supporting business operation would increase profit through an increase in the sales assimilated by an increase in the customer base.

The results from the current study are in line with the results of a prior study byNguruiya (2014)who found that mobile money transactions have a significant effect on sales revenue.The increase in sales revenue is the results of an increase in the number of esteemed customers leading to an increase in profitability. The increase in profitability significantly influences the usage of mobile money services in supporting SMEs operations. This means that some enterprises will take advantage of mobile money services as the business communication channel in their business undertakings and hence improve their business prospects.

In the same context, Kirui, et al. (2013b)in their study on the Impact of Mobile Phone-Based Money Transfer Services in Agricultural production, found that the use of mobile phone-based money transfer services significantly increasedthe level of annual input use among households in Kenya. Such an increase may increase revenue leading

to the adoption of mobile services usage even for business operations. This means that the opportunities offered mobile money services usage significantly influences SMEs into using the service and thereby support their business operations.SMEs are in a position of exploiting the opportunities of integrating mobile money services usage with business operations.

Contrastive findings to the findings in the current study are reported in other studies. In a study by Mbiti and Weil (2013)in Kenya found out thatthe use of M-Pesaled to a decrease in the prices of competing money transfer services such as Western Union. There is little evidence that people use their M-Pesa accounts as a place of storing wealth and not for increasing profit. In another study Mbogo (2010) found that profit was insignificant in linking the usage of mobile money services with the success and growth of micro-business. The author observes thatthe key factors which influence the usage of technology was convenience of the money transfer technology plus its accessibility.Whereas operational costs and support and security factors are related to behavioural intention of using and the actual usage of the mobile payment services by the micro businesses to enhance their success and growth. This means that the primary objective and the influencing factor among micro-business is not to increase profit through the usage of mobile money services but rather to store wealth for future business and non-business transactions.

It can be concluded that the integration of opportunities of increase profit accrued by SMEs business undertakings through the usage of mobile money services would be generated through increased customer base and reduction of operating cost. The need for adopting the technology that would increases pressure among SMEs operatorsof

taking this advantage for their business prospects. However the absence of clear ICT policy and underdeveloped infrastructure would limit the usage of mobile money services in supporting business operations. In the discussion, increase profitability included accessibility and increase of market base, reduction of running costs, creation of global market and savingtime are key the drivers and influencing factors on mobile money services usage in supporting enterprises business operation.

5.2.2 Improved Financial Services

The study investigated whether improved financial services on SMEs business operationswere influenced by the usage of mobile money services. Scholars such as Kirui, et al., (2013) found that mobile phone-based money transfer services in rural areas helped to resolve a market failure that farmers face and it enabled them access financial services. They observed that mobile money services was simple to operate; the registration process was simple and could be completed within few minutes and there were many access points (agents) which improved the delivery of financial services. This means that the usage of mobile money services enabled SMEs improve financial services which increased financial inclusion and thus influenced its usage in business undertaking.

In the current study, improved financial services was found to be positively and significantly related to the usage of mobile money services in supporting SMEs business operation as it yielded the standardized path coefficient (γ) of 0.335 and Critical ratio of 7.448.The improved financial services were improved due to the uniqueness of SMEs in wholesale and retail sectors, which demand real time transactions. In another study theWorld Bank (2017) found that mobile money

platforms allowed people with limited access to formal banking facilities to use a range of financial services through their mobile phones.

The study commended that mobile money platforms enable people to set up bank accounts, send and receive payments, pay utility bills, and the like without having to go to the banks which are often out of reach for low-income people because of geographic inaccessibility. This means that the usage of mobile money services has increased the level of financial inclusion by filling the gap that existed for unbanked areas and facilitated theiraccess to financial servicewithin their proximity. Therefore, accessibility of financial service from mobile money transfer facilities motivates SMEsinto using mobile money services during business operations.

Onthe same token, Abdullah, et al., (2013) observe that technological usage alone is not enough in enhancing effectiveness and efficiency of the enterprise operations. Such technology ought to be supported with other resources such as staff with certain levels of competencies for the enterprise to benefit from the investment in the technologies chosen. This means that technology cannot be treated in isolation;rather it needs to be integrated with other business functions.

This implies that different SMEs with different extracurricular engagements will have different transaction needs and would carry out their transactions using that same technology differently. Similar observations are made byWamuyu (2014) who contend that the adoption of a new technology depends on how well this new technology serves the purpose beyond the existing technologies to a given population.

The findings from the current study are consistent with the findings in a study by Alam and Ahsan (2007)who found that through mobile internet SMEs the Malaysia service sector can provide almost unlimited financial information about their products and services.Elsewhere, Kaynak, et al., (2005) revealed that, the opportunities offered by mobile money to SMEs in Turkey include 24-hour accessibility, low-cost communication, and easy access to international markets, easy access to potential customers, gathering of information about potential markets, enhancing the company's image, and creating a global image.It can thus be concluded that mobile money services usage made the provision of financial services through a mobile device, which includes making payments, carrying out financial transactions and doing banking.Kaynak, et al. (Ibid) revealthat SMEs and individual were unable or unwilling to adopt ICT in their business due lack of government support which is seen to be the most important factor which could influence an organization to use the technology; and understanding the important of a technological usage could be the most important factor any organization must consider before involving in such a technology.

In the context of Tanzania, Venkatakrishnan and Senso (2013)found out among the significant challenges that affected market penetration, expansion, and regular use of mobile money in Singidainclude financial capital problems for the agents, unavailability of network coverage and regulatory barriers to mobile money payment systems. This means that the bottlenecks on financial capital and uncoordinated infrastructure affect the mobile money services usage in supporting SME business operation.

5.2.3 Perceived Ease of Use

On the influence of perceived usefulness of mobile money service usage, the researcher investigated how and whether the perceived ease of use of mobile money services has any significant influence in supportingSMEs Operations. According to Davis (1989), the perceived ease of use is the degree to which a person anticipates that the use of a certain technology would make him/her use little effort and would be determined by the attitude towards the adoption and usage of the new technology. The attitude towards usage would determine the person's future decision concerning the usage of a new technology. This is by considering that an application that is found easier to use would most likely be accepted by users. It has been advocated that, SMEs owners and employees did not take a long time to learn the menu and procedures of running all the operations of mobile money services(USAID, 2013; Mpofu,et al., 2009). Consequently, ease to use of mobile money services also was an influential factor for the adoption of the technology as SMEs could not use much mental effort to interact with mobile money services.

In the current study, the perceived ease of use is found to be positively and significantly related to the usage of mobile money services in the operations of SMEs businesses as it yieldeda standardized path coefficient (γ) of 0.944 and Critical ratio of 19.766. These findings are consistent with the findings in a study by Muciimi and Ngumo (2014) on Technology Acceptance Model and E- commerce among SMEs. The findingsin Muciimi and Ngumo (Ibid) revealed that the perceived ease of use on e-commerce significantly influenced its adoption among SMEs in Kenya and hence assisted to perfect e- commerce in their daily transactions. This means that the

perceived ease of use of technology significantly influenced its usefulness and promoted its usage in SME business operations.

The findings of the current study are consistent with the findings in a study by Madila, (2016) in Tanzania who found that majority of SME among wholesalers and small retailers use mobile money predominantly because of motivated by the perceived ease of use.The authors observe however that the perceived ease of use is not the only factor with significantly influence mobile money services usage but also cost serving plays an important role.They recommend that the cost of using mobile money services must be reduced to attract more people into adopting the services.

The results from the current study revealed further that most of the owners and employees were aware of ICT usage; hence they found it easy to use ICT in their daily operations. This implies that users of mobile money services prefer simplicity of the service in carrying out their daily business undertakings. Similarly, Ndekwa (2014) in a study on Factors Influencing the Adoption of Information and Communication Technology (ICT) among Small and Medium Enterprises (SMEs) in Tanzania, found that the perceived ease of use strongly influences the adoption of ICT among SMEs in Tanzania. The study concluded that the adoption of mobile money services among SMEs seems to be useful, since it enables entrepreneurs to improve their performance in different perspectives.This means that the perceived ease of use of mobile money services significantly influence the SMEs business operations.

In another study Wamuyu (2014) revealed that mobile money technology is easy and simple to use simply because mobile money software and the related operations are

clear hence it is easy to use the technology as it does not require advance knowledge or a sophisticated mobile device. The current study discovered that SMEs owners are motivated into adopting mobile money service due to its easiness to learn. Most of the SMEs owners and employees admitted that it did not take much time for them to learn the entire process of money transfer through their mobile phone. In this context therefore, mobile money services usage simplifies business transaction. SMEs owners and employees used mobile money services to perform business transactions, simply because, the procedures and the mechanism are not complicated and are just user friendly in their daily business undertakings.

Previous studies such as Achieng and Ingari(2015) concludedhowever that perceived ease of use had no significant influence on the usage of mobile money service. Similarly, findingsin a study by Alamand Noor (2011) on factors affecting the adoption of electronic commerce among SMEs in Malaysia found that the perceived ease of use has no significant influence in the adoption of e-commerce among SMEs business undertakings. These findings imply that some of the SMEs found e-commerce as complicated. This means that the perceived ease of use of mobile money service does not guarantee its usage since the cost and other related factors also come into the play in SMEs business operations.

The findings of thecurrent study are consistent with the Technological Acceptance Model drawn by Davis (1989) which showed that perceived ease of use does not only influence the perceived usefulness but also the intention to uses such a technology. John, et al. (2018) found that, only two dimensions namely increasing services accessibility in 24 hours and convenience of services improved students' attitudes

towardsthe adoption of mobile money services. It has been observed that, in order to improve financial inclusion in the economy, most of the financial service points must be accessible for 24 hours without network failure or power cut. SMEs would manage to perform business transactions (receiving and sending money for merchandise) via mobile devices at their locality and waive transport costsof physically visiting the banks or other financial institution. In other words, lack of improved financial services and increased complications in using mobile money services usage, would make SMEs operators hesitate to use such technology and hence find other better alternatives.

5.3 The influence of Perceived Trust on MMS usage to SMEs Operation

One of the drivers for this study was to establish how perceived trust on mobile money services usage significantly influences SME business operationsand other emerging market in Tanzania. In addressing this theme, literature has been reviewed to link the findings of previous studies to the measures,which were adopted in evaluating the sought relationship. According to (Mng'ong'ose, 2017), trust is defined as the willingness of individuals to take risks with the anticipation that their needs would be met even where negative consequences are possible. Furthermore, scholars (e.g. Wilson and Kennedy, 1999)pointed out that trust is the mutual confidence that one's vulnerability would not be exploited in an exchangein business transactions.

The current studyhypothesized that Perceived Trust on mobile money services has a positive and significant influence on SME Business operation. The study findings, through scoring a standardized regression coefficient of -0.032, critical ratio of 1.303 and p-value of 0.422, indicate that theperceived trust on mobile money services usage

is insignificantly related to SMEs business operation.As argued by Chin (1998) that a standardized regression coefficient should be at least 0.2 in order to be considered significant and meaningful for discussion. Surprisingly, the attribute identified in the research model, namely, the perceived reputation and competencein explaining the perceived trust on pushing SMEs business operation were all found significant. This implies that the individual indicators were more meaningful than was the case when all the factors were taken together in combination.The findings of this study show thatthe perceived trust on mobile money services usage in supporting SMEs business operation is less meaningfully related to the perceived reputation and perceived competence in explaining SMEs business operations in Tanzania.

The findings of the current study collaborate with the results of the study finding by Baganzi and Lau (2017)who revealed that trust did not significantly influence behavioural intention of using mobile money service in business operations in Uganda. In addition, they suggest that mobile money services usage may help mobile money services providers and SME operators to see how customers interact with mobile money technology, thereby enabling them to assess trust and reduce risk perceptions towards sustainable adoption and usage.

Inconsistent findings are reported in a study by Yan and Pan (2015)who reveal that trust must be considered as an important factor in explaining the usage of mobile money services due to the high degree of uncertainties and risks involved in SME business operations. This means that uncertainty and risk embodied in mobile money services are the key indicators for their adoption. The findings in a study bySrivastava, et al., (2010)indicate that perceived trust on mobile money services influence business

operation and hence increase usage of mobile payment. Therefore, this confirms the argument that trust plays a significant role in the usage of mobile money services in performing business transaction in Tanzania.

5.3.1 Reputation

In the current study, the researcher aimed at ascertaining the contribution of reputation on mobile money services in influencing operations of SMEs business in Tanzania. In a study by Kim, et al. (2003) on electronic commerce it was emphasized that the company needs to have reputation in enhancing trust. The findings of the current study yielded a standardized path coefficient (γ) of .879, which is higher than the recommended coefficient of 0.2 by Chin (1998).

The findings of thecurrent study connect with the findings drawn by Camner,et al.,(2010) demonstrated that the usage of mobile money services had good reputationwhich increased the execution of business transaction. This may includeless tendering of counterfeit notes; minimization of time spent on the queues waiting for the services and the like. A good reputation increases certainty and reduces risks in business operations and thus accelerates the uptake of mobile money services due to increased consumer trust(Shao and Li, 2009; Cho, et al., 2007; Siau and Shen, 2003). An increase in reputationof the services providers increases trust on mobile money services usage and hence improves SMEs business prospects.

The findings on reputation are consistent with previous findingsin a study byVasileiadis (2014) who revealed that good reputation of online transaction increases trust. This means that reputation positively and significantlyinfluences the perceived

trust on the usage of mobile money services in supporting SME business operation. In this context, the increased perceivedtrust requires SMEs to use such technology in their business undertakings, which serve time and hence increase business prospects.Thus, mobile money services provider ought to improve online reputation so as to increase uptake of mobile money services in business operations.

In another study Koufaris and Hampton (2004)revealed that perceived reputation and willingness of using technological services can significantly affect the initial trust. In the current study, willingness was not taken into consideration with regards to usage of technology in SMEs business operations. This implies that reputation in the usage of mobile money services must be enhanced by mobile money service providers so as to increase trust on ICT usage in SMEs business operations.

In a recent study Vig, et al., (2017)showed a significant relationship between individual dimensions of reputation of innovative services on the usage of technology and the financial performance of a company. This means that a good reputation of the services would influence the uptake of mobile money services in business operations. The reverse is true that, a bad reputation of mobile money services would reduce the usage of the services. Mobile money services providers including agentsare thus encouraged to have good reputation so that the usage of mobile money services could influence business operation in Tanzania.

In another study Mng'ong'ose (2017)commented that, reputation of mobile money services significantly and positively influence mobile payment particularly in supporting business operation. From a practical stand point, the findings reveal that

the reputation of the usage of mobile money services encourages SME business operators to increase the uptake of mobile money in their business operations. As commented and concluded by various studies on technological usage as well as in this study that the usage ofmobile money services would depend on the reputation of Mobile network service provider in conjunction with other factors. In this context therefore, a rational user of mobile money services would be more comfortable in performing business transaction via a reputable service provider.

5.3.2 Competence

The study showed that, whether competenceon the usage of mobile money services has some influence on SME business operation. Competence in the usage of technology is reflecting the beliefs and even the wishes about future needs which facilitate business competition as new technologies are regarded as an opportunity and a solution to business operations(Ilomäki, et al., 2011). Competences provide the potential for a wide range of market access and make significant contribution to building trust among services users.

In the current study, competence variable in trust was found to positively influence the usage of mobile money services in SMEs business operation as it yielded a standardized path coefficient (γ) of 0.953,which is higher than the recommended coefficient of 0.2 (Chin,1998). In the same vein, the findings revealedthat the usage of mobile money services had a significant influence on SME business operation by scoring Critical ratio of 10.818 and acceptable p-value as suggested by Hoe (2008). These findings confirm that, competence increases trust in mobile money services and hence facilitates the uptake of the services in business operations in Tanzania.

The current findingsare consistent with the findings in the previous studies results. For example, Mng'ong'ose, (2017)found that competence of the mobile money services provider has a strong influence on the consumers' trust in the usage of mobile money services. The finding of the current study are similar tothe findings of a by other scholars (Taluka and Masele, 2016) which revealed that consumer trust on mobile money services could increase the uptake of mobile money services in a business operation. This means that competence on the usage of mobile money services increases the ability and willingness to keep promises and satisfy customers' needs.

5.4 The Influence of Perceived Risk on MMS usage by SMEs Operation

The current study aimed at to establishing whether the perceived risk on the usage of mobile money services has a significant influence on SME business operation in Tanzania. In addressing this objective, the reviewed literature, were combined with the findings from previous studies to evaluate the sought relationship. According to Gbongli et al., (2016), perceived risk is defined as the embrace or reluctant of the customer to use the services of the company especially when the consumer perceives a certain degree of potential loss or other negative outcome emanating from a particular decision usagein performing business or non-business transactions.In a financial services context, perceived risk is defined as "*the perceived lack of predictability of outcomes*" affecting the set of financial transactions and positions which cumulatively influence business operation(Bansal, et al., 1991). Perceived risk includes the possibility for the occurrence of either favourableor adverse business outcomes.

In the usage of mobile money services, the perceived risk may arise whenthe customer data are compromised to allow another party to replicate the customer's identity in the system and thereby fraudulently using the customer's identity to conduct transactions. In the case of network,leakage of information in the chain of transactions can lead to inability to transact and hence fail to perform business operation(Lake, 2013). In a study by Vasileiadis, (2014), the significant influence of mobile payments is refined by explaining the perceived risk such that the service with high risk has a negative effect on the intention ofusing it in performing financial transaction. In this case, a mobile money service operator should make sure that there is no any redundant path and that the mobile operator's ability of delivering messages via machine on a cyclical basis is actively tested and hence attain clear rollback procedures in the event of uncertainty.

In the current study, the perceived risk had a positive coefficient of regression weight and significantly related to the usage of mobile money services insupporting SMEs business operation as it yielded a standardized path coefficient (γ) of 1.122 and Critical ratio of 13.816 with significant p-value of 0.00. The current study aligned with the findings of a study by Liu (2013) who found that consumers had serious concerns in protecting their personal information when evaluating the risks of using mobile money services to perform their business transactions without bearing too much psychological stress. This means that, business operators would use mobile money services,which protect their person and business information to perform their business transactions. In most cases, mobile money services providers advise the users to keep their passwords which bear all financial information as secrete.

The current study findings align with the findings drawn byLiu, et al., (2012) on A Unified Risk-Benefit Analysis Framework for Investigating Mobile Payment Adoption. The authors demonstrated that the perceived risk was found to be a key resource of the risks of using mobile payment and hence significantly influencedthe usage of mobile money services in the SMEs business operations. This means that SME business operators would hesitate to use mobile money service in their business operation for fear of losing their wealth.The proper usage of passwords and proper handling of devices would reduce the perceived risk calls for business operators to use mobile money services in their business operation.

These findings are inconsistent with the findingsreported in a Survey on Perceived Risk and Intention of Adopting Internet Banking (Fadar, et al., 2016). In this survey, perceived risk was found to have a weak relationship with the intention to use e-business. This means that the risk averse business operators would sceptical of using mobile money service to effect business transaction for fear of losing their money.

Similar findings are reported in study by Maditinos, et al., (2013) on examining the critical factors affecting consumer acceptance of online banking; a focus on the dimensions of risk. The authors found that usage decisions seem not to be affected by possible negative criticism from significant others as no statistically significant relationship were found between the perceived risk and the intention to use technology in business orientation. This means that a rational user would not fear for the expected risk on using mobile money service for business prospects.The issue of critical importance of the business operator is how to understand and amplify the objective of

business in increasing wealth to the enterprises and the owners at large. This includes safeguarding the assets of the enterprises and how best the technology can be used for the prospects of business. While most of the previous studies paid attention to the perceived risk, these findings show that a better explanation of the significant influence of perceived risk on the usage of mobile money services in supporting SME business operation rests on the financial risk and performance risk as discussed in the next sub-sections.

5.4.1 Financial Risk

In this study, financial risk is defined as the perceived negative effect on loss of wealth accruing from theusage of mobile money servicesin SMEs business operations due to the amount tendered and the timing(Moles, 2016). Financial risk may result from network failures, transactions attacks and unauthorizedaccess to the accounts through false identification. Financial risk in the current study scores for the model has qualified as it met the minimum requirement with critical ratio (C.R) of 14.419 and positive standardized path coefficient of 0.932 which shows a significant contribution of the usage of mobile money services in SMEs operations in Tanzania.

The findings in the current study are consistent with the findings in the previous studies that established a significant relationship between financial risk and the SMEs usage of mobile money services in business operation(Liu, et al., 2013;Ali, et al., 2011). The findings from these studies had the same implication that financial risk significantly influences the uptake of technology in the business operation. In this context therefore, the possible significant influence of financial risk on the usage of

mobile money services in SMEs business operation is such that their financial information may be stolen or compromised by an intruder who hacks the system.

In previous studies was argued that the proliferation of mobile money technologies has led to lack of cohesive technological standards that can provide a universal mode of mobile money services, which may accelerate financial risk. This is due to lack of common standard which creates local and fragmented versions of mobile money servicesas offered by different stakeholders(Masamila, 2014). It can be recalled that, in the mobile money services ecosystem, the relationship between the customer and the agent requires important information (user name, mobile number and other credential information) beforethe money is delivered to the customer, and which may in turn lead to information leakage. This means that the use of mobile money services in business operation increases the financial risk of losing financial information and hence losing money.

These findings are inconsistent with the findings reported in a study a by Kolesova and Girzheva (2018)who concluded that development of financial technologies opens new opportunities for business operations and hence financial risk in the usage of mobile money services is insignificant in SMEs business operations. They argued that in defending the SMEs market share an enterprise must apply the newly technology which would lead to better quality services to her customers. This means that the perceived financial risk did not significantly affect the usage of mobile money services for SMEs to communicate business information.Based on the foregoing discussion, the findings in this study are collaborated with the findings in the previousstudies in explaining the significant influence of financial risk on the usage of

mobile money services in SMEs business operation. It is agreed that the usage of such technology would depend on the level of the risk and the quality of the services to be offered.

5.4.2 Performance Risk

According to empirical evidence PerformanceRisk is crucial and plays an important role in understanding the significance of the influence of the usage of mobile money services in supporting SME business operation(Ali, et al., 2011; Kolesova, 2018; Lake, 2013). In the current study, scores for the models qualify as theymeet the minimum requirements for critical ration (C.R) greater than 1.96 and the standardized path coefficient (γ) of 0.619. All of these scores present a positive and significant contribution of performance risk of the usage of mobile money services in the SMEs business operation in Tanzania.

These findings show that the influence of performance risk on the usage of mobile money services usage in supporting SMEs business operation is significant and potential.The findings of this study coincide with the findings of the previous studies (Richard and Mandari, 2018) who revealed that performance risk has a significant negative influence on the usage of mobile money services in Tanzania. This means that in a business operation a rational user of mobile money service would be more mindful in the uptake of mobile money service for fear of performance risk.

Previous studies (e.g. Bagana and Muturi, 2015) found out that performance risk had no association with the transmission of money for business operations hence it does not influence its usage.This includes sending money to a wrong person due to some

carelessness does not warrant avoidance of using mobile money service to perform business transaction.

It is common that, if the money is wrongly transmitted it may be recovered through mobile money service providers. The challengesfor mobile money service providers and regulators to improve the infrastructure for better quality and for fast tracking the retrieval of erroneously transmitted money are still great. In view of the foregoing discussion, the current study conclude that SMEs business operators need to have a streamlined infrastructure which would enhance mitigation of the perceived risk on the usage of mobile money services.

The usage of mobile money transfer services among the SMEs business operators would reduce transaction costs and hence improve their business prospects. It is the role of mobile money service providers and regulators to establish a mechanism, which would ensure that risk on mobile money servicesare mitigated to guarantee that the environment for business transactions is secured. To encourage usage, particularly mobile money service, the government through the Ministry of Communication, Science and Technology should develop a binding policy, which would ensure that no loss is occurred from the usage of the services and that the use is beneficial to the national economy.

5.5 A Review of Study Hypothesis

The study concludes by revising the hypothesis of this study. It was hypothesized that *Perceived Usefulness (PU) of the usage of mobile money services has positive and significant influence on SMEs Operations (BO).* The Perceived usefulness was

measured using three constructs namely improved financial services, increase profitability, and perceived ease of use asthe engine for SMEs Operations as identified in the structural model in Figure 4.6.

The findings show that perceived usefulness is insignificant in explaining the SME business operationsin Tanzania business undertakings. But fortunate enough, the three constructswere used to measure the PU which isincreasedprofitability;improved financial services, and perceived ease of use of the mobile money service all of which were found to have a positive and significant influence on SMEs operations. The possible explanation of significant influence of Perceived Usefulness is the high explanatory power increased profitability, improved financial services and perceived ease of use of the mobile money service which managed to score significantly high.

The study also hypothesized that*Perceived Trust (PT) on mobile money services has a positive and significant influence on SMEs Operations (BO).* Perceived trust was measured using two indicator variables namely perceived reputation and competence as identified in the structural model in Figure 4.6. The study found insignificant relationship between the variables considered. Unexpectedly, the two attributes which were used to measure the perceived trust were all found to be positively and significant in influencing the usage of mobile money services to support SMEs operations.

The explanation on this insignificant influence of perceived trust on the usage of mobile money services to support SME business operation is low explanatory power for both Perceived reputation and perceived competence.Whenthese two are combined

together to account for Perceived Trust, they fail to score a significant critical ratio. This means that when these two variables are combined with other variables,which are not included in this study, they can automatically increase the explanatory power of perceived trust of the usage of mobile money services as the driver for SMEs Operations.

Lastly, the study hypothesized that *the influence of Perceived Risk (PR) on mobile money services usage has a negative and significant influence on SMEs Operations (BO).* This perceived risk of the usage of mobile money services usage was measured by two constructs namely financial risk and performance risk as illustrated in Figure 4.6. It has been observed that, all indicator variables explained the perceived risk and SMEs business operation quite well.

The study finding support this relationship as it was found to be positive and significant. In this context therefore, users and service providers of mobile money services must make efforts in minimizing or eradicating the riskexistingin business operations for better results.

CHAPTER SIX

SUMMARY, CONCLUSION, IMPLICATION AND RECOMMENDATIONS

6.1 Chapter Overview

This study focused on analysingthe factors influencing the adoption of mobile money services among small and medium enterprises. More specifically, the study investigated the following specific objectives: (i) assess the influence of perceived usefulness of mobile money services in supportingSMEs Operations. (ii) examines the influence of perceived trust onthe usage of mobile money servicesinsupporting SMEs Operations. (iii) examinesthe influence of perceived risk bySMEs Operations in Tanzania. This research addressed these objectives by employing quantitative research methods through empirical study based on 372 samples from SMEs in three regions in Tanzania namely, Mwanza, Dar es Salaam and Mtwara. SPSS version 22 was employed for data analysis

This chapter presents key conclusions and implications of the main issues, limitation of the study and recommendation for future study. The implication of the study addresses the theoretical and practical implications of the results as well as the contribution of this study to operators and relevant policies for small businesses operations in the emerging economies.

6.2 Summary and Conclusions

This part addresses the main findings and conclusion of the study and isorganized based on specific research objectives of this study as described below:

6.2.1 The Influence of Perceived Usefulness on MMS Usage in Supporting SMEs Operation

In addressing the first objective, it was hypothesized that perceived usefulness of the usage of mobile money services has a positive and significant relationship in SMEs Operationsin Tanzania. The results from a standardized path coefficient (γ) yieldeda positive standardized regression weight of 0.404, which is above the recommended value of 0.2, which is considered significant. This indicates that perceived usefulness of the usage of mobile money services is positively related to SMEs Operations.

In a similar hypothesis, theanalysis of the relationship between perceived usefulness of the usage of mobile money services and SME business operation yielded a critical ratio of 5.635 which is greater than 1.96 and had a significance level of p=0.000 which was considered significant. On other hand, increased profitability, improved financial services and perceived ease of use, which were used to measure the perceived usefulness of the usage of mobile money services all had a positive standardized regression weight of more than 0.2 and a critical ratio of more than 1.96. This implies that the perceived usefulness had significant influence on the usage of mobile money services in supporting SME business operation in Tanzania particularly the whole sale and retail trade subsectors.

Generally, the study concludes that the perceived usefulness of mobile money services has a strong significant influence on the SMEs Operations in Tanzania. However based on the discussion of the study,the findingsshowthat not all usefulness parameters support the uptake of mobile money services on SME business operation simply because they are not worthwhile. This is due to suchmatters as geographical

and country socio-economic setup in which SME operates. These tend to explain the unique usefulness which is rewarding for SMEs for using mobile money Services in business orientation.

6.2.2 The Influence of Perceived Trust on MMS Usage in SupportingSMEs Operations

The second objective of this study was to examine the influence of perceived trust of the usage of mobile money services to support SMEs business operation in Tanzania. With respect to objective, it washypothesized that the perceived trust on the usage of mobile money services hasa positive and significant influence onSMEs business operation. The survey data were analysed using structural equation modelling (SEM) to evaluate the significance of influence of the said relationship basing on the standardized pathcoefficients (γ) and critical ratio (C.R). The results of the standardized path coefficients yielded a non-positive value of 0.032, which was below the recommended value of 0.2 to explain the influence of trust on the usage of mobile money services to support SME business operation. Surprising, all attributes namely, reputation and competence on the usage of mobile money services had a positive standardized paths coefficient, which was considered to be significant.

Further analysis of the significant influence of perceived trust on mobile money services usage yielded a critical ratio of 1.303 and p =0.422 which indicates an insignificant relationship.It was further found that, the indicator variables namely reputation and competence which were used to measure perceived trust on the usage of mobile money service to support SME business operation were found to be significant. In the discussion, trust on the uptake of technology in business operation

was found important. This is due to the fact that wholesale and retail trade subsectors had taken the advantage of the opportunity and other factors in choosing the best technological channel in their business communication. In this context therefore, for perceived trust on the uptake of mobile money services does not explain the relationship between the adoption of this technology and the SMEs Operations in Tanzania.

6.2.3 The Influence of Perceived Risk on MMS Usage bySMEs Operations

As for the usage of mobile money service in SME business operation, it was hypothesized that, the perceived risk of the usage of mobile money services has a negative and significant influence on SMEs business operation in Tanzania. To evaluate the significant influence of the perceived risk of the usage of mobile money service in SMEs business operation the standardized estimate and critical ratio in structural equation modelling was used. A positive standardized path coefficient (γ) of 1.122 was yielded which indicated that the perceived risk of the usage of mobile money services is negatively influencing SMEs business operation in Tanzania. The results have also yielded a critical ratio of 13.816 and p-value of 0.000, which indicates a significant influence of the perceived risk of the usage of mobile money services in SME business operation. Moreover, the two measures of perceived risk of the usage of mobile money services namely financial risk and performance risk were all found to be positive and significant. This shows that the usage of mobile money services exposes SME business operation in a risky which may lead to loss of wealth.

This study concludes that, the exposure of SMEs business operations to financial and performance risk attributes would notfavour the uptake of mobile money services in

their business operation. The anticipated risk may include, loss of mobile phone or other devices, misplacing ofsimcards, trafficking of business information and the like. In other words, business operators would prefer to use mobile money services in their business operation without bearing too much psychological stress. This forces rational and risk averse business operators to become hesitant from using mobile money services to support business undertaking in Tanzania.

6.3 Study Implications

This section presents implications of the study on theory and practice onRegulators, Managers, Mobile Network Service Providers and researchers from the findings, discussion and conclusions. Theoretical implications highlight the contributions of the study to the literature on SMEs business operation in terms of the support through the usage of mobile money services. Regulators are key players in the usage of mobile money services that make checks and balances in the whole mobile money services ecosystems. SMEs are the economic driver to the households and to the national level of using mobile money services to increase business prospectsof the people. Mobile Network Service providers are the communication channel which ensures that the passage of financial information is smoothly handled.

The study would be of great contribution to researchers in advancing the methodology of the prior studies on mobile moneyservices usage in supporting SME business undertakings. Managerial implications relate to the practice of SMEs insupporting the usage of mobile money services where policy implications include recommendations for addressingpolicy issues relating to the development and up scalingthe usage of technology in Tanzania.

6.3.1 Theoretical Implication

Grounded in the Technological Acceptance Model (TAM) literature, this study theoretically developed and empirically evaluated an integrated research framework incorporating factors from perceived risk and consumer trust theories, for assessing factors influencing the usage of mobile money services in supporting SMEs operations in Tanzania. In the reviewed literature, these theories were typically studied separately (Chandra, et al., 2010; Chen and Chen, et al., 2011; Mohammed, et al., 2013; Li, et al., 2014). For example, Daud, et al.(2011) employed TAM to identify factors that influence SME into using mobile money services in their businesses in Malaysia, Lee (2009) used Perceived Risk theory to investigate five types of risk in studying Internet banking adoption, including performance, social, time, financial and security risk while Baganzi and Lau, (2017) used trust theory in identifying the factors influencing mobile technologies. In this respect, included competence, integrity, and reputation were found to play an important role in explaining the usage of mobile money services (MMS). The results of the current study suggest that the usage of mobile money services in supporting SMEs operations is linked to perceived usefulness attributes, perceived trust attributes and perceived risk attributes. This unified perspective helps us to gain a more holistic picture of the factors influencing MMS usage in supporting SMEs operations.

Furthermore, while other scholars such as Tobbin and John (2011) combined Technology Acceptance Model (TAM) with Innovation Diffusion Theory (IDT), in their study on the adoption of mobile money transfer technology,revealed that, perceived usefulness, perceived ease of use, relative advantages, risk, and transaction

costs are the factors which influence acceptance and use of mobile money transfer technology. Perceived trust was not well covered hence there is need for further research (Sanjo, 2010; Young, 2015). The results of this study provide evidence of the robust applicability of the integration of TAM with PRT and CTT, instead of integrating TAM and DIT in cross sectional study and arrive at the conceptual framework problem, which was evident in other studies (e.g. Young, 2015; Fredrick, 2014; Ali, 2013). Researchers can now use our model, which is proven to provide a useful framework for studying the usage of mobile money services in supporting SMEs operation.

Reviews of literature on MMS usage of the latest technologies on SMEs' operations show that most of the previous studies focused on factors influencing MMS usage in supporting SMEs operation of latest technology isolations. This accounts for the missing link between the actual usage as a critical stage and the enterprises' operations. Studies (e.g.Wamuyu, et al., 2014;Nyaga and Okonga, 2014) revealed that the usage of mobile money services in SMEs operation varies from basic usage that includes services which enables enterprises to use mobile services such as prompt payment and linkage with financial services. The current study is a significant contribution to the academic literature where the researcher has advanced the integration of TAM, PRT and CCT by measuring the usage of the dependent variable with indicator variable namely prompt payment and linkage with financial services in supporting SMEs business undertakings.

Characterizing and measuring of the usage of mobile money first proved a bigger picture of the usage situation in SMEs operation.Secondly, it enabled the researcher to

determine the impacts of MMS usage for each service offered by MMS in supporting SMEs operations and these include Increase Profitability, Improve Financial Services, enhanced Ease of Use, increased reputation, and competence. The study made a thorough check on risks embodied in MMS usage such as Financial Risk and Performance Risk to enhance smooth running of SMEs operations. This was therefore an extension of previous studies and theories on technological usage, which only considered few variables in MMS usage to support SMEs operation. The framework devised in this study is envisaged to characterize and measure broader usage of mobile money services in supporting SMEs operation. It could, for example, be replicated in other studies on SMEs in other sectors and/or geographical locations or larger enterprises.

Furthermore, the study provides the basis for characterizing and measuring the usage of some other types of information and communications technologies in both large and small enterprises. More importantly, both dimensions could form the bases for classifying firms in future studies, whereby causal models could be designed to examine the relationships between variables such as factors associated with the usage and impacts of SMEs operation for each dimensions. The model can be used for further testing of the proposed factors in other populations to examine further the relevance of the factors influencing the usage of mobile money in other contexts.

6.3.2 Policy Implication to Policy Makers and Regulators

The study concludes that the unique characteristics of mobile money services can potentially push SMEs operations into using mobile money services. The validated models isolate the characteristics of mobile money technology that could influence

SMEs usage of mobile money services. Increased profitability, improve financial services and improved perceived ease of use were found to have overriding influence on the firm's usage of mobile money services. in view of the foregoing discussion, increased profitability and improved financial services have were found crucial in influencing perceived usefulness on the usage of mobile money services in supporting SMEs operation. These findings point to the need of developing policies that would create conducive operating environment, encouraging the use of mobile money services among SMEs and embrace on an entrepreneurial culture that would lead to greater understanding of opportunities offered by mobile money services and improve mobile money services fitness to business undertakings.

While national policies and strategies have put a lot of emphasis on the use of ICT for SMEs in general, the current study suggests that the development of the National policy should address theusage of mobile money services at the national and enterprise levels. Similarly, mobile technology infrastructure should be given priority as it paves the way for better use of mobile money resources and thus supplement the internal capabilities of the enterprise. Therefore, the study recommends for the formulation of national policies that would address mobile money services issues at the national and at the enterprise level both of which underscore enterprising culture as necessary for enterprises usage of mobile money services.

Policy and public interventions that emphasize on both the skills and mobile infrastructure are important. Small enterprise should be facilitated through better policy interventions that enhance learning and knowledge sharing on the

opportunities,which are offered by mobile money services and their impact on their business operations. Additionally, SMEs should be encouraged and assisted to embrace more mobile money usage behaviour through proper policy guidelines. There is a need to have policy interventions,which are designed for addressing the use of mobile money services and the special characteristics of small enterprises in learning institutions and at the national level. Similarly, small enterprises should also be encouraged to share business operations and knowledge on mobile money services, experience and skills among themselves.

This implies that regulators (BoT and TCRA) have to ensure there is fair play in financial matters by encouraging users of mobile money services to use the technology. Network failure and power cuts offcouldresults to lose their wealth of the users of mobile money services.This study calls upon the regulators to improve infrastructure and thus minimize the risk for mobile money services providers might face in rendering their services. Also it has been observed that, the usage of mobile money services increase financial crimes which implies that regulators have to formulate policies that would control and protect users of mobile money services from cybercrimes.

Moreover, the study demonstrates that competence and reputation on MMS usage is significant in SMEs operations. It is thus important to foster mechanisms and interventions, which would help SMEs to understand their internal environments and how they can use mobile money services to enhance efficiency in their operations. It is even more important, for policy interventions, which address and ensure that

appropriate knowledge and infrastructure are made available to SMEs in using mobile money services to enhance market competition. This makes it easy and possible for SMEs to align their use of mobile money to address these challenges. With such interventions, it is possible for SMEs to use mobile money that give them a competitive edge even at a global marketplace.

Governments in developing countries have to intervene primarily by improvising policy guidelines, which would ensure that service providers of such services offer quality and reliable services befitting SMEs. For instance, mobile money services such as money transfer and withdraw that are tailored to meet the need of small firms are imperative. Policy guidelines that stipulate on how and what mobile money resources and quality services should be rendered to tourist enterprises could overcome a great deal of predicaments related to the use of mobile money services and the adoption of the same by a firm. Otherwise, poor services operators an impact on the effort of increasing SMEs technological adoption through mobile money services. It is equally important to ensure that such services are available at reasonable and competitive prices given the fiscal resource constraints among SMEs. Government policies which are specifically tailored for small firms that address issues of better mobile money infrastructure development, reliable and quality telecommunication infrastructure and services are important for the SMEs' growth and eventually the growth of the national economy.

Therefore, it can be concluded on the whole, SMEs operations are influenced or shaped by an increase of profitability improvement of financial services; ease of use; competence, and reputations. However, these SMEs operationsare bogged down

byfinancial and performance risks,which are embodied usage in mobile money services. This strong link indicates that both policies and strategies enhance the usage of mobile money and are crucial and are crucial in SMEs business operations.

6.3.3 Managerial and Practical Implication

This study has established that, the unique characteristics of mobile money services encourage SMEs to use the technology in their business operations for enhancing their business prospects. The validated models segregate the characteristics of mobile money technology that could influence SMEs operatorsinto using mobile money services in their business operation. This implies that business operators should strive to better understand the specific business activities they run and manage and thus align the mobile money resource acquisition and deployment to meet and fit them in their business operations.

SMEs operators should strive to gain more knowledge that enable them to coordinate and influence the application of cost effective mobile money services. SMES operators are advised to use mobile money services in order to have proper accounting records, which coordinate their financial transactions, which could be translated into a formal and coherent mobile money strategy by SMEs. It was also apparent that the usage of mobile money services in business operation increase customer base and hence increase business prospects. The management of SMEs is advised to use the mobile money services model and see how the business could capture the market and increase revenue from business operations. It is equally important to use the technology which minimizes risks in business operation particularly those risks related to receiving counterfeit notes and other illegal money tendering.

6.3.4 Implication to Mobile Network Service Providers

Empiricalresults fromthis study indicate that, there is a significant influence resulting from the ease of use of mobile money services on the SME business operations. This means that, Mobile money services providers should select appropriate mobile technologies,which would fit well with SMEs operations in Tanzania. TCRA and mobile money services providers have a role to make sure that the network failures are arrested through constructing reliable infrastructure. Moreover, for smooth running of the e-business, mobile money services providers should ensure they increase literacy levels of their agents and make sure that the amount to effect transactions are available when the need arise

6.3.5 Implication to Researchers

This study has extended the methodological context of previous studies by providing a guideline for researchers who are interested in the usage of mobile money servicesor related services in SMEs setting. In particular, the philosophy followed, data collection instruments, validity and reliability, selection of variables and sampling proceduresare envisaged to enlighten researchers on the methodologies of collecting data from SMEs setting in a local context.This research has contributed to the field of methodological literature through the useof the positivism paradigm approach which facilitated the understanding of the contextual forces on mobile money services usage to support SMEs business operation in Tanzania.Wamuyu (2014) advocates, the use of mobile money services to execute financial transactions in Africa varyfrom one country to another. This can be attributed to the level of technological advancement, a country’s level of socio- economic development and the ecosystem of financial

transactions. Researchersare advised to integrate more than one model or theories in elaborating the usage of mobile money services in business operation.

This study, which was carried out in Tanzania focusing on SMEs population, has provided a better understanding of the factors associated with mobile money services usage in the context of SMEs population in business operation. Compared to other studies done in other SMEs population in other countries, this study has provided a better link of factors, which are cutting across each unique population of SMEs business operation in Tanzania. As it has been argued by other scholars, each unique population tends to have unique factors influencing their usage decision.

Previous studies have analysed factors influencing the adoption of mobile money services using descriptive data analysis techniques. It is argued by most scholars such as Ndekwa(2014); Mng'ong'ose, (2017)that, descriptive data analysis lacks the power of generalizing findings to the population hence limit generalization at the sample level. On the other hand, other previous studies used very small sample sizes, which tended to generate statistical errors hence their findings cannot be trusted.Conversely, other studies used larger sample sizes, which tended to be affected by small diversion hence their findings areconsidered to have an adverse effectson validity and reliability. In this study, the researcher has contributed to the body of knowledge in providing findings, which are in line with the recommended sample size, and by performing both factor analysis and structural equation modelling.

Moreover, this study has contributed towards the advancement of data analysis technique, which could account for indicator and construct of independent variables to

illustrate dependent variables on a complex model. The study would also be valuable to future researchers and students interested in understanding similar studies in the future for academic and non-academic purposes.

6.4 Recommendationfor Future Research

The study demonstrates a significant and clear role of MMS usage in relation to SMES business operation and extends the literature on mobile service usage. It would be instrumental if future researchers would extend to address deployment, implementation, and management of mobile payment systems.

Though this study makes significant contributions, there are a few limitations. Firstly, this study explored the influence of MMS usage to support SMEs operation in Tanzania and not in other areas. The findings and their implications were obtained from one single study that targeted a specific set of users of MMS in Tanzania. Hence the findings and the model validated from this study may not be applicable in other countries due to context differences. This study recommends for further research in more than one country in order to confirm and establish more evidence, which could explain the usage phenomenal in developing countries and compare some unique characteristics found in each country.

Recently, the Government of United Republic of Tanzania launched the use of Government e-payment Gateway in collecting revenue from both tax and non-tax. This system has been fixed in all government entities, which collect revues and thusenabling the government render services to its citizen. GePG is aligned with MMS as the communication channel in communicating financial transactions. It is thus

suggested further research study,which may use the model and methodology used in this study could be done to confirm if the influencing factors on MMS usage are useful in explaining the factors influencing GePG usage on Revenue collection in Tanzania.

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APPENDECIES

Appendix I: Research Questionnaires

This questionnaire was designed to collect information aimed at exploring "**the influence of mobile money services usage to Support SMEsoperations in Tanzania**. The success of this survey is to collect data from wholesale and retail trading enterprises which will depend much on your kind and honest participation. In this case, I would like to have your valuable opinion on the subject and your participation is very important for this study. The information gathered will be strictly used for research purpose. The information provided were kept confidential and names of individuals or enterprises will not be included in the reporting of findings.

A. General Background Information

1. Name of the interviewer and enterprise (Option)

   _____ _____

2. Gender of the respondent:

   Male ( )

   Female ( )

3. Jurisdiction:

   Owner ( )

   Employee ( )

4. Location and SME category (Please tick the appropriate)

S/N	LOCATION	SME CATEGORY	
		Retail Trade	Wholesale
1	Dar es salaam (Ilala Municipality)		
2	Mwanza Region (Ilemela Municipality)		
3	Mtwara Region (Mtwara–MikindaniMunicipality)		

5. Education Level (Please tick the appropriate)

Primary Education	Secondary Education	Certificate/Diploma	Degree/Advanced Diploma	Master and Above	Others

6. How long have you been in thisEnterprise/business?

Less than 1 year	1 to 5 years	6 to 10 years	More than ten years

7. Which class best describe the number of employees in your enterprise?

Number of Employees	≤ 5	5 - 49	50 - 99	≥ 100
Please tick				

8. Are you using mobile money services in your business operation?

Yes ( )

No ( )

B1. SME Business Operation

Please rank the influence of mobile money services usage to facilitate SME Operations, where 1 = strongly Agree; 2 = Agree; 3 = Neutral; 4 = Disagree; 5 = Strongly Disagree

S/NO	**Benefits of MMS usage**	**1**	**2**	**3**	**4**	**5**
1	In SMEs, MMS is used to link with Financial Services Provider					
2	In SMEs operation, MMS is usedfor prompt payments					
3	In SMEs operation, MMS is used for management and withdrawal of fund					
4	In SMEs operation, MMS is used to facilitate money transfer					
5	In SMEs operation, MMS is used to link with customers and suppliers					

B2. The influence of perceived usefulness of mobile money services to support SMEs Operations

Please rank the usefulness mobile money services usage to facilitate SMEs Operations, where 1 = strongly Agree; 2 = Agree; 3 = Neutral; 4 = Disagree; 5 = Strongly Disagree

S/NO	Usefulness of Mobile Money Services	1	2	3	4	5
1	MMS usage save time in accomplish business transactions					
2	MMS usage increase profitability on business operation					
3	MMS usage Increase customer base and hence improve market share					
4	MMS usage improves Financial Services					
5	The usage of MMS ensure greater business control					
6	MMS usage assist in data keeping and retrieval for business operation					
7	MMS usage enhance triability in fund management					
8	MMS usage enhance Cost Reduction in business operations					
9	MMS usage is Compatible with business operation					
10	MMS usage assist to loan services					
11	MMS usage ensure Perceived Privacy on performing business transactions					
12	MMS usage increase business reliability					
13	Perceived Ease of Use facilitate usefulness of MMS in business operation					
14	MMS usage depends on Vendor support					
15	MMS usage assist to receive funds from customers					
16	MMS usage depend on suppliers readiness					
17	MMS usage encourage saving behaviour and wave Bank charges					

B3. The influence of Perceived Trust mobile money services usage in supporting SMEs Operations.

Please rank the perceived trust on mobile money services usage to facilitate SME Operations, where 1 = strongly Agree; 2 = Agree; 3 = Neutral; 4 = Disagree 5 = Strongly Disagree

S/NO	Trust on MMS usage	1	2	3	4	5
1	The use of mobile money services increase reputation in performing business transactions					
2	The use of mobile money services protect the loss financial data					
3	Uses of mobile money services enhance business competence					
4	Mobile money services usage protect unauthorized personnel to access user information					
5	Strong regulatory framework increase the trust on MMS usage					
6	Uses of mobile money services guarantee high level of data integrity					

B4. The influence of perceived risk on mobile money services bySMEs Operations

Please rank the perceived risk on mobile money services usage to facilitate SME Operations, where 1 = strongly Agree; 2 = Agree; 3 = Neutral; 4 = Disagree 5 = Strongly Disagree

S/NO	Perceived Risk on MMS usage	1	2	3	4	5
1	MMS usage reduces the misallocation of funds					
2	MMS usage encourage reduce the burglary of cash float during delivering financial transactions					
3	The sufficient security in MMS minimize technical attack and hence decrease performance risk					
4	MMS usage increase financial risk in business operation.					
5	Proper data capture reduces the risk of loss of wealth					
6	The capital adequacy of the float holder must be checked to reduce performance risk in the economy					
7	Mobile money services usage enables privacy in financial communications and hence reduces psychological risk					
8	The use of MMS services reduces fraud results from identity theft.					
9	MMS usage reduces the receipt of counterfeit notes may increase business risk					
10	Transaction delayed by network failure will not results into loss of wealth					
11	MMS usage by employing more than one service providers reduces concentration risk					

Appendix II: Research Clearance Letter

THE OPEN UNIVERSITY OF TANZANIA

DIRECTORATE OF RESEARCH, PUBLICATIONS, AND POSTGRADUATE STUDIES

P.O. Box 23409 Fax: 255-22-2668759Dar es Salaam, Tanzania,
http://www.out.ac.tz

Tel: 255-22-2666752/2668445 ext.2101
Fax: 255-22-2668759,
E-mail: drpc@out.ac.tz.

27/05/2017

Regional Administrative Secretary,,
Mwanza Regional,
P.O.Box 119,
Mwanza, TANZANIA

RE: RESEARCH CLEARANCE

The Open University of Tanzania was established by an act of Parliament no. 17 of 1992. The act became operational on the 1st March 1993 by public notes No. 55 in the official Gazette. Act number 7 of 1992 has now been replaced by the Open University of Tanzania charter which is in line the university act of 2005. The charter became operational on 1st January 2007. One of the mission objectives of the university is to generate and apply knowledge through research. For this reason staff and students undertake research activities from time to time.

To facilitate the research function, the vice chancellor of the Open University of Tanzania was empowered to issue a research clearance to both staff and students of the university on behalf of the government of Tanzania and the Tanzania Commission of Science and Technology.

The purpose of this letter is to introduce to you, **Mr. Elizeus KALUGENDO John; REG NO:HD/B/1126/T.13** who is a PhD student at our university. **Elizeus KALUGENDO John** has been granted clearance to conduct research in the country. The title of his research is **"The influence of Mobile Money Services usage on SME operations in Tanzania**.The period which this permission has been granted is from 01/06/ 2017 to 30/12/2017.

In case you need any further information, please contact:
The Deputy Vice Chancellor (Academic); The Open University of Tanzania; P.O. Box 23409; Dar Es Salaam. Tel: 022-2-2668820

We thank you in advance for your cooperation and facilitation of this research activity.
Yours sincerely,

Prof Hossea Rwegoshora

For: VICE CHANCELLOR

THE OPEN UNIVERSITY OF TANZANIA

THE UNITED REPUBLIC OF TANZANIA

PRESIDENT'S OFFICE

REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT

MWANZA REGION

Telegrams : "REGCOM"
Telephone: 028-2500690/2500686
Fax : 028-2501057/2541242
E-mail: rasmwanza@pmoralg.go.tz
In reply please quote:

REGIONAL COMMISSIONER'S OFFICE
P.O. Box 119,
MWANZA.

Ref. No. **DA.193/333/15**

30th June, 2017

District Administrative Secretary,
P.O.BOX 2315,
ILEMELA

REF: RESEARCH PERMIT FOR MR. ELIZEUS KALUGENDO JOHN

The above named is a student of the Open University of Tanzania who is a PhD student.

He has been granted a permit to conduct a research in your organization. His research title is ***"The influence of Mobile Money Services usage on SME operations in Tanzania".***

The period which this permission has been granted is from 01/06/2017 to 30/12/2017.

Kindly assist him.

R. B. Juma
For: REGIONAL ADMINISTRATIVE SECRETARY
MWANZA

K.n.y .KATIBU TAWALA(M)
MWANZA

COPY: Municipal Director,
P.O.BOX 715,
MWANZA

" Mr. Elizeus Kalugendo John
STUDENT

JAMHURI YA MUUNGANO WA TANZANIA

OFISI YA RAIS

TAWALA ZA MIKOA NA SERIKALI ZA MITAA

MKOA WA MWANZA
Anwani ya Simu: "ADMIN"
Simu Na.: 0737 202808
Fax:
Unapojibu tafadhali taja:

OFISI YA MKUU WA WILAYA,
WILAYA YA ILEMELA,
S.L.P 2315,
MWANZA.

Kumb. Na. AB.65/209/02/

Tarehe 03/07/07

KWA YEYOTE ANAYEHUSIKA,
WILAYA YA ILEMELA.

YAH: KIBALI CHA KUFANYA UTAFITI WILAYANI ILEMELA
NDUGU. ELIZEUS KALUGEDO JOHN

Mtajwa hapo juu ni Mwanafunzi/Wanafunzi wa Chuo Kikuu cha OPEN UNIVERSITY kilichopo DAR-ES-SALAAM Ameruhusiwa/wameruhusiwa kufanya utafiti Wilayani Ilemela.

Mada ya utafiti: THE INFLUENCE OF MOBILE MONEY SERVICES USAGE ON SME OPERATIONS IN TANZANIA

.....

Tafadhali apewe/wapewe msaada na ushirikiano atakaohitaji/watakaohitaji ili kufanikisha utafiti huo.

K.n.y: KATIBU TAWALA WA WILAYA
ILEMELA

KNY. KATIBU TAWALA (W)
ILEMELA

THE OPEN UNIVERSITY OF TANZANIA

DIRECTORATE OF RESEARCH, PUBLICATIONS, AND POSTGRADUATE STUDIES

P.O. Box 23409 Fax: 255-22-2668759Dar es Salaam, Tanzania,
http://www.out.ac.tz

Tel: 255-22-2666752/2668445 ext.2101
Fax: 255-22-2668759,
E-mail: drpc@out.ac.tz.

27/05/2017

Municipal Director,
Ilala Municipal Council,
P.O.Box 20950,
Dar es salaam, TANZANIA.

RE: RESEARCH CLEARANCE

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To facilitate the research function, the vice chancellor of the Open University of Tanzania was empowered to issue a research clearance to both staff and students of the university on behalf of the government of Tanzania and the Tanzania Commission of Science and Technology.

The purpose of this letter is to introduce to you, **Mr. Elizeus KALUGENDO John; REG NO:HD/B/1126/T.13** who is a PhD student at our university. **Elizeus KALUGENDO John** has been granted clearance to conduct research in the country. The title of his research is **"The influence of mobile money services usage on SME operations in Tanzania**.The period which this permission has been granted is from 01/06/ 2017 to 30/12/2017.

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We thank you in advance for your cooperation and facilitation of this research activity.
Yours sincerely,

Prof Hossea Rwegoshora

For: VICE CHANCELLOR

THE OPEN UNIVERSITY OF TANZANIA

ILALA MUNICIPAL COUNCIL
RECEIVED
Date 12/6/17

HALMASHAURI YA MANISPAA YA ILALA

BARUA ZOTE ZIPELEKWE KWA MKURUGENZI WA MANISPAA

SIMU NA. 2128800
2128805
FAX NO. 2121486

OFISI YA MKURUGENZI
I MTAA WA MISSION
S.L.P 20950
11883 – DAR ES SALAAM

KUMB. NA. IMC/AF.3/31 ..23.../06.../2017

MAAFISA WATENDAJI WA KATA,
MANISPAA YA ILALA,
MKOA WA DAR-ES-SALAAM.

YAH: KUMTAMBULISHA ELIZEUS KALUGENDO JOHN

Husika na mada tajwa hapo juu.

Halmashauri ya Manispaa ya Ilala imemruhusu Mwanachuo toka CHUO KIKUU HURIA CHA TANZANIA kufanya Project/~~Field~~/Research juu ya The influences of MMS Usage on SME Operations in Tanzania katika ofisi yako. **Project/Field/Research"** itaanza kuanzia tarehe JUNI/.....2017 hadi DESEMBA/.....2017.

Tafadhali umpe Ushirikiano.

Nakutakia kazi njema.

R. Muna
Kny: MKURUGENZI WA HALMASHAURI
MANISPAA YA ILALA

HALMASHAURI YA MANISPAA YA ILALA
Kny: MKURUGENZI

THE OPEN UNIVERSITY OF TANZANIA

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Tel: 255-22-2666752/2668445 ext.2101
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E-mail: drpc@out.ac.tz.

27/05/2017

Municipal Director,
Mtwara Mikindani Municipal Council,
P.O.Box 92,
Mtwara, TANZANIA

RE: RESEARCH CLEARANCE

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Yours sincerely,

Prof Hossea Rwegoshora

For: VICE CHANCELLOR

THE OPEN UNIVERSITY OF TANZANIA

HALMASHAURI YA MANISPAA MTWARA-MIKINDANI
(Barua zote kwa Mkurugenzi wa Manispaa)

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Ofisi ya Mkurugenzi wa Manispaa,
S.L.P. 92,
MTWARA.

Kumb. Na. MM/MC/A.6/49/VOL.III/93 12/07/2017

Watendaji wa Kata na Mitaa,
S.L.P 92,
MTWARA – MIKINDANI.

YAH: KIBALI CHA UTAFITI

Nachukua fursa hii kumtambulisha kwenu **Ndugu Elizeus Kalugendo John** ambaye ni mtafiti kutoka Chuo Kikuu Huria ambae atafanya utafiti juu ya Maturmizi ya Simu na Miamala yake katika maeneo yenu.

Tathimini hii itasaidia kupata picha halisi ya uzingatiwaji wa masuala ya kisheria ya Matumizi ya mitando na Mihamara katika simu.

Namtambulisha kwenu ili muweze kumpatia taarifa muhimu zinazohusu maeneo yenu ya kazi kupitia mahojiano ya moja kwa moja.

Taarifa mtakazotoa zitatumika kwa ajili ya tathimini hii tu na si vinginevyo

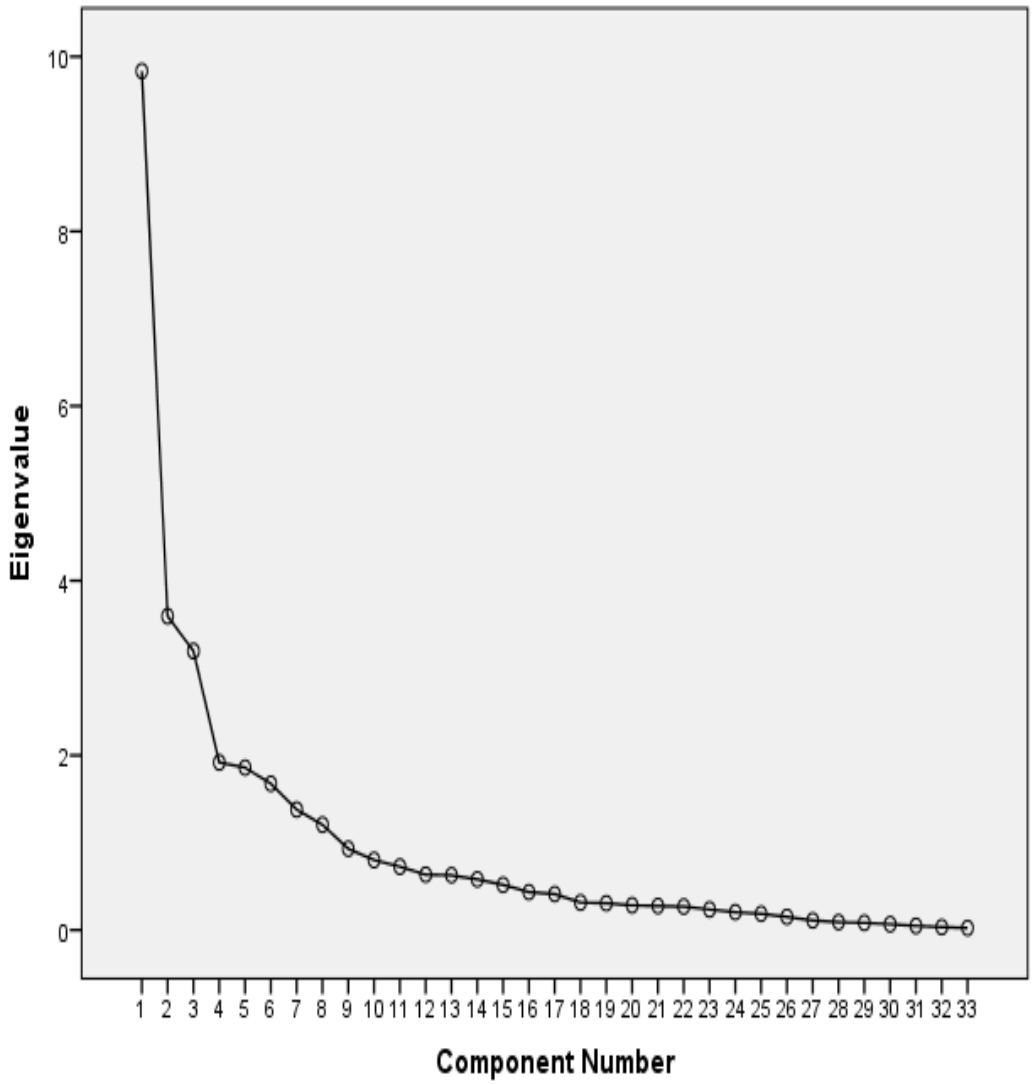
Nawatakia ushiriki mwema.

Abdalla Mkumbo
KNY: MKURUGENZI WA MANISPAA
MTWARA – MIKINDANI

Nakala:-
Mkurugenzi wa Manispaa,
Mtwara – Mikindani. – *Aione kwenye jalada*

Appendix III: Statistical Data

(a) The Scree Plot for Exploratory Factor Analysis



(b) Summary of Variance

Component	Initial Eigenvalues[a]			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	10.605	29.804	29.804	5.962	17.239	17.239
2	3.949	10.888	40.692	4.210	12.173	29.412
3	2.830	9.682	50.374	5.211	15.067	44.478
4	2.142	5.814	56.188	4.143	11.710	56.188
5	1.812	5.239	61.697			
6	1.628	4.706	66.404			
7	1.578	4.562	70.966			
8	1.216	3.515	74.481			
9	1.132	3.272	77.753			
10	.943	2.727	80.481			
11	.848	2.452	82.933			
12	.671	1.942	84.875			
13	.633	1.832	86.706			
14	.542	1.567	88.273			
15	.488	1.412	89.685			
16	.447	1.293	90.978			
17	.356	1.030	92.008			
18	.329	.951	92.959			
19	.311	.900	93.859			
20	.283	.819	94.679			
21	.276	.798	95.477			
22	.269	.778	96.255			
23	.236	.683	96.938			
24	.213	.615	97.552			
25	.189	.546	98.099			
26	.157	.454	98.552			
27	.129	.374	98.927			
28	.101	.293	99.220			
29	.097	.280	99.500			
30	.066	.191	99.691			
31	.045	.130	99.820			
32	.034	.097	99.918			
33	.028	.082	100.000			

Extraction Method: Principal Component Analysis.

a. When analyzing a covariance matrix, the initial eigenvalues are the same across the raw and rescaled solution.