

**THE CONTRIBUTION OF MOBILE MONEY TRANSFER IN
MARKETING AGRICULTURAL PRODUCTS OF WOMEN
INVOLVED IN AGRIBUSINESS IN MOROGORO MUNICIPALITY,
TANZANIA**

MSc THESIS

LUAMBANO KIHOMA

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Municipality, Tanzania**

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Luambano Kihoma

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**HARAMAYA UNIVERSITY
SCHOOL OF GRADUATE STUDIES**

As Thesis Research advisors, we here by certify that we have read and evaluated this thesis entitled The Contribution of Mobile Money Transfer in Marketing Agricultural Products of Women Involved in Agribusiness in Morogoro Municipality, Tanzania prepared, under our guidance, by Luambano Kihoma. We recommend that it be submitted as fulfillment of the Thesis requirement.

Muluken G. Wordofa (PhD)
Major Advisor

Signature

Date

Prof. Zebedayo S.K. Mvena
Co- Advisor

Signature

Date

As member of the Board of Examiners of the M.Sc. Thesis Open Defense Examination, We certify that we have read and evaluated the Thesis prepared by Luambano Kihoma and examined the candidate. We recommended that the Thesis be accepted as fulfilling the Thesis requirement for the degree of Master of Science in Agriculture Information and Communication Management.

Chairman

Signature

Date

Internal Examiner

Signature

Date

External Examiner

Signature

Date

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Name: Luambano Kihoma

Signature: _____

Date: _____

Department: Rural Development and Agricultural Extension

BIOGRAPHICAL SKETCH

Ms. Luambano Kihoma the author of this project is a Tanzanian citizen born on 27th November 1974 in Songea, Tanzania. She is currently employed as Research Assistant in the Department of Agricultural Education and Extension, Sokoine University of Agriculture (SUA), Tanzania. She completed her B.Sc. (Agricultural Economics and Agribusiness) at Sokoine University of Agriculture and graduated in November 2013. In her undergraduate research project, she worked on comparative analysis of local chicken and broiler enterprises in Morogoro district.

Since July 2013, she has been working as a Research Assistant for various research projects at SUA including USAID funded Innovative Agricultural Research Initiative (iAGRI), based at Sokoine University of Agriculture, Morogoro, Tanzania. In this project she was involved in data collection, data entry using SPSS program and data analysis for baseline survey to assess conditions and document promising Conservation Agriculture Technologies. She has also participated in the Rapid Rural Appraisal exercise in the Southern Agricultural Growth Corridor of Tanzania (SAGCOT), as part of the IFAD funded project “Increasing food security and farming system resilience in East Africa through wide-scale adoption of climate smart agricultural practices”, led by CIAT in collaboration with Sokoine University of Agriculture from September to October 2014.

Ms. Luambano Kihoma is currently a MSc. Candidate in Agricultural Information and Communication Management (AICM) at Haramaya University, Ethiopia under financial support from the Regional Universities Forum for Capacity Building in Agriculture (RUFORUM).

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ACRONYMS AND ABBREVIATIONS

AYF	African Youth Foundation
ANOVA	Analysis of Variance
BOT	Bank of Tanzania
EYGM	Ernst and Young Global Member
FII	Financial Inclusion Insights
GSMA	Global System Mobile Association
ICT	Information Communication Technology
IFC	International Finance Corporation
ITU	International Telecommunication Union
MAFSC	Ministry of Agriculture, Food Security and Cooperatives
MMT	Mobile Money Transfer
RUFORUM	Regional Universities Forum for Capacity Building in Agriculture
SPSS	Statistical Package for Social Sciences
SSCC	Social Sciences Computer Cooperative
TCRA	Tanzania Communication Regulatory Authority
USAID	United States Agency for International Development
USD	United States Dollar

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THE CONTRIBUTION OF MOBILE MONEY TRANSFER IN MARKETING AGRICULTURAL PRODUCTS OF WOMEN INVOLVED IN AGRIBUSINESS IN MOROGORO MUNICIPALITY, TANZANIA

ABSTRACT

Mobile money transfer services are popular services in Tanzania used to facilitate financial transactions for business activities and family matters. Despite of the fact that the services have many advantages to users; their contributions to Tanzanian agribusiness women on marketing their agricultural products are not empirically substantiated. This study aimed to investigate and establish the contribution of mobile money transfer services in marketing agricultural products to women involved in agribusiness by analyzing factors motivating agribusiness women to use mobile money transfer services in marketing agricultural products, to understand to what extent mobile money transfer services used by agribusiness women in marketing agricultural products and to identify challenges and advantages agribusiness women who use MMT get from using the services. A case study was Morogoro Municipality Tanzania. Both qualitative and quantitative from primary and secondary data were used in the study. Primary data were collected from agribusiness women within Morogoro Municipality, Secondary data were collected from network service providers, library and from the internet. Then quantitative data were analyzed by using SPSS program version 20 and qualitative data were analyzed by content analysis. The study identified that the services were used by agribusiness women and age, education, type of business products, capital and type of customer are the factors that motivate agribusiness women to use MMT services. It was identified that service providers agents problems, unavailability of network, high transaction cost compared to bank are among the challenges agribusiness women face in using MMT and promotion, time saving, security of their money are among of the advantages agribusiness women get from using MMT. It was recommended that due to its potentiality in facilitating money transactions; MMT service providers should make sure that their services are convenient, affordable and easy to use by their customers.

Key words: *Mobile money transfer, agricultural products, marketing, agribusiness women.*

1. INTRODUCTION

1.1. Background

Movement of money from one person to another or from one account to another for making payment, helping families and friends is common in societies. The transaction can be done by either hand to hand, electronically or by using banking system. Mobile money transfer services are information communication technology business innovation enabling movement of money from one account to another electronically. More popular mobile money transfer services are phone to phone money transfer, phone to bank/bank to phone money transfer, phone to company/organization money transfer, bank to company/organization money transfer, phone to phone airtime credit transfer and phone to phone airtime top-ups (GSMA, 2015).

In Tanzania Mobile money applications were introduced in April 2008 with Vodafone M-Pesa provided by Vodacom Tanzania Company (BOT, 2008). The services were launched one year after successful introduction of M-Pesa with Safaricom in Kenya in March 2007 (BOT, 2008) and became a popular service used in the country. Limited access to money transfer services, structural weaknesses in the formal financial institutions especially in rural areas nourished the development of mobile money transfer business in Tanzania (Bangens and Soderberg, 2011; Masamila, 2014). Nowadays mobile money applications services have become a common objective for almost all the mobile phone service providers. Every mobile phone service provider struggles to introduce mobile money applications to capture large market demand available. Currently four among seven mobile phone service providers in Tanzania have already put mobile money products on the market, the products are Vodacom M-Pesa by Vodacom Tanzania company, Tigo Pesa by Tigo company, Airtel Money by Airtel Tanzania company and Ezy Pesa by Zantel (FITS, 2013).

Tanzania like other developing economy countries most of its adult population have not access to basic financial services in order for its citizen to save, borrow or make money transactions. It was reported by IFC and World Bank group, (2010) that there is only 9%

of Tanzania population who have access to formal financial services. The introduction of mobile money services in the country was views as problem solver in facilitating financial transaction. The business spread and became more used by people in many areas due to its penetration even to the remote areas. Agriculture is the mainstay of Tanzania economy and most of its employees live in rural areas; MMT services help in facilitating rural – urban financial flow easily and quickly (Kumar and Payne, 2010).

Agribusiness is the business that deals with commercial aspect of agricultural activities (crop and livestock) such as production, processing and selling farm products, manufacturing of farm equipment and supply of farm inputs such as seeds, fertilizers and pesticides (Buruah, 2007). In other words it refers to a chain of businesses involved in the production, transformation and supply of agricultural products; this study was only dealing with women involved in marketing agricultural products. For a better performance, business requires efficient, reliable and affordable money transfer services to enhance movement of money from one location to another; that is money can be deposited in one account and withdrawn in another easily and cheaply.

1.2. Statement of the Problem

The lack of access to formal banking in Africa has opened the door for mobile operators to build successful mobile payment services. A number of service providers are already active in deploying mobile application services to tap the demand from the large unbanked population (GSMA, 2015). In Tanzania, mobile applications have significantly adopted that is, almost 35 percent of the adult population in Tanzania actively uses at least one of the four mobile money deployments in the country. As agriculture is the main source of income in many developing countries; women play a core role in the activities but underperform in terms of productivity and selling agricultural output largely because they lack access to resources such as financial services (Huyer, 2012; Donnell, 2014). Mobile phone technology could bridge this gap, by helping them to increase productivity and marketing their farm products (Donnell, 2014).

However a number of barriers have been reported to exist that can prevent women from adopting mobile money services. While the economic, social, and cultural context varies dramatically from market to market, mobile money operators reported five common and persistent barriers; which are low literacy and education levels, lack of easy access to mobile money agents, lack of identification documents, lack of confidence to use mobile money and low levels of mobile phone ownership (Minischetti and Scharwatt, 2014). In the development of mobile money market all over the world women could not be ignored, it was reported by (Minischetti and Scharwatt, 2014) that women could take half of the mobile money transfer services users in mobile markets.

The important of making the right choice of technology to the right time could bring community to the right development. Many researchers (Kirui *et al.*, 2012; Castri and Gidvan, 2014) revealed that mobile money transfer services have positive outcomes to users; that is the services are easy to use, cheap, safe and available to many areas compared to formal financial system that could help many development activities. Despite the advantages that mobile money transfer services have to users;- the contribution of the services to Tanzanian agribusiness women on marketing their agricultural products is not empirically substantiated. Therefore this study was conducted with the aim of investigating and establishing the extent to which mobile money transfer services contribute in marketing agricultural products for the women involved in Agribusiness

1.3. Objectives of the study

1.3.1. General objective

The main objective of the study was to evaluate the contribution of mobile money transfer services in marketing agricultural products of women involved in agribusiness at Morogoro Municipality.

1.3.2. Specific objectives

- (i) To determine the extent of use of mobile money transfer services on marketing agricultural products of agribusiness women.

- (ii) To identify factors motivating agribusiness women to use mobile money transfer services in marketing agricultural products
- (iii) To identify challenges and advantages in using MMT services.

1.4. Research Question

- (i) What are the main purposes of agribusiness women to purchase mobile phone device?
- (ii) To what extent mobile money transfer services contribute in marketing agricultural products of agribusiness women
- (iii) What are the factors that motivate agribusiness women to use mobile money transfer services in their business activities?
- (iv) What are the challenges and advantages of using mobile money transfer services?

1.5. Significance of the Study

The study was carried out with the intention of understanding to what extent MMT services use in agribusiness activities by taking women in Morogoro Municipality as a case study, what are the factors which drive them to use MMT services in business activities and what are the challenges and advantages agribusiness women face from using MMT services. The findings will provide information input to researchers for further studies and policy makers for developing appropriate policies that will enhancing ICT performance especially mobile phones to support agricultural activities.

1.6. Scope of the Study

The study was focused only to the agribusiness women who deal with marketing agricultural products of all ages no matter they are single married, divorced or widowed and mobile money transfer services especially those provided by network services in Tanzania such as Vodacom Tanzania, Tigo, Airtel Tanzania and Zantel. The study was not deal with financial institution like banks even if they provide mobile money transaction services. This is due to limited resources such as time and money.

2. LITERATURE REVIEW

This chapter was divided into three sections. The first section discussed the study key concepts such as mobile money transfer, marketing and agribusiness women. The second section presented various empirical studies on the mobile money transfer services growth, gender, motivators, challenges and its role in agriculture activities. The third section develops a synthesis of the conceptual framework of the study.

2.1. Study key Concepts

2.1.1. Mobile money transfer Services

Mobile money transfer is an electronic movement of money from one location to another or from one account to another by using mobile phone device, the more popular mobile money transfer services are phone to phone money transfer, phone to bank and bank to phone money transfer, phone to company/organization money transfer, bank to company/organization money transfer, phone to phone credit top-ups and phone to phone airtime credit transfer (GSMA, 2015).

2.1.2. Agricultural marketing

Agricultural marketing covers the services involved in moving an agricultural product from the farm to the consumer (Tracey, 2003). Numerous interconnected activities are involved in doing this, such as planning, production, growing and harvesting, grading, packing, transport, storage, agro and food processing, distribution, buying supplies, renting equipment, advertising and selling. Marketing is everything a business does (Tracey, 2003).

2.1.3. Agribusiness women

Agribusiness women are those women who are involved in business of agricultural products activities such as production, processing and selling farm products (Crop and Livestock products), manufacturing of farm equipment and the supply of farm inputs such as seeds, fertilizers and pesticides. (Buruah, 2007)

2.2. Mobile Money Transfer Overview

Several literature have been reviewed and in its overview it showed that mobile money transfer services are useful in enhancing different development activities if it used in the right way and for the right purpose (Chakraborty, 2005). The services usage is growing faster especially in developing countries even if women are behind in using the services compared to men (GSMA, 2009). Services such as person to person (P2P) sending and receiving money transaction services are more popular using services in the developing economy (GSMA, 2015). The services improve agricultural activities by enabling movement of money among agricultural stakeholders (Payne and Kumar, 2010). However there is still a gap on understanding the contribution of the services on marketing agricultural products of Tanzanian women who are involved in agribusiness, which is the objective of this study.

2.2.1. Growth of mobile money transfer services in Tanzania

When Vodacom Tanzania's M-Pesa went live in April 2008, one year after an extremely successful launch of the service in Kenya, analysts were expecting the service to take off in the same way and at the same speed; However, in its first 12 months, the growth of Vodacom's M-Pesa service remained well below that seen by Safaricom's M-Pesa in Kenya (Cagri and Gidvan, 2014). In the first twelve months, it had only 280,000 users and 930 agents; although that number has expanded to over 5 million subscribers by November 2010 (Cagri and Gidvan, 2014). During 2009 to 2011 other three service providers join to the market namely Tigo (Tigo pesa), Airtel (Airtel money) and Zantel (Ezy pesa). Today, Tanzania has success story in adoption of mobile money transfer technology, up to September 2015 there were about 16,471,400 active mobile money subscribers in Tanzania, in which Vodacom M-pesa has 7,130,582 subscribers, Tigo pesa 5,033,622, Airtel money has 3,957,509 and Ezy pesa has 349,687 (TCRA, 2015). The number and value of transactions is growing very fast, and today the Tanzania market is performing close to Kenya (GSMA, 2014). According to USAID report (2013) it was reported that there is no single reason for this success; However, there are a variety of market factors that likely contributed to the rapid uptake, including a strong mobile phone market penetration (over 50% of the total population), wide mobile network coverage

(76% of the total population have access to at least one mobile network) a relatively young population (median age of 18.5 years), as youth are often amongst the first adopters of new technologies, a relatively strong literacy rate (70%), an enabling regulatory environment, significant time and financial investment from MNOs, a highly competitive market for both mobile voice and mobile money services (USAID, 2013).

Table 1: Mobile Money Subscriptions between July and September, 2015 (TCRA, 2015)

Month	Vodacom (M-Pesa)	Airtel (Airtel money)	Tigo (Tigo Pesa)	Zantel (Ezy Pesa)	TOTAL
July	5,008,270	4,084,600	4,878,246	355,822	14,326,938
August	5,443,611	4,136,908	5,018,398	349,687	14,948,604
September	7,130,582	3,957,509	5,033,622	349,687	16,471,400

The market for mobile money in Tanzania is dynamic and the four providers are highly competitive. Currently, the mobile banking market share is dominated by Vodacom's M-Pesa is the leading provider of mobile money services representing 43% of the mobile money market followed by Tigo-Pesa with 31% of the mobile money market and Airtel Money with 24% of the mobile money market are the second and third ranked providers, Ezy pesa is still behind by only 2% (TCRA, 2015). The BOT then remains actively involved in shaping the market through prospective regulation and guidance on emerging issues, such as interoperability and cross-border payments.

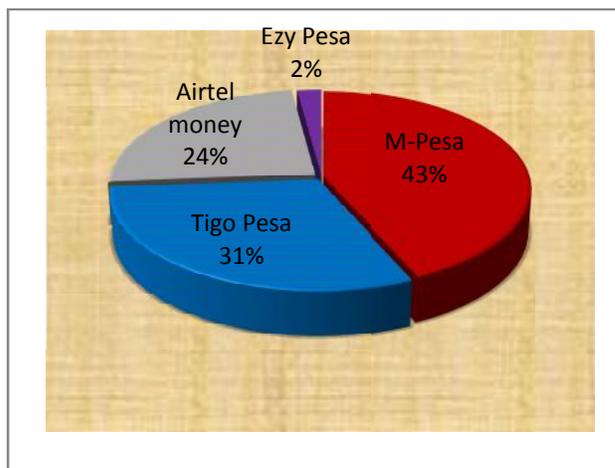


Figure 1. Mobile money subscription 2015

2.2.2. Role of Mobile money transfer in facilitating financial transaction

Mobile money transaction is the business concerning money as a product by using mobile phone device. It is a business dealing with money transfer, mobile money payments and mobile banking. Reliable financial transaction play an important role in enabling informal economic activity; mobile money service is high demanded to strengthening rural-urban payments flow, it was reported that more than 2.7 billion adults in developing economies do not have access to a formal financial services (IFC and World Bank group, 2011). Mobile money technology is the building block upon which everything else depends. There is no single reason for more of developing economy population do not have formal bank account but it was reported by ITU (2013) that the most important reason for not having a bank account is the lack of money to use one, bank accounts are too expensive, banks are too far away (especially in rural areas), documentation is lacking, and people do not trust banks. This situation nourished the use of mobile money transaction services to many rural and urban areas in Tanzania.

2.2.3. Role of mobile money transfer in agribusiness

Developments of agribusiness activities require reliable, affordable and available money transaction services to facilitate payment activities. Mobile money services are potentially important tools to leverage in agribusiness activities by making it cheaper and easier for agribusiness people to save, receive loans and make loan payments, agribusiness women could supply agricultural products and can collect payments from customers easier, faster and cheaper and customers also can use mobile money to fulfill demand for agricultural products and make payment for the products easily (Kumar and Payne, 2010). Agricultural activities study in Kenya by Okello *et al.* (2011) revealed that results from all matching approaches indicated that use of MMT services had a positive and significant effect on level of household agricultural commercialization, household agricultural income and household input use.

2.2.4. Mobile phone and the gender gap

Due to the fact that mobile phone is the device that enables movement of money from one point to another; it requires the user of the service to have the device for the transaction process. It was found that most of the women are behind men in owning and use mobile phone which affect also on getting opportunity of using MMT services. Despite the rapid growth in mobile telephone in low and middle-income countries in recent years, women are 21% less likely than men to own a mobile phone (GSMA, 2009). This has given rise to a mobile phone ‘gender gap’, where there are 300 million fewer female mobile subscribers than male subscribers in low- to middle income countries. As a result, women are less likely to reap the benefits of using mobile phones services (GSMA, 2009). There are many barriers that women in developing countries face in owning and effectively using mobile phones, which not only affect them in their daily lives but also affects them in the market. Local social norms and values are likely to influence the productive use of mobile phones. Studying the gender differences in mobile phone uses in rural Uganda, Scott *et al.* (2004) found that many women were not using mobile phones because of the cost of buying and managing the phone and their lack of knowledge of how to use the device.

A 2010 study on the use of mobile phones to aid agricultural development in southwestern Uganda revealed that, while women used the phone less than men, they were more likely to use the mobile phone to access agricultural information (Masuki *et al.*, 2010). Also a study in rural Iringa Tanzania by Mpogole *et al.* (n.d) revealed more men than women who own and use phones due to cost of getting and managing them. Although the study aimed at having an equal number men and women among respondents, there were fewer females who own/use mobile phones than males who own/use mobile phones (Mpogole *et al.*, n.d).

2.2.5. Motivators on using MMT in agribusiness activities

Motivation is personal satisfaction, encouragement or influencing of using certain goods or services due to personal decision or outside convincing power. Customer satisfaction and influencing is crucial for mobile money expansion in business activities, given the role of personal recommendations as drivers of mobile money uptake. A number of reasons explained by different researchers indicate kinds of motivators that could encourage and influence agribusiness people to use mobile money transfer services in their business activities.

Awareness of the services and device ownership

Awareness of the MMT services to users is important for influencing adoption and use of the technology. The business is successful if customers are aware of the products (Sedoyeka and Chogo, 2014). It was reported that most of less active users of MMT services especially women are less aware of the services (AYF and CTA, 2014). Mobile phone service providers should make sure that their customers are aware of all MMT services provided by them. Lack of information and understanding of the services provided by mobile money transfer to women is a big challenges that discouraging them to use the services (Senso and Venkatakrishnan, 2011). Government policies and mobile money applications stakeholders should underlying better programs to help potential MMT user especially women to understand services provided. Also due to the fact that using mobile money transfer services require the user of the service to have the mobile phone device for the transaction process. It was viewed by many researchers that nowadays most of the women especially in urban areas they own and use mobile phone in different activities (Meyer, 2015; Huyer, 2012; AYF and CTA, 2014).

Type of customers

Market is among of very important factor in business activities; type of customers usually agribusiness person dealing with could influence her/him to do what customers want to meet their needs due to pressure of competition. Some customers like to purchase farm products and pay by using MMT especially who purchase in large amount, some time they like to pay by MMT in order to reduce cash handling costs, risk and fraud (Meyer,

2015). In order to win the market agribusiness people could be influenced to use technology customers suggested. According to Wanjau *et al.* (2012) study in Kenya they reported that competition in the market influences the adoption and use of new technology, there is a direct relationship between the intensity of competition in an industry and the degree of adoption of new technologies.

Reduction of business cost and time saving

Business people are profit makers and cost minimizers, agribusiness women need to reduce business transaction and travel costs to increase profit and make their enterprises more productive (Huyer, 2012). Users of MMT reported that the services reduce business costs especially transport cost, for example if you are a business person selling the products which produced far from your market area to get those products for sale need time and high transport costs, to travel far to get the products, and monetary risk to carry money here and there. MMT services help to reduce all those costs by enabling payments for the products or services even if you are far. Ndunge (2011) reported that on the side of purchasing goods, MMT users have been freed from travelling by vehicles they just send the money and the goods delivered to them easily and quickly. MMT not only reduce travelling cost but also save time. Researchers such as Rabbany *et al.* (2013); Chogo and Sedoyeka (2014) reported that MMT save time in monetary transaction services because the services are quicker, safer, ease to use and available to many areas.

Education Status

Formal education is crucial in any development activities, it increases confidence, assurance of what you are doing and more capable to handle various issues in different angles. Education status women have (literate) could motivate and increase women's capacity on using social and economic services such as MMT than illiterate women. (AYF and CTA, 2014) reported that most of agribusiness women entrepreneurs who like to use ICT especially MMT are highly educated professionals and they use MMT for making money transaction on marketing their agricultural products. It was reported also by (USAID, 2012) that low level of education women have is among of critical obstacle affected them in adoption and using of MMT in their agribusiness activities. It was also

revealed by Muhammad *et al.*, (2004); Foreman and Livezey, (2003) that there is positive relationship between agribusiness performance and education level.

Economic factors

Economic status of agribusiness person could influence him/her in using MMT in business activities. Agribusiness women who have high capital are more motivated to use MMT in business activities. According to EYGM, (2014) reported that social economic factors are clearly influence mobile money up take to many people. High capital increase stocks of business, increase activities, increase customers which result in increase in income. Most of business people who have high capital they don't like to waste time due to many activities around them.

Security of mobile money services

Security in business activities is important to assure continuation of the business. For better performance of agribusiness activities they need safer and easy money transaction services. Most of women need to trust financial tool which could safeguarding their money especially in business activities. Mobile money transfer services were considered as safe and easy to use financial tools which could help women if facilitating financial transaction in business activities (Kumar and Payne, 2010). A woman vendor who sells vegetables on Route Delmas and a TchoTcho customer explained that by avoiding the stress of travelling with money and the possibility of being robbed as you travels home; it would be rather pay the cost of withdrawing money than risk of losing everything (Taylor *et al.*, 2011). To have money in your phone is like having cash on you but safer because you don't have to carry the actual money on you all the time (EYGM, 2011).

MMT simplify payment

Mobile money transfer services simplify payment transaction to users; it is possible to make payment or contribution to any activities when you are far without meeting to person who you want to make payment or contribute. It was reported by USAID-MEDA (2013) that MMT help USAID health organizations to use few financial workers to facilitate financial payment to the field by paying per diems to community health workers

who provide training to communities even they are far from the work place. Study in Kenya by Ndunge (2011) on groups to reduce poverty of women in Kenya revealed that it is possible for woman who lives far from her group to make contribution easily by using mobile money transfer services. Women who live far from their group MMT allows them to still contribute although they are not always physically appeared there (Ndunge, 2011).

Network service providers

Network Services Providers by themselves could encourage or discourage users to use MMT services. Customers could be motivated to use MMT according to quality of services provided by network service providers; network availability, agent availability, promotion, moderate transaction costs, safe and easy to use services are among of the factors that can influence customers to use the network services (Chogo and Sedoyeka, 2014). Bad qualities of services such as unavailability of network, few network service provider agents, delaying in assisting customer problems, high transaction costs, are among of the challenges that can discourage customers to use the network services (Chogo and Sedoyeka, 2014).

2.2.6. Challenges to effective use of mobile money transfer

There are some challenges that have been addressed by different researchers on effective use of mobile money transfer services such as agents problems, fraud, distance of the agents, insufficient understanding of the services and difficult to track the services because it does not offer receipt in transaction.

Agent problems

Agents have an essential role in supporting mobile money users with most of their transactional and informational needs. However, agents can also be a cause of frustration, especially when they are rude, absent or experience a shortage of e-float or cash to help with a transaction; the large majority of registered users of MMT services reported they had encountered problems with agents to almost all service providers in urban and rural areas. (FII, 2014; FITS inter media, 2013). Some customers explained how it is

frustrating moving from one agent door or outlet to another with the same answer that they had inadequate float or cash to serve the customers, wasting time and causing delays and not being able to achieve the timeliness of the transaction (Senso and Venkatakrishnan, 2013). To enable the effective use of the MMT services the distance between provider's agents and customers should be shorter. If agents were not located in nearby areas, the usage was also limited as it was difficult to access them (Senso and Venkatakrishnan, 2013).

Fraud in using MMT services

Fraud in mobile money transaction services was reported by many researchers as a big problem that hinders customers using the services. Fraud and money laundering are of great concern with the emergence of global mobile money remittances, which are outside traditional financial institution regulations (EYGM, 2009). As mobile commerce emerges, spam and outright theft of personal financial information will become an increasing threat that must be prevented. Managing fraud will add costs and complexity to this process, which will make it more difficult for new market entrants to succeed (EYGM, 2009). A study in Kenya by Ndunge (2011) on MMT to reduce poverty for women it was reported by several of the women who lost money due to fraud; the most common type of fraud was receiving a call or SMS from an individual who claims they have sent money to your M-PESA account by mistake so they request you to send it back to them. Senso and Venkatakrishnan (2013) were reported fraud issues to many agents and customers that hinder growth and marketing penetration of mobile money services. Different fraud modalities and cheating methods were used such as swapping of SIM cards, unfaithful workers, and transfer of money from one account to another unknowingly due to PIN leakage, fake money and fake mobile money withdrawal text messages were commonly observed by both the agents and the customers (Senso and Venkatakrishnan, 2013).

Distance from MMT agents

Distance from where the agents of MMT are and users are reported to reduce effective use of MMT. According to Okello *et al.* (2012) they reported that distance to the nearest

MMT agent has a negative influence on the likelihood of using MMT services. The further away the farmers were from MMT an agent the less likely was the use of the service.

Poor network connectivity and unreliable services

Network is the main important factor in the operation of mobile money services; you can't do anything concerning mobile money in unavailability of network situation. A study in Singida Tanzania by Senso and Venkatakrishnan (2013) was reported that the major factor that hinders large population of customers from using the service was network or service failures. Most of the times especially in rural areas customers face network connectivity problems causing end up in receiving messages stating that 'service is not available please keep trying, or try again later' or service hanging; this situation discourage users and agents as they were exposed to the risk of losing their cash, wasting time and other problems like loss of customer goodwill. Study in Kenya by Ndunge (2011) reports that network problems especially in rural areas is a major challenge to mobile money users. One group member explained the problem they often face, 'the network is low, so you are told, "there is no network".....which means today there is no M-Pesa, so you find you wanted to send that money quickly but it can't go because of the network. (Ndunge, 2011).

Insufficient understanding of the services

Low knowledge of using mobile money services among users is an issue of concern in the development of the service. GSMA (2015) reported that most of the mobile money users view mobile money primarily as a service for sending or receiving money, this perception was held by registered users regardless of whether they were from rural, urban or peri-urban areas. Also FITS (2013) reported that one-quarter of all individual users said they need help from other people when performing m-money transactions, most frequently they turn to m-money agents to help them with transactions.

Financial regulations and legislation

Regulations make or break mobile money offerings in the market as much as technology and innovation. Mobile platforms can inherently provide complete traceability of all transactions, thereby ensuring security, authentication and compliance. However, this could not be possible for some regulatory environments. According to Taylor *et al.* (2011) study in Haiti they reported that in many countries, telecom operators are not allowed to adopt the role of financial institutions, as is the case in the Philippines. The need for regulatory compliance has caused many non-financial service providers to stay away from the service (Taylor *et al.*, 2011). This regulatory weakness hinders the development of mobile money services.

Service does not offer receipts

Receipt in business activities is essential for safe use of products and to understand the cost of running the business. Mobile money transfer service does not offer receipt so it is difficult to track the services especially in business activities to understand the real cost have been used for transaction process (Owiro and Tanui, 2011).

2.2.7. Barriers that women face on adopting MMT

Mobile money has been growing at a dizzying rate over the past few years, with urban men emerging as the early adopters of the services (GSMA, 2014). A number of barriers that have been reported to exist that can prevent women from adopting mobile money services. According to Minischetti and Scharwatt (2014) reported that major constraints women face in using MMT services are low literacy and education levels of women in most of developing and emerging markets, lack of easy access to mobile money agents, lack of identification documents like identity card and confirmation letter from local government sometimes are required in order to open MMT which women could not have, low level of mobile phone ownership and lack of confidence to most of women especially uneducated one also reported is the constraint women face in using MMT services.

2.3. Conceptual Framework

Mobile money transfer services help business people users to facilitate financial transaction in business activities easily, safely and quickly so the services simplify business activities, save time and reduce unnecessary cost in business activities. A number of motivators reported by various researchers were viewed to influence agribusiness people to use MMT services. According Meyer (2015); Wanjau *et al.* (2012) reported that type of customer and market competition could influence agribusiness person to use MMT in business activities. Also (Huyer, 2012; Ndunge, 2011; Rabbany *et al.*, 2013; Chogo and Sedoyeka, 2014) reported that MMT reduce unnecessary travel cost and save time in business activities. Travelling cost of purchasing products for sale or purchasing business inputs have been reduced by MMT services, nowadays it is possible to order the products you want and pay by MMT and the products will be send to you without wasting time of going to market area physically. According to EYGM, (2014) reported that economic factors of a business person is among of the motivators that influence business person to use MMT in business activities.

Based on various motivators of using MMT services in business activities reported by various previous studies as above narration, respondent personal Profile and personal observations, conceptual framework of the study was formulated.

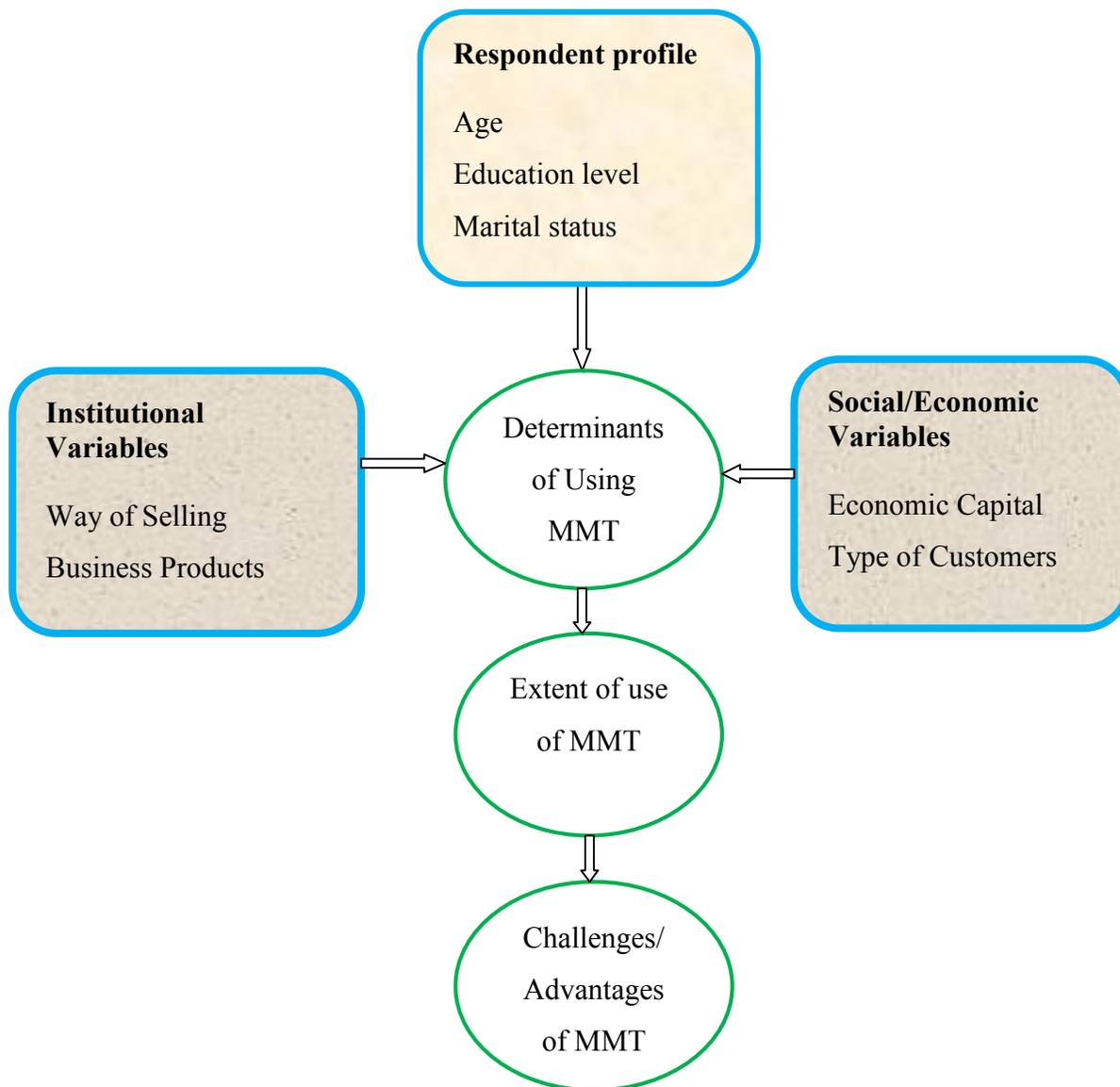


Figure 2: Conceptual Framework due to Literature review

3. RESEARCH METHODOLOGY

This chapter comprises of three sections describing the methodology used in the study. The first section presents the description of the study area. The second section is research design and sampling technique and the last section presents the analytical techniques used.

3.1. Description of the Study Area

The study was conducted in Morogoro Municipality in Morogoro region - Tanzania. The reason of selecting the Municipality as a study area is because there was a wide use of mobile phone technology in Tanzania.

3.1.1. Location

Morogoro Municipality a study area is one among six Districts available in Morogoro region in Tanzania; others are Kilosa, Kilombero, Mvomero, Ulanga and Morogoro Rural. Morogoro Municipality has total land area of 531 square kilometers which cover 0.4% of the total regional area. The district lies between Latitude 4°50 and 10°00 South of the Equator and between Longitudes 35°25 and 38°30 East of Greenwich, it bordered by the Morogoro Rural District to the east and south, Mvomero District to the north and west. Morogoro Municipality situated at the base of Uluguru Mountains about 195km west of Dar es Salaam which is the business city in Tanzania. Municipality is the Regional Headquarter, commercial and transport center of the region and it has only one division which is subdivided into 29 administrative wards.

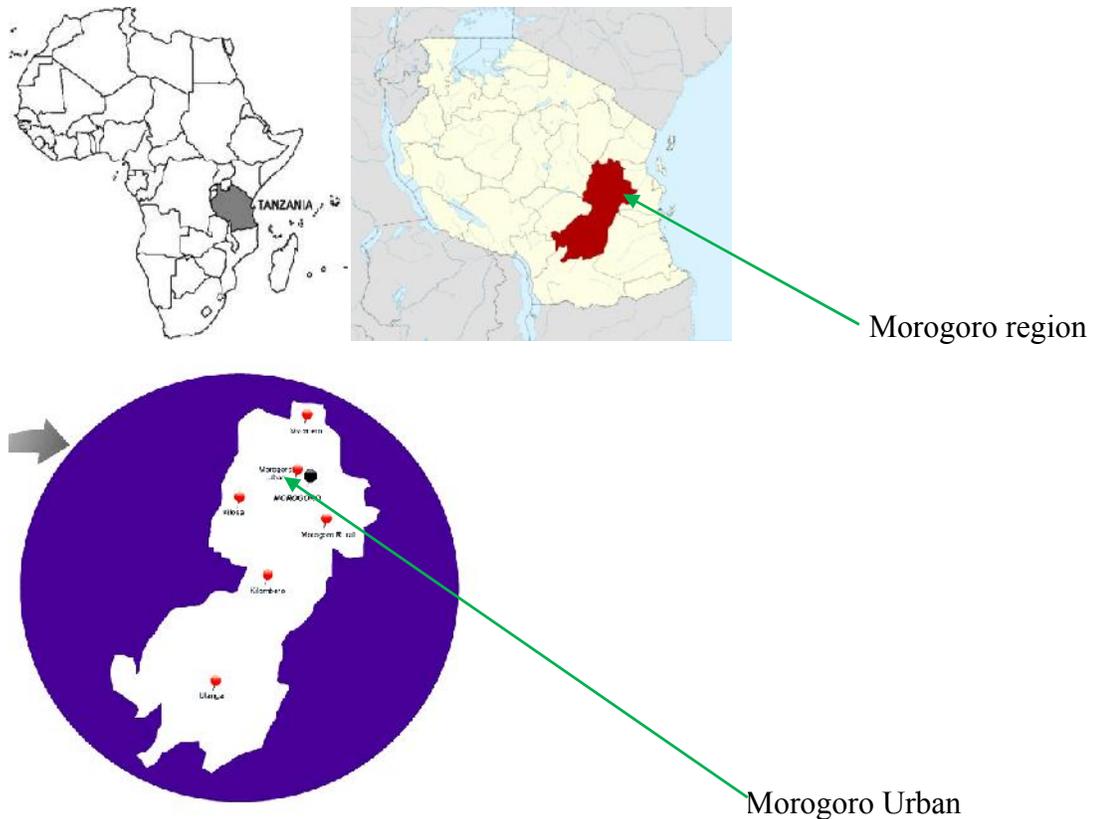


Figure 3: Location of the study area; Morogoro Municipality in Morogoro region, Tanzania

3.1.2. Population size

Morogoro Municipality has a total population of 315,866 on the ratio of 52% women (164,166) and 48% men (151,700). The description of the population in each ward was shown on appendix (Table 1).

3.1.3. Mobile money Transfer in Morogoro

In Tanzania four among seven mobile phone network service providers have been put mobile money application services in the market, the products are M-Pesa provided by Vodacom Tanzania, Tigo pesa provided by Tigo Tanzania, Airtel money provided by Airtel Tanzania and Ezy pesa provided by Zantel (TCRA,2015). In Morogoro Municipality Mobile money market dominated by three providers which are Vodacom,

Tigo and Airtel and they are competing largely to win the market available in the area; in Morogoro Municipality Vodacom has 1,450 M-Pesa agents, Tigo has 1,300 Tigo pesa agents and Airtel has 1350 Airtel money agents to serve customer (Key informant from service providers, 2015). According to Msavange, (2015) reported that 37.5% of mobile phones users in Morogoro Municipality they use for mobile money transfer services.

3.1.4. Climate condition of the area

Weather condition of Morogoro Municipality is tropical and the average annual temperature varies between 16°C to 33°C in lowlands. The highest temperature occurs in November and December, during which the mean maximum temperature is about 33°C. The minimum temperature is in June and August when the temperature goes down to about 16°C. The total average annual rainfall ranges between 821mm to 1,505mm. Long rains occur between March and May and short rains occur between October and December each year.

3.1.5. Main Economic activities

The main economic activities of the people living in the area are formal employment agricultural activities and business activities. This is due to the fact that around the area there a number of Universities such as Sokoine University of Agriculture, Mzumbe University, Muslim University and Jordan University also there are various industries such as Morogoro Canvas Mills, Tanzania Packaging Manufacturers (1998) Ltd., Morogoro Polyester Mills, Alliance one Company, Morogoro Seed Oils Mills, Tanzania Tobacco Processing Company and Morogoro Plastics and a number of Financial institution branches and government organization which all together contribute to provide employment to people around the area. Weather condition and soil profile of the area is suitable for agricultural activities, the main crops grown are maize, rice, vegetables and fruits and livestock keeping in the area are cattle, Goats, Sheeps, Pigs, Local and Technological chicken (Broilers).

3.2. Research Design and Sampling Technique

Research design of the study was a cross-sectional survey. Such design allows data to be collected at one point in time to represent a large population. Morogoro Municipality has 29 wards from which four wards were selected. Population size and development of agricultural activities were the factors used to select wards within study area. Wards selected have average population size and there are high agricultural activities (production, processing, and selling crops and animal products) carried out. A total sample size of the study was 128 respondents and 32 respondents from each ward were randomly selected. The population size of the study area calculated by considering National census (2012) that is a total women population in Morogoro Municipality was 164,166 and due to the fact that the main economic activities of the people living in the area are business activities, formal employment and agricultural activities it was assumed that one third of Morogoro urban women were engaged in agriculture/agribusiness activities, so one third of 164,166 women in Morogoro Municipality District which is equal to 54,722 were assumed to engage in agricultural/agribusiness activities.

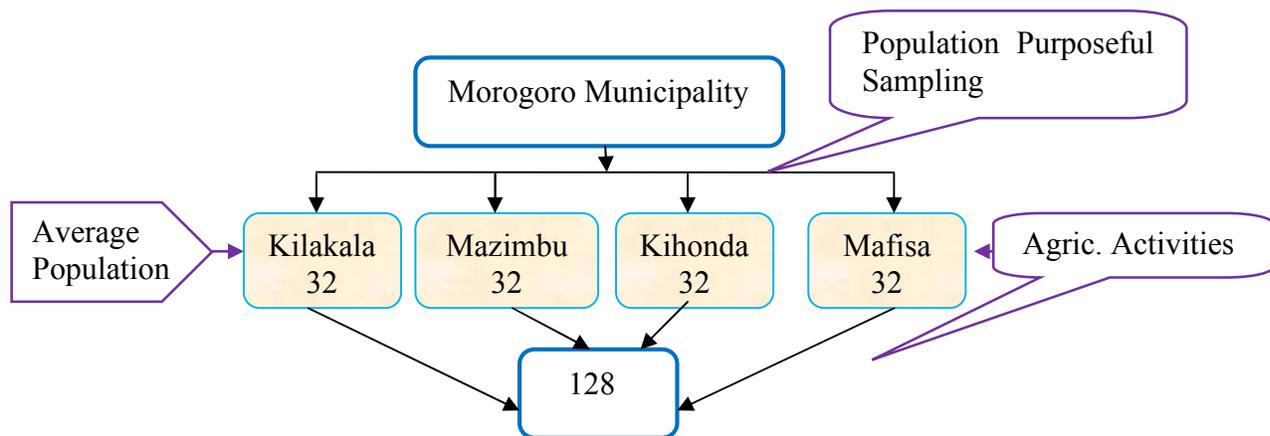


Figure 4: Schematic diagram of sampling design

3.2.1. Data collection

Both quantitative and qualitative data from primary data and secondary source were used in the study.

Quantitative Primary data

The structured questionnaires were used for primary data collection in order to generate the information needed in the study. The data were collected from agribusiness women within the selected wards in Morogoro Municipality. Four enumerators who at least completed Ordinary level (form four) secondary education and who speak Kiswahili national language were employed (certificates of their education were checked to certify their level of education). Training was given to enumerators before starting survey work on the contents of questionnaires, how to approach the respondents and on methods of data collection. Interview questionnaires were pre-tested by 16 respondents (4 from each ward) and modifications were made according to the context of the area before conducting the survey. Finally, the structured survey instruments were administered under the close supervision of the researcher.

Qualitative primary data

Qualitative data were collected from key informant from major network service providers in study area which are Vodacom Tanzania, Tigo and Airtel. It was difficult to meet with key informant from Zantel because there is no network service provider head quarter in study area due to the fact that Zantel network service was more dominated to Tanzania Island than mainland, so most of their offices are available to Tanzania Island. Also qualitative data were collected from agribusiness women interviewed by using questionnaire, they were allowed and able to explain much as they know concerning contribution of MMT services in their agribusiness activities according to the questions they asked.

Secondary data

Secondary data of the study were collected from different source of information such as library, internet and from network service providers

3.2.2. Data analysis

Qualitative data collected were analyzed by content analysis. Quantitative data were analyzed by using Statistical Package of Social Sciences (SPSS) Program Version 20 based on the study objectives.

Descriptive statistics (Frequencies, Average, cross tabulation,) was used to analyze to what extent MMT service used by agribusiness women and challenges and advantages in using MMT services.

Binary Logit Model was used to identify factors motivating agribusiness women to use MMT services in marketing agricultural products. Statistics **logistic regression model** was used to analyze relationships between a dichotomous dependent variable and metric or non-metric independent variables. Logistic regression measures the relationship between the categorical dependent variable and one or more independent variables by estimating probabilities using a logistic function. Binary logit model is appropriate when the response takes one of only two possible values representing success and failure of an attribute of interest (Rodríguez, 2007). In this study

$$Y_i = \begin{cases} 1 & \text{if using MMT} \\ 0 & \text{if Not using MMT} \end{cases}$$

Where:-

Y_i is the use of MMT service by agribusiness women in marketing agricultural products

1 represents success (use mobile money transfer services)

0 represents failure (Not use of mobile money transfer services)

MMT is Mobile money transfer

Let $p = \text{Probability of Success}$

The ratio $\frac{p}{1-p}$ is called **odds ratio**

This quantity will increase with the value of x , ranging from zero to infinity.

The quantity $\ln\left(\frac{p}{1-p}\right)$ is called the **log odds ratio**

Assumes the **log odds ratio** is linearly related to x .

$$\ln\left(\frac{p}{1-p}\right) = \beta_0 + \beta_1 x$$

$$\frac{p}{1-p} = e^{\beta_0 + \beta_1 x}$$

Therefore

$$Y = \ln \frac{P}{1-P} = b_0 + b_1 x_1 + b_2 x_2 + b_3 x_3 + b_4 x_4 + b_5 x_5 + b_6 x_6$$

Where

$x_1 = \text{age}$, $x_2 = \text{education}$, $x_3 = \text{products sold}$, $x_4 = \text{economic capital}$, $x_5 = \text{customers dealing with}$
 $x_6 = \text{way of selling products}$

$b_0 = \text{intercept}$, and b_1 to b_6 are the slope parameters in the model

Logistic regression does not make any assumptions of normality, linearity, and homogeneity of variance for the independent variables. In logistic regression Multicollinearity problem is detected through examining standard errors. To see the relationship between dependent and independent variable we use the significance test for the model chi-square. In the model individual coefficients represent change in the odds of being a member of the modeled category, if a coefficient is positive, its transformed log value will be greater than one, meaning that the modeled event is more likely to occur. If a coefficient is negative, its transformed log value will be less than one, and the likelihood of the event occurring decrease. A coefficient of zero (0) has a transformed log

value of 1.0, meaning that this coefficient does not change the odds of the event one way or the other.

3.2.3. Independent and dependent variables and hypothesized relationship

Dependent variable

There was only one dependent variable in this study, which is the use MMT by agribusiness women in marketing agricultural products. In binary logit model dependent variable was measured as dummy variable that is users and non users of MMT services. For users was coded as “1” and non user was coded as “0”

Independent variable

Independent variables of the study were identified by reviewing various empirical studies, personal profile of the respondent and researcher observation. Independent variables used were age, education background, marital status, business products agribusiness women dealing with, economic capital, customer’s agribusiness women dealing with and ways of selling products.

1. Age:- Age is virtue in the performance of business activities, it was measured in group of young age (18 – 35), middle age (36 – 60) and elders (Above 60 years). As age increase experience in business also increase, capital may also increase. Experiences in business activities could influences agribusiness woman to use MMT services in their business. EYGM (2009) reported that user’s experience is one of the most crucial and basic element to make mobile money transfer services success. It was hypothesized that there was positive relationship between increase in age group of agribusiness women and MMT services usage.

2. Education level:- Education status of women (literate) is believed to increase women’s capacity on using social and economic services than illiterate women. Education agribusiness women have may affect effective use of MMT; education was measured in levels; that is No formal education, Primary school level, secondary school level, college level and university level of education. It was revealed by researchers

(Muhammad *et al.*, 2004; Foreman and Livezey, 2003) that there is positive relationship between agribusiness performance and education. It was hypothesized that there was positive relationship between increase in level of education of agribusiness women and the use of MMT services in marketing their agricultural products.

3. Marital status:- Marital status of the women can affect the effective use of mobile money transfer services. Marital status was measured as dummy variable, married women coded as 1; and single coded as 0, for the purpose of this study, divorced and widowed they considered as single women and they coded as 0; It was viewed that married women could be less users of MMT services than single women (single, widowed and divorced). This is because some African culture married women are under control of men in term of responsibilities and decision making, so men has a power to decide either his wife has to own and use mobile phone or not which could affect using MMT service. Study in Uganda by Scott *et al.* (2004) reported that local social norms, culture and values are likely to influence the productive use of mobile phones. Also freedom of going here and there to get services is limited to marriage women because they are under control of men so they have to ask permission before going anywhere which reduces using the services. It was hypothesized that there was negative relationship between MMT services usage and married agribusiness women.

4. Business products:-Type of business products agribusiness women dealing with was measured as dummy variable, regional business products (products produced outside the study area) were coded as 1, and local business products (products produced within study area) were coded as 0. Type of business products agribusiness women dealing with have greater influence for them to use MMT services. Products that purchased or produced far from market areas have high transport costs, need time to travel far to get the products, and monetary risk to carry money here there (Meyer, 2015). Agribusiness women needs to reduce business transaction and travel costs to increase profit and make their enterprises more productive (Huyer, 2012). MMT services reduce business costs especially transport cost and monetary risk of carrying cash money here and there

Ndunge (2011). It was hypothesized that regional products have positive relationship for agribusiness women to use MMT services in marketing agricultural products.

5. Type of customers agribusiness women dealing with:- Customers in business is more important portion that could influence business people to do what they want. In this study type of customer was measured as dummy variable. Customers such as hotels, cafeterias, and those who purchase by order they considered as major customers and they coded as 1 and household customers they considered as minor customers and they coded as 0. Type of customers' agribusiness women usually dealing with could influence them to use MMT services. Customers such as hotels, cafeterias, and those who purchase by order, most of them they purchase large amount some use phone to call and bargain to reach the agreement, ask the products to be sent to them (personal observation). This type of customers sometimes they like to use MMT technology for payment in order to reduce cash handling costs, risk and fraud (Meyer, 2015). Household customers are customers who most of them go themselves to the market areas and pay by cash they do not need to use MMT and most purchase small amount (personal observation). It was hypothesized that major customer have positive relationship to use MMT services in marketing agricultural products by agribusiness women.

6. Economic capital:- Capital in any business activities is crucial for better performance of the business. High capital increase stock of business increase activities increase customers which result in increase in income. Capital is a dummy variable and was measured in term of stock agribusiness woman has. For those who have stock above 200 animals (Poultry, Fish, cattle, goats, pig, etc.) they considered have high capital and was coded 1; and those who have 200 animal and below they considered have low capital and coded 0. Also for crops for those who have stock above 200kg stock of crop products they considered have high capital and coded 1; and those who have 200kg and below they considered have low capital and they coded 0. Agribusiness women who have high capital are more likely to use MMT service in their business activities than those who have low capital (EYGM, 2014). It was hypothesized that high capital has positive relationship for agribusiness women to use MMT services in business activities.

7. Way of selling Products:- The way of selling products was measured as dummy variable, for those agribusiness women who sell their products in retails and in bulk coded as 1; and those who sell their products in retail only they coded as 0. The way of selling products in business activities could influence to use MMT services. For those agribusiness women who sell their products in retail and in bulk could be motivated to use MMT services in payment than those who sell their products in retail only (personal observation). This is because for those who sell in bulk, payment also will be in large amount of money so it is safer, cost and risk reduction to pay by MMT than cash (Kumar and Payne, 2010; EYGM, 2011). It was hypothesized that there was positive relationship for agribusiness women who sell their products in retails and in bulk and the use of MMT services in marketing agricultural products.

4. RESULTS AND DISCUSSION

This chapter comprises the study findings and discussion with regards to the study objectives. It concerns with respondent personal profile, MMT services provided by different network service providers, the extent of use of mobile money transfer services by agribusiness women in marketing agricultural products, factors motivating agribusiness women to use mobile money transfer services in marketing agricultural products, challenges agribusiness women face in using MMT services in marketing agricultural products and advantages agribusiness women get from using MMT services in marketing agricultural products.

4.1. Respondent's Personal Profile

Respondent personal profile comprises marital status, education background and age of the respondent. In this study 128 agribusiness women were interviewed and high numbers of respondents were married women 82.8% (Table 2). Based on the education status of the respondents interviewed study findings revealed that as education increase from primary to university level, the number of women engaged in business activities decrease from 45.3% to 7.9% (Table 2), this is due to the fact that most of the educated women are engaged much in formal employment rather than business activities, this is because in the country to get a formal employment for educated person is somewhat easy than uneducated person (Table 2). Concerning age of the respondents interviewed there were no agribusiness women who have age below 17 years. This is because in the country age below 17 is a childhood age so it was assumed that most of the people are at school, they leave with their parents so most of them are dependant. For aged women whose age are above 60 years were very few only 2.3% this is because at this age women are old sometime it is difficult for them to move here and there for business activities (Table 2).

Table 2: Respondent personal profiles

Variable	Response	Frequency	Percent
Marital Status	Married	106	82.8
	Widowed	9	7.1
	Divorced	8	6.2
	Single	5	3.9
	Total	128	100
Education	No formal education	4	3.1
	Primary school	58	45.3
	Secondary school	37	28.9
	College level	19	14.8
	University level	10	7.9
Total	128	100	
Age	18 to 35 Young age	43	33.6
	36 to 60 Middle age	82	64.1
	Above 60 Elders	3	2.3
	Total	128	100

4.2. MMT provided by different network service providers

In the study area three major network service providers which provide MMT applications (Vodacom, Tigo and Airtel) are competing largely to capture available market; each provider aims at providing quality service to win the market. Although all network service providers provide similar services, they differ on the way of providing the services in order to attract customers. Consumers attracted to use network service due to advantage they get; by considering the quality of network service according to personal perception. Consumers choose the services in terms of availability of network, availability of agents, easy to use services, cost of transaction and many interconnections to different other business such as banks, companies, organization and small business people. The following are three major service providers and their characteristic on the way they provide services.

Vodacom:- In Tanzania Vodacom is a market leader in provision of MMT services. According to TCRA, (2015) it takes 43% of the MMT service market followed by Tigo which takes 31% and Airtel which takes 24%. In Morogoro Municipality Vodacom network have 1457 Mpesa agents who help customer to make different MMT services; the network deal with 34 different banks available in Tanzania and 66 different companies/organizations and several small business people which help to provide financial transaction activities. Vodacom Tanzania interconnected with Safaricom in Kenya to enable customers to perform money transaction from these two countries. Nowadays it is possible to send and receive money from these two countries by using M-Pesa. Costs of transaction of Vodacom M-pesa were shown on appendix (Table 2).

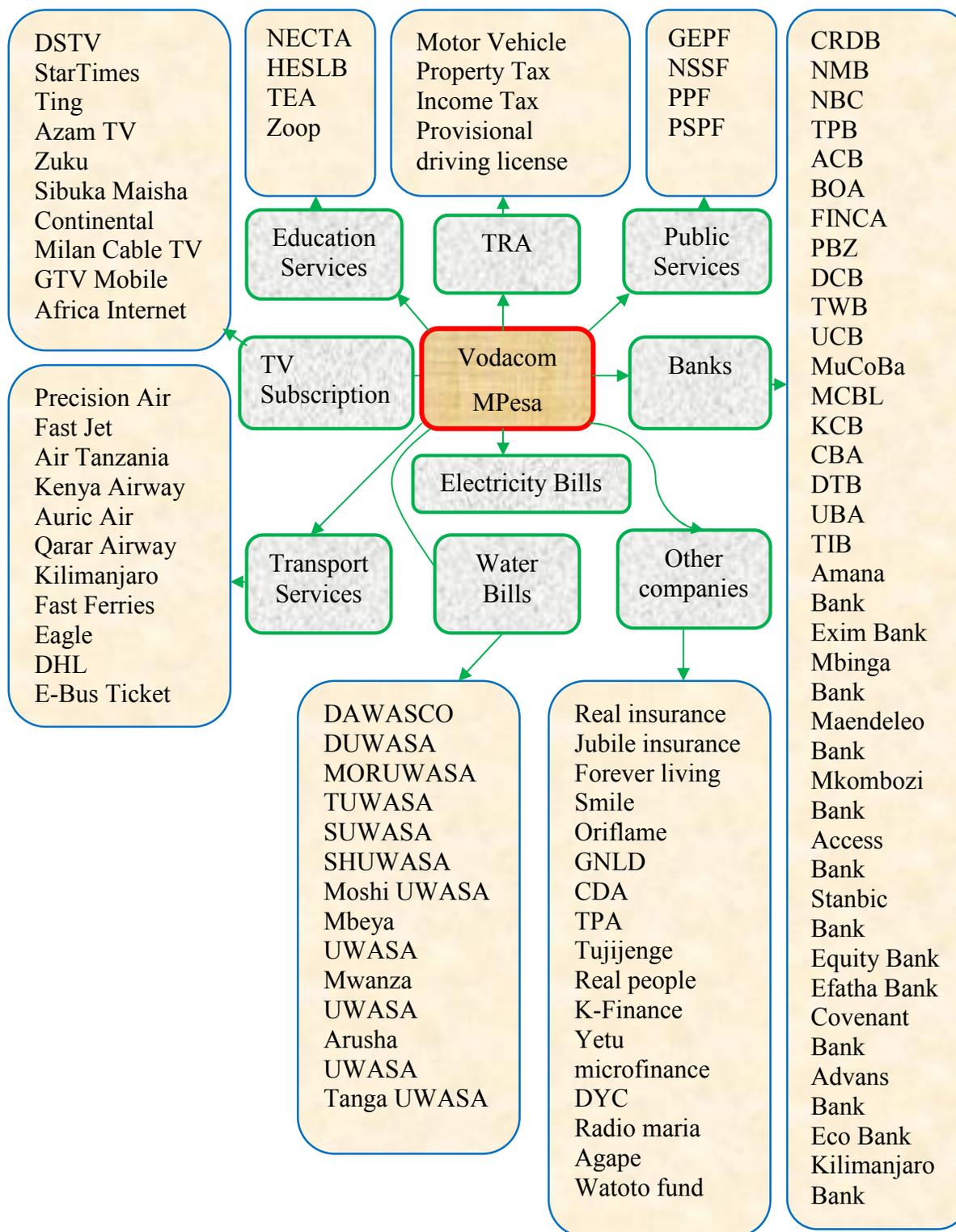


Figure 4: Different banks, companies and organizations dealing with M-pesa

Explanation of the abbreviations are shown in appendix 2

Tigo:- is a second network service provider in Tanzania market share after Vodacom. In Morogoro Municipality Tigo network has about 1300 Tigo pesa agents from them customers can make different MMT services; the network deal with 33 different banks available in Tanzania, 47 different companies/organizations and several small business people which also help in providing financial transaction activities. Tigo Tanzania interconnected with Tigo Rwanda to enable customers to send and receive money from these two countries. Costs of transaction of Tigo pesa were shown on appendix (Table 4).

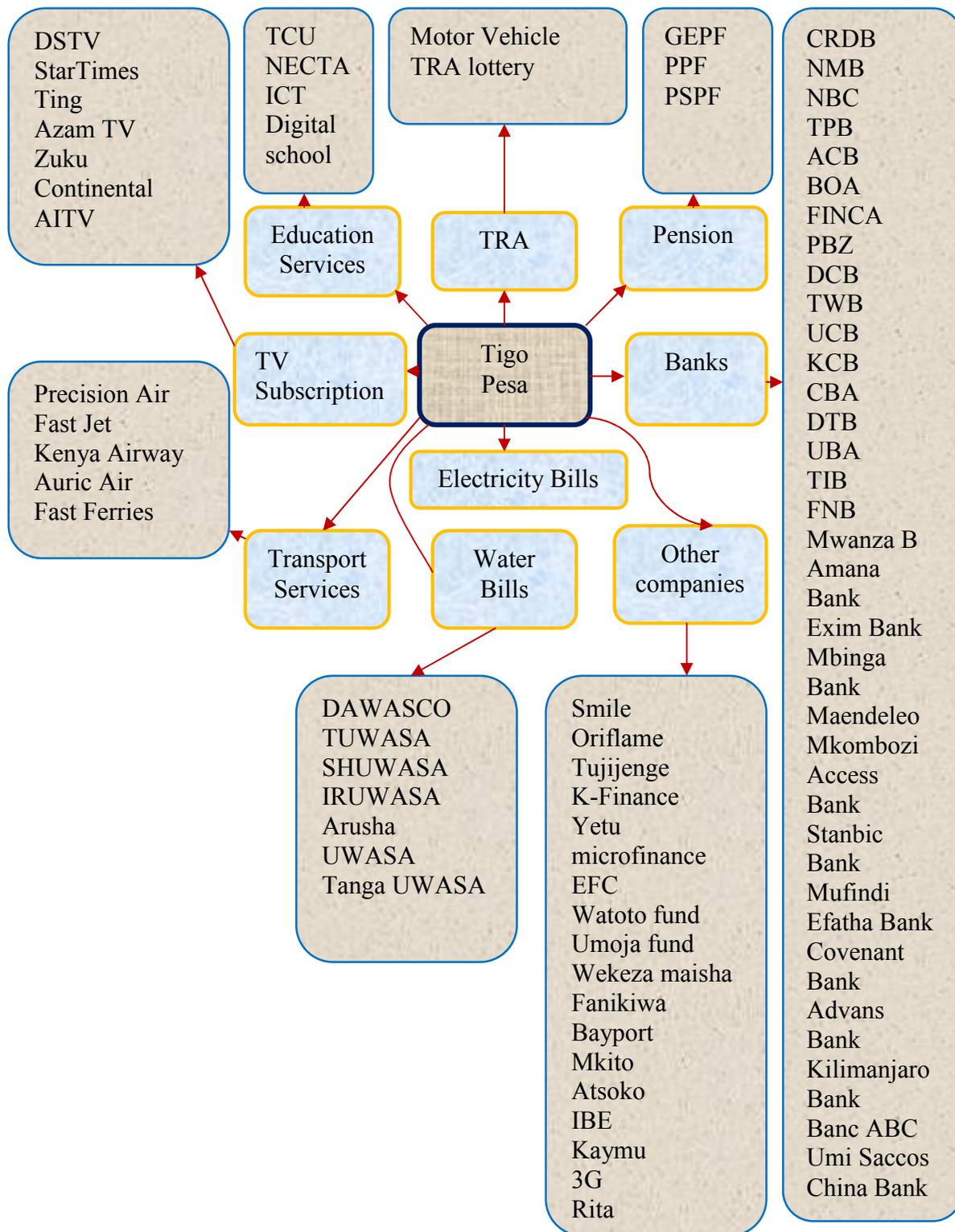


Figure 5: Different banks, companies and organizations dealing with Tigo pesa

Explanation of the abbreviations are shown in appendix 2

Airtel:- Airtel money takes third position in provision of MMT services in Tanzania mobile market after Tigo. Network has 1350 agents in Morogoro Municipal who serve customers in different MMT services. There were 24 different companies/organizations and one bank which work together with airtel money to facilitate financial transaction in the country. Costs of transaction of Airtel money were shown on appendix (Table 3).

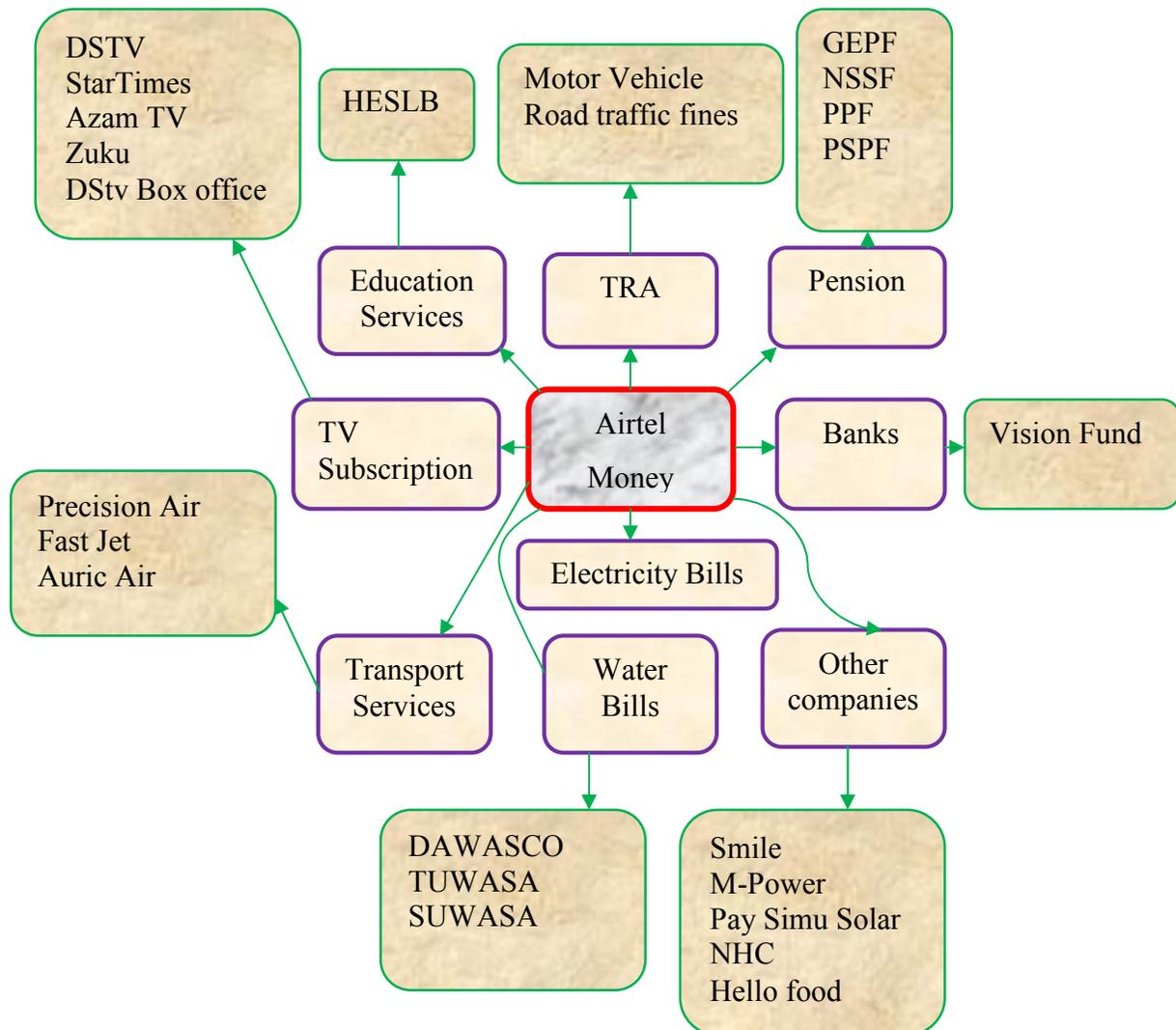


Figure 6: Different banks, companies and organization dealing with Airtel money
Explanation of the abbreviations are shown in appendix 2

4.3. The Extent of use of MMT by Agribusiness Women

4.3.1. Mobile phone ownership and use by agribusiness women

Study findings revealed that 100% of agribusiness women in the study area own mobile phone devices. 70.3% own one mobile phone device and 29.7% own more than one device (Table 3). This is because there were three major mobile network service providers around study area namely Vodacom, Tigo and Airtel, most of agribusiness women like to use more than one network service providers in order to get difference services from different network service providers such as MMT services, communication and promotions, also to deal with their customers who use different network services. To deal with a person who are in the same network is easy and cheaper than a person who is in different network. Great competition in business between network service providers increase the quality of the services which make consumers to move time to time to choose the service which has high quality, even those who own one mobile phone device most of their phones have more than one line spacing so that they can be able to use more than one network services. Although according to TCRA (2015) Vodacom network is the market leader in the country, currently in the study area most of agribusiness women use Tigo network service (Table 3). Despite in Tanzania mobile phone were introduced in 1990's study findings revealed that there were only 14.8% women owned mobile phone during 1990's then and by the 2000's most women about 78%, started to own mobile phones (Table 5). Respondent explained that during that time when mobile phone was introduced in the country the product were very expensive and few women were able to afford buying and manage the running cost of the mobile phone device and its services. It was identified that most (about 75%) of agribusiness women bought mobile phone devices for purposes of business activities and family issues and few bought mobile phone for business purposes only (Table 3). This shows that mobile phone devices help agribusiness women not only for marketing issues but also for family issues.

Table 3: The use of mobile phone by agribusiness women

Subject	Results	Frequency	Percent
Mobile phone ownership	One	90	70.3
	Two	33	25.8
	Three	5	3.9
	Total	128	100
Network used	Tigo	84	65.6
	Vodacom	64	50
	Airtel	61	47.7
	Zantel	2	1.6
	Total	211	164.8
Time phone bought	1990's	19	14.8
	2000's	100	78.1
	2010's	9	7.1
	Total	128	100
Reason of buying	Business and family issues	96	75.0
	Most family issues	25	19.5
	Most business activities	7	5.5
	Total	128	100

Note: Total of network used is not 100% because were multiple responses

4.3.2. Awareness and uses of MMT services

It was identified that most of agribusiness women are aware and use one or more of MMT services. Hundred percent of agribusiness women interviewed by this study are aware of phone to phone MMT service. In 128 respondent interviewed by this study half (64) of them use MMT and half (64) were not using MMT in business activities. For users 100% use phone to phone MMT which shows that this service is popular and more used by people. The service helps agribusiness women to purchase inputs and make payment easier, also selling agricultural products to their customers and collect money by using this service.

Bank to company service is not popular and not well known by the people, this service need to have a bank account then mobile phone makes money transaction from bank account to company, Instead of transferring money from bank to phone and make payment from phone to company/organization, you can transfer money directly from your bank account to company for bill payments or purchasing inputs to companies that have business agreement with your bank by using mobile phone. Most of users fear this transaction because it perceived that if transaction fails it is difficult to track. One woman poultry keeper explained that if transaction failed; to check if money was deducted from your account and if it reached to intended company or not is difficult because you need to confirm your bank account balance which is also hard because there are transaction done by bank without information till you get monthly bank statement; but from phone to company somewhat simple because you will see amount of money in your phone account and realize if it was deducted or not (Table 4).

Table 4. Awareness and uses of MMT

Subject	Result	Frequency	Percent
Service awareness	Phone to phone MMT	128	100
	Phone to company/Organization	82	64
	Phone to phone airtime credit transfer	81	63
	Phone to bank/bank to phone MMT	80	62
	Phone to phone airtime top-ups	80	62
	Bank to Company	37	28
Service Uses	Phone to phone MMT	64	100
	Phone to bank/bank to phone MMT	33	51.6
	Phone to company/Organization	33	51.6
	Bank to Company	15	23.4
	Phone to phone airtime credit transfer	18	28.1
	Phone to phone airtime top-ups	17	26.6

Note:- response were multiple

4.3.3. Frequency of use MMT services

Study findings revealed that phone to phone MMT was more used by agribusiness women; this is because the services concerning directly payment between person to person and most of business activities deal with person to person payments. About 33% of 64 users they use this service almost daily (Table 5). It was identified that most of users of Phone to bank/bank to phone MMT service and phone to company/organization service they use for paying different bills (electricity bills and water bills) and this payment almost done at the end of month so most of users of this service they use once per month. But also they use this service to transfer money from phone to bank for the purpose of saving after selling their products and collect money through phones (Table 5). Phone to phone airtime credit transfer and Phone to phone airtime top-ups MMT services are less often used by agribusiness women because nowadays people buy airtime by using MMT (M-Pesa, Tigo pesa, Airtel money or ezy pesa (Table 5).

Table 5. Frequency of use MMT services

MMT Service		Daily	Almost daily	2 times per week	Weekly	Once per month	Few times	Total
Phone to phone	No.	2	21	4	24	12	1	64
	Percent	3.1	32.8	6.2	37.5	18.8	1.6	100
Phone to Bank	No.	1	6	0	6	19	1	33
	Percent	3	18.2	0	18.2	57.6	3	100
Phone to company	No.	2	0	1	1	27	2	33
	Percent	6.1	0	3	3	81.8	6.1	100
Bank to company	No.	0	0	0	1	6	8	15
	Percent	0	0	0	6.7	40	53.3	100
airtime transfer	No.	0	1	0	1	1	15	18
	Percent	0	5.6	0	5.6	5.6	83.2	100
airtime top-ups	No.	0	1	0	1	1	14	17
	Percent	0	5.9	0	5.9	5.9	82.3	100

4.3. Factors motivating agribusiness women to use MMT services

Binary logit model was used to analyze data to identify factors motivating agribusiness women to use MMT services in business activities. Dependent and various independent variables were analyzed. Dependent variable analyzed was the use of MMT services by agribusiness women in marketing agricultural products, response of this variable was binary that is either use MMT or not use MMT services in business activities. Independent variables used as predictors were age, education, marital status, economic capital, type of products, type of customers and way of selling products. Chi-square test was used to measure relationship between dependent variable and various independent variables (Table 6). Six independent variables showed significant influence to the dependent variable and included to the model were age, education, economic capital, type of products, type of customers and way of selling products. However marital status of a respondent was found not influence the use of MMT service in business activities.

Table 6. Chi-square test of the relationship of dependent and independent variables

Variable	Response	Not use in %	Use in %	Total %	Sig
Age in year	Young age	72.1	27.9	100	.002
	Middle age	39.0	61.0	100	
	Elders	33.3	66.7	100	
Education	No formal Ed.	75.0	25.0	100	.004
	Primary level	63.8	36.2	100	
	Secondary level	48.6	51.4	100	
	College level	21.1	78.9	100	
	University level	20.0	80.0	100	
Marital status	Single	40.9	59.1	100	.241
	Married	51.9	48.1	100	
Business products dealing with	local products	59.8	40.2	100	.000
	Regional prod.	25.0	75.0	100	
Type customers dealing with	Minor	56.6	43.4	100	.001
	Major	18.2	81.8	100	
Way of Selling products	Retails only	77.8	22.2	100	.000
	Retails/bulk	34.9	65.1	100	
Economic capital	Low capital	80.3	19.7	100	.000
	High capital	22.4	77.6	100	

In the overall analysis it was revealed that there was existence of a relationship between the independent variables and the dependent variable (Table 7).

Table 7. Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	75.315	6	.000
	Block	75.315	6	.000
	Model	75.315	6	.000

Table 8. Binary Logit model result

Variable	B	S.E.	Exp(B)
Age	1.435***	.518	4.201
Education level	1.039***	.299	2.827
Business products dealing with	1.479**	.582	4.389
Type of customers dealing with	1.263*	.825	3.536
Capital agribusiness woman has	1.952***	.593	7.046
Way of selling the products	.329	.603	1.389
Constant	12.141	2.169	.000

Number of obs	=	128
LR chi 2 (6)	=	75.32
Prob > chi 2	=	0.0000
Pseudo R2	=	0.3934

In analysis multicollinearity problems were not detected since all predictors had standard error less than 2.0.

4.3.1. Age of respondent and the use of MMT services

From the table of result it shows that there is a relationship between increase in age of agribusiness women and the use of MMT. As age increase from young age to elders it assumes that experience in business increase, capital increase and activities in business also increase hence a need of technology assistance like MMT required. The results match with the hypothesis relationship that as age increase the use of MMT also increases.

4.3.2. Education of the respondent and use of MMT

From the table of result it shows that as level of education increase survey respondents were more likely to use MMT services. It was viewed that as education status increase to agribusiness women it strengthening capacity to use MMT services, reduces fear and increase confidence in using different MMT services to improve performance in business activities. The findings are consistent with the previous studies by (Muhammad *et al.*, 2004; Foreman and Livezey, 2003) that there is positive relationship between agribusiness performance in using technology and education.

4.3.3. Type of business products dealing with and use of MMT

The study model result identified that agribusiness women who deal with the products which are not produced in the study area (regional products) are more motivated to use MMT services in purchasing and transporting products. Survey respondent reported that MMT services help them to save time and reduce transport cost which they could incurred if they travel long distance to purchase products for sell. The findings noted that MMT are improving business activities by helping agribusiness women to save time and money by avoiding unnecessary travel. The result confirm earlier study by Ndunge (2011) that concerning purchasing goods, MMT users have been freed from travelling cost they just send the money and the goods delivered to them easily and quickly.

4.3.4. Capital agribusiness women have and use of MMT

The study identified that agribusiness women who have high capital are more likely to use MMT services in their business activities than those who have low capital. MMT enhance their abilities to purchase inputs for their business in large amount and pay by MMT services easily and quickly. Also because they have large stock they can sell also their products in large amount and collect money from their customers by MMT. The result supported by hypothesized relationship that there is positive relationship between high capital agribusiness women have and the use of mobile money transfer services.

4.3.6. Type of customers dealing with and use of MMT

Study identified that type of customers who most of the time agribusiness women dealing with could influence them to use MMT services. Agribusiness women explained that to cope with market competition sometimes you have to make some negotiations with customers to meet their requirement. From the table of result it shows that as agribusiness women increase to deal with major customers they were more likely to use MMT services in business activities in order to cope with market competition. Similarly to Wanjau *et al.* (2012) study in Kenya they reported that competition influences the adoption and use of new technology

4.3.7. The way of selling the products and use of MMT

From the table of result it shows that there is no relationship between the way of selling the products and use of MMT services. This implies that the way agribusiness women sell their product doesn't have any influence on using MMT services. The results contradicting with hypothesized relationship that there is positive relationship between selling products in retails/bulk and use of MMT services.

4.5. Challenges agribusiness women face in using MMT

In Tanzania mobile money transfer services have become more popular service for issues concerning money transactions. Technology is more used by different kinds of people (young and old; men and women; rich and poor; etc.) in attaining different kind of activities such as family and business matters. However these services have some challenges that discourage users in using the services effectively, these challenges some are caused by network service providers and others are general challenges no matter what network services you are using. With reference to agribusiness women in Morogoro Municipality as a case study they explained different challenges caused by different network service providers and general challenges as follows;-

4.5.1. Challenges caused by network service providers

Respondents in this study reported different challenges caused by network service providers which discourage customers to use the services. Challenges differ from different network service providers, study finding reported different challenges depending on the network service person use. Unavailability of the network is the big challenge reported by all network service users. This problem causes inconveniences to customers when they need to make money transactions, for example if they want to transfer money to their customers or purchasing products by using MMT in payment, or if they want to draw money they end up waiting till the network available. Respondents reported that this situation delays business activities hence loss could occur to their business. Users of Airtel money and Ezy pesa complained about few network service provider agents available in study area, this problem sometimes causes customers to go long distance to find agent in order to get services.

Poor customer care services from network services providers also were reported a big challenge to all service users. Delaying in receiving customer assistance was reported to occur to all network service providers available in the study area. Respondents reported that sometimes you need assistance from a network service provider in order to solve different problems such made a mistake of sending money to unintended person due to mistake in entering customer number or forget PIN and when you call the customer care

of the service they delay in receiving customer request which sometime cause to lose money. High transaction cost compared to other network service providers were reported as a challenge to agribusiness women who use Vodacom M-Pesa. About 40% of M-Pesa users they complained about high transaction cost. Although Vodacom network has good services their transaction charges are higher compared to others, this is complaints from some of Vodacom M-Pesa users interviewed by this study (Table 9).

Table 9. Challenges caused by Network service providers

Network	Challenges	Frequency	percent
Vodacom	Unavailability of the network	26	86.7
	Delaying in receiving customer assistant request	4	13.3
	Fraud	2	6.7
	High transaction costs	12	40
	Total	44	146.7
Tigo	Unavailability of the network	31	96.9
	Delaying in receiving customer assistant request	7	21.9
	Fraud	1	3.1
	Total	39	121.9
Airtel	Unavailability of the network	26	92.9
	Delaying in receiving customer assistant request	6	21.4
	Fraud	2	7.1
	Few network service provider agents	7	25
	Total	41	146.4
Zantel	Unavailability of the network	1	100
	Delaying in receiving customer assistant request	1	100
	Few network service provider agents	1	100
	Total	3	300

4.5.2. General Challenges on using MMT services

In view of general challenges we consider all challenges user of MMT service could face without taking into account network service she use. Agent problems was reported a big issue in MMT services, respondents in this study reported that sometime these agents have the problems such as they have very little e-floats and cash to facilitate money transaction services to customers especially when you need transaction of more than 500,000 T. shillings (250 USD), also some of these MMT services agents are cheaters and rude (Table 9). Likewise other studies (FII, 2014; FITS, 2013; Senso and Venkatakrishnan, 2013) agents can also be a cause of frustration, especially when they are rude or experience a shortage of e-float or cash to help with a transaction (Table 10).

Mistakes in entering customer phone numbers also reported a big challenge to agribusiness women. The problem caused by accidentally entering number which is not required due to personal problems such as eye problem, mistakes in articulation from the person who you intend to send money or if you are in hurry. When the problem occur you can call service providers customer care to block the money sent to the unintended person in order to return the money to you, but it can happen that customer care to delay in helping you and that person who you sent the money by mistake withdraws quickly and therefore the sender loses money (Table 10).

Faithfulness of the customers also is a challenge in using MMT in business activities. Mrs. Simba seller of fish product in Morogoro Municipality explained that a customer can come to the market area to purchase products and ask to pay by MMT but after transaction and the customer leaves that customer call to service provider to block the money by explaining that she/he send the money by mistake so that the money can be sent back to customer, only to find that the customer is no longer reachable. Another problem reported by agribusiness women in Morogoro Municipality is that a customer could ask you to send products and promising to make payment by MMT after short time but after getting products he/she could take time may be one month to make payment. This problem could discourage business people to make agreement of using MMT service to another customer hence use of MMT service in business reduces (Table 10).

High transaction costs compared to bank was reported a challenge in using MMT services. Respondent of this study explained that, MMT service simplify business activities, it enable you to do many activities at the same time; you can draw money from bank at any time, purchase inputs, make bill payments (water bill, electric bill, Tax payment) for your business when you are doing other activities, selling products and collect money when you are at home doing other activities, buying airtime and talk with your customers at anytime and anywhere, simply MMT services save time. But the services have high transaction cost compared to bank. For example when you draw money from ATM bank account from T.sh 1000 to 400,000 (0.5 to 200 USD), most of banks they charge constant amount of average 400 to 1000 T.sh (0.2 to 0.5USD) per transaction, but MMT service for 400,000/= they charge on average of 5,500 to 6,500 T.sh (2.75 to 3.25USD) depending on network service provider you are using. The cost is too high. (Table 10).

Disclosing the personal identity number (PIN):- is another challenge agribusiness women who use MMT services in their business activities reported to face. This challenge caused by user of MMT service to ask assistance to the agents of MMT services, friends or relatives when she wants to use services either to withdraw or to send money because they don't know how to use the services. Whoever provides the assistance may not necessary have good intentions; they could use that chance to take money from the person who asks assistance.

Table 10. General Challenges on using MMT services

Challenges	Frequency	percent
Agent problems	28	65.1
Mistake in entering customer phone numbers	20	46.5
Faithfulness of the customers	17	39.5
High transaction costs compared to Bank	9	20.9
Disclosing the PIN	6	14.0
Total	80	186

4.6. Advantages agribusiness women get from using MMT services

Mobile money transfer services are potentially important innovation in business activities especially agribusiness. Respondents in this study who use MMT services reported several advantages they get from using MMT services, some advantages they get was due to network service they use and some are general advantages of using MMT without considering network service they use.

4.6.1. Advantages of using MMT services from network service providers.

Increasing in competition between network service providers in Tanzania; result in increase of the quality of the services and reduction of the cost to users. Respondents in this study reported that to attract MMT service customers in an increasingly competitive market, network service providers are competing on quality of the service and cost, since consumers have more choices to access services. Network service providers attract customers by providing different promotions such as free airtime, provide some percent of money as dividend collected from using the services, free internet service, Game winners etc, make sure agents are available in many areas to reduce traffic jam and movement cost of traveling long distance to seek agents, improve quality of the network so that customers could be able to make transactions at any time. These kinds of attractions open the door for consumer to choose network service which is more attractive to her or to use more than one network service to capture those advantages provided by different network service providers (Table 11).

Table 11. Advantages provided by Network service Providers

Network	Advantage	Frequency	Percent
Vodacom	Promotion	29	72.5
	Availability of the agents	42	100.
	Availability of the network	38	95.
	Total	109	267.5
Tigo	Promotion	29	67.4
	Availability of the agents	42	97.7
	Availability of the network	39	90.7
	Total	110	255.8
Airtel	Promotion	23	69.7
	Availability of the agents	30	90.9
	Availability of the network	31	93.9
	Total	84	254.5
Zantel	Promotion	1	100
	Total	1	100

4.6.2. General advantages of using MMT services

Study findings revealed that apart from advantages of using MMT services user get from network service providers; there are general advantages of using MMT services in business activities without considering network services you use. Study findings revealed that MMT services simplify business activities of agribusiness women and save time. Such services enable agribusiness women to collect money from their customers and purchase inputs from suppliers very easy, they can save money in their phones or deposits into their bank accounts or withdraw money from bank by using the phone, MMT services enable agribusiness women to receive loans and make loan payments easily, make easier for agribusiness women to pay various bills water bill, electricity bill, Tax payment, it is easier to purchase airtime at any time and enable them to talk with their customers; in general MMT services simplify business activities, users of MMT

service can do many activities at same time and anywhere. Respondents reported that in the past when you want to purchase products or inputs you are supposed to go to the market area and buy or when you want to sell products, customers must come and negotiate price then sell the products, but nowadays no need to waste time of going to the market area, wherever you are call business person make negotiation then purchase or sell the products by using MMT services. Study findings go together with Ndunge, (2011) study that MMT services reduce unnecessary travelling cost.

Security of the services reported is a major advantage to users. Study findings revealed that MMT services is safer, easy to handle and available at any time. Respondents in this study explain that for example if you have money in your phone no one will understand how much money you have; even if someone take your phone and try to check the balance he/she will not success because it needs PIN of owner of the phone, or if some steal the phone or phone get lost still your money will be safe, only thing you can do is to go to network service provider renew your number, money will be there safely. They continued to explain that mobile money is like a bank we save money in our phones and at any time if we want to use we can. One agribusiness woman who deals with local chicken in Morogoro Municipality explained that if I want to go to the villages to search local chicken for sale, I put money in my phone; if I find the product I just go to agent draw money and purchase the product. This is because most of the villages which I go for business activities access of formal financial institution (bank) is unavailable, and to carry money in hand is dangerous due to theft fearless, so MMT service is safer and enable me to draw money at anytime and anywhere, even if someone steal my phone but my money is still there. Similarly to previous studies by (Taylor *et al.*, 2011; Kumar and Payne, 2010; EYGM, 2011) it is more secure to store money in mobile phone because to have money in your phone is like having cash on you but safer because you don't have to carry the actual money on you all the time.

MMT services reduce business costs, everywhere you go a business person like to reduce cost of business to maximize profit. It was revealed by this study that MMT services reduce cost of business especially transport cost. Respondents reported that for example

if you want to purchase products for the purpose of sale or purchase business inputs; instead of going to the market place physically you can call and negotiate price then make payments by using MMT service with minimum costs of transaction and the products will be send to you. (Table 12).

Table 12. Advantage of MMT services without considering service providers

Advantage	Frequency	Percent
Save time	64	100
Security	64	100
Reduce business costs	54	84.4
Total	182	284.4

5. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1. Summary

Mobile money transfer is a faster growing service especially in developing economy countries like Tanzania. The study aimed to investigate and establish its contribution to Tanzanian women involved in agribusiness by using Morogoro Municipality as a case study. As women are the vulnerable group in many development activities and most of the time are behind men in adoption new technology; the findings revealed that nowadays most of women especially in urban areas own and use mobile phone almost the same as men use. In the study area 100% of the respondents interviewed they own mobile phone device and they are aware of one or more mobile money transfer services provided by different network service providers in the area. Agribusiness women who use MMT services reported that the services help them in most of their business activities by facilitating financial transaction easily, safely and quickly at any time.

Education status, economic capital, type of business products agribusiness women dealing with and type of customers usually they dealing with are among of the factors motivating them to use MMT services in their business activities. Study findings revealed that although services have many advantages such as the services are more secure in making financial transaction, save time, reduce business cost especially travelling costs and there are many different promotions provided by network service providers; there are challenges also that discouraging users to use MMT services effectively. Major challenges that hinder most of agribusiness women to use MMT services in business activities are service provider's agent problems, unavailability of network, high transaction cost compared to bank and faithfulness of their customers.

Study identified that most of agribusiness women are more likely to use MMT services if obstacles analyzed above have been minimized or completely removed. They explained that the services simplify their business activities they can be able to do many things at once, also the services are safer, easy to use and available at any time in many areas; and due to competition services increase quality as days go.

5.2. Conclusion

The study findings shown that MMT services are vital factors that would push agribusiness activities toward e-payment system in most of financial transaction; MMT services contribute to simplify agribusiness women activities by enhancing them to perform various business financial transactions easily, quickly and safely in a number of ways. Firstly the services help them to reduce unnecessary travel cost of going here and there to purchase business inputs or purchase business products for sale. Secondly the services help them to sell their business products and collect money from their customers easily and quickly. Thirdly MMT help agribusiness women to make various payments such as electricity and water bills, Tax payment, purchase goods/services like airtime at any time and communicate with their customers, save and withdraw money from their bank account by using MMT easily. Fourthly MMT reduce risk of handling cash by helping agribusiness women to save their money in mobile phones safely.

Greater penetration of MMT services even to the remote areas; will contribute to reducing the time and effort required to perform financial issues to agribusiness people by enabling financial flow of rural – urban markets. Besides electronic payments systems could promote country economic growth and contribute to generate jobs by employing many agents, providing better financial service and control to consumers, agribusiness women and governments.

5.3. Recommendations

Based on the study findings the following were recommended

1. In today's world especially in developing countries like Tanzania, MMT technology has become a problem solver in facilitating financial transaction due to formal financial services fail to reach many people; MMT service providers should also understand their customers and make sure that:-
 - Their services are convenient, affordable and should also consider the easiness in usage so that every customer could manage to use him/her self without asking assistance to others which end up disclosing their PIN and losing money.
 - Their agents are well trained on how to help customers and also to help them to have enough e-floats and cash by providing loan with soft interest to them so that they can manage to help customers to facilitate financial transaction easily.
 - Deliberate effort should be taken to make sure that their network are available all the time and their customer care staff should be given well training on handling customers issues quickly to reduce complains of losing money from their customers.
 - Safeguard their business people who use MMT in business activities so that cheater customers who pay by MMT could not be able to cheat business person by blocking money which already paid unless they make confirmation with the business person that the money sent to him/her was by mistake.
2. MMT services due to its potentiality in facilitating money transactions to enhance agribusiness women in their business activities; further research needs to be done to assess, for example, how agribusiness women who use MMT technology improve their lives and incomes and by how much so that government could utilize this technology in better service delivery.

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7. APPENDIX

7.1. Research questionnaire

A: PERSONAL PROFILE

1. Name of Ward.....
2. Date of interview.....
3. Name of respondent
4. Age of respondent.....
5. Marital status of respondent
 - (a) Married
 - (b) Single
 - (c) Divorced
 - (d) Widowed
6. Education level
 - (a) Primary School level of education
 - (b) Secondary school level of education
 - (c) College level of education
 - (d) University level of education
 - (e) No formal Education
7. Number of household members
8. Type of business.....
9. Experience: Number of years in agricultural marketing activities

B: MOBILE PHONE OWNERSHIP AND USAGE

10. Do you own mobile phone device?
 - (a) Yes
 - (b) No
11. If yes how many mobile phone devices do you have
12. When did you buy the device(s).....
13. What are the main reasons of buying device(s).....
.....
14. What are the kind(s) of network service do you use
 - (a) Vodacom
 - (b) Tigo
 - (c) Airtel
 - (d) Zantel
15. Why have you chosen such network service(s).....
.....
.....

16. What type(s) of agricultural product(s) do you usually market in your business

Type of product(s)	Stock
(a) Maize	
(b) Maize flour	
(c) Paddy	
(d) Rice	
(e) Irish potatoes	
(f) Onions	
(g) Fruits	
(h) Chicken (Local, Broilers)	
(i) Eggs	
(j) Fish	
(k) Beans	
(l) Vegetable	
(m) Cattle meet products	
(n) Cattle milk products	
(o) Pig production	
(p) Others (specify)	

17. Who are your main customers of your products

- (a) Hotels
- (b) Households
- (c) Cafeterias
- (d) Small retailers
- (e) Others (specify)

18. How do you sell your products
- In bulk
 - Retail (Rejareja)
 - Others (specify)
19. Are you aware of Mobile money transfer services?
- Yes
 - No
20. If yes what are the kind(s) of mobile money transfer services are you aware of.
- Phone to phone money transfer services
 - Phone to bank money transfer services
 - Phone to Company/Organization
 - Phone to phone airtime credit transfer
 - Phone to phone airtime top-ups
 - Bank to Company/Organization
 - Others (specify)
21. Are you using any of the mobile money transfer services in business activities?
- Yes
 - No
22. If Yes what are the kind(s) of the service(s) are you using
23. why you have chosen that services
- Market competition
 - Customer requirement
 - Simplify work
 - Others (specify)
24. If No in question 21. Why not.....
25. How frequently do you use MMT in business activities

Services/Frequently	Daily	Almost Daily	Weekly	2 times per week	Once per month	Others
Phone to phone money transfer services						

Phone to bank money transfer services						
Phone to company/organization money transfer services						
Phone to phone airtime credit transfer services						
Phone to phone airtime top-ups						
Bank to company/organization						

26. What are the challenges are you facing in using mobile money transfer services in business activities?

26a. Challenges to specific network services

MMT Network service Provider	Challenges in using Network service	Frequency of happening
Vodacom (M-Pesa)	<ul style="list-style-type: none"> • Availability of network • Delaying in receiving customer assistance request • Fraud • Few network service provider agents • High transaction cost compared to others 	<ul style="list-style-type: none"> • Frequently • Few times • Very few times
Tigo (Tigo Pesa)	<ul style="list-style-type: none"> • Availability of network • Delaying in receiving customer assistance request • Fraud • Few network service provider 	<ul style="list-style-type: none"> • Frequently • Few times • Very few times

	agents <ul style="list-style-type: none"> • High transaction cost compared to others 	
Airtel (Airtel Money)	<ul style="list-style-type: none"> • Availability of network • Delaying in receiving customer assistance request • Fraud • Few network service provider agents • High transaction cost compared to others 	<ul style="list-style-type: none"> • Frequently • Few times • Very few times
Zantel (Ezy Pesa)	<ul style="list-style-type: none"> • Availability of network • Delaying in receiving customer assistance request • Fraud • Few network service provider agents • High transaction cost compared to others 	<ul style="list-style-type: none"> • Frequently • Few times • Very few times

26b. General Challenges of using MMT in business activities

- (a) Mistake in entering customer number
- (b) Disclosing PIN
- (c) Agent Problems
- (d) Faithfull of the customers
- (e) High transaction cost compared to bank

27. What are the motivators encouraging you to use the services

27a. Motivators to specific network services

MMT Network service Provider	Motivators in using Network service
Vodacom (M-Pesa)	<ul style="list-style-type: none"> • Promotion • Availability of the agents • Availability of network • Fastest in assisting customer request • Low transaction cost compared to others
Tigo (Tigo Pesa)	<ul style="list-style-type: none"> • Promotion • Availability of the agents • Availability of network • Fastest in assisting customer request • Low transaction cost compared to others

Airtel (Airtel Money)	<ul style="list-style-type: none"> • Promotion • Availability of the agents • Availability of network • Fastest in assisting customer request • Low transaction cost compared to others
Zantel (Ezy Pesa)	<ul style="list-style-type: none"> • Promotion • Availability of the agents • Availability of network • Fastest in assisting customer request • Low transaction cost compared to others

27b. General motivators encouraging agribusiness women to use MMT services

- (a) Simplify business activities
- (b) Time saving
- (c) Security
- (d) Cost reduction
- (e) Safety of the service
- (f) Others (specify)

7.2. Abbreviation of Banks and organization

ACB	-	Akiba Commercial Bank
BOA	-	Bank of Africa
CBA	-	Commercial Bank of Africa
CRDB	-	Cooperative Rural Development Bank
DAWASCO	-	Dar es Salaam Water and Sewerage Corporation
DCB	-	Dar es Salaam Commercial Bank
DUWASA	-	Dodoma Urban Water Supply Authority
GEPF	-	Government Employees Provident Fund
HESLB	-	High Education Student Loan Board
KCB	-	Kenya Commercial Bank
MCBL	-	Moshi Commercial Bank Limited
MORUWASA-		Morogoro Urban Water Supply Authority
MuCoBa	-	Mufindi Commercial Bank
NBC	-	National Bank of Commerce
NECTA	-	National Examination Council of Tanzania
NMB	-	National Microfinance Bank
NSSF	-	National Social Security Fund
PBZ	-	Public Bank of Zanzibar
PPF	-	Parastatal Pensions Fund
PSPF	-	Public Service Pensions Fund
SHUWASA	-	Shinyanga Urban Water Supply Authority
SUWASA	-	Sumbawanga Urban Water Supply Authority
TEA	-	Tanzania Examination Authority
TIB	-	Tanzania International Bank
TPB	-	Tanzania Postal Bank
TRA	-	Tanzania Revenue Authority
TWB	-	Tanzania Women Bank
UBA	-	United Bank of Africa
UCB	-	Umoja Commercial Bank
TUWASA	-	Tanga Urban Water Supply Authority

Table 1: Morogoro Municipality administrative wards and population (Year 2012):

S/No.	Name of the ward	Population
1	Mwembesongo	26,202
2	Chamwino	27,533
3	Kihonda Maghorofani	21,205
4	Lukobe	19,171
5	Kichangani	19,166
6	Kilakala	18,345
7	Mazimbu	16,679
8	Kihonda	17,857
9	Mafisa	17,369
10	Tungi	13,779
11	Mafiga	13,586
12	K/Ndege	12,203
13	Bigwa	10,149
14	Boma	8,706
15	Mkundi	8,200
16	Kingolwira	7,370
17	Mindu	7,110
18	Uwanja wa Taifa	7,247
19	Mji Mpya	7,359
20	Mbuyuni	6,225
21	Magadu	5,561
22	Mlimani	4,893
23	Mji Mkuu	4,612
24	Kauzeni	3,971
25	Kingo	2,944
26	Sultan Area	2,604
27	Sabasaba	2,339
28	Luhungo	2,133
29	Mzinga	1,348
JUMLA		315,866

(g) Source: Provisional Result from Census 2012:

Table 2: Vodacom Tanzania Mpesa Tariffs and Charges (1\$ = 2000 TSH)

Minimum (Tsh)	Maximum (Tsh)	Transfer to Mpesa Users	Withdraw from Mpesa Agents
100	999	10	–
1,000	2,999	30	500
3,000	4,999	60	600
5,000	9,999	120	800
10,000	19,999	300	1,200
20,000	39,999	350	1,500
40,000	49,999	350	1,800
50,000	99,999	600	2,200
100,000	199,999	650	2,600
200,000	299,999	850	4,200
300,000	399,999	1,200	5,500
400,000	499,999	1,400	6,500
500,000	599,999	1,850	7,000
600,000	699,999	2,000	7,000
700,000	799,999	2,000	7,200
800,000	899,999	2,250	7,400
900,000	1,000,000	2,500	7,500
1,000,001	3,000,000	5,000	8,000
Vodacom M-pesa Transaction		Vodacom M-pesa Tariffs (Tshs)	
All Deposits		Free	
MPESA Registration		Free	
Airtime Purchase		Free	
Change MPESA PIN		Free	
Pay by Mpesa		Send Money Tariff	
MPESA Balance inquiry and Mini-statement		60	

Table 3: Airtel Money Tariff and charges in Tanzania (1\$ = 2000 TSH)

Minimum	Maximum	Send Money	Cash Out	Transfer to other network
100	999	10	N/A	N/A
1,000	2,999	25	375	450
3,000	3,999	45	450	560
4,000	4,999	45	450	580
5,000	6,999	90	600	780
7,000	7,999	90	600	800
8,000	9,999	90	600	850
10,000	19,999	240	950	1275
20,000	29,999	280	1200	1580
30,000	39,999	300	1200	1650
40,000	49,999	300	1350	1840
50,000	99,999	450	1750	2400
100,000	199,999	490	2100	2800
200,000	299,999	650	3150	4300
300,000	399,999	900	4150	5700
400,000	499,999	1050	5000	6750
500,000	599,999	1400	5250	7550
600,000	699,999	1500	5750	7650
700,000	799,999	1500	5800	7650
800,000	899,999	1700	6100	8250
900,000	1,000,000	1875	6200	8500
1,000,001	3,000,000	3750	6800	N/A

Table 4: Tigo pesa Tariff and charges in Tanzania (1\$ = 2000 TSH)



Ada za wateja Customer tariffs



Kiwango (Tsh) / Transaction range (Tsh)		Ada kwa mteja (Tsh) / Customer charge (Tsh)		
Kuanzia/Minimum	Mwisho/Maximum	Kutuma pesa/Send money	Kutoa pesa/Cash-out	
200	999	10	N/A	
1,000	1,999	25	500	
2,000	2,999	35	500	
3,000	3,999	50	500	
4,000	4,999	75	600	
5,000	9,999	100	750	
10,000	19,999	250	1,200	
20,000	29,999	350	1,350	
30,000	39,999	350	1,500	
40,000	49,999	350	1,750	
50,000	99,999	500	2,000	
100,000	199,999	600	2,500	
200,000	299,999	800	3,500	
300,000	399,999	1,000	4,500	
400,000	499,999	1,250	5,500	
500,000	599,999	1,500	6,000	
600,000	699,999	1,800	6,250	
700,000	799,999	2,000	6,500	
800,000	899,999	2,250	6,750	
900,000	1,000,000	2,500	7,000	
1,000,001	3,000,000	4,000	7,000	
Tukio/Action		Kuanzia/Minimum	Mwisho/Maximum	Ada/Fee
 Kuweka pesa/Cash-in		1,000	3,000,000	BURE/FREE
Kutuma pesa kwa mteja ambaye hana akaunti ya Tigo Pesa (Send money to a non Tigo Pesa customer)		1,000	1,000,000	Adaya kutuma + Ada ya kutoa Send money fee + Cash-out fee
Kutoa pesa kwa mteja ambaye hana akaunti ya Tigo Pesa (Cash-out for a non Tigo Pesa customer)		1,000	1,000,000	BURE/FREE
Tukio/Action			Ada/Fee (Tsh)	
Kubadilisha namba ya siri/Change pin			BURE/FREE	
Kuangalia salio/Check balance amount			50	
Taarifa ndogo/Mini statement			50	
Kiwango chajuu kuhifadhi pesa/Maximum wallet limit			5,000,000	
Malipo kwa Tigo Pesa/Pay by Tigo Pesa			Kulingana na kiwango According to rates	
Taarifa ya mwezi/E-statement				
Mwezi huu/Current Month			500	
Mwezi jana/Last Month			500	
Miezi 3/3 Months			1,000	
Miezi 6/6 Months			1,500	

Ada zimejumuishwa makato ya kodi/ Charges include Taxes