

Full Length Research

Factors Influencing Customers Satisfaction With Mobile Financial Services In Tanzania: A Case Study of Tigo Company

Evod J. Rimisho and Christine Masafiri

¹Assistant Lecturer, Eastern Africa Statistical Training Centre (EASTC), Dar es Salaam- Tanzania, Mail: evod.rimisho@eatsc.ac.tz/ +255755395346

²Manager, Tigo Telecommunication company, Dar es Salaam – Tanzania, Email; Christine.masafiri@tigo.co.tz, Mobile:+255658123220/+25571881442

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The paramount importance of financial services to a developing nation like Tanzania is emphasized. This paper analyses the mobile telecommunication technology in Tanzania for instance the services has changed way individuals perform the financial transaction between one system to the other. This paper has used both regression and descriptive analysis of 105 respondents. Starting with a descriptive part, shows that, Tigo pesa, M-pesa and Airtel Money are frequently used in Mobile Financial Services (MFS) with Tigo pesa being a leader of all. The results show that, (70%) of MFS and Mobile Network Operators are king to customer's satisfactions by educating them on how to use MFS and ensuring network is reliable, lowering transaction charges and improving customer care. The estimates indicate that, Age, Gender, Employment, Customer care, Network availability, meet needs and education are significant factors that influence customer's satisfaction with frequently used MFS in Tanzania.

Key Words: Customers Satisfaction, Mobile financial Service

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INTRODUCTION

In the world today, technology in Tanzania has changed the way that people perform financial transactions. Individuals who uses financial transactions by using mobile phones at any time where individuals are motivated to use Mobile Financial Services (MFS).

However, the financial institutions are seen to be more instituted in urban areas than it is in rural areas. Having access to mobile financial services to both urban and rural areas will help in developing financial services in the country. For the mobile financial service to grow well, it is important that the mobile telecommunication companies provide the service that makes the customers satisfied. Satisfying the customers is very important in order to attain high rate of adoption, retain customers and also obtain customer royalty.

This research focuses on customer satisfaction with mobile financial service, a problem arising from seeing that most individuals face difficult in using mobile transactions while there is still an alternative of using mobile financial service. Also many researches have been done on adoption and the impact of MFS than the research on customer satisfaction with MFS. In Tanzania, research on mobile money service has been done on examining the level of customer

satisfaction, the satisfaction level was also compared to the satisfaction obtained from other money transfer services (Ngilangwa and Venkatakrisnan, 2020); Measures to ensure that the users of mobile transactions are satisfied has also been researched on (Madirisha, 2017). Also research has been done on MFS competition (Mazer & Rowan 2016), MFS adoptability, usage, barriers and opportunity (Mirzoyants, 2019).

MFS is to an extent an alternative to formal banking services. Individuals may be uplifted and motivated to use mobile financial services to improve their own services in different tasks.

Literature Review

What Customers can do with Mobile Financial Services

With Mobile Financial Services, the users or customers are able to receive money, send money and buying airtime for self or for another user (Jama'a, 2015). Compared to other alternative means of transporting such as western union or through bus transportation or traditional banking method, through MFS transfers are made at instant and reach the targeted person at the same time. Most of the person to person transfers are made from urban to rural areas (Economides & Jeziorski, 2020). Mobile financial services are popular in urban areas than in rural areas with Dar es Salaam region having the highest percentage of 75 (Mirzoyants, 2019).

Mobile money transfer service has a characteristic of being mobile and being of immediate access (Tobbin, 2010). The customer is able to cash in cash with a local agent and then be able to cash out the amount from another agent at a different location. The cash is then transported securely instead of carrying the cash in bag and worry about being robbed - the mobile financial service provides the security for that money. Users of the mobile money transfer services are able to open their bank account through the use of mobile phones without visiting the bank, save money and also be able to obtain micro loans (Gupta, 2019). Micro businesses have increases the use of mobile money transfer service as the service is found to be reliable (Mbogo, 2010).

Mobile money transfer (MMT) services enables the users to make payments of products in supermarkets, utility bills, school fees direct to the bank accounts (Gathoni, 2017). MMT service user can make payments of different kind of utilities such as water, electricity, loans and pre-paid transactions (Ngilangwa and Venkatakrisnan, 2020).

Mobile Financial Services Customer's Usage

In developing nations there are about 72 percentage of the population (2.5 billion adults) that have no access to financial services meaning that they are unbanked (BCG, 2017). The numbers of population in developing nations that have access to mobile phones are about 2.5 billion and the population could be financially excluded from financial services (BCG, 2017). The increase access to mobile phones to the by the unbanked is the most efficient and cost effective way of providing financial services (Ondiege, 2015).

Mobile financial services have reached to about only 10% of the adult population in few smaller countries and the users of the service use the service primarily for payments. The countries that have high adoption rate of mobile financial services are seen to have low levels of access to the traditional financial services (Bilodeau *et al.*, 2017).

The implementation of MFS has enabled the population not having access to financial services offered by banks to be covered by the mobile money services. About 17% of the adult population of Tanzania had access to banking services. (Tabaro, 2020).

Thirty-five (35) percent of the population in Tanzania has at least one m-money account and about 32 percent of the population use exclusively the mobile banking service compared to the 2 percent that use the traditional banking service (Economides & Jeziorski, 2020).

Factors Influencing the Usage of MFS

The m-money service is cheaper, quicker, easier to use, safer and more convenient – these are factors that affect the adoption of m-money service (Mirzoyants, 2019).

Demographic profile is a factor that influences the usage of mobile finance service. People aged between 25 and 44 are most users of the service since they have disposable income and also likely have dependents that they need to transfer money to (Mutalemwa & Anthony 2020). This age group is found to be more literate (having college or university

level education hence possible to make use of the service) compared to the age group below 25 years (Mutalemwa & Anthony 2020).

Customers use the service when found that the service has a variety of services. With MFS various transaction types are enabled such as making payments for utilities (electricity, water) and mobile banking which to customer find it useful (Mutalemwa & Anthony, 2020).

Perceived ease of use of the service influences customers to use mobile financial service (Mutalemwa & Anthony, 2020). There is a strong relationship between the ease use of the mobile financial service and adoption of the service (Mutalemwa & Anthony 2020). Having a complicated service hinders the adoption of the mobile financial service (Mirzoyants, 2019).

The users of m-money service are likely to choose the m-money provider whose cost of transfers and payment is cheaper compared to others (Mirzoyants, 2019). Having high costs of transactions, affect the adoptability of the mobile financial service (Mutalemwa & Anthony, 2020).

The reason as to why the MSE use the mobile money service is that the service is faster compared to the alternatives such as use of bank services (Bångens and Söderberg, 2017). As a result, time is saved and delivery of goods is made on time.

Safety is important to customers as the customers need to be ensured that their information is kept confidential and that the transactions that are done using the m-money service reach the targeted person and in time.

When the mobile financial service is convenient that is the service is running all day long with no network problem, have many agents that are easily accessible and that the agents have enough e-cash always makes the m-money provider more likely to be used by the m-money users (Mirzoyants, 2019).

The Socio-Economic Impact of MFS on Society

Customers save time and money by using mobile financial services (BCG, 2017). The need to travel a distance in order to purchase goods has been reduced (Kiiti and Mutinda, 2017) as users can purchase goods through mobile money services and goods are delivered by the sellers. The population that live in remote areas where they are unbanked may need to travel a long distance to find banks but with MFS the time and money spent to travel is saved that could be used in other developmental activities.

Mobile money transfer services reaches out to the unbanked population especially in developing countries hence increasing financial inclusion (Merritt, 2010). As more unbanked people get to have mobile phones, the possibility of using mobile money services increases hence become financially included (Diniz *et al.*, 2017). Mobile money services play an important role to daily lives of the customers hence becomes an important catalyst for financial inclusion (Otieno, 2019).

Establishment of Mobile financial services creates job opportunities to the people. Having access to financial services enables the user to save money and invest example in trainings that helps in improving a person's job market prospects (Simiyu and Oloko, 2015), The World Bank study showed that an increase in financial inclusion leads to an increase in job creation (BCG, 2017). In Tanzania there is a great number of job opportunities that are created as a result of mobile financial services such as the agents for mobile networks and also agents for banks.

Growth of SMEs as the traders engaged in SMEs industry use mobile money transfer services compared to formal banking services (Nyaga, 2019). The traders find that the service is reliable, efficient and convenient resulting to increase in financial transactions hence business growth (Simiyu and Oloko, 2015).

The growth of technological infrastructure especially on mobile and internet as a result of MFS is another impact on the society (BCG, 2017). For the MFS to function well there is a need for mobile technology to be well developed in order to accommodate the features of the MFS. Also the need for data increases as some of the MNOs uses MFS mobile App such as TigoPesa App which uses data so the network/internet provided by the MNOs need to be well established.

Mobile money transfer services promote economic transactions thus leading to rural development (Kiiti and Mutinda, 2017). Through rural development as a result of increased economic transactions, the living standard of the people is increased hence the inequality gap is reduced between the rich and the poor.

Through MFS education and health can be improved (BCG, 2017). The users of MFS are able to transfer money and make payments hence it is possible to send school fees via mobile phone when the student is studying far from the parents. Also for improving health care services, in Kenya women are able to make micro-payments in order to save for childbirth costs (BCG, 2017).

Customers Challenges with MFS

The problem associated with agents of the m-money service is another challenge identified by researchers in adoption of the mobile financial service. The users or customers have identified challenges such as absenteeism of the agents and insufficient e-float or cash to help with the transactions (Masamila, 2020). The mentioned problems are experienced with the users of financial inclusions such as tigo pesa, m-pesa, airtrl money, z-pesa and halo pesa.

The process requires that the user to have an ID and specific papers that need to be filled. To the m-money users is a challenge as they have to wait in a long que, others have no ID and while others complain that there are many forms to be filled in (Mirzoyants, 2019).

Technical issues such as network of the MNO’s being down is a challenge that face m-money users as a result the users are not able to do transactions. Other m-money users find it difficult to perform the transactions hence needs the assistance from other users especially when drawing out money (Mirzoyants, 2019).

The increase in fraudulent cases and lack of interest earned on money deposited in mobile money services are challenges that customers face (Nyaga, 2019). As the result the increase in the cases regarding fraud reduces the trust of customers in the money service.

Shortage of electricity supply and limited availability of agents in rural areas are among challenges that users of the MMT service face (Ngilangwa and Venkatakrishnan,2020). As a result, these challenges hinder the effective adoption of the MMT service in the country.

METHODOLOGY

This study uses the Binary Choice Model in order to study the factors that influence customer satisfaction with mobile financial services. The model helps in explaining if the customers are satisfied or not after using the mobile financial services. The dependent variable in this study is dichotomous in nature, taking the value 1 or 0. In this case the value 1 indicates a customer is satisfied with mobile financial services, 0 indicates a customer is not satisfied with mobile financial services.

When the dependent variable is dichotomous in nature, linear probability models (LPM), probit model and logit model can be used though LPM model is not appropriate since it has the problem of generating predicted values which may fall outside 0,1 intervals thereby violating the basic principle of probability. The other problems are heteroscedacity and lower R² values (Rice, 1994 as cited in Matiya *et al.*, 2005).

LPM is given by equation (3.1)

$$P_i = E(Y = 1|X_i) = B_1 + B_i X_i \dots \dots \dots (3.1)$$

where $Y = 1$ if a customer is satisfied with mobile financial services and 0 if a customer is not satisfied with mobile financial services; X_i are explanatory variables and B 's are parameters.

Probit and logit models have been recommended to overcome the problems associated with LPM. Both logit and probit models use Maximum Likelihood Estimation (MLE) procedures but logit model is based on cumulative logistic probability function, which is computationally easier to use (Kmenta, 1986 as cited in Matiya *et al.*, 2005). Logit is a transformation such that a cumulative distribution is estimated, thereby eliminating the interval 0, 1 problem of LPM.

The logistic cumulative probability function is represented by equation (3.2)

$$P_i = F(Z_i) = \frac{1}{1 + e^{-Z_i}} \dots \dots \dots (3.2)$$

Where P_i is the probability that a customer is satisfied with mobile financial services; $Z_i = \sum_{i=1}^k (B_i X_i)$ given one of $X_i=1$ for a constant term say B_1 and the remaining B_i are the true parameters values of the attributes X_i associated with a customer’s response regarding satisfaction with mobile financial services; e represents the base of natural logarithms which is approximately equal to 2.718. In this equation Z_i can range from positive infinity to negative infinity. The probability lies between 0 and 1. Logit model is derived from equation (3.2) by making Z_i the subject.

If we multiply both sides of the equation (3.2) by $1 + e^{-Z_i}$ we get

$$P_i(1 + e^{-Z_i}) = 1 \dots \dots \dots (3.3)$$

Dividing (3.3) by P_i and then subtract 1 leads to

$$e^{-Z_i} = \frac{1}{P_i} - 1 = \frac{1 - P_i}{P_i} \dots \dots \dots (3.4)$$

By definition, $e^{Z_i} = \frac{1}{e^{-Z_i}}$ so that the equation (3.4) becomes Odds ratio of being satisfied with mobile financial services in favor of not being satisfied with mobile financial services, given by

$$e^{Z_i} = \frac{P_i}{1 - P_i} \dots \dots \dots (3.5)$$

Now we apply the link function to equation (3.5) which is natural logarithms, we get log of odds

$$L_i = \ln\left(\frac{P_i}{1 - P_i}\right) = Z_i = \sum_{i=1}^k (B_i X_i) \dots \dots \dots (3.6)$$

L_i , is the log of the odds ratio, which is linear in X , and linear in the parameters. L_i is called the logit model? As P_i goes from 0 to 1, the logit L_i goes from $-\infty$ to $+\infty$. This property is in contrast with the LPM model (3.1) where the probabilities increase linearly with X 's. If L_i is positive, it means that when the value of the regressor(s) increases, the odds that the regressand equals 1 increase. If L_i is negative, the odds that the regressand equals 1 decreases as the value of X 's increases (Gujarati, 2004).

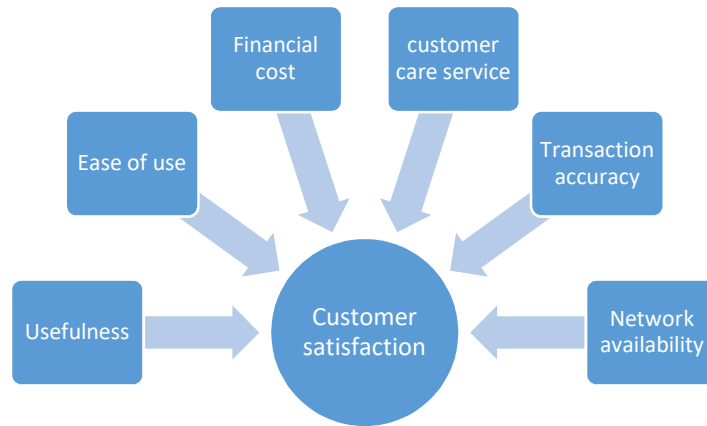


Figure 1: Conceptual Framework
Source: Author’s Own Framework, 2022

Research Results and Discussion

Customers’ Satisfaction with MFS

The second objective is rooted to whether the customers are satisfied with the frequently used mobile financial service. The results indicated that majority of customers are satisfied with MFS. About 70 percent of customers surveyed were satisfied with MFS. Interesting finding is that majority of both male and female were satisfied with MFS with male being slightly leading. Again it was observed that, majority of respondents who are employed were satisfied with frequently used MFS.

It was further found that, satisfaction was more acknowledged by those who found MFS to be useful, meet needs and easy to use. Same was observed to those who stated low transaction cost, accuracy in transaction, good customer care, and network availability. As it is seen from Figure 4.2, 76% of the users of TigoPesa are satisfied with the service while the remaining 24% are not satisfied. The users who were found not satisfied by TigoPesa identified the problems that they do encounter while using the service is that of poor network availability and increase in interest rates associated with money transfer.

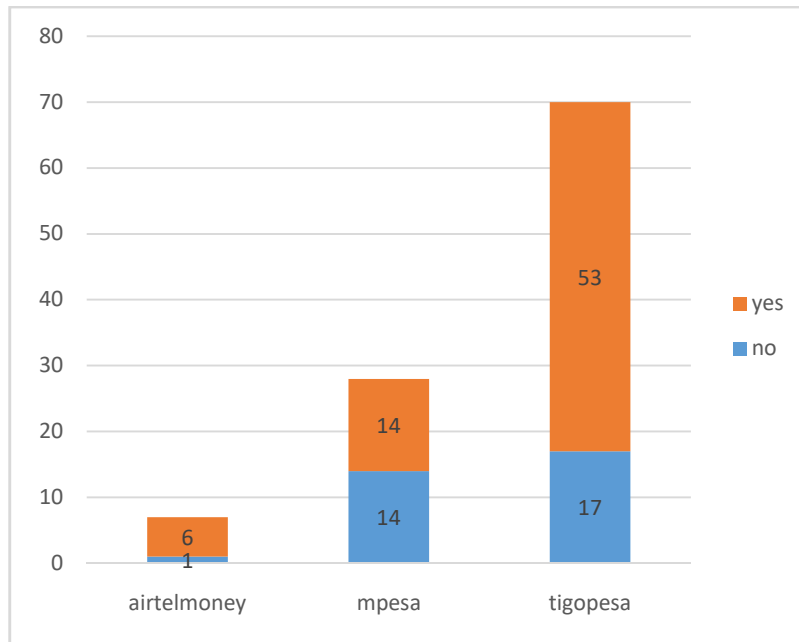


Figure 2: A chart showing the percent of the customer satisfaction. **Source:** Research Findings (2022)

Results from Logit Model and Interpretation

Table 1. Results from Logit Model

Explanatory Variables	Coefficient	Marginal Effects (dF/dx)
Constant	-11.257***	
	[3.382]	
Age	0.101**	0.010*
	[0.047]	[0.005]
Gender#	1.305*	0.148
	[0.752]	[0.091]
Employment#	2.394**	0.266**
	[0.939]	[0.106]

Continuation of Table 1

Usefulness#	0.985	0.137
	[1.679]	[0.292]
Ease to use #	0.278	0.031
	[1.007]	[0.119]
Financial cost#	0.492	0.044
	[0.935]	[0.072]
Transaction accuracy#	-1.227	-0.089
	[1.426]	[0.071]
Customer care#	1.645**	0.156*
	[0.663]	[0.082]
Network availability#	2.200***	0.167**
	[0.799]	[0.064]
Meet needs#	2.007**	0.316**
	[0.803]	[0.159]
Years of Education	0.343**	0.034**
	[0.149]	[0.016]
Number of observations	105	
Wald chi2(10)	-32.875	
Log pseudo likelihood	40.59	
Prob > chi2	0.000	
Pseudo R2	0.4908	
y = Pr(Satisfaction) (predict)	0.887	

Note: Robust standard errors in brackets

*** significant at 1%, **significant at 5% * significant at 10% level
 (#) dy/dx is for discrete change of dummy variable from 0 to 1

Source: Author's Computation (2022)

Conclusions, Proposals, and Recommendations

CONCLUSION

The finding that customers who are employed are more satisfied with mobile financial services implies that, some strategies should be set by the government to enable individuals to abide with the rules and makes people to secure jobs. Education system has to be improved to release graduates that are capable to face job markets and deliver what employers expect.

The findings that satisfaction depends on, network availability, customer care and needs of the customers, call for the government to put favourable environment for mobile network operators wishing to invest more so as to improve network coverage and improve their services

RECOMMENDATIONS

Some strategies and programs that will enable majority of people to secure jobs. Education system has to be improved to release graduates that are capable to face job markets and deliver what employers expect. Education that promotes entrepreneurship should be enhanced so as to have many people in the country that are able to employ others.

Customer care services should be improved and customers should be educated on every improvement that happens in MFS. All difficulties the customers get should be attended accordingly and timely.

Network availability is so crucial in maintaining customers' satisfaction with MFS. Mobile companies are should make sure the network is available and reliable country wide.

Mobile network operators should be innovative to meet needs of the customers regarding mobile financial services. They should collaborate with banks, business entities, and among themselves to make sure customers' needs are met.

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