

Effect of Mobile Money Transfer Service on Customer Satisfaction within Eldoret Central Business District, Kenya

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Abstract

The purpose of the study will be to the effect of perceived usefulness and perceived ease of use of MMT service on customer satisfaction. The study was guided by four research questions. Descriptive survey design method was used to study the population. Stratified random sampling technique was used to select respondents, and the data was obtained using structured questionnaires. The reliability test of the instruments was done using Cronbach's Alpha coefficient while validity was checked using pilot testing. The data was coded, fed into the Statistical Package Software for Social Sciences (SPSS) and analysed using descriptive and inferential statistics and presented using tables and charts. To measure the service quality, expectations and perceptions were compared. The study found out that perceived ease of use, perceived usefulness had a positive and significant effect on customer satisfaction. The study concluded that use of MMT service enhanced customer satisfaction.

Keywords: perceived ease of use, perceived usefulness, Mobile Money Transfer service and Customer Satisfaction

1.1 introduction

Customer satisfaction is the most important factors affecting service management, due to the influence of customer satisfaction on repeat purchases and word-of-mouth recommendations, customer satisfaction is deemed to be critical for all businesses (Yüksel and Yüksel, 2002). In this fast and dynamic environment, service providers can maintain their competitive advantage by delivering high quality services to their customers (Hu et al., 2009). Satisfied customers can bring a lot of other advantages for the service providers as a ripple effect including loyalty to the service provider, engagement in positive word-of-mouth promotion and paying premium prices (Amin et al., 2013; Dominici & Guzzo, 2010; Kim & Lee, 2010; Ryu & Han, 2010). Therefore, customer satisfaction has caught considerable attention from the academicians and the practitioners (Hu et al., 2009).

The current business environment is getting more competitive especially with the advancement of new technologies. The recent emergence of the wireless and mobile networks has resulted in a new platform known as mobile financial services (MFS) which are beginning to catch the attention of the business community. Khraim et al., (2011) stated that technology is a vital element in the competitive landscape of the financial services industry especially when a firm wants to increase its market share and satisfy its customers. As a result of these new advancements, many companies have always strived to improve themselves by creating better products and services for their customers in order to increase customer satisfaction (Wei et al., 2009). Mobile phones are used by billions of people around the globe including the poor by providing an unprecedented opportunity for financial development and access and are set to become a common tool for conducting financial transactions in the near future (Chatain et al., 2008). Mobile money transfer (MMT) service involves effecting financial transactions by use of a mobile phone (Allen, 2003). The popularity of MMT service is attributed to the low cost of transfers relative to alternatives, confidence in the system, speed of transfers and the convenience of a widespread agent networks handling cash deposits and cash withdrawals functions (Kimenyi and Ndung'u 2009).

Research on MMT service and technology acceptance and or adoption has been done in various countries. Beiginia et al., (2011) found that the quality of information, the bank reputation, ease of use, the speed of transaction, and security of mobile banking system played an important role in attitude towards the behaviour to use mobile banking in Iran. Poon (2007) found that lack of privacy and security are the major sources of dissatisfaction of e-banking service in Malaysia. In addition, the results indicated that speed, product features availability, reasonable service fees, and charges, as well as bank operations management, were critical factors that led to the success of the e-banking. Wei et al., (2009) found out that perceived usefulness, social influence, perceived financial cost and trust were positively associated with consumer intention to use while perceived ease of use and trust did not have a significant effect on consumer intention

to use e-commerce. Shin (2010) found out that perceived benefit and perceived convenience influenced consumer acceptance of mobile payment system in Korea. Further, he found out that perceived risk and trust were the main predictors of intention. In Brazil, Puschelet *al*, (2010) conducted a study on mobile banking and made a proposition of an integrated adoption intention framework and suggested that the framework offered a deeper understanding of the variables that influenced the adoption of mobile banking. Boyd and Jacob (2007) argued that mobile financial platforms would not add significant value for consumers unless they were of use. Kolodinsky *et al*, (2004) revealed that the relative advantage, complexity, compatibility, observability, risk tolerance and product involvement were associated with adoption in the US. Lastly, Dass and Pal (2011) carried out an exploratory study on factors affecting the adoption of MFS in India and found out that perceived usefulness, perceived ease of use, and perceived financial cost were important factors in the adoption of MFS.

African countries have the potential for growth with the introduction of MMT service. African continent over the years has witnessed an upsurge in mobile phone transactions due to the availability of mobile phones and the need for financial access (Erick and Raymond, 2013). There has been a significant trend of increased remittance flow into and within countries which has resulted in changing structure of the rural economy by allowing entry into the market economy of previously excluded segments of the population with some potential impact on income and poverty levels. To successfully meet the needs of the poorest segments of the population, telecommunication firms should embrace innovation and inventiveness.

From the above literature, there is a clear indication that technology acceptance model (TAM) variables (perceived ease of use and perceived usefulness) have been tested among other variables. In addition, most of them were carried out based on behavioural intention toward acceptance and or adoption of new technologies. However, studies on factors affecting actual behaviour of adoption or usage have not been clearly shown (Drennan and Wessels, 2010).

Kenya is currently recognized globally as the world leading country in terms of MMT service (Mas and Ng'weno, 2012). It is a market dominated by M-PESA, the service operated by incumbent mobile operator Safaricom. The M-PESA product was launched in the year 2007 and now is the dominant MMT service. It has experienced phenomenal growth since its inception. The success of MMT service such as M-PESA in Kenya has exceeded expectations, with greater numbers of formal financial sector actors taking notice (Liu *et al*, 2003). M-PESA's initial goal was to acquire 200,000–250,000 subscribers in the first year. Instead, it achieved that goal in just four months. In fact, M-PESA attained 10 times the original goal in one year, registering 2 million customers. There are 19 million registered M-PESA customers of whom 12 million customers are active every 30 days and are able to cash in or cash out in 80,000 locations across the country (Kyla 2013). However, firms competing in the same market exhibit differential growth in terms of customer base and distribution networks yet they are serving the same clients or market. In addition, 40% of the Kenyan population have not embraced the use of MFS particular to the less educated and those from rural areas (Aker and Isaac 2010). thus, the study hypothesized that

Ho₁: Perceived ease of use of MMT service has no significant effect on customer satisfaction.

Ho₂: Perceived usefulness of MMT service has no significant effect on customer satisfaction.

Theoretical Framework

The paper was anchored on the theory of reasoned action (1985) and Diffusion of innovations theory (Rogers, 1995). This theory was modified from the theory of reasoned action. The theory of planned behaviour determined the impact of attitude, subjective norm and perceived behavioural control on the behavioural intention. This theory, therefore, was designed to assist in a situation where people do not have complete control over their behaviour. The implication of this theory is that behavioural intention projects the intention to maintain current use and usage frequency by MFS customers. Perceived behavioural control implies that once a customer perceives that he or she is able to use MFS and technological resources that are available to him, the more likely it is that he or she will use, or continue using MFS.

Diffusion of innovations theory seeks to explain how, why, and at what rate new ideas and technology spread through cultures. The theory proposed 4 major elements that influence the spread of a new idea which includes innovation, communication channels, time, and a social system. The implication of the theory in the study was that when customers perceive that using MFS is simple, they tend to adopt it. Therefore, innovations that are simpler to understand are adopted more rapidly than the innovations that require the adopter to develop new skills and understandings. In addition, when the customers perceive that using MFS speeds up financial transactions, improves the quality of financial transaction, makes a financial transaction and services easier, gives greater control in financial transactions and enhances financial activities, then their usage intention increases.

Empirical Reviews

Perceived Ease of Use of MMT Service on Customer Satisfaction

Perceived ease of use refers to the degree to which a person believes that using a particular system would be free of effort (Davis, 1989). He found to be an antecedent to usefulness rather than a direct determinant of customer satisfaction from his regression analysis results. An individual's perception of the mobile phone as easy to operate will lead to automatic customer satisfaction. Leong and Viehland (2007) found that most New Zealand respondents (56%) perceived mobile payments to be easy or very easy to use. However, if customers perceive mobile phone to be complex, then customer satisfaction will be very low. The small size of mobile devices including small screens and tiny multifunction keypads may be troublesome to use and impair the usability of mobile banking service. This was witnessed by Laukkanen, (2007) who found that some bank customers consider bill payment via mobile phone to be difficult and time consuming as the device enables only a limited amount of information processing and hence the whole bill is not visible on display inhibiting the progress in the service process.

Perceived ease of use determines the behavioural intention towards the adoption of new innovations. This was shown by Venkateshet *al*, (2003) who found a significant effect of ease of use on behavioural intention to use internet banking. Similarly, Perceived Ease of Use (PEOU) was found to have a positive relationship to customer satisfaction mobile banking (Cheahet *al*, 2011). It also resulted in a medium effect size from the framework applied to mobile banking users (Puschel *et al.*, 2010). In addition to that, simplicity was found significant and positive only for computer banking according to (Kolodinskyet *al*, 2004). Moreover, a comparative study of consumer's intention to use mobile internet in USA, Russia, and China by Vatanparast and Qadim (2009) showed that positive correlation between perceived ease of use and behavioural intention was supported in those countries. Dass and Pal (2011) suggested that by ensuring ease of use of the offered service in terms of technology and financial products, it would be an important factor in customer satisfaction as regards MMT.

Attitude plays a major role in an individual's mind as far as simplicity of a new system is concerned. This was demonstrated by Beiginiaet *al*, (2011) who revealed that ease of use among other factors plays an important role in customer satisfaction in the adoption of mobile banking. However, (Kumar and Ravindran, 2012) found out that perceived ease of use was not a significant factor but rather represented a cognitive belief formed by second hand information and as well showed the insignificant effect on consumer intention to use e-commerce (Wei *et al.*, 2009). Therefore, it was hypothesized that perceived ease of use has no significant effect on the customer satisfaction of MFS.

Perceived Usefulness of MMT Service and Customer Satisfaction

The adoption of mobile technology to make financial transactions is viewed to be of great benefit to the users because they can enable them to make several transactions anytime anywhere. Perceived usefulness is defined as the degree to which a person believes that using a particular system would enhance his or her customer satisfaction (Davis, 1989). He further found that perceived usefulness has a strong correlation to user acceptance of information technology. Perceived usefulness was found to be the most significant determinant to predict consumer customer satisfaction in Malaysia (Wei *et al.*, 2009). Leong and Viehland, (2007) found that 59% of New Zealand respondents perceived mobile payment to be useful or very useful from their study on acceptance and use of mobile payments. A comparative study of consumer's intention to use the mobile internet was conducted in United States of America USA, Russia, and China by Vatanparast and Qadim (2009) and they found that perceived usefulness and behavioural intention was supported in China and Russia only. These results reveal that the perceived usefulness on behavioural intention is different in different countries.

Shin (2010) found that perceived benefit has an influence on user acceptance of mobile payment system. Kumar and Ravindran (2012) stated that perceived usefulness represent cognitive beliefs formed via second hand information and so satisfaction was found to be a stronger predictor of continuance intention; there is a significant effect of perceived usefulness on the intention to use internet banking (Wang *et al.*, 2003). Dass and Pal (2011) found a positive effect on demand and customer satisfaction of MFS from perceived usefulness predictor. Perceived usefulness has a positive relationship in examining customer satisfaction in Malaysia (Cheah *et al.*, 2011). Therefore, it was hypothesized that perceived usefulness of MMT service has no significant effect on customer satisfaction.

Review of the literature has attempted to address the aspects of adoption of mobile phone financial services. It has, however, not adequately linked the adoption of mobile phone financial services on customer satisfaction. In addition, most of the previous studies (Leong and Viehland, 2007, Laukkanen 2007, Wang *et al.*, 2003, Vatanparast and Qadim, 2009, Dass and Pal, 2011, Riquelme and Rios, 2010, Awuondo 2006, Shin 2010, Akturan and Tezcan, 2010 and Alam *et al.*, 2009) are emanating from developed countries creating a dearth gap in the literature that addresses the effect of MMT service on customer satisfaction. Moreover, few Kenyan scholars (Kimenyi and Ndung'u, 2009 and Ng'weno 2010) investigated the adoption of M-PESA without linking their findings to customer satisfaction. The study, therefore, focused on the effect of MMT services on customer satisfaction within Eldoret Central Business district.

Material and Methods

Descriptive survey design method was used in the study to investigate the effect of MMT service on customer satisfaction. The target population for the study was customers of MMT service transacting from 4558 registered agents shops of Safaricom, Airtel and Orange firms (County Government of Uasin Gishu, 2013). The researcher employed structured questionnaire as an instrument of primary data collection. The reliability test of the instruments was done using Cronbach's Alpha coefficient which showed coefficients of 0.811, 0.771 and 0.904. Nunnally (1978) suggested that the minimally acceptable reliability of 0.7 is recommended. A pilot study was carried out of 27 customers of mobile phone financial service. The study used (Nassiuma 2000) sample size formula to get 98 agent shops of Safaricom, Airtel, and Orange firms. Thereafter, stratified random sampling was used in the study to select agent shops from which the first four customers who entered the agent shop to transact using their mobile handset at the arrival of the researcher selected giving a sample size of 356 respondents. Analysis of data was done using descriptive statistics specifically mean and standard deviation. Inferential statistics was done using Karl Pearson correlation coefficient and multiple regression analysis.

Results and Discussion

Adoption level of MMT Services

The adoption level of MMT services is pegged on the frequency of use of the services, the suitability of the services to the user and the promise of an increase in the use of the mobile phone financial services. According to Kotler and Keller (2009), usage is an individual's decision to become a regular user of a

product. The study sought to establish the significance of the above mentioned factors and the findings were summarized and presented in Table 1.

Table 1 Adoption Level of Mobile Money Transfer Service

	N	Mean	Std. Deviation	Skewness	Kurtosis
I frequently use MMT service	356	4.03	1.009	-1.114	0.677
I use MMT service as it is best suited for my entire financial requirement	356	3.80	1.028	-0.752	-0.072
I plan to increase using MMT service in the near future	356	4.22	0.776	-0.886	0.740

Source; Survey Data, 2014

Table 1 revealed that in the adoption process, the most significant factor related to the adoption of the MMT service was that the respondents plan to increase using MMT service in the near future with a mean of 4.22 and standard deviation of 0.776 with the responses not being normally distributed. Results also showed that respondents frequently used MMT service with a mean of 4.03, the standard deviation of 1.009 and that they used MMT services as it was best suited for their entire financial requirement with a mean of 3.80 and standard deviation of 1.028 which was not normally distributed with a negative skewness value below the mean value of 3.80. This indicated that the respondents were not entirely in agreement with the fact that they used MMT service as it was best suited for their entire financial requirement.

Perceived Ease of Use

The findings in Table 2 indicated that although the respondents agreed that they found MFS system easy to use, mean (4.23) and standard deviation (0.735), the instructions in the MFS system were clear and understandable with a mean (4.22) and standard deviation (0.788), that they could learn to use MFS easily, mean (4.15) and standard deviation (0.9). They failed to decide on the fact that they found the MFS website as user friendly, mean (3.75) and standard deviation (0.979). This might be attributed to respondents not usually utilizing the MFS website. The skewness value for all the factors was negative which indicated that although the responses were significant, they were below the mean values indicated.

Table 2 Perceived Ease of Use and Customer Satisfaction

	N	Mean	Std. Deviation	Skewness	Kurtosis
I can learn to use MFS easily	356	4.15	0.900	-1.305	1.857
Instructions in the MFS system are clear and understandable	356	4.22	0.788	-0.890	0.687
I find MFS system easy to use	356	4.23	0.735	-0.782	0.490
I find the MFS website as user friendly	356	3.75	0.979	-0.430	-0.558
Perceived ease of use	356	4.10	0.613	-0.967	1.614

Source; Survey Data, 2014

Perceived Usefulness and Customer Satisfaction

The findings showed that respondents agreed that mobile phone financial services helped them to know their state of accounts faster, mean (4.12) and standard deviation (0.944) and that they found mobile financial services increasing efficiency in utilizing banking and payment services, mean (4.04) and standard deviation (0.963) despite the negative skewness values. The findings agree with those of Davis (1989) who found out that perceived usefulness had a strong correlation to user acceptance of information technology.

Table 3 Perceived Usefulness and Customer Satisfaction

	N	Mean	Std. Deviation	Skewness	Kurtosis
I can complete my banking and payment tasks more quickly using MFS	356	3.96	0.908	-0.735	0.494
I can perform banking and payment business 24hrs per day using MFS	356	3.88	1.044	-0.768	0.019
I find MFS increase my efficiency and effectively in utilizing banking and payment services	356	4.04	0.963	-1.022	0.771
Mobile phone financial services helps me to know the state of my account faster	356	4.12	0.944	-1.198	1.474
Perceived usefulness	356	4.001	0.748	-1.063	1.370

Source; Survey Data, 2014

Despite this, the respondents were undecided on the fact that they could perform banking and payment business 24 hours per day using MFS, mean (3.88) and standard deviation (1.044) and that they could complete their banking and payment tasks more quickly using MFS, mean (3.96) and standard deviation (0.908). The findings indicated that other than the normal mobile phone financial services, customers did not often use the service for their banking and payment needs. Perceived usefulness of the mobile phone financial services was found to be a significant factor in the adoption of mobile phone financial services with mean (4.001) and standard deviation (0.748). The findings agree with those of Shin (2010) who found out that perceived benefit had an influence on user acceptance of mobile payment system.

Customer Satisfaction

The researcher sought to establish the level of customer satisfaction regarding MFS. The results were summarized and presented in Table 4.9. From the table, customers neither agreed nor disagreed on whether they were generally delighted by MFS offered, mean (2.96) and standard deviation (1.386) and that they were satisfied with the quality of MFS offered, mean (2.63) and standard deviation (1.518). However, customers disagreed that MFS offered were very good to use, mean (2.30) and standard deviation (1.217) and that they were generally contented by mobile financial services offered, mean (2.23) and standard deviation (1.365). Respondents disagreed that they preferred MFS because of the services offered, mean (2.17) and standard deviation (1.398). The coefficient of skewness showed that the responses were positively skewed about the mean value of 3.00 which gave an indication of disagreement and uncertainty about the levels of customer satisfaction.

Table 4 Customer Satisfaction

	N	Mean	Std. Deviation	Skewness	Kurtosis
I am generally delighted by mobile financial services offered	356	2.96	1.386	0.201	-1.252
mobile financial services offered are very good to use	356	2.30	1.217	0.812	-0.197
I am generally contented by mobile financial services offered	356	2.23	1.365	0.755	-0.694
I am satisfied with quality of mobile financial services	356	2.63	1.518	0.432	-1.29
I prefer the mobile because of services offered	356	2.17	1.398	0.830	-0.685
Customer Satisfaction	356	2.527	0.96157	0.303	-0.755

Source: Research, 2014

Correlation and Regression Analysis

They are summarized in Table 5. The findings indicated that perceived ease of use had a significant positive relationship with customer satisfaction ($r = 0.491$, $p < 0.05$). Also, perceived usefulness was significantly correlated to customer satisfaction ($r = 0.468$, $p < 0.05$). The model summary above indicated that the value of R-square was 0.339 which indicated that the model contributed 33.9% of the total variation in customer satisfaction (adjusted $R^2 = 0.332$). This represented less variation than expected although the model was shown to be significant considering the F-value of 44.839 with a p-value of 0.000 at α value of 0.05.

Table 5 Correlation and Regression Analysis

	Unstandardized Coefficients		Standardized Coefficients		Collinearity Statistics		Correlations	
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF	zero-order
(Constant)	0.467	0.313		1.493	0.136			
Perceived ease of use	0.613	0.079	0.433	7.775	0.000	0.609	1.641	0.491**
Perceived usefulness	0.314	0.06	0.278	5.195	0.0000	0.663	1.509	0.468**
R2	0.339							
Adjusted R2	0.332							
F	44.839							
Sig.	0.000							

Dependent Variable: Customer Satisfaction

From the findings perceived ease of use was significant with a p-value of 0.000. Perceived ease of use has a positive and significant effect on customer satisfaction. Cognate to the results, Cheah *et al.*, (2011) who opined that perceived ease of use (PEOU) had a positive relationship to customer satisfaction in mobile banking. Dass and Pal (2011) suggested that by ensuring ease of use of the offered service in terms of technology and financial products, it would enhance customer satisfaction, especially in MMT services. Similarly, Beiginia *et al.*, (2011) stated that in the adoption of mobile banking, perceived ease of use played a significant role in customer satisfaction. Furthermore, Viehland and Leong (2007) found out that most New Zealand respondents (56%) perceived mobile payments to be easy or very easy to use. Consequently, their individual perception of the mobile phone as easy to operate led to automatic customer satisfaction. Wang *et al.*, (2003) found out that there was a significant effect on perceived ease of use on behavioral intention to use internet banking.

Table 5 showed $\beta_2 = 0.278$ (p -value = 0.000 which was less than $\alpha = 0.05$). Thus, the null hypothesis stating that there was no significant relationship between perceived usefulness and customer satisfaction was rejected. Customer satisfaction increased by 0.278 units with each unit increase in perceived usefulness. In addition, the effect of perceived usefulness was stated by the t -value = 5.195 which implied that the effect contributed by the estimated parameter related to perceived usefulness was over 5 times that contributed by the error associated with the parameter. Perceived usefulness has a positive and significant effect on customer satisfaction. Consistent with the result of Wei *et al.*, (2009) who stated that perceived usefulness was found to be the most significant determinant to predict customer satisfaction in Malaysia. In the same vein, Viehland and Leong (2007) found out that 59% of New Zealand respondents perceived mobile payment to be useful from their study on acceptance and use of mobile payments. Moreover, Dass and Pal (2011) found out that perceived usefulness had a positive and significant effect on customer satisfaction as well as Cheah *et al.* (2011) who also found that perceived usefulness had a positive relationship with customer satisfaction. Thus, perceived usefulness had an influence on user acceptance of mobile payment system.

By rule of thumb, the interpretation of the variance inflation factor was carried out. From Table 5, the VIF for all the estimated parameters was found to be less than 5 which indicated the absence of multicollinearity. The variation contributed by each of the independent factors was significant, and all the factors should be included in the prediction model.

Conclusions and Recommendations

Perceived ease of use of MMT service had a positive and significant effect on customer satisfaction. Respondents found it easy to use MFS as the instructions were clear and understandable to the respondents. The user friendliness of the MFS website was also an added advantage. Consequently, there was heightened customer satisfaction through the ease of use of technology and financial products and mobile payments. Perceived usefulness of MMT service positively and significantly affected customer satisfaction. It was affirmed that MFS helped them to know the state of their account faster, aided in performing banking and payment business 24 hours per day as well as fastening banking and payment tasks. As a result, perceived usefulness strongly related to user acceptance of information technology. MMT service providers ought to formulate clear and understandable instructions on how to use financial services on their financial products by emphasizing on user friendliness of mobile devices as well as the firm website in order to promote customer satisfaction. Mobile phone companies should design products that can enable customers to know the state of their accounts faster and allow 24 hour banking and payment services at customer's convenience.

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