

Challenges Facing Penetration of New Mobile Money Transfer Services In Nairobi

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Abstract: The study sought to explore the challenges mobile network operators face in penetrating the Mobile Money Transfer (MMT) in Kenya which is dominated by one player. The study assumes that there are challenges and constraints that limit the involvement of competitive MMT services which are attributed to the internal and external environment of the Mobile Network Operator (MNO). The study is significant as it seeks to unearth knowledge and provide insight to competing firms to enter into the MMT services market which has been experiencing significant growth over the recent years. The study was guided by four specific objectives which include; To identify the factors influencing the adoption of mobile money transfer services; To determine the influence of product positioning on adoption of mobile money transfer; To identify determinants influencing customer migration in adoption of mobile money transfer services and To determine barriers facing consumers in adoption of mobile money transfer services. The study adopts the descriptive research design. The design was perceived to be the most appropriate as it allows the researcher to collect data from respondents and make inferences from this information. The researcher proposes to use the questionnaire as the primary tool for data collection. The researcher performed descriptive and inferential statistics to make sense of the data and presented the information in tables, charts and graphs complemented by the researchers own interpretation.

Keywords: Customer Perception, Mobile Money, Mobile Network Operators, Mobile Money Transfer

I. Introduction

Mobile technology remains the most dominant aspect which continues to foster growth in the way humans do business and work. The spread of mobile phones across the developing world is one of the most remarkable technology stories of the past decade. This is confirmed by Desai (2012) who established that the mobile money industry is continuing to expand rapidly around the world and there were 150 live mobile money services for the unbanked in 72 countries, 41 of which were launched in 2012. The mobile money market in Kenya is dominated by one major player, Safaricom's M-Pesa (Camner & Emil, 2009). Though other players have emerged, the dominance of M-Pesa is so overwhelming that for the time being, anyone looking to utilize a mobile money service in Kenya has little choice but to work with Safaricom (USAID, 2011). Unlike other mobile money services M-Pesa has had its fair share of shortcomings. Among its shortcomings are fees that effectively prohibit small transactions (Comminos, Esselaar & Ndiwalana, 2008), lack of universal mobile phone access (Jack & Suri, 2011a), difficulties for agents managing liquidity and raising start-up capital (Eijkman, Kendall, & Mas, 2009), and complications for third-party organizations and firms seeking to integrate with it (Sadana et al., 2011). Also to this day, network outages are a frequent complaint among Kenyans yet its competitors are unable to make inroads into its customer base, begging the question what challenges are the new mobile money service providers facing in penetrating the Kenyan Market (Roodman, 2010).

1.1 Statement of the Problem

If new entrants are not able to penetrate the market, there is a lack of an equilibrating function in the market. Currently the mobile money market in Kenya is dominated by one major player, Safaricom's M-Pesa. Not only did Safaricom launch the first service, in 2007, but it still dominates the field, with an estimated 80% market share of all mobile money transactions in Kenya. (CCK, 2013). A survey of over 3000 M-Pesa customers commissioned by CBK with local agency FSD Kenya in September 2008 revealed beyond any doubt that more than 40 percent of users were unhappy with the service in terms of costs and quality of services yet they are not able to use alternative services despite the MMT services being offered by other MNOs. Though each of the mobile money players offer similar types of services, the three newer service providers have tried to distinguish themselves in various ways, largely through their platform capabilities, service structures for corporate mobile money services and lower charges. This has however not brought them much success as they market base relatively remains the same (World Bank, 2012). Therefore there was a need to understand what are the challenges facing penetration of new mobile money services in Kenya.

1.2 Specific Objectives

- To examine how user acceptance affects the penetration of new MMT services in Nairobi.
- To examine the environmental and Technological factors affecting penetration of alternative Mobile Money Transfer services
- To explore the influence of product and services positioning on penetration of Mobile Money Transfer services providers
- To identify the role of customer experience in penetration of money mobile transfer service providers

II. Literature Review

2.1 Theoretical Framework

In Information Systems literature, Technology Acceptance Model and Diffusion of Innovation Theory have been used for the last two decades to explain possible consumer behaviour with respect to adoption and acceptance patterns of new technologies and innovations (Chen, 2008). Studies on mobile services have shown that the application of the above information system theories and models have extended to valued added mobile services (Carlsson, 2006). Technology Acceptance Model (TAM) provides a product analysis while the Diffusion of Innovation Theory (DOI) theory focuses on the individual perspective (Hung, 2004).

The technology acceptance model (TAM) consists of two independent constructs; perceived usefulness and perceived ease of use to determine an individual's intention to make use of a system. The decision to adopt a technology is directly associated with the perceptions of the individual consumer in regards to the ease of use of the technology, the usefulness of the technology to the consumer. A consumer is more likely to adopt the mobile money transfer system if they perceive it as being easy to use and that its use will overcome certain barriers that they face, that is its usefulness in their day to day activities.

In Diffusion of Innovations theory, individuals are seen as possessing different degrees of willingness to adopt innovations and thus it is generally observed that the portion of the population adopting an innovation is approximately normally distributed over time. According to Roger (2003) the characteristics of any innovation are; Relative Advantage: the degree to which the innovation is perceived as being better than the practice it supersedes; Compatibility: the extent to which adopting the innovation is compatible with what people do; Complexity: the degree to which an innovation is perceived as relatively difficult to understand and use; Trialability: the degree to which an innovation may be experimented with on a limited basis before making an adoption (or rejection) decision; and Observability: the degree to which the results of an innovation are visible to others (Rogers, 2003). Therefore, adoption of MMTs will depend on consumers' expected gains or losses from the service.

2.2 Empirical Evidence

2.2.1 User Acceptance of MMT Services

Rogers (2002) highlighted key attributes perceived of an innovation to include relative advantage, compatibility, complexity, and trialability. Bradford (2001) stated that the theory of perceived attributes is based on the notion that individuals will adopt an innovation if they perceive that the innovation to add value, easy to use and compatible with their existing infrastructures. According to Lemuria and Belanger (2005), perceived relative advantage, perceived image, and perceived compatibility are significant elements adoption. It is suggested that relative advantage, compatibility, and ease of use are the most relevant constructs to adoption decision. Basing on this Kent et al, (2004) argued that use of an innovation increases in so far as customers perceive it as useful. The perceived usefulness is central because it determines whether the perceived ease of use will lead to increased use of the product and level of market penetration.

Complexity and relative advantage are secondary attributes. Perceptions or secondary attributes are assumed to be influenced by characteristics of both the particular setting (social system) and the diffusion model adopted by the actors involved in implementing a particular innovation. Haapaniemi and Makinen (2006) suggest that successful innovation adoption is associated with perceptions of trust among users. The behavior of adopters and determination of adoption trajectories is critical to be able to understand better adopters' behavior and the process of diffusion. Perner (2008) added that relative advantage (the ratio of risk or cost to benefits), risk which can be either social or financial, time, culture and switching difficulties are the major factors for the speed of innovation adoption.

2.2.2 Environmental and Technological Factors Affecting Penetration of Mobile Money Transfer Service Providers

Evidence suggests that technology integration helps improve firm performance by reduced cycle time, improved customer service, and lowered procurement costs (Barua et al. 2004). Correspondingly, a greater integration of existing infrastructure and technology represent a greater capacity of conducting business. (Al-Qirim, 2007; Mirchandani&Motwani, 2001; Premkumar, 2003; Zhu et al. 2006). According to Bhide (1996)

businesses need a sustainable strategy capable of maintaining the competitive advantage of the firm over a longer period of time, because due to rapid technological changes firms are more vulnerable to lose their competitive edge acquired due to technology. Long term competitive advantage of a firm is determined by the infrastructure which either it holds or it has access to (Barney, 1991).

Regulatory regime is conceptualized as 'any type of authority (industrial, national, international) which can influence, direct, limit or prohibit any activity in the innovation system, the marketplace or the regulatory regime itself' (Tilson & Lyytinen, 2006). Economically, the regulatory regime needs to ensure that services are supplied under conditions of economic efficiency and also satisfy the full range of customer demand. From a social perspective, the regime needs to ensure that such services are available to everyone, on reasonable terms, whether or not it is profitable to do so (Melody, 2007). International and national regulatory bodies are concerned about 'emerging services' and/or 'emerging markets' and how Next Generation Networks should be treated within or outside existing regulatory frameworks (Richards, 2006). The adoption and diffusion of competing mobile services using both the regulated licensed and unregulated unlicensed spectrum, raises issues such as cost of service, quality of service net neutrality, congestion management and industry structure and requires further examination (Lehr & McKnight, 2003).

2.2.3 Product and Services Differentiation

The marketplace has become more dynamic, interest in innovation, its processes and management has escalated. Organizations need to innovate in response to the changing customer needs and other organizational needs (Anahita et al, 2009). However, if not communicated, the innovation will not have any impact on the market. Takeuchi and Nishio (2000) found that communications with positive cognition and/or effect achieved deeper penetration than those with negative effect. It is also stated that series advertising using the same spokesperson or the same tone of appeal achieved deeper penetration than non-series advertising and that penetration begin to reach saturation by non-series advertising earlier than by series advertising. Long-term exposure raise penetration levels if its frequency of contact increases. Short-term exposure makes penetration to reach saturation earlier than long-term exposure.

Kautz and Aby (2000) held that diffusion activities increase the interest of the less privileged potential adopters in adopting an innovation especially those which are tailored to their needs might compensate for their restricted resources. Takeuchi and Nishio (2000) added that the nature of the innovation and the contents of the communication influence the attitudes of potential users thus affecting the penetration levels of the product. Content can be classified as persuasive, familiar, interesting, and trustworthy, evokes sympathy, impressive, emotional, fresh, forms a lasting impression, not tiresome, tiresome, persistent, forms no lasting impression, not familiar, not persuasive, unrefined, boring, easy to understand and ordinary. In the same way communications generating positive affect and cognition such as familiar, persuasive, or having impact have relatively large net cumulative numbers of people with deep penetration levels.

According to Tsubira et al (2007), Initiatives and innovations like near free handsets, public investment in the roll-out of basic connectivity, increased competition that forces increased market efficiency, and delivery of voice services through data are the major factors in pushing access and utilization to a new levels of saturation.

2.2.4 Role of Customers Product Experience

Meyer and Schwager (2007) have made the point that the customer experience may provide a new means of competition. Providing a good experience is also important because it affects customer satisfaction, delivers customer loyalty, influences expectations, instills confidence, supports the brand and also creates emotional bonds with customers or, conversely, leads to emotional scarring. According to Coffman and Stotz (2007) however, despite these benefits, the limited amount of research in this area suggests that good customer experiences are not prevalent. For example, a recent survey by Bain & Co. of 362 companies, across several industries and their customers, found that 80 per cent of the senior executives interviewed said they provided a superior customer experience, but just eight per cent of their customers agreed.

According to Jacoby et al., (2006) consumer knowledge is consisted of two main components: familiarity and expertise. Alba and Hutchinson (2007) found out that individuals with high knowledge of a product are more likely to explore it more than individual with limited knowledge. Mitchell and Dacin (2006) also support this view by explaining that individuals with higher prior knowledge have better understanding of problems that might be related to a purchase or consuming a product. According to Hayes and Roth, (2007) individuals' knowledge accumulates with each trial, purchase or information search about a product or service. On the other hand individuals with insufficient prior knowledge will have to evaluate the attributes, benefits and risks of a product because they do not have enough knowledge to make a confident decision without necessary prior knowledge (Lazetta, 2003)

III. Research Methodology

The study adopted the descriptive research design. Descriptive research is used to obtain information concerning the current status of the phenomena and to describe "what exists" with respect to variables or conditions in a situation (Kaleem& Ahmad, 2008). Descriptive studies are good at giving a detailed investigation of the answers to a specific question (Gilham, 2000). Descriptive studies are more flexible in design and no fixed decision on procedures. A descriptive study will allow the researcher to exhaustively seek information on the impact of mobile phones on access to financial services.

This research method is proposed as it is the most effective method that would fit with the purpose of the study. Reliability of the study was enhanced through pilot study that was conducted to enable the researcher identify items that required modification. Regression Analysis was used to measure the degree of correlation between independent and dependent variables. The Equation took the form:

$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + E$ Where :

Y = Penetration of New MMT services (Dependent variable), $\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 =$ Explained Variations of the Model, E = Unexplained Variation i.e. error term, it represents all the factors that affect the dependent variable but are not included in the model either because they are not known or difficult to measure.

X_1 = User acceptance, X_2 = Environmental Factors, X_3 = Product and service differentiation, X_4 = Customer experience, β_0 = Constant,

$\beta_1, \beta_2, \beta_3, \beta_4$, = Regression Co-efficient. Define the amount by which Y changed for every unit change of predictor variables. The significance of each of the co-efficient was tested at 95 percent level of confidence to explain the variable that explains most of the problem

3.1 Reliability Analysis

Cronbach's Alpha type of reliability co-efficient was used taking into account a value of 0.7 or higher as being sufficient (Sekeran, 2003; Castillo, 2009). All variables were subjected to Cronbach's Alpha so as to ascertain their internal consistency. Cronbach's Alpha was .735 which was above the minimum required and therefore the data was considered as reliable.

IV. Findings and Discussions

4.1 User Acceptance

The study found out that customer considers the perceived usefulness of a product before adopting mobile money transfer service. This is in line with the work of Davis (1989) who postulated that mobile money transfer services relates to the registration procedures, ease of use of the payment procedure, easy access to customer services, minimal steps required to make a payment, appropriate screen size and input capabilities. The study also revealed that the MMT service is useful to the respective customers of mobile service providers. This is in line with the work of Davidson and McCarthy (2010) who indicated that the perceived usefulness affects the demand and subsequent adoption of MMTs. The study revealed that the service provider of the Mobile Money Transfer they are registered with protects their funds from the risk of being stolen. The respondents however were not certain as to whether their Mobile Money transfer service will be in operational in the next 10 years.

4.2 Environmental and Technological Factors

On environmental and technological factors, the study established that the system uptime is an integral consideration in provision of Mobile Money Transfer service. The study revealed that the respondents were undecided on whether Mobile Money Transfer service they use does not have frequent outages. This is consistent with the work of Kirui et al., (2013) who argued that competition for clients has resulted in creation of more stable technology and robust technological support system. Also it was noted that the adequate regulation are in support to support growth Mobile Money transfer service in the country. This however contradicts the work of Merit (2010) who posited that Mobile transfer systems are giving rise to new challenges in how to establish effective regulatory infrastructures to provide oversight for converged banking and telecom industries in a cross-border context

4.3 Product and Services Differentiation

Regarding product and services differentiation, the study revealed that product and services offered impact greatly in a customer's choice of Mobile Money Transfer service. The study also revealed that innovative product attracts a customer to a Mobile Money Transfer service. This is consistent with the work of Bosire (2012) who opined that agents have contributed to the growth of mobile money transfer services. The study established that the Mobile Money Transfer service has a wide range of services which meet the needs of the respondents. The study established that the Agents of the Mobile Money Transfer service provider are well

distributed and easily accessible. This is in line with the work of Jack and Suri (2010) who posited that the rise of mobile money transfer agents to has had a positive effect. Agents receive commissions for transactions, holding the balances on their own cell phones.

4.4 Customer Experience

Regarding the statement on customer experience, the study revealed that initial customer experience with the service providers determines if the customer will remain as a service user or use will move to a competing product. The study also revealed that customers are well knowledgeable on the functionality of Mobile Devices. This is consistent with the work of Heyer and Mas (2009) who found that the mobile money model requires speed, being able to generate momentum and trigger simultaneous interest among users and merchant. The study established that Mobile Money Transfer service they use is user friendly. This is in line with the work done by Phillips Consulting Survey (2013 who argue that those who have never used the service indicate inadequate understanding of the service (31 %) as their main reason for non-usage.

V. Regression Analysis

The data findings analyzed showed that taking all other independent variables at zero, a unit increase in service quality will lead to 0.037 increase in firms performance; a unit increase in process automation will lead to 0.002 decrease in firms performance; a unit increase in customer orientation will lead to 0.003 decrease in firms performance while a unit increase in free cash flow will lead to 0.119 in firms performance.

The Equation ($Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + E$) becomes:

$$Y = 2.624 + 0.430 X_1 + 0.146X_2 + 0.271X_3 + 0.512X_4 + \epsilon$$

Where: Y = Penetration of New MMT services X1 = User acceptance , X2 = Environmental Factors, X3 = Product and service differentiation, X4 = Customer experience,

Table 5.1: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.892 ^a	.796	.704	.2135

Source: Researcher, 2014

- Predictors: (Constant), User acceptance, environmental and technological factors, Product and service differentiation, customer experience
- Dependent Variable: Penetration of New MMT services

Table 5.2 ANOVA (Analysis of Variance)

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	99.675	4	24.92	15.77	.013 ^a
Residual	112.704	71	1.58		
Total	212.379	75			

Since F calculated is greater than the F critical (15.77>2.50), this shows that the overall model was significant. The significance value is less than 0.05, thus indicating that the predictor variables, (Determinants of User Acceptance, environmental and technological factors, product and service differentiation, customer experience) explain the variation in the dependent variable which is the Penetration of New MMT services.

Table 5.3: Regression coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error			
Constant	2.624	0.339		7.740	.000
User Acceptance	0.430	0.121	0.379	3.554	.000
Environmental and Technological factors	0.146	0.129	0.044	1.132	.002
Product and service differentiation	0.271	0.123	0.207	2.203	.003
Customer experience	0.512	0.099	0.117	5.172	.106

Independent variable: User acceptance, environmental and technological factors, Product and service differentiation, customer experience.

VI. Conclusions

The study concludes that customers consider the perceived usefulness of a product before adopting mobile money transfer service. The study concludes that the system uptime is an integral consideration in provision of Mobile Money Transfer service. On product and services differentiation, the study concludes that product and services offered impact greatly in a customer's choice of Mobile Money Transfer service. The study also concludes that innovative product attracts a customer to a Mobile Money Transfer service. On customer experience, the study concluded that initial customer experience with the service providers determines if the

customer will remain as a service user or use will move to a competing product. The study therefore concludes that customer experience plays a key role in mobile money transfer.

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