Factors Influencing the Use of Mobile Banking in Kenya, the Case of M-KESHO in BUNGOMA County

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Abstract: **The aim of this study was explore the factors influencing the use of mobile banking in Kenya based on Mkesho in Bungoma County. The study adopted a descriptive research design. The population of study consisted of all the customers of Equity bank in Bungoma County. The sample size of this study was 50 individuals determined using simple sampling. This represents 10% of the total number of respondents' targeted. Primary data was collected using semi structured questionnaires containing closed questions. The quantitative data was analyzed using descriptive statistics. In addition the study used logistic model to uncover predictive relationships between a set of independent variables and the dependable variable. From the research results, risk was found to be negatively affecting usage of mobile banking. Amongst the customer's greatest risk in using mobile banking was security or privacy risk. Financial cost was also found to be negatively influencing usage of mobile banking which was related to short-time debt.**

Keywords: **risk, financial cost, usage.**

1. INTRODUCTION

Kenya is depicted as one of the fastest growing mobile banking ecosystem in the world. In addition to the traditional text and voice services, majority of the mobile phone service providers in Kenya have incorporated mobile banking as a core business function. Mobile banking is viewed as a key driver that will 'leap' frog the economy of Kenya, bringing poor people into financial system who have been for a long time been excluded by financial institutions. Despite these immense advancements in mobile banking industry, the usage of mobile banking remains low in Kenya, a pointer that there could be several factors that hinder the usage of mobile banking. Some of the factors pointed out in literature include usefulness, financial cost, ease of use, credibility, facilitating conditions, trust, demographics and socio-economic forces.

Statement of the problem:

The gap between the adoption and usage of mobile banking in reference to M-kesho loans remain a challenge in Kenya. It is only a minority of people who are using mobile banking in the market. Furthermore half of Kenyan populations especially the rural folks remain unbanked or under banked. According to CBK report 2014, M-Kesho has 799,532 accounts with 240,633 customers having already transacted. In six months after its launch in May 2010, the product had 613,000 subscribers, indicating a declined rate of uptake. Several studies have been done locally, Ontunya (2006) conducted a survey of consumer adoption of mobile phone banking in Kenya, Otieno (2008) did a study on the challenges in the implementation of mobile banking Information systems in commercial banks in Kenya; Macharia (2009) studies the commercial banks perception of the influence of mobile telephones on growth of banking business in Kenya;Mutua (2009) did a study on mobile banking as a strategic response by Equity Bank Kenya limited to the challenge in the external environment while Ndumba (2014) studies on factors affecting adoption of mobile banking in Kenya; case study of Kenya commercial bank Limuru. These studies while shedding so much light on the mobile banking they were only limited on the adoption of mobile banking. To the best of the researcher knowledge not even a single research has identified and investigated the factors which influence customer's decision to continue using a specific form of mobile banking, and specifically focusing on the evaluation of Mkesho Service in the context of Kenya. Globally the gap still remains unfilled as only few studies have been done on the same study. For instance Shi Yu (2009) did the same research on factors influencing the use of mobile banking but based his study on the context of New Zeland. That implies that they

exist knowledge gab between the adoption and usage of mobile banking which these studies intend to fill. It is evident that Kenya has much potential to access financial inclusion through mobile banking and thus it is assumed that if this untapped market can be captured by examining the peoples behavioral intention financial inclusion will be geared.

Objectives:

i. To examine how risk influence the use of mobile banking in Kenya.

ii. To establish the relationship between the financial cost and the usage of mobile banking in Kenya.

2. THEORETICAL REVIEW

Technology Acceptance Model:

Theories and models used in studies related to the innovations, acceptance and use of new technology are many. For instance, focusing on the technological issues (Davis 1989) advances the Technology Acceptance Model (TAM). This model relates the individuals' behavioral intentions and his/her ICT use. It is suggested that, the actual behavior of a person is determined by his behavioral intention to use, which is in turn influenced by user's attitude toward and perceived usefulness of the technology. However attitude and perceived usefulness are both determined by ease of use. Adopting the TAM model requires the understanding of end-users requirements regarding usefulness and user friendliness (Pedersen, Leif, Methlie and Thorbjornsen, 2002). From this model, usefulness and user friendliness affect users' attitudes towards any service. Davis (1989), thus suggest that it is important to value user requirements based on perceived usefulness and the user friendliness of the technology rather than other objective measure.

The Decomposed TPB Model:

The decomposed TPB model, an alternative version of TPB, uses constructs from the innovation literature (e.g., relative advantage, compatibility). This theory assumes that people's intention to adopt technology is driven by attitude, subjective norms and perceived behavioral control. In addition, this model explains the behavioral control and subjective norm component from a specific dimension, thereby provides a more accurate way to understand and investigate person's behavioral intention to adopt or use a particular technology. Both the decomposed TPB and TAM have some similar advantages, such as both models identify definite salient beliefs which may influence technology adoption and usage. However, TPB is considered better than TAM in understanding technology adoption and usage in that it integrates additional factors which are not present in TAM. Examples of such factors include the influence of significant others, perceived ability and control. These factors have been shown to be significant determinants of behavior (Md & Gang,2014).

Conceptual Framework:

A conceptual framework is a set of broad ideas and principles taken from relevant fields of inquiry and used to structure a subsequent presentation (Reichel and Ramey, 1987). It is a tool intended to assist a researcher to develop awareness and understanding of the situation under scrutiny. It helps the research to explain the relationship among interlinked concepts such as the dependent and independent variables (Kombo, 2006). In this study, the researcher sought to establish the factors influencing the use of mobile banking in Kenya. It was conceptualized within the dependent-independent variable components and their indicators. The figure below shows a diagrammatic representation of the relationship between the dependent and independent variables.

Conceptual Framework:

Independent variable	Dependent variable
Risk • Privacy risk	Usage of mobile banking • M-kesho loan
Financial cost • Short term debt	
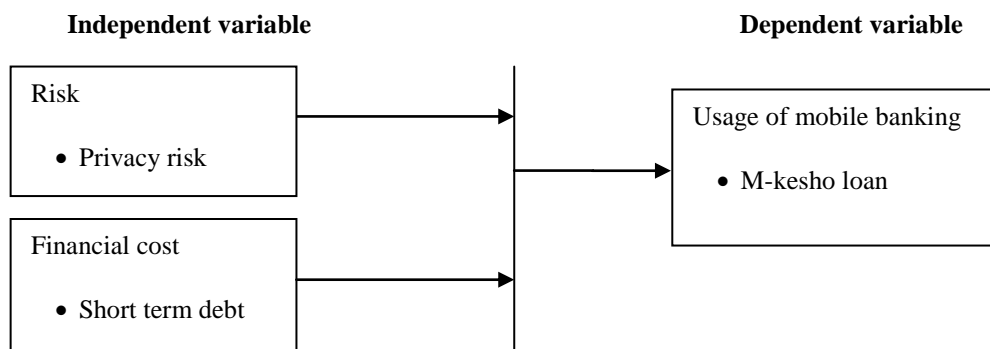
Critique of Existing Literature:

The critique argue that even though full financial inclusion is the overall goal, it does not mean that everyone should be given access to financial services as this may stimulate the rate of the credit in a county at its expense. They argued that the recent financial crisis provides a prominent example of possible consequences off rapid uncontrolled credit growth, which obviously should be avoided as far as possible. (World Bank, 2014).

Research gaps:

Several studies have been done locally, Ontunya (2006) conducted a survey of consumer adoption of mobile phone banking in Kenya, Otieno (2008) did a study on the challenges in the implementation of mobile banking Information systems in commercial banks in Kenya; Macharia (2009) studies the commercial banks perception of the influence of mobile telephones on growth of banking business in Kenya;Mutua (2009) did a study on mobile banking as a strategic response by Equity Bank Kenya limited to the challenge in the external environment while Ndumba (2014) studies on factors affecting adoption of mobile banking in Kenya; case study of Kenya commercial bank Limuru. These studies while shedding so much light on the mobile banking they were only limited on the adoption of mobile banking. To the best of the researcher knowledge not even a single research has identified and investigated the factors which influence customer's decision to continue using a specific form of mobile banking, and specifically focusing on the evaluation of M-kesho Service in the context of Kenya. Globally the gap still remains unfilled as only few studies have been done on the same study. That implies that they exist knowledge gab between the adoption and usage of mobile banking which these studies intend to fill.

3. RESEARCH METHODOLOGY

The research design used in this study was descriptive research design. The target population of study consisted of all the customers of Equity bank in Bungoma County who were estimated to be 10,000 customers. The target customers were Equity bank customers subscribed to M-kesho services. The sample size of this study consisted of 50 individuals from Equity bank determined using a simple random sampling. The researcher used questionnaires as the research instrument to gather the relevant information needed related to the study.

Model

A logistic regression technique was employed to examine the factors influencing the adoption of mobile banking. Logistic regression has been recognized as a new approach to obtain more precise estimates on the level of adoption in social sciences. In this study the following was the regression equations that were used to test the significance of the study hypotheses:

$Y=\beta 0+X1+\beta X2 +\varepsilon$

Where,

Y= Use of M-kesho service

X*1*: Risk

X*2*: Financial cost

Use of mobile banking was measured in term of Mkesho.*β0* is the constant or intercept while *β1 and β2,* are the corresponding coefficients for the respective independent variables. *ε* is the error term which represents residual or disturbance factors or values that are not captured within the regression model.

4. RESULTS AND DISCUSSION

Usage of mobile banking:

To determine the usage of M-kesho service, the respondents were asked whether M-kesho loan have significantly increased reduced or have remained constant. From the results it shows that use of M-kesho loan has dropped among the users. The results agree with CBK reports (2014), that the adversity of M-kesho in Kenya has shrunk relative to its earlier years. The whole results have been summarized in the table below 4.1.

Table 4.1: M-kesho loan

Respondents	Frequency	Percentage
Significantly increased	9	18.4%
Remained the same	10	20.4%
Significantly decreased	30	61.2%
Total	40	100%

Risk:

Privacy Risk:

The study sought to establish if the accounts of the respondents have been accessed without their consent when using M-kesho service. Majority of the respondents making 87.8% stated that their accounts have been accessed while minority 12.2% stated that their accounts have never been accessed (Table 4.2). However the respondents argued that they feared losing personal or account information to the frauders of mobile financial services. This has implication that privacy risk negatively affects the adoption of mobile financial service. This concurs with Ndumba et al (2014) who stated that privacy risk negatively the adoption of mobile banking. Fear of the lack of security is one of the factors that have been identified in most studies as affecting the growth and development of technology. Wang 2010), examined the impact of perceived credibility on usage intention of technology, and found that perceived credibility had a significant effect on intention. The results have been summarized in the tables 4.2 below

Table 4.2: Privacy risk

Respondents	Frequency	Percentage
Yes	30	62.2%
No	19	38.2%
Total	49	100

Financial cost:

Short-term debt:

The study sought to establish if short-term debt of the respondents have increased since the adoption of mobile banking.Mojarity of the respondents 87.5% agreed with the question. They complained that Mkesho loan was a new financial scam driving them into debt. They also argued that M-kesho loan is one way of luring them into debt slavery. However the minority 12.5% did not agree with the notion. They stated that M-kesho loan charge very low interest for short-term loan which cannot trap people into a vicious debt spiral. The results have been summarized in the table 4.3 below.

Table 4.3:Short-term debt

Respondents	Frequency	Percentage
Yes	35	87.5 %
No	14	12.5 %
Total	49	100

Regression results:

Omnibus Tests of Model Coefficients:

The model (set of predictor variables) was tested. The Sig. value of the set of the results is 0.000 which means p is less than .0005.This implies that the model is better. The chi-square value, which was needed to be reported in the results, was 55.176 with 2 degrees of freedom. The results have been summarized in table 4.4 below.

Omnibus Tests of Model Coefficients:

		Chi-square	df	Sig.
	Step	55.176	2	.000
Step 1	Block	55.176	2	.000
	Model	55.176	2	.000

In the above table 4.28 the two values are .676 and .936 suggesting that between 67.6% and 93.6% of the variability is explained by this set of variable. The results have been summarized in table 4.5 below.

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	6.730[a]	.676	.942

Variable in the Equation:

They were two significant variable (risk p=.051, financial cost p=0.027.This implied that both financial cost and risk influence people to use M-kesho loan. Both variable measuring financial cost and risk showed a negative B value (-21.608) and -20.797 respectively. This indicates that the people feel that M-kesho loan has financial cost implication in that it lures them into debt slavery thus avoiding M-kesho loan. Furthermore they also feel that M-kesho loan has security risk implication thus avoiding it too.

Table 4.6 Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Risk	-20.797	7338.199	.000	1	.051	0.00
	Financial Cost	-21.608	10742.023	.000	1	.027	0.00
	Constant	-21.203	7338.199	.000	1	.027	.000

a. Variable(s) entered on step 1: Risk, Financial cost.

5. CONCLUSION

From the research results, the usage of mobile banking in reference to M-kesho loan has reduced at an alarming rate low in Bungoma County. This is an opportunity for both the banks and mobile network providers to increase market penetration for the under-served population.

Risk was found to be influencing the usage of mobile banking. Privacy risk affects majority of the customers negatively. It was found out that majority of customers have at one point lost their mobile phones and malbility of malware gaining access to their M-kesho account. Some customers also complained that from time to time they have received misleading engineered messages purported to have come from Equity bank prompting them to reveal the M-kesho account information.

Financial cost was also found to be influencing the usage of mobile banking. Short term debt affects majority of the customers negatively. Customers are lured to the short-term debt resulting to debt problem thus putting them into financial instability.Mojarity of the respondents also complained that M-kesho loan was a new financial scam driving them into debt.

5.1 Recommendation:

This research work has shown that M-kesho usage in Kenya is low especially in villages like Bungoma County. The research has confirmed that the current users are low compared to the earlier users. This study can be used by banks to realize the benefits that could be derived if the innovation is well managed by the banks as well as taken drastic steps to address the issues militating against its growth.

The banks should also ensure that the cost of mobile banking service is reasonable and affordable for common citizen, students, officer workers, business person, etc in order not to discourage current users and the intending users.

Due to fear of Freud and uncertainty many Kenyan have kept a distance from this innovation and they will rather go to the banks to carry out their banking transaction. Customers will be more willing to accept the innovation if the regulatory body central bank of Kenya (CBK), takes the initiative to tackle the security issues of online bank transaction in the country. Bank should constantly remind their customers on how to keep their pin and password safe for security purpose.

Investigation need to be carried out to find out why important services such as loan payments were no longer being used by majority of Mkesho customers.

It is also important to address security issues associated with mobile banking technology so as to ensure success of mobile banking technology. More specifically, the issues that need to be addressed concerning risk include performance of mobile banking because on network problem.

The study recommends that the customers and the government, the relevant policy makers should improve the policies governing the industry and use of ICT in financial services for quality of their services to the customers to minimize the problems that they get in using the service. Interest should be aimed towards improving services that ensure that the customer get account balance details in time and with the least cost possible, request last transaction details is offered and pay bills for electricity and insurance.

5.2 Suggestions for Further Research:

In the course of undertaking this study the researcher realized the need for further study in this area in the following aspects.

1. The researchers should device instruments of measuring the perceived risk on Customers through further research.

2. Further study should be carried out on non-Mkesho users to investigate their adoption intentions of such service.

3. Further research on usage of mobile banking should be extended to corporate customers. Comparison can then be made between individual's customers and corporate customers in terms of the factors influencing their usage decisions.

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