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User Challenges and Performance of Mobile Banking: The Case of Selected Commercial Banks in Nairobi County, Kenya

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Abstract

The study examined user challenges and performance of mobile banking: case of selected commercial banks in Nairobi County. The study sought to establish how technology improvement, user-security improvements, user risk prevention, and user sensitization enhances M-banking among commercial banks. A descriptive survey research design was adopted in collecting data from the respondents of all the eleven commercial banks. A representative sample of 4 staff members per bank were then picked and questionnaires administered. Pearson's correlation of significance level of 0.05 revealed a positive association (r = 0.158) between technology and performance. There was a positive correlation (r = 0.361) between security and performance of mobile banking. The study found a positive correlation (r = 0.113) between risk prevention and performance of mobile banking. Pearson's correlation indicated a positive correlation (r = 0.255) between customer awareness and performance of mobile banking. The regression analysis also found that increase in all the variables led to increase in performance. The study recommends that, fraud checks should be aligned to the risk of specific actions by customers, and should necessarily be subject to customer credentials and identity authentication, integrity and secrecy and to the equipment stored on the equipment. Further, banks should implement measures to make training staff more competitive, invest in research and technology development. Because the number of people with mobile phone handsets is on the rise, the study recommends that the banks should continue making use of mobile phones in providing and improving services.

Key Word: *Technology Improvement, User-Security Improvements, User Risk Prevention, M-banking, and User Sensitization, Performance.*

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1.1 Introduction

Mobile applications in different fields have been developed and used. Mobile pervasive technology infiltrated both individual and commercial fields (Koksal, 2016). Consumers benefit from mobile services since they provide widespread and standardized access to information and services, and the ability to exchange information in a unique and personalized manner (Alalwan, Dwivedi, & Rana, 2017). As a result, using mobile devices has become ingrained in daily life as a means of staying connected to the rest of the world, and also communicating and networking (Vanitha, 2013).

Globally, innovative mobile services have paved the way for M-banking, a new distribution channel through which banks can implement their multi-agency strategies, reduce costs, access the un-banked, and ensure a competition edge (Chitungo & Munongo, 2013). M-banking is a term that refers to the process of executing financial services via mobile communication methods and mobile devices. Mobile banking is among the evolving components of ICT which have altered operations in financial industry, and banks are looking forward to implementing several kinds of SMS services for communication and transactions (Cudjoe, Anim, & Nyanyofio, 2015).

In Africa, majority of banks have implemented mobile banking, capitalizing on the recent surge in mobile phone penetration (Kazi & Mannan, 2013). The ease with which mobile phones can be used to conduct financial transactions and make the payments virtually anywhere has the potential to aid in the transition to a cashless transaction. Broader adoption and usage of mobile banking can lead to increased and enhanced growth in business and economy (Laukkanen, 2017).

In Kenya, Mobile banking is among the developing mobile technique utilized in the commercial domains (Achieng & Ingari, 2015). It has combined information technology and commerce applications together. After introduction of M-banking subscribers have been able to use it to obtain special services 24 hours a day without having to visit the traditional bank branches for personal transactions. Mobile phones have been an instrument for using on daily basis, that creates a chance for the banking services' evolution to reach the previously population that is unbanked through mobile banking (Hosein, 2013). The use of mobile banking could make elementary financial services more accessible to low-income people, minimizing time and distance to the nearest retail bank branches (Kato, Otuya, Owunza, & Nato, 2014). The outstanding mobile sector growth globally have resulted into an exclusive chance to provide social and financial services over the mobile network. Commercial banks have had the opportunity for effective communication, reimbursements and marketing systems through an unprecedented penetration of mobile devices, wireless connections and mobile communications (Nganga & Mwachofi, 2013). According to CAK (2019), during the quarter three of 2019, the number of mobile subscriptions stood at 53.2 million, in effect pushing the mobile penetration in the country to 11.2 per cent. The growth in mobile networks which have an impact on economic growth through the emergence of new services and applications for mobile cellular services supported this increase in the number of users.

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1.2 Statement of the Problem

Mobile banking registration and taking up today is incredible as a result of the multi-agency strategies that has been adopted by most financial institutions (Koksal, 2016). This strategy resulted "in maximized acceptance/adoption of mobile devices by customers as banking mechanisms. Most banks recruit M-banking customers by providing them with registration documents along with other mandatory formulas such as debit/credit card request or account opening, but later statistics are provided; the number of registered customers is high while use and therefore, efficiencies are decreased (Reeves & Sabharwal, 2013). The issue of high take- up of the product but eventual low usage of the same creates a need to address this disparity, since this situation means that there is a lot more potential in mobile banking as a service in terms of returns on investment. Banks would stand to lose income in case the situation persists.

There have been many studies conducted on various aspects of mobile banking but none has been conducted on the effect of the challenges a mobile banking end user on the overall performance of the service. For instance, Okiro and Ndungu (2013) on impact of mobile and internet banking on performance of financial institutions does not assess on the factors impeding the slow uptake and/or post adoption usage of the mobile banking channel. A study by Kiura (2014) on challenges influencing mobile banking adoption and use on Equity Bank does not look at challenges faced in marketing of the channel to the targeted clients. Dineshwar *et al*. (2013) investigated mobile banking adoption and usage in Mauritius. This research adds information to the knowledge body on the factors which influence the performance of mobile banking and as well gives a foundation bas upon which other researches could be done regarding mobile banking and related marketing challenges. Thus, the study sought to investigate the user challenges and performance of mobile banking: case of selected commercial banks in Nairobi County.

1.3 Specific Objectives

i. To establish how technology improvement enhances performance of M-banking among commercial banks in Nairobi.
ii. To determine how user-security improvements enhance performance of M-banking among commercial banks in Nairobi.
iii. To establish ways in which risk prevention enhance performance of M-banking among commercial banks in Nairobi.
iv. To assess the extent to which user sensitization improvements enhance performance of M-banking among commercial banks in Nairobi.

1.4 Conceptual framework

Figure 1 provides insight and aids in understanding the complex array of causal relationships the dependent variable (performance of mobile banking) has with the independent variables.

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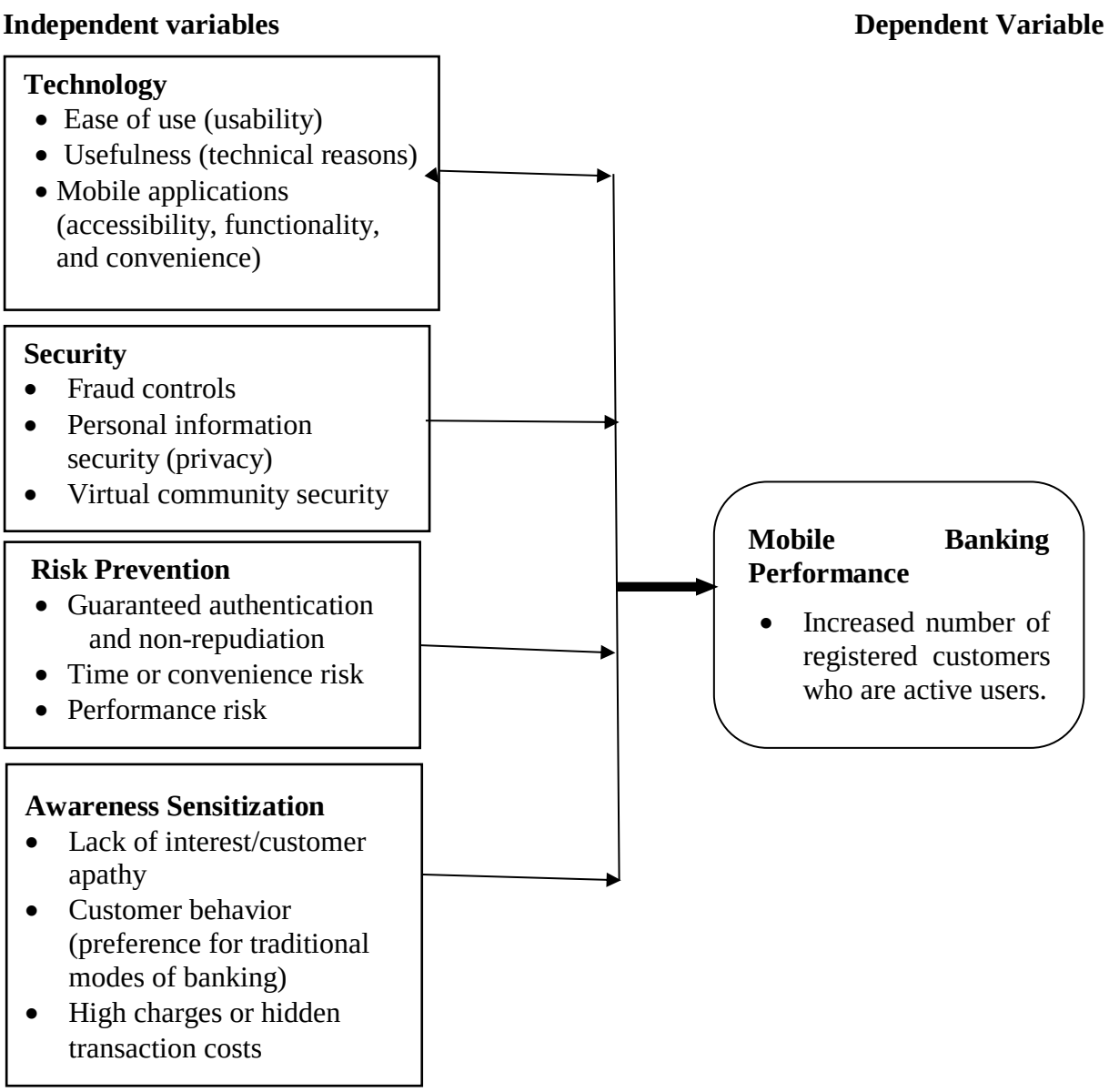

Figure 1: Conceptual Framework

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2.0 Literature Review

2.1 Theoretical Review

2.1.1. Innovation Diffusion theory

The distribution of all innovations; products, processes or philosophy has been linked to the diffusion of fluids between media. Individuals who first come into contact with an innovation must decide whether to accept or reject it. While some will act quickly, others will proceed slowly, conducting extensive research into the innovation and its expected outcomes. Thus, the decision phase is characterized as the path taken by an individual/decision-making unit from initial awareness of an innovation to developing an attitude toward it, to making a decision to adopt or reject it, to implementing and using the new idea, and to confirming this decision. In this theory, Agag and El-Masry (2016) invented attributes to assist in predicting when and where adoption occurs under given social conditions.

These attributes are; relative advantage, compatibility, complexity, trial ability, and observability. As per Wani and Ali (2015), even if they are beneficial, not all innovations are adopted, an innovation may take a long time to be adopted. He added that opposition to change can hinder the spread of innovation, even if it does not stop the invention that slows it down. The unwillingness to vary is partly due to lifestyle incompatibility. These investigations, together with the qualities of ID theory, show some possible aspects which affect technological improvements of performance, such as mobile banking.

2.1.2 Technology Acceptance Model

Technology Acceptance Model (TAM) proposes that users' motivation can be explained by three factors; Ease of Use (PEOU), Usefulness (PU) and the attitude towards using (ATU) the system (Marangunić & Granić, 2015). TAM has become popular in research work especially the ones oriented towards technology (L). Attitude has also been mentioned as the main element to whether one will use or reject a system (Rauniar, Rawski, Yang & Johnson, 2014).

TAM has been thoroughly tested and validated and is an acknowledged model. It was changed or extended with different theories or structures (Svendsen, Johnsen, Almås-Sørensen, & Vittersø, 2013). Organizational and social aspects have been incorporated into the TAM model as subjective standards, impression, quality of output and work relevance and led to a suggestion to develop the TAM2 hybrid model. To incite customer adoption of M-banking, the service level must be increased and the mobile banking services technological infrastructure must be sufficiently sophisticated to ensure the reliability and timely delivery of services to customers (Thakur, 2013). With regard to new functionalities, banks should further improve their mobile experience overall to enhance acceptance. Banks' information and guidance have the most important effect in decreasing the use barrier, followed respectively by the image, value and risk barriers. Through this study TAM can therefore be incorporated to reveal the factors and bottlenecks that slow down and prevent the acceptance of M-banking technology and its performance outcomes.

2.2 Empirical Review

2.2.1 Technology Improvements and Performance of Mobile Banking

The introduction of technologically innovative products such as mobile banking, electronic payments, security investments, and information exchanges enables banks to offer a broader range of services to their customers while utilizing fewer human resources (Akhisar, Tunay & Tunay, 2015). By lowering operational costs and streamlining transactions between customers on the same network, technology helps banks perform better. Thus, technology has facilitated a great deal of innovation, predominantly in the banking sector for positioning purposes. However, technology can generate a cluster of challenges on the market, insecurity about the type and scope of needs to be met, and customer misunderstanding of the emerging use and advantages of technology. In addition, it is difficult to determine the size of the potential market or how quickly new technology will spread (Ondiege, 2015).

Therefore, the rate of obsolescence is so high that users are more confused about the techno-savvy market. Furthermore, in as much as IT innovations are motivated primarily by the need for efficiency and convenience, system downtimes and other side effects can arise at times making the primary services so necessary totally unavailable and inaccessible (Mothobi & Grzybowski, 2017). The demands of vibrant mobile banking executions revolve around enhanced network coverage, quality connections (AlSoufi & Ali, 2014). Mobile banking for most banks takes place through mobile money transfers from third-party Telco firms whose preferences vary from banking and thus often lead to slow and bureaucratic handling of transactions, particularly on weekends. This externalization results in high financing costs and limits on the amount of money that could be withdrawn in a day and embezzlement (Ndungu, 2013).

There has never been a clear difference made between marketing strategies for IT-innovated products/services, as a result of which most players in the industry contextualize the pull strategy rather than the push strategy (Mothobi & Grzybowski, 2017). Wrong strategy may hamper the improved performance of mobile banking. The market has to do with the novelty of the technology and more support is necessary to dismiss end-user concerns and application fears. Consumer banking must have an important negative impact on Mobile banking adoption. Capturing innovators and early adopters to enter the market is inadequate to consider the marketing concept as enterprises are concerned with assessing and finding a way to meet unmet consumer needs (Oyewole *et al*., 2013).

2.2.2 User Security Improvements and Performance Mobile Banking

As customers demand frictionless online experience especially on mobile devices, in which there is specific demand for speed and responsiveness (AlSoufi & Ali, 2014). Further, companies must match the implementation of the capacities in order to carry out risky transactions in the way the device, the application and the user authenticate, preferred by the customer and allowed by local laws and regulations (KPMG, 2015). Fraud controls should be proportionate to the risk posed by individual customer actions and must rely on the authentication, integrity, and confidentiality of the customer's credentials and identity, as well as the assets stored on the device itself (Saleh & Mashhour, 2014).

Concerns regarding security of mobile banking is a substantial factor contributing to the level of performance and adoption rates. The inflexibility and inadequate confidence displayed by the majority of potential users stem in part from fear, uncertainty, and heresy regarding technological innovations such as mobile banking (Hosein, 2013). These may stem from prior exposure to similar technology or a familiar context, and are largely attributable to the level of knowledge required to operate new information technology products and services. Customer adoption in new markets is contingent upon growing trust (Saleh & Mashhour, 2014). Consumers' experiences with a few reckless providers may lead them to distrust all similar offerings on the market.

2.2.3 Risk Prevention and Performance of Mobile Banking

Substantial number of consumers and potential users of technological innovations anticipate loss in their own unique ways; the more certain their subjective outlooks on loss are, the more risks they anticipate (Chandran, 2014). They develop an internal sense and, more specifically, various independent risks, which causes them to lose interest in maximizing the use of such innovations as mobile banking, which has a negative effect on the channel's performance (Li, Liu & Ji, 2014).

Additionally, the stability of mobile devices has been seriously threatened by the continued spread of mobile viruses, which creates privacy and economic risks for users. The sense of loss or inadequacy keeps the majority of users and potential users from using the channel (Mullan, Bradley & Loane, 2017). Additional risks perception included uncertainty about the completion of a transaction and if not who should be consulted exactly; is it the bank or the mobile network provider? These are just a few of the questions and risk equivalents that must be acknowledged in order to maximize mobile banking usage (Etim, 2014).

2.2.4 User Sensitization and Performance of Mobile Banking

Non-price competition, in the form of marketing and advertising efforts, is a significant factor in commercial banks' performance (Shaikh & Karjaluoto, 2015). There is a strong correlation between advertising costs and the competitiveness of the market. Banks use advertising to foster an image of superior service through branching and advertising. The creation of awareness is a critical marketing communication function. This is accomplished through a suitable mix and integration of marketing communication tools such as advertising, salesmanship, and so on. Marketing communications are critical in any organization's process of establishing trust with its customers and potential market (Song, 2015). It is a relationship-building process that has a contextual effect on the organization's relationship with its target market.

Appropriate advertisement design and media message execution can result in a positive outcome for any business. Authors such as Baba, Dogonyaro, Yisa, Omobolanle (2019) articulate that mass media advertising in business to share information in consumer marketing with greater precision. Advertising has thus facilitated companies to achieve communication as well as other marketing goals. Customers begin the buying process by processing information sent by various organizations, through various forms of advertising, as mass communications. They will then develop brand knowledge and build a stronger need for the service or product concerned, which may then generate a need for more personal data. The customer will then look for more information on the offer while making use of the opportunity to sell (Dineshwar & Steven, 2013). Consequently, the success of an advertisement is no longer rooted on creating the ultimate message

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and selecting the ideal media channel, but the right strategies are required and a publicity plan must be properly developed (Okiro & Ndungu, 2013).

2.2.5 Performance of Mobile banking

As per the Business Daily issue of November 2020, mobile cashless payments have taken leap up to 85.8 percent market share of non-cash payment modes which schemes a bulging conversion to a cashless society (Business Daily, 2020). In sub-Saharan Africa, over half of mobile money transfer providers operate. East Africa has experienced a significant increase in mobile money services (Ondiege, 2015). Current international money transfer efforts are designed to enhance mobile money worldwide as a means of transactions.

Mobile banking provides a wide range of banking services to consumers everywhere. However, this service is currently not widely accepted by consumers (Jacky & Kennedy, 2013). The African Reports investigation found that in the year 2019, registered mobile money account in Sub-Saharan Africa stood at 469 billion subscribers, while the number of active users stood at 181 million indicating that only 38.5% have adopted the services (Okiro & Ndungu, 2013). This rate of adoption is significantly lower than other mobile value-added services. By recognizing the factors that affect the adoption and use of mobile banking services, banks can tackle bottlenecks that prevent user adoption and enhance their services (Gupta, 2013)."

3.0 Research Methodology

This study adopted a descriptive survey that helps in detecting associations between variables and measures cause and effect. It allows the researcher to collect detailed information on the studied population (Sreejesh, Mohapatra & Anusree, 2014). It was ideal since it guaranteed a complete description of the situation and ensured that minimum bias was achieved in the process of research. The target population was Operations and Customer service staff in all Kenyan commercial banks listed at the Nairobi Securities Exchange (NSE) totaling to 88. There are eleven banks listed at the NSE at the time of the study (NSE, 2018). The study adopted a stratified random sampling method whereby 50% of the population respectively were sampled thus, a sample size of 44. According to Mujere (2016), a sample size between 15 percent to 30 percent of the target population is enough representation of the entire population. The method of data collection was through the use of questionnaires. The data was analyzed using statistical package for social sciences (SPSS) version 20 (Gunst, 2018). Descriptive statistics, Pearson product moment correlation, and multiple regression analyses were employed.

The regression equation:

$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$

Y = Performance of M-banking

α= Constant term

β = Beta Coefficient

X_1 = Technology X_2 = User Security X_3 = Risk Prevention

X_4 = User Sensitization ε = Error term

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4.0 Findings and Discussion

4.1 Descriptive Statistics

Technology Improvements and Performance of Mobile Banking

The findings in table 1 relate to mobile banking technology and how its improvement can enhance the performance of mobile banking.

Table 1: Technology Improvements and Performance of Mobile Banking

	Strongly disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly disagree (%)	Total (%)
Users regard Mobile Banking as easy to use ease	9.4	15.6	6.3	50.0	18.8	100
Clients use mobile banking application for various reasons	0.0	94	16.5	53.1	21.9	100
Mobile banking enhances service accessibility, functionality, and convenience	0.0	6.3	22.4	44.4	28.6	100

When asked to respond on whether users regard Mobile Banking as easy to use ease, the majority at 50% agreed followed by 18.8% who strongly agreed. These results highlighted that most user regard mobile banking as easy to use ease. The findings concur with Akhisar et al. (2015) that implementing innovative technologies such as M-bank, electronic transfers, security investments, information interchange offers bank customers with minimal human resources more diverse services. Participants were asked whether clients use mobile banking application for various reasons, respondents (53.1%) agreed followed by strongly agreed at 21.9%. This is in line with Achieng and Ingari (2015) that m-banking in Kenya's commercial banks is utilized to improve banks performance as well as efficiency of bank services. When asked whether Mobile banking enhances service accessibility, functionality, and convenience 44% followed by 28% agreed and strongly agreed respectively thus an indication that Mobile banking enhances service accessibility, functionality, and convenience. Akhisar et al (2015) also observed that IT innovations are majorly inspired by the need for effectiveness and convenience.

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Security Improvements and Performance of Mobile Banking

The findings on Table 2 relate to mobile banking security and how its improvement affects mobile banking performance.

Table 2: Security Improvements and Performance of Mobile Banking

	Strongly disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly disagree (%)	Total (%)
The current mobile banking platform guarantees personal information security (privacy)	9.4	0	21.9	40.6	28.1	100
The current mobile banking platform guarantees virtual community security	6.3	3.1	28.1	43.8	18.8	100
Fraud controls have been incorporated in the current mobile banking platform	6.3	12.5	34.4	37.5	9.4	100

When requested to respond to whether current mobile banking platform guarantees personal information security (privacy), 40.6% and 28.1% respectively agreed and strongly agreed. These results hence highlighted that the current mobile banking platform guarantees personal information security. KPMG (2015) in line with this also indicates that because customers require frictionless online experiences, especially on mobile equipment, where speed and responsiveness are in particular demand, organizations have to match the functionality of the project with their ability to authenticate a device, the application and the user, in the ways the customer prefers and allowed for by local laws and rules. When asked whether the current mobile banking platform guarantees virtual community security, majority of respondents at 43.8% agreed while 18.8% strongly agreed. The findings thus point out that the current mobile banking platform guarantees virtual community security.

The research by AlSoufi and Ali (2014) argued that virtual security related issues is one of the reasons customers' perceptions of mobile banking adoption in Kingdom of Bahrain as the main reasons for rejection of mobile banking. When asked whether fraud controls have been incorporated in the current mobile banking platform, respondents (37.5%) agreed, 9.4% strongly agreed while 12.5% disagreed while 34.4% maintained a neutral stand thus, pointing out fraud controls have been incorporated in the current mobile banking platform. The findings of Vutsengwa and Ngugi (2013) indicate that the customers are hesitant to use mobile due to concerns about security, but if banks take steps to alleviate this fear and provide proper operational guidance, a sizable portion of the mobile user base could begin to migrate to mobile banking.

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Risk Prevention and performance of Mobile Banking

The results in Table 3 are about risk prevention and they affect performance of mobile banking.

Table 3: Risk Prevention and performance of Mobile Banking

	Strongly disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly disagree (%)	Total (%)
In mobile banking the parties to a transaction are well known	6.4	4.3	2.1	57.4	29.8	100
Mobile banking is associated with low Time and convenience risks	9.4	12.5	25	34.4	18.8	100
Bank strives to reduce the level of Risks among customers/users	13.1	9.3	9.4	19.4	50.1	100

To manage the risk of mobile banking, the parties to a transaction should be well known. Participants were requested to respond to whether in mobile banking the parties to a transaction are well known. Majority of the respondents at 57.4% agreed followed by strongly agree at 29.8%. The results highlight that in mobile banking, the parties to a transaction are well known. Cudjoe *et al*. (2015) on the other hand opine that when it comes to the perceived disadvantages of mobile banking, security concerns are identified as the primary factor. When asked whether Mobile banking is associated with low time and convenience risks, 34.4% and a further 18.8% agreed and strongly agreed, and 25% maintained a neutral stand. The results thus point out that Mobile banking is associated with low time and convenience risks. On the contrary, the findings of Laukkanen et al. (2013) state that a lot of consumers and potential users of technological innovations anticipate loss in their own unique ways; the more certain their subjective perceptions of loss are, the more they anticipate risks. On whether the bank strives to reduce the level of risks among customers/users, 50% of the respondents agreed with a further 19% at strongly agreed. These findings indicate that bank strives to reduce the level of risks among customers/users. In line with this, Gupta (2013) suggest that risk barriers combined with information and guidance provided by a bank have the greatest impact on lowering the usage barrier.

User Sensitization and Performance of Mobile Banking

The findings in Table 4 concerns awareness level among customers and how its related improvements enhance performance of mobile banking.

Table 4: User Sensitization and Performance of Mobile Banking

	Strongly disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly disagree (%)	Total (%)
There is lack of interest in mobile banking among customers	3.1	9.4	28.1	50	9.4	100
Customers have high preference for other traditional modes of banking	15.1	1.1	0	39.4	45.3	100
Users associate mobile banking with high charges or hidden transaction costs	1.2	12.2	13.4	47.6	25.6	100

High awareness is what motivates users to make use of a product or technology. When asked whether there is lack of interest in mobile banking among customers, 50% and a further 9.4% agreed and strongly agreed respectively while 28.1% neither agreed nor disagreed. The findings thus suggest that there is lack of interest in mobile banking among customers according to Okiro and Ndungu, (2013). Further, the use of mobile banking may be influenced by other factors among them the other traditional modes of banking. When asked to respond on a scale of five whether Customers have high preference for other traditional modes of banking, 39% and 45% of the respondents agreed and strongly agree respectively. The findings are an indicator that customers still have preference for other traditional modes of banking and not exclusively mobile banking. The findings of Vanitha (2013) in line with this state that the customers are hesitant to use mobile due to concerns about security, but if banks take steps to alleviate this fear and provide prosper operational guidance, a sizable portion of the mobile user base could begin to migrate to mobile banking. Service costs are a major determinant of usage rate and performance. When requested to respond on whether users associate mobile banking with high charges or hidden transaction costs, 47.6% and 25.6% strongly agreed and agreed respectively. The results tend to suggest that users associate mobile banking with high charges or hidden transaction costs. Kabir (2013) has a different opinion that it is not about costs but concerns about mobile banking security play an important role in determining performance and adoption rates. The uniformity and lack of self-confidence displayed by the majority of potential users are a result of phobia and ambiguity.

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4.3 Correlation Analysis

Pearson Bivariate correlation coefficient was utilized to calculate the correlation between the dependent variable (performance of mobile banking) and the independent variables (Technology, security, risk prevention and user sensitization) as shown in Table 4.

Table 4: Coefficient of correlation

	M-Banking Performance	Technology	Security	Risk Prevention	User Sensitization
M-Banking Performance	1				
Technology	.158	1			
Security	.361	.262	1		
Risk Prevention	.113	.165	.407	1	
User Sensitization	.255	.014	.225	.142	1

*. Correlation is significant at the 0.05 level (2-tailed).

As per the results, it was clear that there was a positive correlation between the independent variables- technology, security, risk, and awareness level and the dependent variable -performance of mobile banking. The analysis specifies the coefficient of correlation, r = 0.158, r = 0.361, r = 0.113 and r = 0.255 for technology, security, risk prevention and user sensitization respectively. This implies positive association amongst the independent variable and the dependent variable performance of mobile banking such that an improvement in technology, security, risk prevention and user sensitization will enhance the performance of mobile banking.

4.3 Multiple Regression Analysis

Table 5: Dependent variable: Mobile Banking Performance

Variables	Standardized Coefficients (Beta)	Std. Error	t values	P-values (Sig.)
Constant	11.941	0.115	0.000	0.000
Security	0.069	0.057	0.795	0.429
Technology	0.402	0.078	3.331	0.001
Risk Prevention	0.146	0.07	1.757	0.083
User Sensitization	0.381	0.059	4.93	0.000
Model summary:				
R	0.95			
R square	0.911			
ANOVA:				
F statistics (sig.)	220.958 (0.000)			

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Table 5 illustrated that the coefficient of determination was 0.911. This implied that 91.1% of mobile banking performance is explained by a combination of the four independent factors investigated in this study. Evidently, there are factors other than the four proposed in this model which can be used to predict mobile banking performance and thus this is a good model as Cooper and Schinder (2013) pointed out that as much as lower value R square 0.10-0.20 is acceptable in social science research. The ANOVA results show a P-value of 0.00 which is less than 0.05. This shows that the regression model is statistically significant in predicting factors influencing performance of mobile banking. The overall ANOVA results shows that the model was significant at F = 220.958, p-value = 0.000.

The regression coefficient results established that taking all factors into account (Mobile Banking performance as a result of technology, user security, risk prevention, and user sensitization), the constant will be 11.941. The results show that user sensitization and technology have positive significant relationship with performance of M-banking because their p-value is less than 0.05. However, risk prevention and security had positive but insignificant relationship with performance of M-banking as shown by p-values greater than 0.05. Further, all variables had positive β coefficients an indication that an increase in any or all the variables would lead to improved performance of M-banking.

5.0 Conclusions

The study findings reveal that improvements in technology, security, risk prevention and user sensitization have potential of improving the performance of mobile banking. Customer adoption in new markets is contingent upon growing trust. Consumers' experiences with a few irresponsible providers may cause them to distrust all similar offerings on the market.

Additionally, as a results of the continuous spread of mobile viruses, the stability of mobile devices system has suffered grave threat, bringing users privacy and economic risk. The fear of loss or inadequacy discourages the majority of users and potential users from using the channel. Although mobile banking is an integration of technology into the banking system, where value is stored electronically, it is still a difficult reality that the majority of users are yet to accept.

With technologically innovative products and services such as mobile banking, it may be necessary to dig a little deeper into the advertising strategies, as it is not just about raising awareness of the technology's availability, but regarding the educating users on proper usage and application to maximize the system's performance.

6.0 Recommendations

Marketing communication such as advertising can yield results in increasing uptake of mobile banking. More precisely, mass media advertising in business to communicate in consumer marketing. Advertising has thus enabled companies to achieve communication and other marketing goals. Customers begin the purchase process by processing the information that is sent by various organizations, through different forms of publicity, as mass communications. They then enhance brand knowledge and build a stronger need for the service or product concerned that may later trigger a need for further information.

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Fraud controls should be compatible with the risk of specific transactions and customer and inevitably rely heavily on the authentication, integrity and confidentiality of customer identity credentials and asset stored on the device itself.

Customers are hesitant to use mobile due to concerns about security, but if banks take steps to alleviate this fear and provide adequate operational guidance, a sizable portion of mobile users may begin to migrate to mobile banking.

In the long run, mobile banking is likely to have a significant impact on commercial banks' profitability, as it streamlines business operations. Banks should take steps to improve their competitiveness by training employees and investing in research and development of technology.

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