

# The Effects of Mobile-banking on the Bank's Competitive Advantage: A Case of Selected Commercial Banks in Eldoret Town, Kenya

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**Abstract:** M-Banking is used to denote the access to banking services and facilities offered by financial institutions such as account-based savings, payment transactions and other products by use of an electronic mobile device. Since the beginning of mobile banking in Kenya financial institutions have witnessed many changes. Bank customers now have access to fast, efficient and convenient banking services. Most financial institutions in Kenya are investing large sums on money in information and communication technology (ICT). The purpose of this study was to determine effects of mobile banking on the bank's competitive advantage. An explanatory design was adopted in the study. The target population was drawn of selected commercial Banks in Eldoret. The target population was 275 respondents. The sample size of 161 respondents was determined using sample size determination formula advanced by Krejcie and Morgan (1970). The 161 respondents were selected by simple random sampling in proportion to bank staff. The research was conducted using questionnaire as the main tool for collecting data. The study used primary data, which was collected, by use of self-administered questionnaires. The study findings revealed that there is a statistically positive relationship between usage of mobile banking and bank's competitive advantage. It was therefore recommended that Banks need to expand the provision of mobile banking services in order to attract new customers and retain the old customers. Similarly, there is need for banks to provide mobile banking services at low cost to the clients. The study was crucial to emerging financial institutions as it provides answers to the factors against the implementation of mobile banking in Kenya, prove of the success and growth associated with the implementation of mobile banking and highlights the areas of banking operations that can be enhanced via e-banking. It is equally significant for bank executives and indeed the policy makers of the banks and financial institutions to be aware of mobile-banking as a product of e-commerce with a view to making strategic decisions.

**Keywords:** Electronic Banking, Mobile Banking Competitive Advantage, Commercial Banks

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## I. Introduction

The terms Mobile Phone banking and mobile banking (M-Banking) are used interchangeably. M-Banking is used to denote the access to banking services and facilities offered by financial institutions such as account-based savings, payment transactions and other products by use of an electronic mobile device. According to Mallat *et al.* (2004), mobile banking encompasses the provision of banking and financial services through the help of mobile telecommunication devices. The scope of offered services may include facilities to conduct bank and stock market transactions, administer accounts and to access customized information. Mishra & Bisht (2013) distinguishes two aspects of mobile banking: Additive and transformational characteristics. *Additive aspects* are those in which the mobile phone is merely another channel to an existing bank account. Mobile banking is additive when it merely adds to the range of choices or enhances the convenience of existing customers of mainstream financial institutions. *Transformational characteristics* arise when the financial product linked to the use of the phone is targeted at persons who do not hold formal bank accounts with the conventional banking institutions.

Mobile banking in Kenya started with the creation of services by banks which could be accessed through the mobile phone. These facilities aimed to enable customer's access information relating to their accounts. Subsequent innovations have seen the mobile banking phenomena continue to grow steadily. Currently, even mobile networks in Kenya offer mobile banking services in the name of M-pesa by Safaricom, Orange money by Orange, Yu-cash by Essar, and Airtel money by Airtel. Currently the mobile money market size is about 15 million users transferring Kshs. 2 billion daily, of these over 14 million are Mpesa customers (Ibrahim, 2015). Mobile money providers have partnered with commercial banks such as Equity Bank, I&M Bank, and Kenya Commercial Bank, Barclays and Co-operative to offer mobile based financial products that aim to reach the unbanked (Kariuki, 2015).

The most prominent mobile-banking service in Kenya is the M-Pesa service offered by Safaricom which is the Kenya's largest cellular phone provider. M-Pesa allows users to exchange cash for "e-float" on their phones, to send e-float to other cellular phone users, and to exchange e-float back into cash (Burns, 2015).

Within eight months of its inception in March 2007, over 1.1 million Kenyans had registered to use M-Pesa, and over US\$87 million had been transferred over the system (Mbiti & Weil, 2013). By September 2009, over 8.5 million Kenyans had registered to use the service and US\$3.7 billion (equivalent to 10 percent of Kenya's GDP) had been transferred over the system since inception. This explosive growth was also mirrored in the growth of M-Pesa agents (or service locations), which grew to over 18,000 locations by April 2010, from a base of approximately 450 in mid-2007 (Buku & Meredith, 2012). By contrast, Kenya has approximately only 500 bank branches.

Another Kenyan financial services heavyweight Equity Bank has already rolled-out mobile banking services using innovative paper-thin SIM technology. This allows customers to maintain their existing phone numbers and services, but give the bank access to the phone menu and ensure that banking transactions are secure. With more than eight million customers, Equity Bank is Africa's largest bank by customer base. The company is hoping that mobile banking will help attract new customers and encourage more mobile-banking transactions. According to BBitok (2015), the new mobile banking platform is likely to shake up a market that has been dominated by Safaricom's well-known M-Pesa mobile money transfer platform.

While the mobile banking is within sight of becoming the dominant banking business in Kenya, such e-money services are still in their early days and are continually evolving in response to competitive pressures and customer needs. Currently, Mobile-money providers are swiftly partnering with commercial banks such as Equity Bank, I&M Bank, and Kenya Commercial Bank, Barclays and Co-operative to offer mobile based financial products that aim to reach the unbanked.

Information sent on request mostly concerns current interest rates or currency exchange rates. Providing these is simple for the bank because this is publicly accessible information that needs no protection (Freedman, 2000). A client however can request information about the balance in his account, which is not public information and must be protected when it is provided. Passwords are used for this purpose or technologies based on the principle of an electronic key. A client however is required to know the code of every transaction including constant and variable symbols (Tarkka, 2002).

Since the beginning of mobile banking in Kenya, financial institutions have witnessed many changes. Bank customers now have access to fast, efficient and convenient banking services. Most financial institutions in Kenya are investing large sums on money in information and communication technology (ICT). However while the rapid development of ICT has made some banking tasks more efficient and cheaper, customers seem not to be willing to adapt to these services as evident by increased queues in the banking halls and customers still carrying large amount of cash, which points to their being dissatisfied with the services. The issue of competitive advantage associated with mobile banking has little been studied in Kenya. This study therefore attempted to establish the effects of mobile banking on achieving competitive advantage on Banks.

## **II. Research Methodology**

**Research Design:** An explanatory and survey design was adopted in the study. This design is most appropriate method to study the objectives set in this study because the researcher sought to explain the relationship between variables. De Vaus, (2002) explains that researcher has an explanatory purpose if he/she wishes to know why a certain event happened as opposed to simply describing what happened. The degree of relationship between two variables is of particular concern in explanatory studies. Explanatory research stresses the determination of causes. This design measures the extent of relationship between the variables. Explanatory research designs attempt to specify the nature of functional relationship between two or more variables. Explanatory research is useful to show the impact of one variable on another. The relationship between the independent and dependent variables can be studied in detail using an explanatory research design.

**Study Area:** The study was conducted among selected commercial banks in Eldoret town. Eldoret town has 23 Banks operating within the town. The town lies 320 kilometers West of Nairobi city.

**Target Population:** The target population was drawn all commercial Banks in Eldoret. There are 23 commercial Banks in Eldoret town with a workforce of 50 management staff and 225 middle level management staff who formed the population of the study. The target population was 275 respondents.

**Sample Size and Sampling Procedures:** Sampling is the process of selecting a sub-set of cases in order to draw conclusions about the entire set. A sample is a small part of large population, which is thought to be representative of the larger population (Orodho, 2003). Any statements made about the sample should be true for the entire population. As noted by Cohen *et al.* (2003), factors such as expenses, time and accessibility frequently prevent researchers from gaining information from the whole population. Therefore, there is need to obtain data from a smaller group or subset of the total population in such a way that the knowledge gained is representative of the total population under study. The sample size for this study was determined using sample

size determination formula advanced by Krejcie and Morgan (1970). Using the formula, the sample size for a target of 275 respondents at confidence level of 95 % was 161. The 161 respondents were selected by using stratified sampling in proportion to bank staff.

**Data Collection Procedures:** Primary and secondary data was used in this study. Primary data was collected through the questionnaires while secondary data was collected from text, journals and magazines. Data was collected at several locations in Eldoret using Quota sampling (by age and sex). Two different questionnaires was designed, one for each category. Respondents were asked to answer questions with respect to competitive advantage and the use of mobile in banking.

The study used semi-structured questionnaires as the main tool for collecting data. The selection of this tool has been guided by the nature of data to be collected, time available, as well as by the objective of the study. The study was mainly concerned with views, opinions, and perceptions. Such information can best be collected through the use of questionnaire (Touliatos & Compton, 1988).

The researcher acquired research permit and letter of authority from Kenya bankers association. With the help of research assistants the questionnaires were administered to the top level management and the middle level management. Data was collected at several locations in Eldoret using Quota sampling (by age and sex). Two different questionnaires was designed, one for each category. Respondents were asked to answer questions with respect to competitive advantage, electronic plastic cards, internet banking and the use of SMS in banking.

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**Validity and Reliability of the Instruments:** To determine the content validity of questionnaire items, educational experts from the Kisii University was consulted. Some respondents were also asked if there were items that were not clear. Suggestion and advice offered was used as a basis to modify the research items and make them more adaptable in the study. To establish the reliability of the questionnaire items, a pilot study was conducted in a micro-banking institution in Eldoret. The questionnaire was administered to the staff members of the selected micro-banking institution and thereafter Cronbach Alpha Coefficient was used to test on the reliability of the instruments. A Cronbach Alpha coefficient of 0.78 was obtained after piloting indicating that the instruments were reliable for data collection.

**Data Analysis and Presentation:** Descriptive statistics was used to compute certain indices or measures along with the search for patterns or relationships that existed among the data groups. Prior to testing the hypotheses the multi-item scales was evaluated using exploratory and confirmatory techniques to assess reliability, dimensionality and validity. To assess the reliability of the measures Cronbach's alpha and the item-to-total correlation for all scales was used. Correlation of variables was carried out to establish existence of associations between independent and dependent variable. Furthermore, multiple regression and moderated regression was carried out using predefined models containing independent variables and dependent variable.

### III. Results and Discussion

#### Demographic Information

This section focuses on demographic characteristics of sampled respondents from the study area. Such a profile is important in providing a basis for a clear understanding of the respondents used in the study. A total of 146 out of 161 respondents duly filled and returned the questionnaires. The return rate for questionnaires used in data analysis was 90.7% which was therefore considered high enough to provide information relevant to this study. The demographic information of the respondents is presented in Table 1.

**Table 1:** Demographic Information

Information		Frequency	Percentage
Gender	Male	84	57.50
	Female	62	42.50
	Total	146	100.00
Work Experience	Less than 6 months	9	6.2
	1 -2 years	12	8.2
	3- 4 years	18	12.3
	More than 4 years	107	73.3
	Total	146	100.00
Position in Management	Top Management	30	20.50
	Middle Level management	116	79.70
	Total	146	100.00

*Source: Survey Data, 2014*

Table1 shows that 57.5% (84) of the sampled respondents were male while 42.5% (62) of the respondents were female. This shows that a higher percentage of Bank workers in Eldoret town is made up of male workers. Further it emerged that 73.3% (107) of the respondents had more than 4 years banking experience, 12.3% (18) respondents had 2 -4 years banking experience and 8.2% (12) respondents had 1-2 years banking experience while 6.2% (9) respondents had less than 6 months banking experience. The study findings shows that majority of the respondents had a banking experience of more than 4 years and therefore were able to understand the effects of e-banking on achieving competitive advantage among commercial Banks. Process re-engineering in banks occurred in some ten years ago and most banks have adopted e-banking as one way of re-engineering which influences customer satisfaction and retention.

In addition, it was found out that 79.50 % (116) of the respondents were middle level managers while 20.5% (30) of the respondents were in top-level management. It can therefore be shown that majority of the respondents were in middle level of management an implication that majority of the employees in commercial banks are in the middle level management positions.

**Effects of Internet Banking on the Bank's Competitive Advantage**

The main objective of this study was to determine the effects of internet banking on the bank's competitive advantage. To achieve this objective, the respondents were asked to rate the level of agreement on a five likert questions in the questionnaire on effects of mobile banking on the bank's competitive advantage. The results of data analysis are presented in Table 2.

**Table 2:** Effects of Mobile/SMS Banking on the bank's competitive advantage

Statement		SA	A	U	D	SD	Mean	SD	Skewness
The bank provides call centers in a timely manner	F	44	66	6	17	13	2.23	1.250	1.016
	%	30.1	45.2	4.1	11.6	8.9			
The bank makes use of cell phones to process financial application	F	43	69	8	20	6	2.157	1.118	1.003
	%	29.5	47.3	5.5	13.7	4.1			
The bank provides Services to clients through SMS service	F	37	72	27	10	0	2.07	.844	.566
	%	25.3	49.3	18.5	6.8	0.0			
The bank provide services to customer on regular basis through SMS service free of charge	F	26	89	15	9	7	2.19	.963	1.340
	%	17.8	61.0	10.3	6.2	4.8			
Sendin information on the Transactions of bank account via SMS attracts more customer	F	50	48	23	18	7	2.21	1.180	.768
	%	34.2	32.9	15.8	12.3	4.8			
The bank sends Interest rates prices via SMS which gave the bank a competitive advantage	F	26	55	16	39	10	2.67	1.237	.296
	%	17.8	37.7	11.0	26.7	6.8			

Source: Survey Data, 2014

Table 2 showed that 75.3% of the respondents were in agreement with the statement that the bank provided call centers to accomplish financial transactions in a timely manner through the use of the phones and 20.5% respondents were in disagreement with the statement while 4.1% respondents were undecided on the statement. Majority (75.3%) of the respondents reported that their banks provided call centers to accomplish financial transactions through the use of mobile phones in a timely basis improving on banks efficiency.

In addition, 76.8% of the respondents were in agreement with the statement that the bank makes available to use cell phones to process financial application with speed around the clock which increased number of clients, 17.8% respondents disagreed with the statement while 5.5% respondents were undecided on the statement. It appeared that majority of the commercial banks in Eldoret make use of cell phones to process financial application with speed around the clock increasing the banks' efficiency leading to increase in the number of clients.

On the statement that the bank provide out the processes that occur to customer's accounts on regular basis through SMS service quickly and around the clock which increase customer loyalty, 74.6% of the respondents were in agreement with the statement, 18.5% respondents were undecided on the statement while 6.8% respondents were in disagreement. This shows that most of the commercial banks in Eldoret town usually SMS their customers on all transactions made on their accounts making customers to closely monitor their accounts.

Similarly, 78.8% respondents were in agreement with the statement that their bank provide out the processes that occur to customer's accounts on regular basis through SMS service free of charge which increase

customer loyalty, while 11.0% respondents were in disagreement with the statement. This shows that most commercial Banks in Eldoret town provide their customers with account transactions through SMS services free of charge influencing customers' loyalty to the Banks. This could translate to high customer attraction to the various banks using this service.

Further, it emerged that 55.5% of the respondents believed that their banks usually sends interest rates prices via SMS which gave the bank a competitive advantage, 33.5% of the respondents disagreed with the statement while 11.0% of the respondents were undecided on the statement. This shows that most commercial banks in Eldoret town use SMS services to give their customers the interest rate prices.

### **Bank's Competitive Advantage**

The researcher sought to establish Bank's competitive advantage. The results shows that 88 (60.3%) respondents strongly agreed that e-banking contributes to lower cost of doing business, 30(20.5%) respondents agreed with the statement, 4(2.7%) respondents disagreed with the statement. Further, a mean of  $3.66 \pm .985$  was obtained showing that majority of the respondents believed that e-Banking contributes to reduced cost doing business. Similarly 90(61.6%) respondents agreed with the statement that e-banking leads banks to offering service to clients with high efficiency, 49(33.6%) respondents strongly agreed with the statement, 4(2.7%) respondents were in disagreement. A mean of  $4.17 \pm .743$  was obtained on the statement with a skewness of .041 showing that majority (95.2%) of the respondents reported that e-banking made banks to offer services to their clients with high efficiency.

In addition, 68(46.6%) respondents reported that e-banking lead to increased trading volume and annual profit growth, 47(32.2%) respondents strongly agreed with the statement, 21(14.4%) respondents were undecided on the statement while 10(6.8%) respondents were in disagreement with the statement. A mean value of  $3.59 \pm .862$  was obtained showing that majority (78.8%) of the respondents were of the view that e-banking led to increased trade volume and profits.

Further it emerged that 75(51.4%) respondents strongly agreed with the statement that e-banking increased bank's productivity, 41(28.21%) respondents agreed with the statement while 14(9.6%) respondents disagreed with the statement. A mean of  $3.60 \pm .748$  was obtained on the statement. In addition, 90.5% (132) respondents were in agreement with the statement that e-banking added value to Bank's business and created competitive advantage. A mean of  $4.04 \pm .701$  was obtained on the statement showing that majority (90.5%) of the respondents believed that e-banking added value to the business and created Bank's competitive advantage. Similarly, 89(61.0%) respondents agreed that e-banking contributed to market share growth and targeted new markets, 43(29.5%) respondents strongly agreed with the statement, 8(5.5%) respondents were undecided on the statement while 6(4.1%) respondents disagreed with the statement. A mean of  $3.10 \pm .950$  was obtained on the statement showing that majority of the respondents were in agreement with the statement.

Further 54(37.0%) respondents reported agreed with the statement that e-banking facilitated the developments of new products, 55(37.7%) respondents strongly agreed with the statement, 27(18.5%) respondents were undecided on the statement while 10(6.8%) respondents were in disagreement with the statement. A mean of  $3.09 \pm .916$  was obtained from the responses showing that majority of the respondents believed that e-banking facilitated the developments of new products. In addition, 57(39.0%) respondents agreed that e-banking increases market share, 49(33.6%) respondents strongly agreed with the statement, 26(17.8%) respondents were undecided on the statement and 7(4.8%) respondents strongly disagreed with the statement while 7(4.8%) respondents disagreed with the statement. A mean value of  $3.08 \pm 1.067$  was obtained on the statement indicating that majority of the respondents believed that e-banking led to increase in market share.

Further 61(41.8%) respondents agreed with the statement that e-banking led to increase revenue generation, 57(39.0%) respondents strongly agreed with the statement, 15(10.3%) respondents were undecided on the statement while 13(8.9%) respondents were in disagreement with the statement. In addition, a mean of  $3.89 \pm .918$  was obtained from the responses showing that majority (80.8%) of the respondents believed that e-banking led to increased revenue generation in their banks. Similarly, 63(43.2%) respondents agreed that their banks had multiplicity and diversity of E-banking services offered by the bank, 42(28.8%) respondents strongly agreed with the statement, 18(12.3%) respondents were undecided on the statement, 17(11.6%) respondents strongly disagreed with the statement while 6(4.1%) respondents disagreed with the statement. A mean of  $3.27 \pm 1.069$  was obtained showing that majority of the respondents reported that their banks provided multiplicity and diversity of E-banking services.

**Correlation Analysis:** To understand the effects of use of mobile banking on banks' competitive advantage, Pearson correlation analysis was performed. At 95% confidence level, use of mobile banking and banks' competitive advantage were positively correlated and significant ( $r = .579$ ,  $p = .000$ ). From the results it can be shown that there was a strong positive and significant relation between use of mobile banking and bank's

competitive advantage among commercial banks in Eldoret Town and thus the null hypothesis that there is no significant relationship between usage of mobile banking and bank's competitive advantage was rejected.

#### **IV. Conclusions and Recommendations**

The study findings indicated that there was a strong positive and significant relation between use of mobile banking and bank's competitive advantage among commercial banks in Eldoret Town.

The following recommendations were made based on the study findings:

- a) The banks have a duty to ensure customer confidence in the electronic banking services by providing call centers which are 24Hrs service and increasing efficiency of conducting business through mobile banking.
- b) There is need for banks to provide their clients with account update on regular basis through SMS service free of charge in order to increase customer loyalty.
- c) There is need for banks to provide their clients with interest rate price through the mobile banking services at a low cost thus achieving competitive advantage.

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