

Emergence of Information Technology in the Kenyan banking Sector: An empirical study

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Abstract

The financial service industry is truly at crossroads. The new electronic age has transformed the marketing of banking services. Customers nowadays demand new and differentiated financial products and services. In the essence banks must search for new strategies of marketing their products and services. With pressure from dynamic and advancement of information technology, different electronic distribution channels have been adopted to meet the demands of customers. The main objective of this paper is to examine the adoption of information technology in Kenyan banks. The services provided through internet and mobile banking. The data for this study was obtained from primary source with the use of well structured and pre-tested questionnaires which were distributed among customers of Kenyan banks. The study concluded that in order to achieve business excellence goals, the road map to inclusion of information technology in banking business as marketing and customer retention strategy was necessary in modern banking business. Banks with fast innovative decision regarding diversification and integration will survive in the competitive financial service market.

Key words: e-banking, Customer, Banking, Technology, SMS banking

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1. Introduction

The world witnesses an information and technology revolution (Siam, 2006). This revolution has touched every aspect of people's life including banking. Singh (2002) opined that technology has introduced new ways of delivering banking services and products to the customers, such as ATMs, and internet banking (IB). Hence banks have found themselves at the forefront of technology adoption for the past three decades. These changes and developments in the banking industry have impacts on serves quality, future of the banking activities, and consequently its continually competitive ability in the world markets since going along with technology is one of the most important factors of economic organizations success in general and banks in particular (Siam, 2006). This motivates banks to spend more on technology and information to achieve maximum returns and attract large number of clients.

2. Literature Review and objective development

While efforts have been made to survey the various relevant empirical studies, it was discovered that two studies (Nyangosi,et.al, 2009 and Barako and Gatere, 2008) attempted to study IT in the Kenyan banks. This section will concentrate on summarized findings of relevant researches, develop objective from the findings and indicate the organization of this paper.

2.1 Survey of relevant contributions

Zheng and Zhong (2005) examined the trend in the internet revolutions that have set the Chinese banking sector in motion and the Factors which have influenced the adoption of IB in china. It was revealed that internet availability, awareness, attitude

towards change, computer and internet access, cost, trust in ones bank, security concerns, ease of use and convenience were the major factors affecting the adoption.

Al-Hajri (2008) examined various factors that might act to determine whether a given technology is likely to be adopted by the banking industry in developing country such as Oman by comparing it with a developed country such as Australia. The result indicated that relative advantage, organizational performance, Customer organizational relationship and ease of use, can shed light on the reasons for adoption of Internet technology

An exploration done by Singhal and Padhmabhan, (2008), revealed that utility request, security, utility transaction, ticket booking and funds transfer were major factors contributing to internet banking adoption

Tat, et.al (2008) examined predictors of intention among users of internet banking to continue using IB services. It was revealed that trust was the strongest predictor followed by compatibility and ease of use

Mirza,et.al.,(2009) revealed a significant difference between demographic and attitude of users and non-user groups. The majority of customers were very comfortable and willing to use IB services. Security concerns, lack of technological knowledge and awareness stood out as being obstacles to the adoption of Internet Banking

Yuttapong et.al (2009) investigated the factors impacting the adoption of internet banking and found that complexity had a negative relationship with intention to adopt the internet banking in Thailand. Further, it was indicated that compatibility had a high positive relationship with intention to adopt IB

Al-ghamdi and King (2009) explored how IB affects the relationship between customers' trust and their loyalty. The study also examined how factors may affecting IB usage can be different in UK and Saudi Arabia. The study considered privacy aspects, communication, customer experience, usefulness, self-efficacy and ease of use as major factors trust and customer loyalty.

The survey of literature indicates that many researchers have examined factors affecting IB adoption, trends in different countries but not in Kenya. This study therefore, is sought to focus on the adoption of internet banking in Kenya, the perceived usefulness of Mobile banking and analyze the banking services provided by internet and mobile phone banking. The objectives were developed which initiated a survey study

2.2 Objectives of the study

This study has the following major objectives:

- To investigate from Kenya customers the various technologies adopted by their banks
- To study internet banking usage in Kenya
- To explore the perceived utility of SMS banking
- To analyze the banking services adopted by Kenyan customers through mobile phones

2.3 Organization of the study

This study has been divided into six sections. The first section deals with the general introduction of the study which gives an overview of the ideology to be dealt with. The second section develops objectives and raises research questions from revisiting the already existing contributions which has been made available by many scholars. The third section was dedicated to the methods and the design selected to

conduct the research. Section four presented findings of the study, section five gave the conclusion, recommendation and policy implications of the study

3. Methodological design

The universe of the study comprised customers of all commercial banks in Kenya in some selected major cities. It was necessary that the approached respondents should be e-banking savvy. This was done by approaching the respondent and asking if he/she has adopted mobile or internet banking technology. The respondents which do not use these services were excluded from the sample.

The research instrument was mailed to identified respondents addresses, others were personally distributed using drop and pick method. E-mail attachment through internet was used to send the questionnaires to known customers. Out of the total 300 questionnaires send to respondents and after several reminders, 125 usable responses were received. The period of the study was the Last quarter of 2006 to the third quarter of 2007. Important statistical tools like Chi- square, Cross-tabulation and other appropriate tools were applied with the help of SPSS statistical software Version 12.0

4. Result and Discussion

4.1. E-Banking Technologies available in Kenya Banks

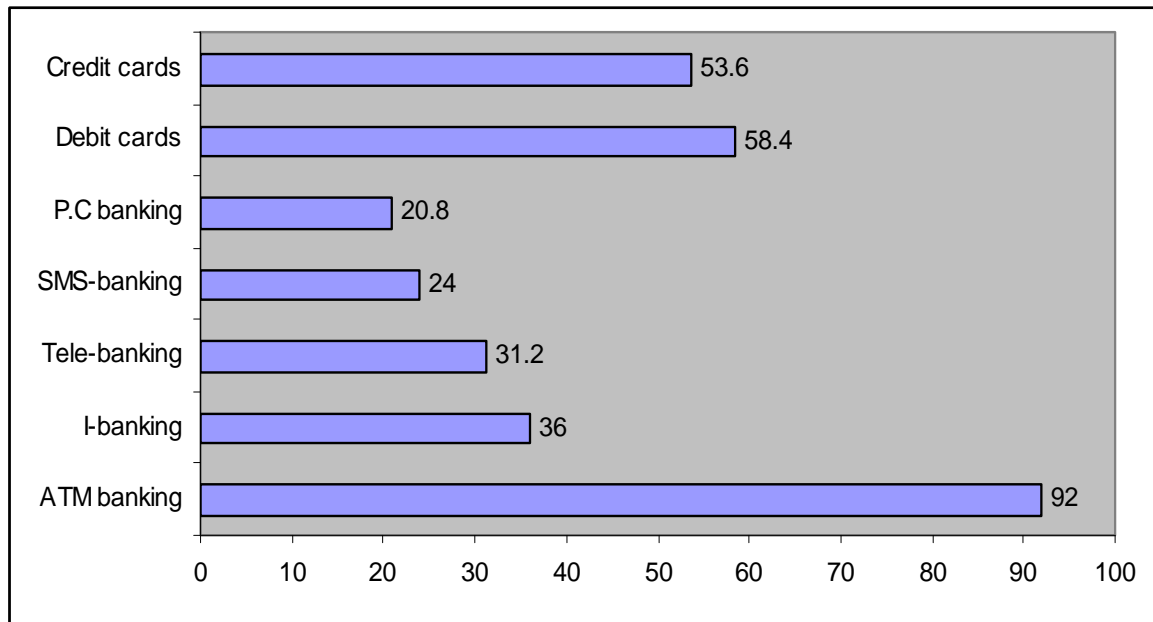
Banks in Kenya, have adapted different technologies through which e-banking services are provided. Customers were asked to indicate the various technologies their banks have adopted. This was enquired to know if the customers are aware of the technologies provided by their banks. Seven common technologies were selected to present the variables which include ATM, Internet banking, Tele-banking, SMS banking, PC banking, Debit cards and Credit cards. The variables are labeled and the result is

presented on table 1 and Figure 1. From the Figure, Kenyan customers are seen to favor ATM banking (92.0%). This has been followed by debit cards (58.4%) and credit cards 53.6%.

Table1: Distribution E-Banking technologies available for Customers

Variable	<20 yrs n=9	20-35 yrs n=88	36-50 yrs n=22	>50yrs n=6	Total N=125
ATM banking	6 (66.7)	82 (93.2)	21 (95.5)	6 (100)	115 (92.0)
I-banking	6 (66.7)	27 (30.7)	13 (59.1)	00	46 (36)
Tele-banking	3 (33.3)	23 (26.1)	11 (50.0)	2 (33.3)	39 (31.2)
SMS-banking	00	17 (19.3)	11 (50.0)	2 (33.3)	30 (24.0)
P.C banking	3 (33.3)	16 (18.2)	7 (31.8)	00	26 (20.8)
Debit cards	4 (44.4)	49 (55.7)	16 (72.7)	4 (66.7)	73 (58.4)
Credit cards	4 (44.4)	45 (51.1)	14 (63.6)	4 (66.7)	67 (53.6)

Figure1: E-banking Technologies available in Banks



This reveals that cards banking in general dominate e-banking adoption in Kenya. The least favored were SMS banking (24%) and PC banking (20.8%). The least favor on

PC banking may be attributed to the fact that computer penetration in Kenya is very low and hence many banks have utilized the technologies other than PC and SMS banking and may be due to infrastructural problems

H1: Age is not associated with e-banking adoption

The hypothesis above can be rejected since it was observed that young and middle aged with more than 20 years and less than 50 were mostly adopters of e-banking

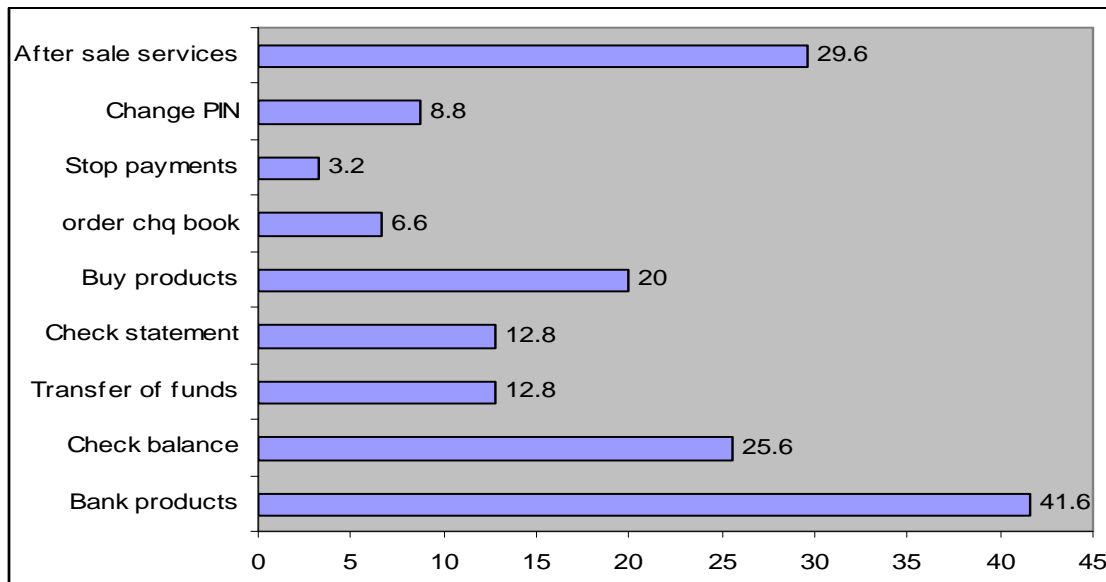
4.2 Internet banking usage in Kenya

Internet banking has gained popularity in the modern banking arena. Using nine common services offered through internet banking, it was enquired from customers the most used services. The various services were listed as variables and the result is presented on figure 2. The list of variables which represents the internet banking services include, know products of banks, check balance, electronic funds transfers, check statement, purchase products, order cheque books, stop payment, change password or pin and after sale service i.e. e-mail enquiries. Figure 2 reveals that majority of Kenyan customers favored the first service. They use bank websites to know information and the news of innovative products provided by banks (41.6%) and services offered by their banks. After sale service (29.6%) also received favor of respondents as a service mostly used.

The survey revealed further that 25.6% of the respondents used internet banking when they want to know the balances in their accounts. Also 20% of the customer respondents reported that they purchased product through internet banking which included opening new accounts and other bank products and services. The least

favoured internet banking services included change of password (8.8%) order cheque book through internet banking (6.6%), and stop payment (3.2%).

Figure 2: Internet banking Usage by Kenyan customers



4.3 Perceived utility of SMS banking

Financial products through cell phones have gained popularity in recent times. Customers find it easy, convenient, and efficient to transact conventional banking services which are non-monetary in nature such as balance enquiry, transfer of funds, change password etc. The research proposed to ask their feeling toward the emergence of SMS banking. The result is presented in on the basis of bank wise and age-wise. The strong feeling were indicated by strongly agree and the weakest feeling was indicated by strongly disagree.

Table 2 shows that majority (38.4%) of Kenyan customers strongly agreed that mobile banking is useful channel for banking services. In the same case, 42.4% agreed and 15.2% were neutral about the usefulness of mobile banking. However, few

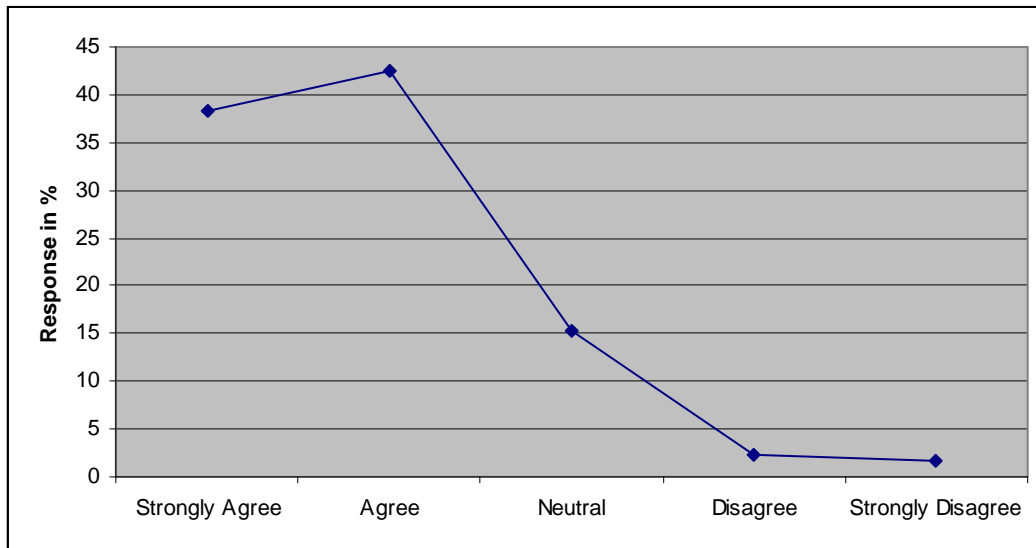
respondents 2.4% and 1.6% disagreed and strongly disagreed respectively on this issue. The overall picture from Kenya indicates that, customers consider SMS banking to be useful as more than 80% either agreed or strongly agreed that SMS banking is a useful channel through which banking service should be provided.

Table2: Utility of SMS banking in Kenya

Variable	Bank type wise				Age-wise				
	PBs	PSBs	MNBs	Total	<20	20-35	36-50	>50	Total
Strongly Agree	33 (44.0)	5 (20.0)	10 (40.0)	48 (38.4)	5 (55.6)	32 (36.4)	9 (40.9)	2 (33.3)	48 (38.4)
Agree	29 (38.7)	12 (48.0)	12 (48.0)	53 (42.4)	3 (33.3)	39 (44.3)	11 (50.0)	-	53 (42.4)
Neutral	9 (12.0)	7 (28.0)	3 (12.0)	19 (15.2)	1 (11.1)	13 (14.8)	2 (9.1)	3 (50.0)	19 (15.2)
Disagree	2 (2.7)	1 (4.0)	-	3 (2.4)	-	2 (2.3)	-	1 (16.7)	3 (2.4)
Strongly Disagree	2 (2.7)	-	-	2 (1.6)	-	2 (2.3)	-	-	2 (1.6)
N=	75 (60)	25 (20)	25 (20)	125 (100)	9 (7.2)	88 (70.4)	22 (17.6)	6 (4.8)	125 (100)

Bank-wise perspective show that, more than 80% customer respondents from the private banks agreed or strongly agreed with the fact that SMS banking is a useful channel. Majority from PSBs(48.0%) agreed and 28% were neutral. This reveals that PSBs, need to do more either by adopting this service or by promoting it through public awareness. Majority of respondents who belonged to MNBs category (48%) agreed and 38.4% of them strongly agreed with the fact that SMS banking is useful. Age-wise analysis shows that, 55.6% of Kenyan responded aged 20 years and below strongly agreed with introduction of SMS banking. Majority of the age category two (21-50) agreed with the introduction of SMS banking, however, the case of the old aged respondents were different, where 50% were unable to give their feeling and only 33.3% agreed strongly that SMS banking is useful and should be introduced.

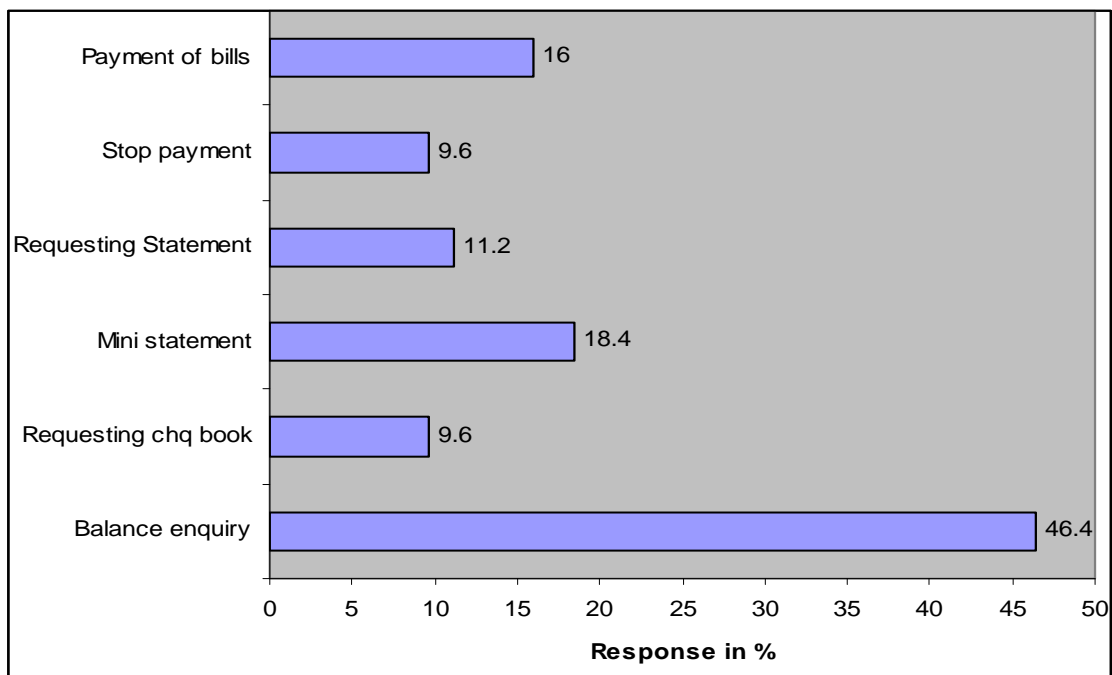
Figure3: Utility of SMS banking in Kenya



4.4 Utilization of SMS banking services

Using different common E-banking services provided through a cell phone, which included: balance inquiry, requesting cheque book, know last few transactions, requesting bank statement, stop payment of cheque, and bill payment.

Figure4: SMS banking Usage by Customers.



Respondents were asked to indicate the services they had started using. Figure 4 present the result. From the figure, it is clear that majority of Kenyan respondents (46.4%) used SMS banking to know the balance of their bank accounts. Also, they were enquired about recent transactions through SMS banking. 16% of the Kenyan respondents revealed also that they use SMS to pay the utility, insurance premiums and other bills.

5. Conclusion

The study revealed that ATM technology is the most available technology in User's banks. This shows that still Kenyan banks are at initial stages of adopting technology. On SMS banking usefulness, respondents indicated that they support the usefulness of SMS banking. This might be because of the use of Mobile phones for transactional services which has been introduced of recent by two Telco companies to cap the menace of shortage of financial intermediaries in rural areas. The result show that customers use bank websites to know the products, use internet banking to check balance, know after sale services and buy products. This is a show that internet banking is gaining popularity and becoming vital in financial transaction events. However, the overall look indicates that the IT state in Kenyan banks is at initial stages. This study will be useful to financial institutions planning to offer digital financial services especially IB and mobile banking to know the extent it can be used by customers and the services already in the market. It can help other concerns like regulatory authorities to know the areas of much interest in provision of banking services through internet and mobile phones

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