

Okibo, Bichanga Walter; Wario, Ali Yattani

Article

Effects of e-banking on growth of customer base in kenyan banks

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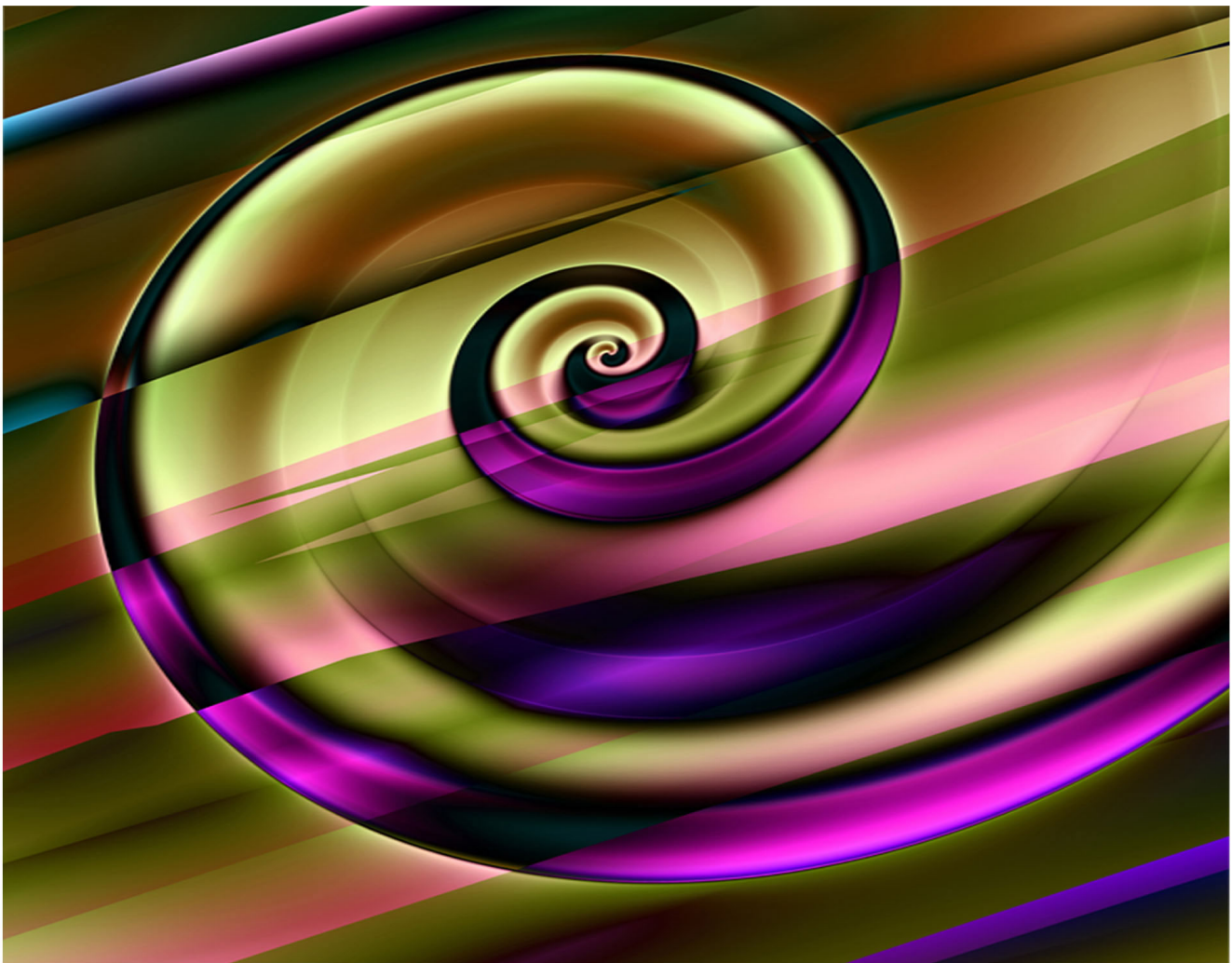
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Effects of e-banking on growth of customer base in kenyan banks

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Abstract

The study highlights the effects of E-banking services on growth of customer base in Kenyan banks for over the last five years. It addresses issues that affect effective utilization of E-banking facilities by customers. The study generally investigates how lack of technological know-how, illiteracy, unreliability, and transaction limits has hindered growth of on-line customer base in Kenyan banks. E-banking provides enormous benefits to consumers in terms of time saving and cost of transactions, either through internet, telephone or other electronic delivery channels. The research adopted a descriptive research design, to survey of selected Kenyan banks. The study used stratified random sample to ensure equal representation where 135 respondents who were selected from the strata/ banks. According to the results obtained in the study e-banking has enhanced the growth of the customer base for the banking institutions in Kenya, through enhancing banking services accessibility to a larger population in the country. Therefore the study recommended that the banks should embrace e-banking as a key competitive advantage.

Keywords: *Electronic Banking, Innovation, Internet Banking and Customer Base*

Abbreviations

ACH- Automated Clearing House; ATM-Automated Teller Machine; CBK-Central Bank of Kenya; ICT- Information and Communication Technology; ISP-Internet Service Provider; IT-Information Technology; PC- Personal Computer; PDA-Personal Digital Assistant; POS- Point of Sale; USA- United State Association

1. Background of the Study

Financial services industry over time has opened to historic transformation that can be termed as e-developments which is advancing rapidly in all areas of financial intermediation and financial markets such as e-finance, e-money, electronic banking (e-banking), e-brokering, e-insurance, e-exchanges, and even e-supervision. In recent years, the adoption of e-banking began to occur quite extensively as a channel of distribution for financial services due to rapid advances in IT and intensive competitive banking markets (Mahdi and Mehrdad, 2010). The driving forces behind the rapid transformation of banks are influential changes in the economic environment include among others innovations in information technology, innovations in financial products, liberalization and consolidation of financial markets, deregulation of financial inter-mediation.

The e-banking is transforming the banking and financial industry in terms of the nature of core products or services and the way these are packaged, proposed, delivered and consumed. It is an invaluable and powerful tool driving development, supporting growth, promoting innovation and enhancing

competitiveness (Gupta, 2008; Kamel, 2005). The evolution of banking technology has been driven by changes in distribution channels as evidenced by automated teller machine (ATM), Phone-banking, Tele-banking, PC-banking and most recently internet banking (Gallup Consulting, 2008). Some key issues addressed in the recent literature about the e-banking include: customer acceptance and satisfaction, services rendered, value added for consumers and banks, privacy concerns, profitability, operational risks, and competition from non-banking institutions.

The major indicator of e-banking is ATM banking. According to the survey conducted by financial sector deepening Kenya in association with Central Bank of Kenya, it was indicated that Kenya had a total number of 968 by the end of December 2007. Further, indication was that, an increase of 31.3 percent from 2006 was experienced, when the industry had 737 ATMs. A part from individual bank ATMs, Kenyan Banks who are members of two organizations, which provide e-banking outsourcing partnership, will access to 272 ATMs. The two organizations include, Pesapoint limited and Kenya switch (Kenswitch). Customers of Banks which are members of Pesapoint can access 120 Pesapoint ATMs and those banks which are members of Kenya switch can access 152 ATMs of Ken switch banks plus Pesapoint's giving access to a minimum of 272 ATMs.

Among the innovative banks in Kenya is Equity Bank which had more ATMs (232) as at December 2007. Research reveals that, only 22 out of 41 banks have their own ATMs. Kenya commercial bank and Barclay's banks have second and 3rd rank with 19.92 and 14.7% of total ATMs in Kenya. All information and communication technology developments are attributed to the realization of the advantages of technology integration in the banking industry.

Currently, there are about 8 million users of M-banking services compared to 4 million people who hold accounts in conventional financial institutions in Kenya (CBK, 2007). The tremendous increase in number of people adopting M-banking has been attributed to ease of use and high number of mobile phone users.

2. Statement of the Problem

In recent past, banks are challenged by technological up scale that led to innovative products which stiffed up competition for market share. There is a shift from paper-based to electronic payments and reliance on ATMs rather than costly branch offices to deliver cash and other depositor related services. Both banks and customers are increasingly migrating from traditional banking channels to the e-banking channel (Mols, 2000) but despite the benefits and advantages of e-banking for both sides, it entails some critical issues both for customers and the banks. It is the intent of this study to determine the effect of E-banking service on growth of customer base in Kenyan banks. This research shade some light on factors that hinders effective utilization of e-banking service by bank customers and challenges banks face in adopting this technological innovation.

3. Objective of the Study

The major objective of this study was to determine the effect of e-banking service on growth of customer base in Kenyan banks with the hope that such an attempt provides ground for more attentions on functional aspects of service quality in e-banking approach by bank managements. The specific objectives include;

- i. To determine the influence of electronic fund transfers on growth of customer base in Kenyan banks.
- ii. To establish the degree of uptake of card technologies on growth of customer base in Kenyan banks.

- iii. To evaluate how ATM availability affects growth of customer base in Kenyan banks

4. Scope of the study.

The study covered three major selected commercial banks of Kenya head offices situated in Nairobi namely; Barclays bank, equity bank and Co-operative Bank of Kenya. The population for the study was based on the top management working in the head office to represent the entire population of banks in Kenya.

5. Literature Review

Relevant literature to this research was reviewed from books, journals, websites, magazines and manuals. Empirical review was covered under this section which included literature on Electronic Fund Transfers, The Card System, The ATM Availability, E-banking and Customer Perceived Value in Internet Banking. Also a range of theories were covered under theoretical review which included; The Innovation Diffusion Theory and Disruptive Innovation Theory.

6. Electronic Fund Transfers

The progress of e-payments in Kenya has been rapid over the last few years. From the intensive survey of literature (CBK reports 2000 to 2009, FSDK 2007, NPSK report 2003, and EAC 2005), it was revealed that, in Kenya payments through ATM machines, EFTs, Electronic Clearing Services (credit and debit) and through cell phones are on the rise and have dominated the payments industry.

The drastic changes in the payment system industry, has been attributed to the realization by the business community and consumers regarding the viability of using the new payment systems which has been accelerated by the changes in the recent advancements in the ICTs. From the analysis, it was found that, transactions through Retail EFTs increased from 311,000 in 2002 to 3,774,000 in 2007 indicating a compound growth of 49.6%. The projections show that in the near future the payment industry is going to record high figure on EFTs' usage countrywide. The recent launched mobile banking financial transfer system of which service has gone global (M-Pesa) which allows customers from UK to transfer funds to Kenya will also increase the upwards trends in EFTs. The transactions moved through ECS in Kenya, has been increasing from June 2000 (14,114) to 24,166 (70.9%) thousand by June 2008. The compound growth rate of the entire period of study in Kenya was 11.8%. Transactions moved through Kenya's RTGS officially known and settlement system (KEPSS) has been increasing since its launch in July 2005. In 2008 (232,516), the industry recorded 93.4% increase from June 2006 (120,249). The growth of the entire period was compounded to be 37.8%. This is due to the initiatives of the CBK and continuous advice to banks to leverage on the new IT systems which reduce cost and which increases convenience and efficiency (CBK 2007). Banks in Kenya, have adapted different technologies through which e-banking services are provided.

7. The Card System

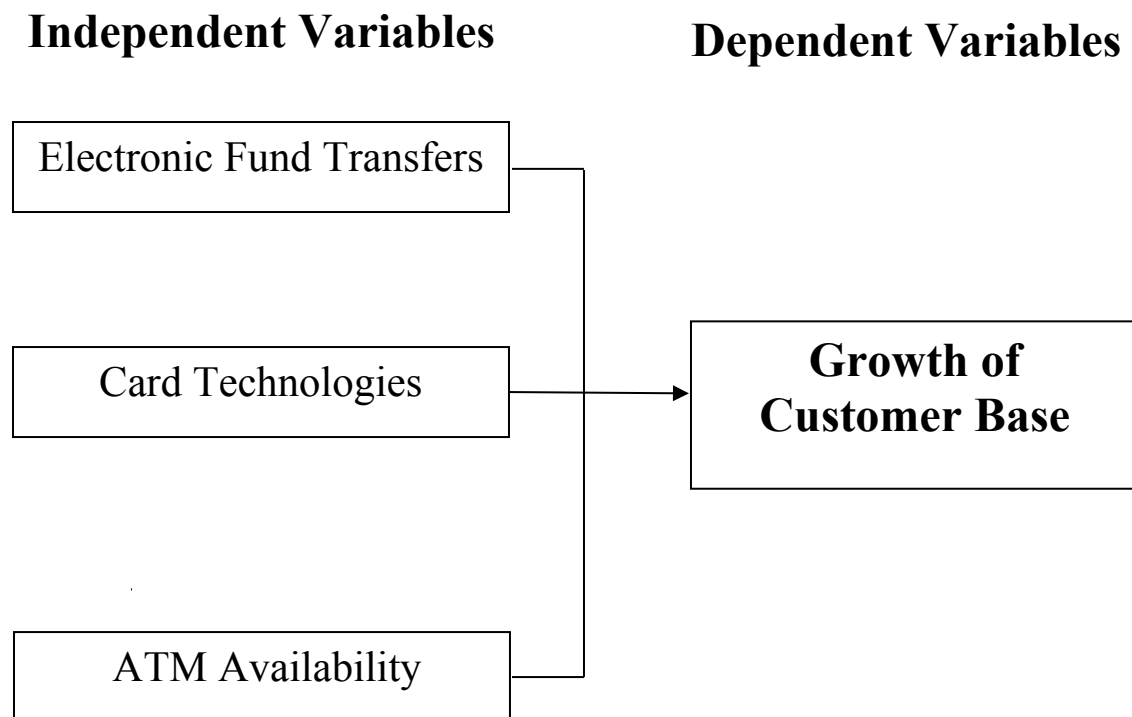
The card system is a unique electronic payment type. The power of cards lies in their sophistication and acceptability to store and manipulate data, and handles multiple applications on one card securely (Amedu, 2005). Depending on the sophistication, it can be used as a Credit Card, Debit Card and ATMs (Automatic Teller Machine). While the electronic card is gaining popularity in USA and Nigeria, the Spanish financial Institution demonstrated the highest implementation and update of smartcards across Europe (Amedu, 2005). To date, rates of uptake for mobile banking and bank cards have seemed high, fueling the excitement over branchless banking. Uptake as measured by numbers of new accounts opened has often shown rapid growth. For example, six months after launching its mobile banking service in February 2007 in Kenya, M-Pesa had 650,000 customers and was registering 7,000-10,000

new users per day (Ngurukie, 2007). Despite the rhetoric about the simplicity of mobile banking and bank cards, the research clearly showed that these new electronic financial products and services are complicated for both the banked and the unbanked. Discussions with respondents indicated that many low adopters, whose cell phone accounts are linked to bank accounts, were unaware of the full range of financial services at their disposal. They limit their transactions to airtime purchase, bill payments and money transfers. In Kenya, respondents were familiar with only two or three mobile banking features, the same features that first attracted them to register for the service (Ngurukie, 2007).

8. Conceptual Framework

This section assessed the research variables derived from literature to test whether there were significant relationships between the independent variables and the dependent variable. It focused on the determinant variables identified in the study, which would be associated with the growth of customer base in Kenyan banks. In this study, the explanatory variables were classified as; electronic fund transfer, card technologies and ATM availability.

Figure 1: Conceptual Framework



8.1. Electronic Fund Transfers is a system of transferring money from one bank account directly to another without any paper money changing hands. Transactions are processed by the bank through the Automated Clearing House (ACH) network, the secure transfer system that connects all U.S. financial institutions. For payments, funds are transferred electronically from one bank account to the billing company's bank, usually less than a day after the scheduled payment date. The growing popularity of EFT for online bill payment is paving the way for a paperless universe. The recently launched mobile banking financial transfer system of which service has gone global (M-Pesa) which allows customers from UK to transfer funds to Kenya will also increase the upwards trends in the uptake of EFTs.

8.2. The Card System is a unique electronic payment type. The smart cards are plastic devices with embedded integrated circuit being used for settlement of financial obligations. The power of cards lies

in their sophistication and acceptability, to store and manipulate data, and handles multiple applications on one card securely (Amedu, 2005). Uptake of bank cards has gone high, fueling the excitement over branchless banking. Cash withdrawals make up 70 percent of the cash transactions at ATMs at one bank in Kenya.

8.3. The ATM Availability; Literature review indicates different dimensions of ATM service quality. Lovelock (2000) identified secure and convenient location, adequate number of ATM, user-friendly system, and functionality of ATM. Devinix (1999) identified costs involved in the use of ATM and efficient functioning of ATM. (Joseph & Stone, 2003) identified user-friendly, convenient locations, secure positions, and the numbers of ATM provided by the banks as essential factors of ATM service quality. Mobarek (2007) established speed of operation, and waiting time as the important predictors of ATM service quality.

9. Theoretical Review

Following are the theories that were reviewed in relation to this research;

9.1. The Innovation Diffusion Theory explains individuals' intention to adopt a technology as a modality to perform a traditional activity. The theory is developed by (Roger's, 1983). The critical factors that determine the adoption of an innovation at the general level are the following: relative advantage, compatibility, complexity, trialability and observability (Rogers, 1995). The nominalized factors are complexity, triability and observability.

9.2. Disruptive Innovation Theory; in the area of electronic retail banking there has been an ongoing dispute among academics regarding the disruptive nature of the new business models based on the Internet. In their book "The innovator's solution", Christensen and Raynor state that "Internet banking can only be deployed as a sustaining technology relative to the business model of retail banks" .

10. Empirical Review

E-banking; (Daniel, 1999) defines electronic banking as the delivery of banks' information and services by banks to customers via different delivery platforms that can be used with different terminal devices such as a personal computer, a mobile phone, telephone or digital television. "This is an umbrella term for the process by which a customer may perform banking transactions electronically without visiting a brick-and-mortar institution".

Customer Perceived Value in Internet Banking; (Buys and Brown, 2004) enumerate common products and services that customer access from internet banking; Balance enquiry, Statement of bank account, Account/Bill payment, Beneficiary set up, Short-term recurring payments, Stop and Debit order payments, Open and Manage Investment accounts, Email branch or customer contact centre (secure messaging), Funds transfers, Increase/Decrease overdraft. Electronic banking, and for that matter internet banking, is changing traditional banking activities such as payment mediums, (Buys & Brown, 2004) physical transaction processes, delivery channels, and security systems. It has also come with novelty in information, customization and self-service offering differentiating itself sharply from traditional banking report.

11. Knowledge Gap

The research addressed the challenges that banks faces in transition from paper banking to e-banking and its impact on growth of customer base. The banking sector faced a range of limitation in embarrassing digital technology and this includes: technological know-how, unreliability, illiteracy and limitation on transaction amount have hindered effective utilization of E-banking services and this study addressed such factors in depth.

12. Research Design and Methodology

This study was conducted with aim of investigating effect of e-banking services on growth of customer base; this research adopted a descriptive research design, and surveyed a group of selected Kenyan banks. This helped the study to critically analyze the case in question with a view of drawing more detailed and specific information about the subject that was useful to the banks.

The target population of the study was top management teams from the three selected banks. The research used purposive sampling to select three banks namely Equity Bank, Barclays bank of Kenya and co-operative bank of Kenya. This method is considered appropriate because the population of interest is homogenous. The study also used stratified sampling approach to cover the total population. This was done using a stratified random sample to ensure equal representation. A sample size of 135 was selected for the study.

Table 1: Sample Frame

Population	Frequency	Ratio	Sample size
Barclays bank	200	0.3	60
Equity bank	150	0.3	45
Co-operative bank	100	0.3	30
Total	450	0.3	135

To achieve the objectives of the study, both primary and secondary data were collected. The secondary data was obtained from archived sources such as published material, journals internet resources, while primary data was collected by the use of questionnaires which had both open and close ended questions. Data was analyzed by both qualitative and quantitative approaches finally summarized and presented using tables and charts

13. Data Analysis, Presentations and Interpretation

This section comprises of data analysis, presentation and interpretation of the findings. The data presented includes response rate, background information of the respondents and a presentation of findings against each individual response.

Rating the Banking Services Accessibility in Introduction of e-banking

The study sought to know if there were any influences that the electronic funds transfer had brought on the banks services accessibility. The results were as per the figure below

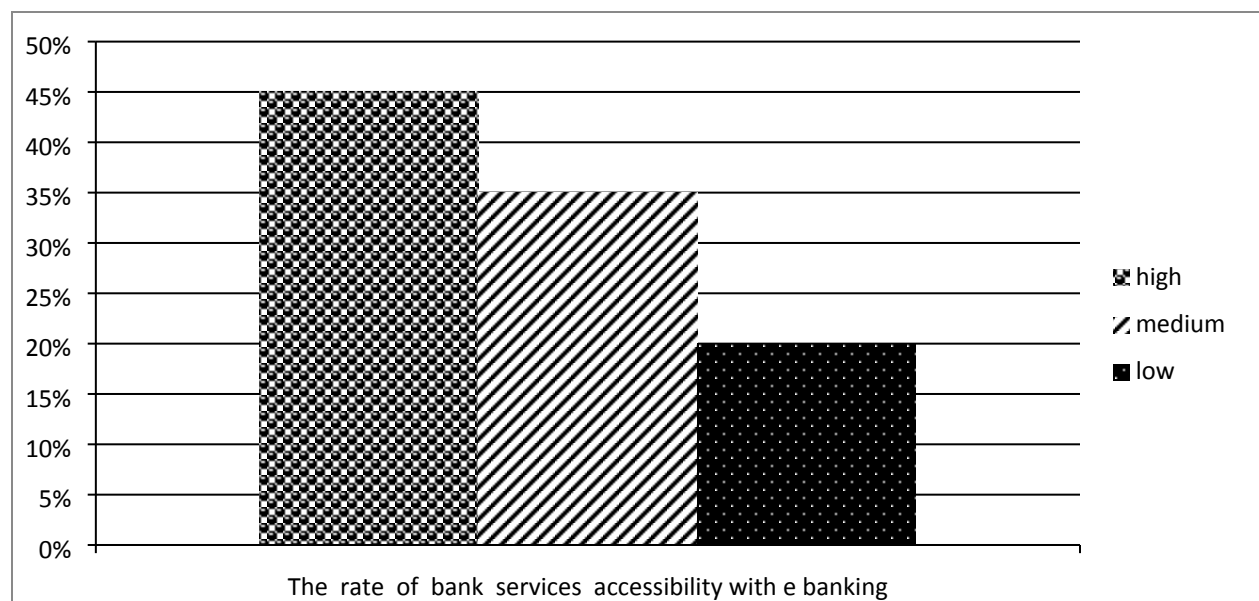


Figure 2: Rating the Banking Services Accessibility in Introduction of e-banking

The findings indicated that majority of the respondents felt that it had high influence on the accessibility on the baking services as 45% rated it high, the 35% of the respondents rated it medium while 20% rated it low . This implies that the introduction of the electronic funds transfer had positive impact on the banking sector.

Effect of Electronic Fund Transfers Services on Growth of the Banking Sector

This was meant to establish whether there was significant growth that could be observed with the introduction of electronic fund transfers in the banking system. The results were as per the figure below

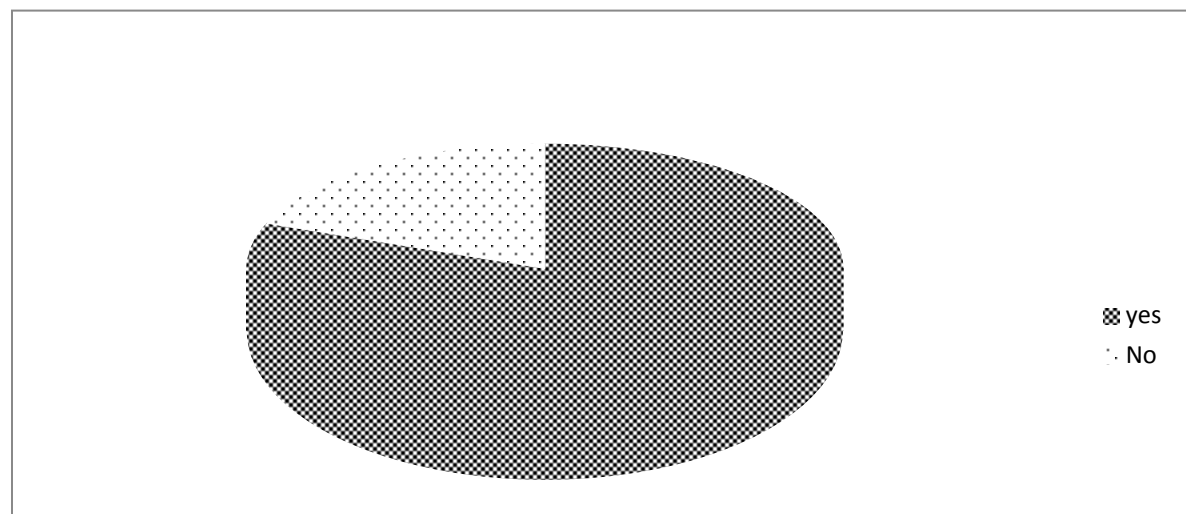


Figure 3: Effect of Electronic Fund Transfers Services on Growth of the Banking Sector

The results from the respondents indicated that majority agree to the growth that was evident in the sector with 80% confirming while 20% of the respondents could not find any significant growth, this therefore implied that many people have embraced banking due to the introduction of electronic fund transfers system.

Factors Affecting Access to E-Banking Service

This was meant to rate various factors that affect the e-banking services in the country. This would help in the assessment of those factors that could be affecting this system of banking

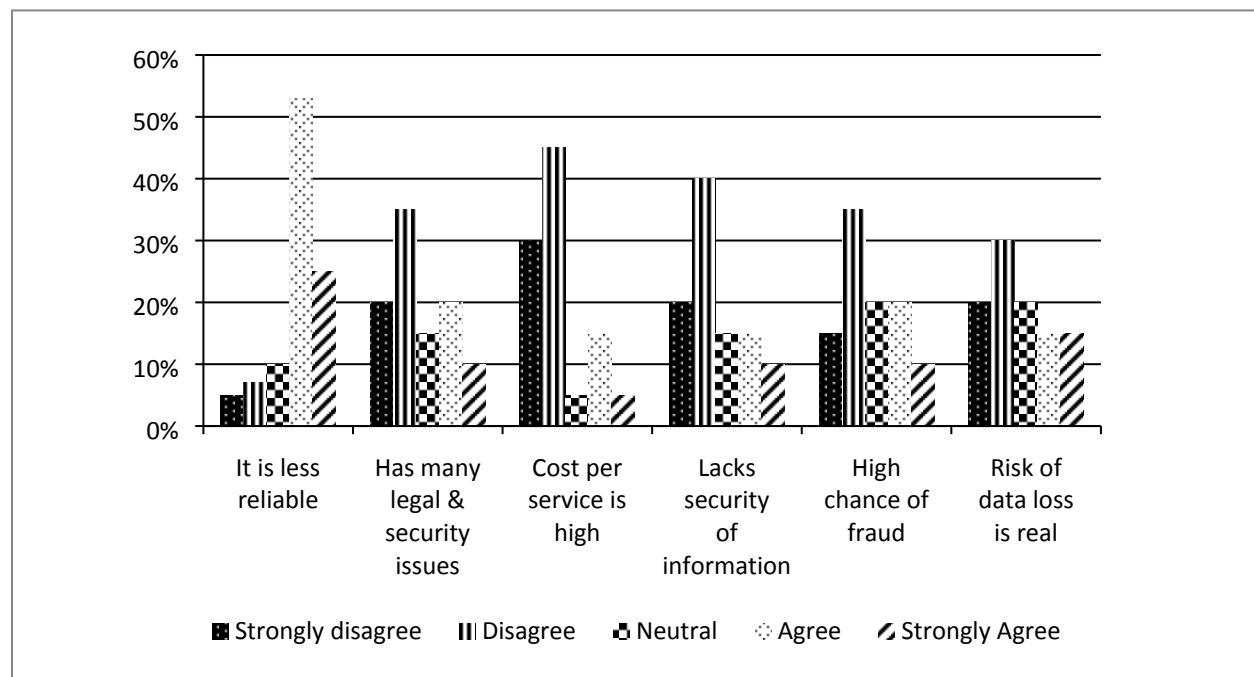


Figure 4: Factors Affecting Access to E-Banking Service

On reliability majority agree that electronic money transfer is more reliable hence implying that the introduction of e-banking has made money transfer more accessible and reliable. As indicated on the issues of having many legal and security issues majority of the respondent agreed that these services were straightforward to those who understand them. On the issues of high cost of services majority disagreed this implying that the cost of these services were well within the clients reach and therefore were not very high as insinuated. On lack of security information majority of the respondents disagreed indicating that there was enough information on e-banking. Majority of the respondents disagree that there is high chance of fraud in e-banking connoting that the loopholes that could lead to fraudulent acts have been sealed making it safe. On the sentiment that's the risk of data loss was real majority of those who responded disagreed indicated that there was no easy possibility of data loses.

Effect of Electronic Fund Transfers on Banking Efficiency

This question sought to find out if there was any improvement on efficiency and the accessibility of the banking services in the bank.

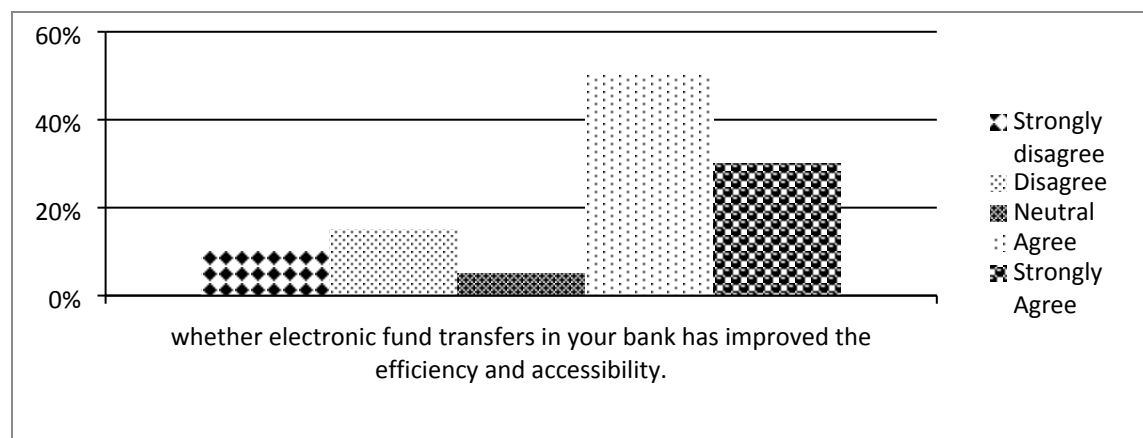


Figure 5: Effect of Electronic Fund Transfers on Banking Efficiency.

Majority of the respondents agree that there is improved efficiency which is indicated by 50% while 30% strongly agree, this therefore implied that there was remarkable improvement.

Customers Awareness on Existence of E-banking Services

The study sought to find out the rate of awareness of e banking from the bank's customers in order to understand if there is large group still left out from taking up this option of banking.

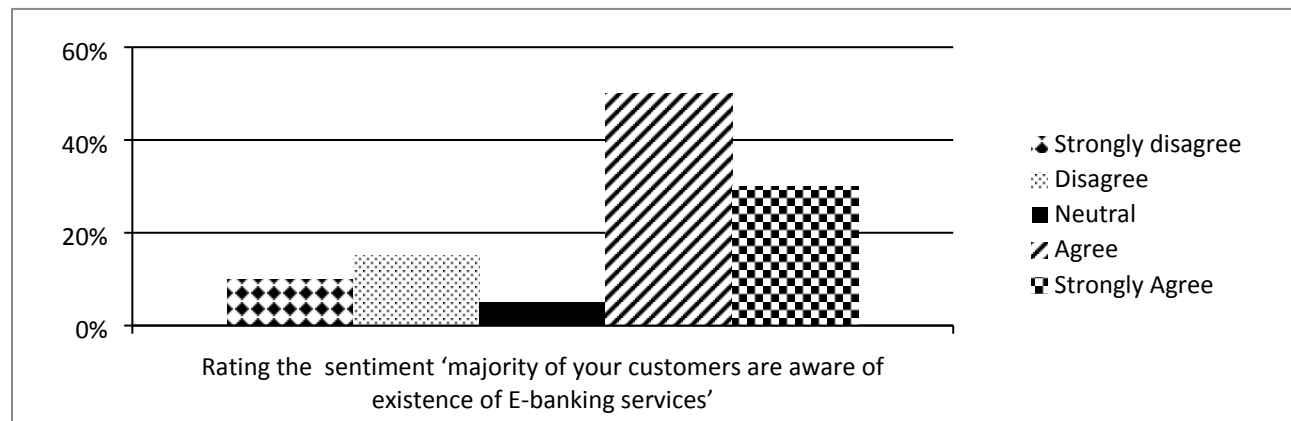


Figure 6: Customers Awareness on Existence of E-banking Services

50% of the respondents agreed that they are aware of the system implying that there were a large number of their clients who have knowledge on the E-banking services.

The Degree of Uptake of Card Technologies on Growth of Customer Base For Banks In Kenya

Following questions were focused in clarifying the same;

Population that is not Reached by E-Banking

The study also sought to find out whether there are still people who should be reached and sensitized on these issues by the bank. It could help deduce if there are still potential clients that the banks should still lure.

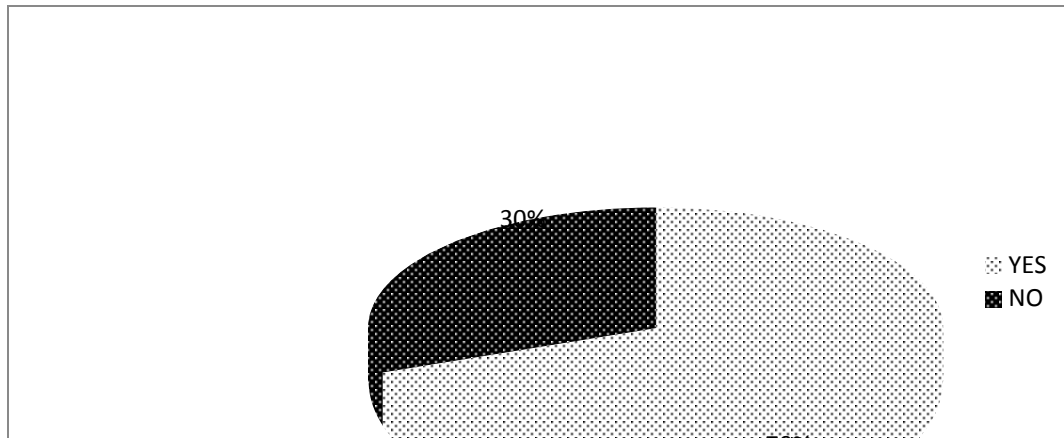


Figure 7: Population that is not reached by E-Banking

According to the results obtained majority of the respondents agree with 70% indicating so, while 30 % of them disagree on the issues. This implies that there is a large number that could still be reached by the bank.

Involvement of People not Reached by E-Banking would be Significant to the Banking Sector

The results indicates that there was majority agreeing with the sentiment with 50% agree and 30%strongly agree.

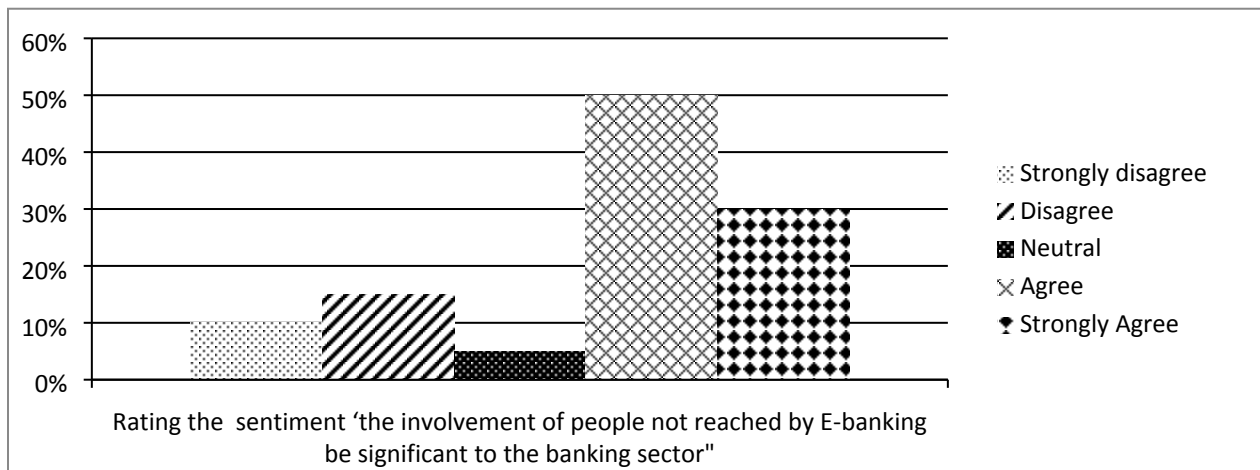


Figure 8: Involvement of People not Reached by E-Banking would be Significant to the Banking Sector

From the feedback, the implication is that there was need for the banks to be concerned with the population unreached by e banking.

Card Technology has Resolved the Selected Limitations which Hinders Bank Accessibility

The sentiment targeted to find out if the card technology could resolve the stated limitation which hinders bank accessibility. The respondents' feelings were as per the figure below

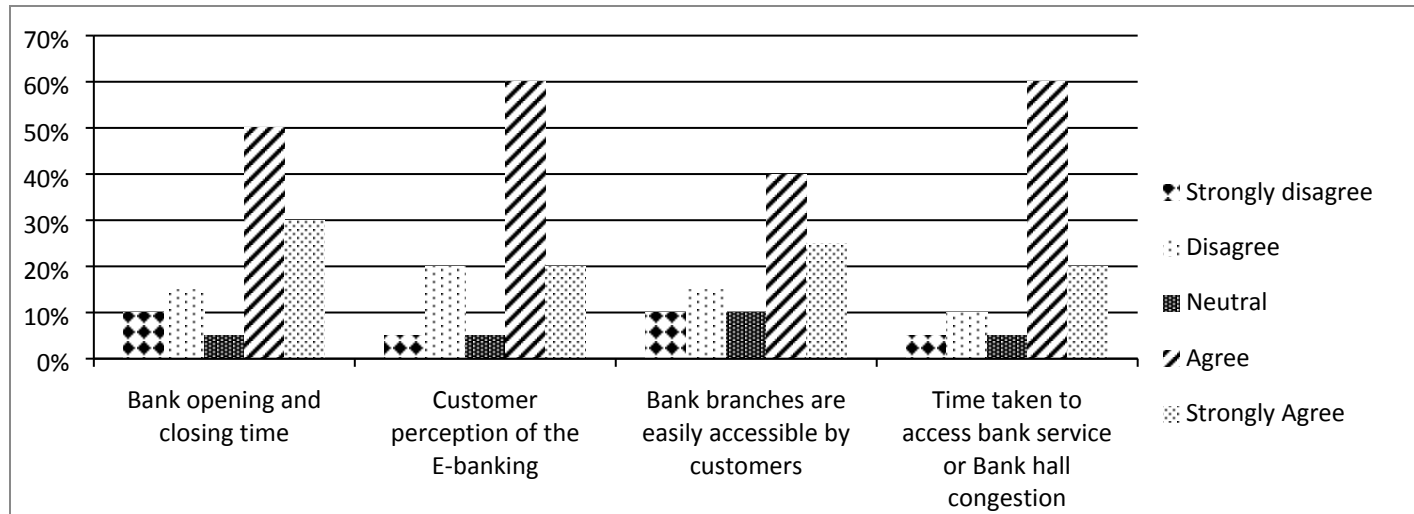


Figure 9: Card Technology has Resolved the Selected Limitation which Hinders Bank Accessibility

The result indicates that there was majority who agree with the sentiment on the bank opening and closing time which is indicated by 50% agreed and 30% strongly agreed. This result implies that the card technology has played a vital role in resolving the problem that hinders bank accessibility. The results on the issues of customer perception of E-banking majority (60%) agreed implying that there was change in e banking perception. On accessibility of bank branches majority agreed implying that banking has become more accessible in the branches. On the time taken to access the banking services or the bank hall congestion, majority indicated by agreed implying that there was change to ease access to banking services.

Rating of the Effects of E-Banking Factors on the Growth of Customer Base

The e-banking since its inception has gradually witnessed development milestones and adopted value addition services. Therefore, the study seeks to find out the rating of the effects on the supplementary services.

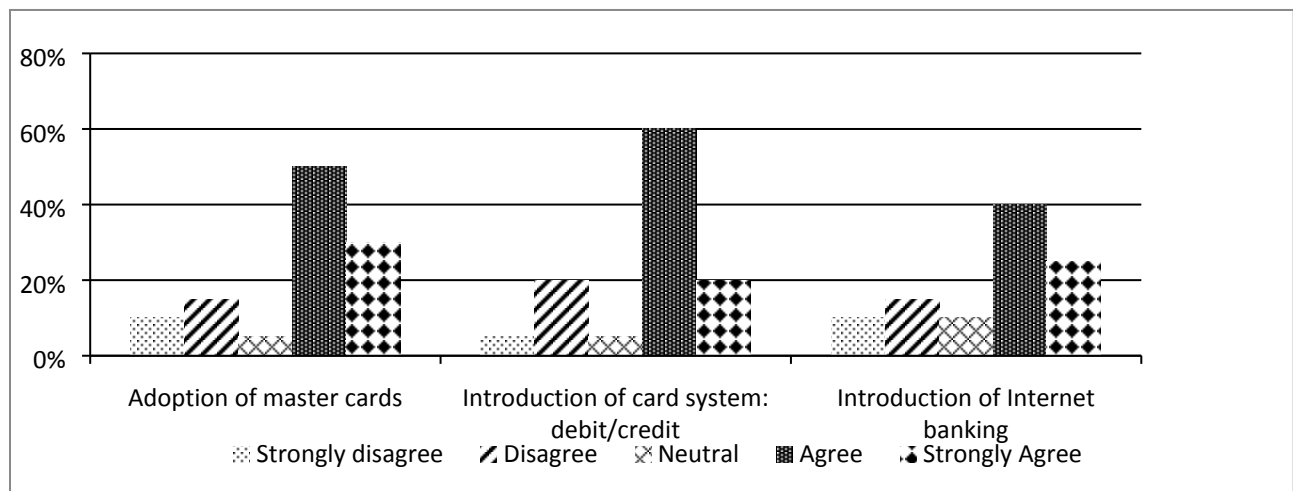


Figure 10: Rating of the Effects of E Banking Factors on the Growth of Customer Base

On the issues of adoption of master cards many respondents agree to this sentiment with 50% agreed indicating that it led to an increase in the customer base. The results on the introduction of the card system which is the debit and the credit majority of the respondents agreed connoting that it also

played a major role in increasing the customer base. The introduction of the internet banking has the majority of the respondents agreed implying that there was increase in the customer base with this introduction.

Effect of Lack of Civic Education on E-Banking

The study tried to find out if there are issues that have not been sensitized on the side of the clients concerning the e-banking services and whether it would be taught through civic education.

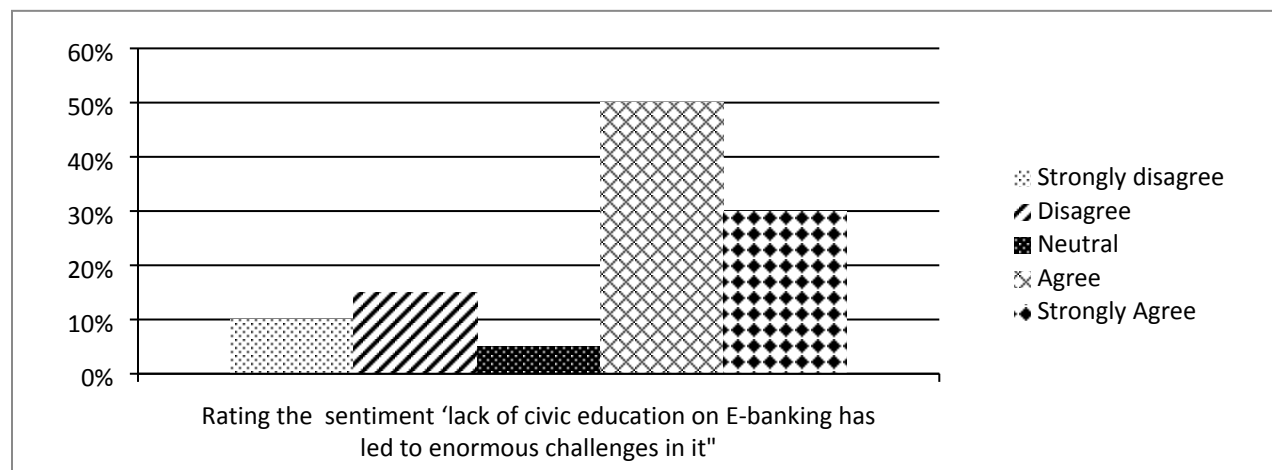


Figure 11: Effect of Lack of Civic Education on E-Banking

The results indicated that there was majority in agreement with the sentiment as indicated which meant that any hindrance to e banking was because of lack of enough civic education.

Effect of ATM Availability on Growth of Customer Base in Kenyan Banks

Following were the responses on effect of ATM availability on growth of customer base in Kenyan banks.

ATM Availability directly Enhances Banking

The availability of the ATM translates to improved convenience and proximity of the banking service. Thus, the research wished to establish whether availability of ATM would be linked or rather encouraged unbanked population to take up banking.

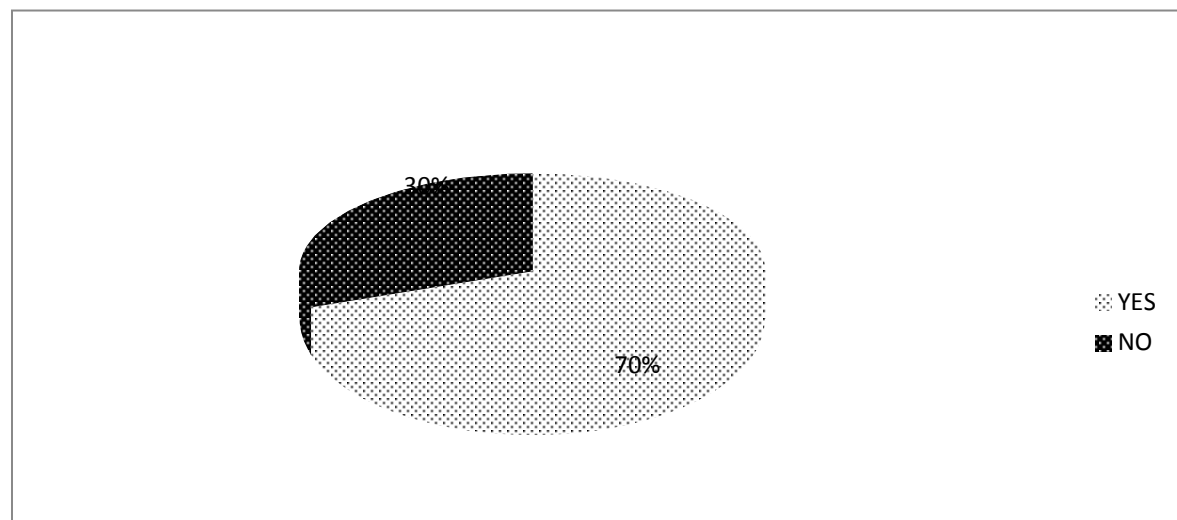


Figure 12: ATM Availability directly Enhance Banking

The results indicates that majority of the respondents as indicated by 70% agree while 30% disagree. This implies that there was direct enhancement of the banking through availability of ATM.

Extent which ATM Availability Enhance Growth of Customer Base

The study opted to establish the extent to which the availability of the ATM would boost the banking activities and led to growth of the customer base. The respondent feelings were as per figure

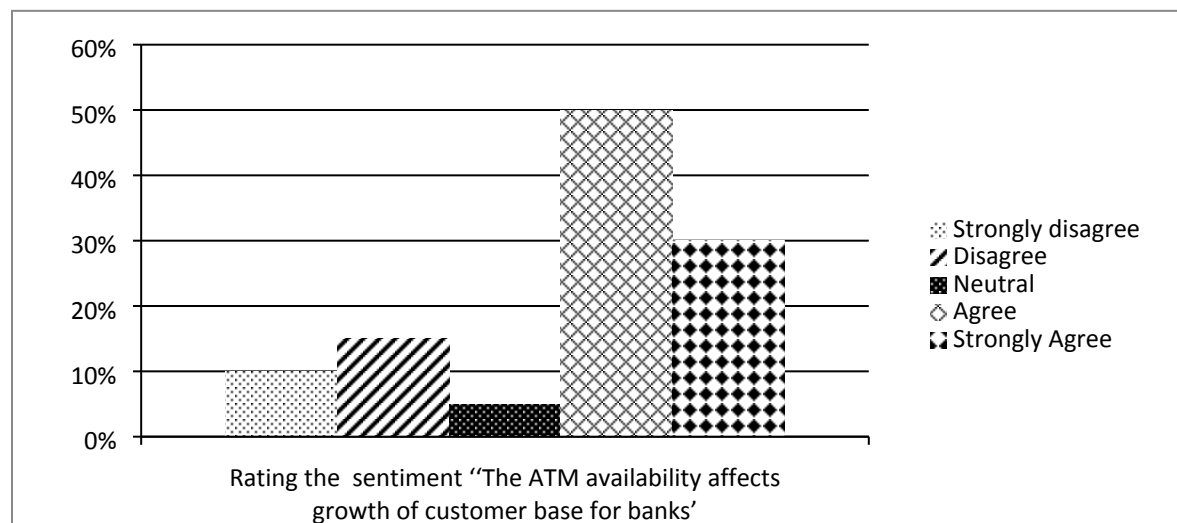


Figure 13: Extent which ATM Availability Enhance Growth of Customer Base

The results indicated that majority agree with the sentiment where 50% of them agree, 30% strongly agree, implying that there was a lot of influence on the ATM availability on the growth of banks.

Selected ATM Features Enhance Growth of Customer Base

Technology is adopted due to its socio economic benefits, therefore the study wished to assess the impact of main ATM features on the growth of the banks.

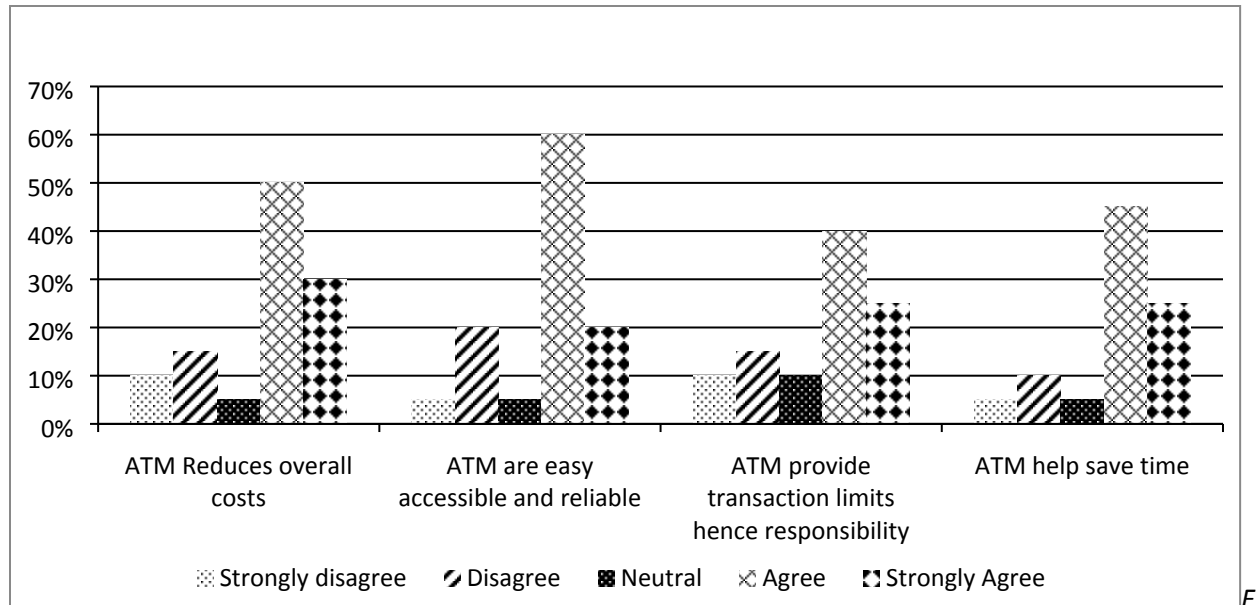


Figure 14: Selected ATM Features Enhance Growth of Customer Base

The result on the ATM reduces overall cost majority of the respondents connoting that there was reduced cost. On the sentiment that ATM are easy accessible and reliable majority of the respondents agreed therefore implying that the ATM were reliable and customer friendly. On the issue of ATM provide transaction limit hence responsibility majority of agreed indicating that there was limit at which one could draw and therefore prevented one from misuse of his or her money. The results on the sentiment that ATM helps to save time majority of (45%) agreed implying that there was a lot of time saved from the use of ATM during transactions.

Effect of E-banking on Banking Institutions in Kenya

The following were the findings;

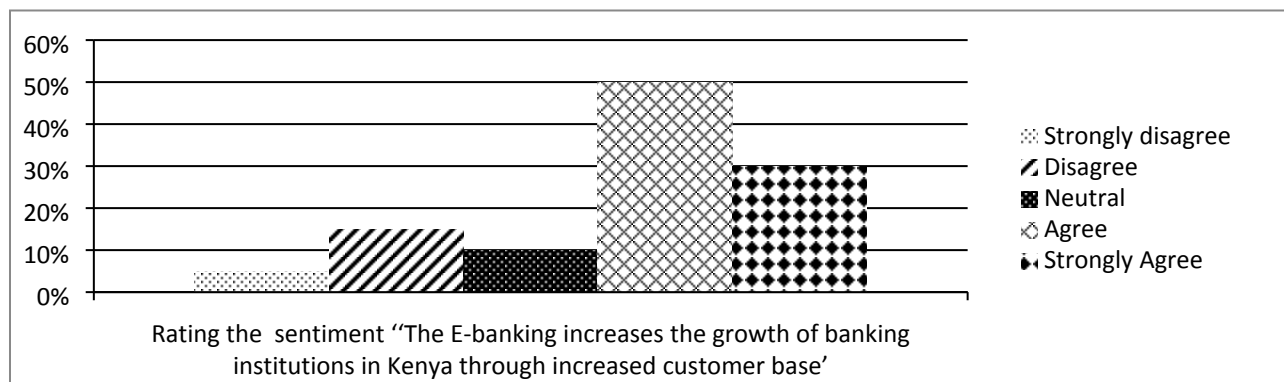


Figure 15: Effect of E-banking on Banking Institutions in Kenya

The results indicated that 50% majority agree to the sentiment, 30% strongly agree, 10% were neutral, 15% disagree while 5% strongly disagree. This implied that there was increased banking and customer base, hence the increase in the number of banking institutions.

14. Summary of the Findings

The influence of electronic fund transfers on growth of customer base for banks in Kenya, the deduced results indicates that, the rating of the accessibility of the banking services since the introduction of the e-banking or electronic money transfer majority of the participants felt it is high. The rating of factors affecting e-banking, there was general disagreement; e banking is less reliable with 53% disagreeing, It has many legal and security issues with 35%, disagreeing and it has high cost per services as indicated by the 45% of the majority. On the other hand there was agreement that there lacks enough security information with 40% of the respondents agreeing, possibility of high fraud is also agreed at 45% and the risk of data lose is also agreed by 30% majority. On the rating of whether there is any improved efficiency and accessibility to banking majority agreed. The degree of uptake of card technologies on growth of customer base for banks in Kenya results indicates the population who could be unreachable by the e-banking as high.

Master card has led to the increased customer base as indicated by 50% majority response agreeing. The introduction of the card system has also led to an increased customer base as there is 60% majority agreeing and the introduction of the internet banking has led to the increased customer base as indicated by 40%. Lack of civic education is a factor hindering people from embracing e-banking. The ATM availability could directly enhance banking and increase the customer base

15. Conclusions

According to the results obtained in the study, electronic fund transfer has influenced the growth of the customer base for the banking institutions in Kenya, through enhancing banking services accessibility to a larger population in the country. The introduction of the card system has led to an increased customer base by eliminating or rather resolving most of the issues that usually hinder the spread of banking in the country. There is a lot of sensitization through all media channels on the security issues and therefore enabling people to be aware of possible fraud in the entire financial sector.

16. Recommendations

The e-banking has big influence on the growth of customer base for the banking institutions in Kenya, through enhancing banking services accessibility to a larger population in the country. Therefore the bank should embrace e-banking as a key competitive advantage; they should enhance its impact by investing more on e-banking innovations to diversify its uses and provision of civic education to increase its penetration. The banks should heavily invest in innovative banking products and continuously make improvement to enhance its efficiency in operation. The banking sector should heavily invest in creating awareness through advertisement of banking products through public media. The challenges facing e-banking in the country is lack of civic education and the possibility of fraud. It is therefore essential for the banks to emphasize on the important of observing security measures on the part of an individual such as reporting immediately the loss of a card.

Bibliography

- Aladwani, A. (2001). Online Banking: A Field Study of Drivers, Development Challenges, and Expectations. *International Journal of Information Management* , 21, 213–225.
- Al-Hawari, M., & Ward, T. (2006). The impact of automated service quality on financial performance and the mediating role of customer retention. *Journal of Financial Service Marketing* , 10(3), 228-43.

- Amedu, U. M. (2005). Domestic electronic payment in Nigeria. *The Challenges Central Bank of Nigeria Bullion* , 29 (1).
- American, B. (2000, february). *web Banks Beat Branches on Ratios but there's No competition*. <http://web6.infotrac.galegroup.com>.
- Au, Y. A., and Kauffman, R. J (2008), the economics of mobile payments: understanding stakeholder issues for an emerging financial technology application. *Electronic Commerce Research and Applications*, 7, 141–164.
- Basel Committee Report on Banking Supervision Risk management for electronic Banking and electronic money activities, Switzerland: Bank of International Settlements, 1998
- Blair, K., & Fugazy. (2000, March). Has dot.com banking peaked? *ABA Banking Journal* , 73-75.
- Boateng, R. (2006). Developing e-Banking capabilities in a Ghanaian Bank: Preliminary lessons, : . *Journal of Internet Banking and Commerce* , 11 (2).
- Bruene, J. (2002). *online Banking by the numbers 2002*. Retrieved from www.onlinebankingreport.com.
- Buys, M., & Brown, I. (2004). Customer Satisfaction with Internet Banking Web Sites, An Empirical Test and Validation of a Measuring Instrument. *Proceedings of SAICIT*, (pp. 44-52).
- CBK (2003), Payment Systems in Kenya, Central Bank of Kenya annual financial report for the year 2003, Kenya
- CBK (2007), Payment Systems in Kenya, Central Bank of Kenya annual financial report for the year 2007, Kenya
- Daniel, E. (1999). Provision of Electronic Banking in the UK and the Republic of Ireland. *International Journal of Bank Marketing* , 17, 72–82.
- Devinix. (2004). *Global payment services in Asia Pacific, available on* . <http://www.devinix.com/g-asiapacific.htm>.
- Gallup, C. (2008). *dynamics of banking technology adoption: an application to internet banking*. department of economics. coventry: university of warwick.
- Gupta, P. K. (2008). internet banking in india: consumer concern and bank strategies. *Global journal of business research* , 2, 43-51.
- Joseph, M., & Stone, G. (2003). An empirical evaluation of US bank customer perceptions of the impact of technology on service delivery in the banking sector. *International journal of Retail & Distribution Management* , 31(4), 190-202.
- Kamel. (2005). internet banking in india: consumer concern and bank strategies. *Global Journal Of Bussiness Research* .
- Lovelock, C. H. (2000). Functional integration in service: understanding the links between marketing, operations, and human resources. In Swartz, T.A. and Iacobucci, D .
- Mahdi,S., & Mehrdad, A. (2010). E-Banking in Emerging Economy: Empirical Evidence of Iran. *International Journal of Economics and Finance* , 2 (1), 201-209.
- Mobarek, A. (2007). E-Banking Practices and Customer Satisfaction - A Case Study in Botswana.
- Mols, N. (2000). The Behavioral Consequences Of PC Banking. *International Journal of Bank Marketing* , 16 (5), 195–201.

Ngurukie, Corrinne. (2007, October). "Developing an Educational Module for the Purpose of Increasing the Adoption of Technology-based Financial Services in Kenya." Microfinance Opportunities.

Rogers, E. M. (1983). *The diffusion of innovations*. . New York: Free Press.

Rogers, E. M. (1995). *Diffusion of innovations*. New York: Free Press.

Wang, Y. S., Y, M. W., H, H. L., & T, I. T. (2003). Determinants Of User Acceptance Of Internet Banking: An Empirical Study. *International Journal of Service Industry Management* , 14(5), 501-19.

Wolfe, D. (2004), 'E-banking for the masses? Differing expectations', *American Banker*, 169(31), p.17