IMPLICATIONS OF ELECTRONIC BANKING ON BANK REVENUES: EVIDENCES FROM TANZANIA

DR. HARUNI MAPESA

(Senior Lecturer), SCHOOL OF BUSINESS, MZUMBE UNIVERSITY, TANZANIA Email: hjmapesa@mzumbe.ac.tz, Tel: +255 713 265757

Abstract: This paper presents results from a study which assessed the implications of electronic banking on customer retention and revenues of commercial banks in Tanzania. The study examined how electronic banking contributes towards customer enrollment and retention in Tanzania commercial banks, and how electronic banking translates itself into additional revenues for commercial banks. The study used qualitative methods and approaches. Data for the study were collected using three data collection approaches namely, interview, questionnaires, and focused group discussions. The study found that e-banking has a significant role on customer enrollment and retention for commercial banks. It was also found that charges and commissions' charges on e-banking transactions have significantly increased revenues for commercial banks. The study further revealed that effectiveness of e-banking is sometimes impaired by network connectivity problems, and insufficient knowledge of customers on the language used in e-banking menu. The study recommendations e-banking awareness programs, commercial banks to be more innovative in designing more e-banking services to enable customers to enjoy more banking services.

Keywords: E-banking, Customer retention, Revenues, and Tanzania.

1. INTRODUCTION

In the last three decades, the banking sector has witnessed a dramatic evolution owing to the changes in the global financial arena and technology advancement. The major transformation witnessed in the banking sector has been great advances in financial innovations and technologies, which are a result of turmoil in the global financial environment. Improvement in financial innovations and technologies has made electronic banking an intense part of the banking sector. Electronic banking has revolutionized the lives of so many people of present times and is considered to be a wave of information revolution. Some decades ago banking customers were needed to personally visit bank branches in order to make transactions through their saving accounts or current accounts. E-banking is changing the manner in which financial transactions are carried out (Gupta and Yadav, 2017).

The Promotion of online banking technology has enabled banks to facilitate their operations with cost cutting through online banking platform. Customers are being facilitated by reducing their go-and-return movements to bank branches and they can now easily carry out their transactions through internet or cellphones or ATM Machines instead of personally visiting the bank branches (Omar, Sultan and Zaman, 2011).

In Tanzania, electronic banking is in its early stages, though a great response of use is witnessed. The adoption of Automated Teller Machines (ATM) by various commercial banks and financial institutions is of pride, the adoption of mobile banking by various communication Companies such as Vodacom, Airtel, Tigo, Zantel, Hallotel has increased substantially. Deposits and quick transfers of money or payments via electronic payments services are increasingly being adopted by many of the bank of customers. The quick adoption of electronic banking by commercial banks such as NBC, NMB, CRDB, City, Barclays, Stanbic, Exim, Postal, and other banks, just to mention a few banks vividly indicate how electronic banking is wide spreading in the country.

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As banks seek to develop new business opportunities and maintain relationships with corporate clients, while answering the industry mandate of moving toward real-time payments, technology is becoming the driving strategy (Chauhamand and Chourdhary, 2015; and Thomson and Jane, 2016). Armed with the flexibility and analytical capability of their technology landscape, banks are adding muscles to their sustainability practice in the course of time (Infosys, 2012). As these technologies advances information about their benefits and implications to bank customers and banks management are equally becoming important. Some studies relating to technology and the banking sector in different countries and context are in progress. In Tanzania studies by Mkoba (2014); Mugenda (2003); Rumanyika (2015); and Kotoroi (2015) are worth noting in this areas. Adding to this stock of knowledge this study aimed at attaining the following objectives in a developing financial markets context: To examine how electronic banking contributes towards customer enrollment and retention among commercial banks, to assess the role of electronic banking on revenue generation among commercial banks, and to identify challenges facing the use of electronic banking in the banking industry in Tanzania.

2. RELATED LITERATURE

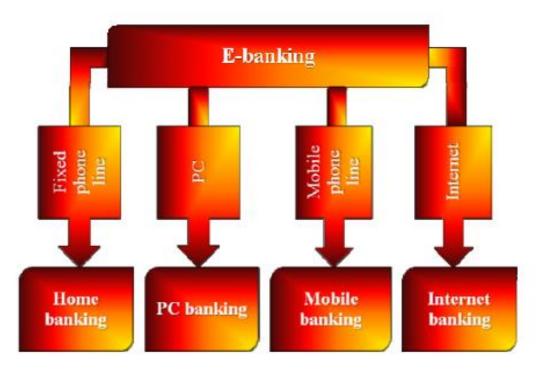
2.1 Conceptual Issues:

2.1.1 Electronic Banking (E-banking):

Electronic banking involves the use of electronic devices by customers to do banking transactions as opposing to be served physically by bank officers. It involves provision of facilities such as accessing accounts balances, saving, paying for utility, bills, borrowing transferring funds (both local and international remittances), and buying financial products such as shares, bonds treasury bills and others (Hossain *et al.*, 2013). E-banking is considered to be faster and a more reliable way of accessing one's account and make transactions even when traditional operations of the banks are closed (Sheikh and Rajmohan, 2016).

2.1.2 Types of E-banking:

Electronic banking is accomplished through different channels including mobile phone, internet, and ATM. Literature indicate (Hossain et al., 2013; EIB,2016) that there are four major types of electronic banking as indicated in figure 1 below.



Source: Author, Literature Review

Figure 1: Types of electronic banking

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2.1.3 Mobile banking (SIM banking):

This is a system that allows bank customers to conduct different transactions through a mobile device. Being the newest service in electronic banking; mobile banking relies on WAP (Wireless Application Protocol) technologies. Mobile device requires a WAP browser installed in order to allow access to information. The system is operated in such a way that a specific sequence of SMS messages will enable the system to verify if the client has sufficient funds in his or her wallet and authorize a deposit or withdrawal transaction at the agent. Also, when depositing money, the merchant receives cash and the system credits the client's bank account or mobile wallet. In the same way the client can also withdraw money at the merchant: through exchanging SMS to provide authorization, the merchant hands the client cash and debits the merchant's account. This is one of the innovative technological advancement which dominates most of the electronic banking services in developing financial markets.

2.1.4 Internet Banking:

This is an online banking, web based banking or virtual banking, an outgrowth of personal computer banking. It is a more developed service, a system that enables bank customers to access accounts and general information on bank products and services or perform account transactions directly with the bank through a personal computer using the internet as the delivery channel. Customers are able to access all of their accounts information through the website of the bank and are allowed to conduct banking activities such as transferring funds, paying bills, viewing account balances, paying mortgages or purchasing financial instruments.

2.1.5 Automated Teller Machines (ATMs):

An automated teller machine (ATM) is as well-known automated banking machine or cash machine. ATM supports financial transactions of users from financial institutions in a public space without the need for a bank cashier, clerk or any bank employee. ATM consists of plastic ATM card having magnetic strip which contains detail users information, card number, and some security information. Authentication is provided by the entering of customer's personal identification number (PIN). Customers can access, their bank accounts by using an ATM. In order to make cash withdrawals, debt or credit card are used. If the currency being withdrawal from the ATM is different from that which the bank account is denominated in the money will be converted at a wholesale exchange rate. Thus, ATMs often provide the best possible exchange rate for foreign travelers and are heavily used for this purpose as well (Somad and Lai, 2012 and Olumide, 2014).

2.2 E-banking and Customer Enrollment in Commercial Banks:

The study by Rajesh (2013) examined the contribution of e-banking in the performance of Indian banks and found that customers are likely to join a bank that offers e-banking services than that which doesn't. These findings are similar to those by Gregory (2015) who found that Malaysian banks that have not offered much attention of development and implementation of e-banking infrastructure were losing customers to those who have advanced in the area. The study concluded that there is a significant relationship between e-banking and customer enrollment in commercial banks something that gives them bigger market share and a competitive advantage.

The study of Kim (2014) insisted that Chinese and Japanese commercial banks that operate outside their countries of origin tend to be preferred by customers because of having friendly infrastructure in the area of electronic banking. Customers find banking experience more convenient not only in dealing with their respective banks but also in making transactions with other service providers such as supermarkets and in e-commerce. The study by Roozbahani, Hojjati, and Azad (2015) had similar findings. They found that e- e-banking leads to customer satisfaction. In Pakistan Kazmi, and Hashim (2015) observed that there is a momentous relationship between service quality dimensions and customer satisfaction with e- banking.

2.3 Electronic Banking and Revenue Generation in Commercial Banks:

A couple of studies have documented the relationship between e-banking and changes in incomes of banks. In Kenya the study by Nyambura and Oich (2014) found that e-banking has a significant contribution on profitability of the bank through money generated using e-banking service. Their findings are consistent with that by Ahmed (2016) who found that Ghanaian commercial banks experienced an increased revenues collections following the adoption of using e-banking services.

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In some studies adoption of e-banking is associated with effectiveness in bank operations. The study by Ayobami (2015) in a Nigerian context found that e-banking contributes significantly towards revenue generation of banks. These results seem to be supported by Kotoroi (2015) who found that ICT positively influence banking performance. It was observed that market performance indicators' such as net income and market share were associated with innovation types performed banks.

E-banking is also perceive to improve efficiency and profitability. Taiwo and Agwu (2017) obeseve that banks' operational efficiency among Nigeria banks increased following the adoption of electronic banking. The improvement was noticed in revenue and capital bases, as well as in customers' loyalty. E-banking operations drastically increased bank performances, as a result of more active customers performing electronic transactions.

2.4. Challenges of E-banking in Commercial Banks:

The study by Nyambura and Oich (2014) shows that adoption of e-banking in commercial banks is hindered by high initial and maintenance investment costs. Commercial banks find it challenging to afford costs associated with installing and maintaining the technology. Rumanyika (2015) studied the obstacles towards adoption of mobile banking in Tanzania. Poor network coverage, lack of knowledge of e-banking users, lack of enough float of mobile money agents and ATM breakdown are major challenges reported by previous studies (Gao, 2011 and Olumide, 2014).

3. METHODS

The study adopted qualitative methods. Qualitative approach focused on discovering and understanding experiences, perspectives, and thoughts of e-banking participants on variables of interest. Interview guide and self-administered questionnaire guided the process of data collection. Bank officers (bank managers, customer services officers, and ICT Officers) and customers of selected five major banks in Tanzania were included in the sample for in-depth interviews. The sample size of this study was one hundred and fifteen (115) respondents, comprised of 95 customers, 5 branch managers, 5 ICT officers and 10 customer services officers. Major themes were identified during interviews through narrations. Factual and logical interpretation were discussed with respondents to allow presentation of reality.

4. RESULTS AND DISCUSSION

4.1 Results:

Three major objectives of the study are reported in this section namely; implication of e-banking on customer retention and enrollment, the implication of e-banking on revenues generation and the challenges of e-banking among commercial banks. The results are based on qualitative inquiry of bank managers, bank officers and bank customers.

4.1.1 E-Banking and Customer Enrollment and Retention:

Respondents were requested to provide qualitative assessment and opinion on how electronic banking contributes towards customer enrollment and retention in Tanzania commercial banks. Seven different questions were designed in order to determine the respondents' views on this concept. A five-point likert scale was also used i.e. Scale ranged from; strongly disagree, disagree, neutral, agree and strongly agree.

It was observed that some bank customers joined some banks because of not only the presence of e-banking but also for the efficiency and effectiveness of e-banking facilities. Both qualitative inquiry and likerty scale indicated that e-banking was one of the reasons for joining and staying with the banks they transact with. It was found that more than 52% of bank customers had this perspectives. The reminder had mixed perspective (i.e. not just e-banking but there are other factors which determine their bank choices).

One of customers who was interviewed said that,

"E-banking services have made my life easier than ever before. Previously, I used to travel for more than an hour just to visit the bank to ask for my account balance. It used to be tiresome and frustrating but now days I rarely visit this place [bank] because everything can be seen in my phone wherever I am"

Some bank manager indicated that e-banking may be one of major reasons for people to make choices on which bank to make membership and open account with. One bank manager had this to say:

"There are those customers who joined our banks before even we started using the e-banking service, to such we should expect that they can't say e-banking is one of the reasons for them to join us. But so long as other banks are offering e-

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banking they can still leave our bank if we don't adopt e-banking. There are those who started becoming our customers because of our efficient e-banking system, to this group e-banking is an important factor."

Yet in another interview with one bank managers, this is what s/he had to say:

"Customers always look for banks where they can not only access banking services but services that are convenient and reliable and this is what e-banking does to our customers."

The study observed that customers who use e-banking services find e-banking experience more pleasant. This was clearly indicated by some customers who commented that:

"My banking experience is excellent because I can access so many bank services via my finger tips. My cellphone has become like my bank branch something which has been helping to avoid unnecessary costs. I don't visit banking halls very often"

"I am a businessman hence a value my time so much. Having e-banking services means a lot to me personally and to my business as well. I can now easily pay bills, receive payments, ask for my balance and much more so it has to do with business success"

The responses above show how customer value time. E-banking creates an environment that would help them in time-saving.

Respondents were also asked to respond to the statement that "If the bank wouldn't have implemented e-banking I would have probably joined another bank offering the service". It was found that 50% of respondents agreed, and 30% strongly agreed. These findings show that 80% of the respondents would leave and join another bank offering e-banking services.

One respondent added that,

"At this age of science and technology no one would be happy staying with a bank which requires the customers to physically visit the place for every service they need. It is important for these banks to adopt this technology if they want to retain their current customers"

Bank managers explained that they are committed to ensuring that e-banking exceed customers' expectations. They are working hard to improve their e-banking menus in order to give their customers what they want and maximize their satisfaction.

On this particular idea one of the bank managers, had this to say:

"It is true that e-banking positively influence customer enrollment. And sometimes when a new customer wants to open an account wishes to confirm if we have e-banking services"

4.1.2 E-Banking and Revenue Generation:

The study found that banks charge their customers certain amount of money for performing electronic transactions in form of commission and charges. For instance, it was observed that bank charges ranges from Tshs. 305.09/- (US\$ 0.133) to Tshs 354 (US\$ 0.154) when a customer performs an e-banking balance inquiry. The amount charged as commission for money transfer using e-banking varies depending on the amount that a customer transfers. Bank managers indicated that e-banking services play a big role in generating revenue without involving too much human efforts.

One bank manager confirmed this by saying:

"It is true that customers pay little amount of fee and/or charges for using some of e-banking services like balance inquiry, money transfer, and others. This also helps us in generating revenue out of the services and they positively influence our financial success.

Interviews with bank IT Officers indicated that transactions that are done using e-banking avoid unnecessary losses that are associated with by human errors especially when charges are deducted manually. E-banking helps banks serve more customers at once and thus increases the ability to generate more money over a period of time. Bank managers insisted that, worldwide customers prefer faster and more reliable services hence services that were manually and traditionally offered are to a large extent discouraged especially when technology like e-banking can be used. Through the use of likert

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scale all 115 respondents were asked to express their level of agreement or disagreement on a statement "e-banking helps customers from remote areas to enjoy bank services and hence market share increases". The study found that about 70% of the respondents either agreed (45.5%) or strongly agreed (25%). Implying that banks are reaching out more people from rural areas at the same time increasing their revenues from this category of customer who could not be reached without e-banking.

In an interview with bank managers, one commented that:

"Our observations show that the number of people visiting our branches from rural areas where we have not opened branches there have decrease drastically due to presence of e-banking. We used to see long queues of civil servants (e.g. primary and secondary school teachers) located in rural areas just to check their bank balances or sometimes withdraw cash from banking halls or ATM's but e-banking services have made life easier for them since everything can be done using their cellphones"

It was further observed that bank officers and managers believe that e-banking has increased revenues through cost savings in manual transaction. Money which had been used to purchase paper for instance have been declining as the number of e-banking users increases.

One IT officer added that:

"Transactions that are done electronically are more efficient way of reducing resources used including papers and printing facilities. However one challenge has been proof of transaction because traditional ways has been involving some sort of printed receipts.

In the same direction one of the bank managers said:

"Apart from cost reduction through paper works (e.g. electronic bank statement), the use of e-banking makes banks more environmental friendly, it is also a part of corporate social responsibility which contributes towards environmental sustainability"

In understanding the role of e-banking on reduction of bank costs the study found that e-banking offers a platform for advertising bank services and hence saves some amount of money that could be spent for advertising bank services elsewhere.

For instance one bank manager insisted that:

"We send bank information to customers who have subscribed in our bank mobile services and this is one of very cost effective ways of advertising."

4.1.3 E-Banking Challenges:

The major challenges reported by customers includes network problems and illiterate on using e-banking facilities especially PC facilities.

The study obtain more clarification from the IT officers who said:

"Admittedly, network problem is common. However, it is attributed by number of factors including e-banking system, device used by our customers but also the network providers. Customers have to access e-banking information using their devices that are enabled by their cell-phone network companies or internet connections. Our bank has been working hard to ensure whenever we notice any network problem we report to responsible bank officers and IT Managers so that it gets fixed as soon as possible"

The study also found that 56.8% of the sampled bank customer had sufficient knowledge on the use of e-banking. However some 43.2% of the sampled customers believed that insufficient knowledge on language used is sometimes a barrier to e-banking services.

In response to this, one of IT officers explained that:

"The language that is used sometimes seems unfriendly because sentences cannot be written in full and customers are supposed to select numbers as their options in the menu. Something that is considered as complication. However, we have customer service desk in each branch that is responsible for offering clarification on issues like this"

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4.2 Discussions:

4.2.1 E-Banking and Customer Enrollment and Retention:

The study has found that e-banking is increasing customer enrollment among the surveyed banks in Tanzania. About 86% of the respondents are in agreement with this fact. The study found that majority of customers in our sample (89.5%) use e-banking in making their transactions. From this view point it can be vividly seen how e-banking service has been accepted by the many bank customers in developing country like Tanzania. The has resulted into fewer customers visiting banking halls thus increasing efficiency of bank as bank officers can deal with fewer customer in banking halls. Secondary, physical resources including devices, furniture and size of banking halls has become more sufficient to serve few customers that seek for physical contact with bank officers. These findings are in alignment with those by Thompson and Jane (2016) who found that customers are likely to move to a bank that has a more advanced technology than their current bank just to find convenience. A study by Gregory (2015) insisted that having right technology in a bank is not only good for the customers themselves only but also for the banks themselves since customer retention has a significant role to play in financial success of any institution.

4.2.2 E-Banking and Revenue Generation:

The study found that commercial banks generate revenue through the use of e-banking services, specifically from charges and commissions that customers pay for the use of the services. E-banking has also increased revenue for commercial banks as a result of savings arising from using less human effort. The findings are similar with those of Ying (2014) who found that there is positive correlation between implementation of e-banking in commercial banks and financial success of the banks. Customers pay fees for the service as soon as they use or subscribe. This study found that e-banking helps commercial banks to serve multiple customers at once something that a human being cannot efficiently and effectively do. This provides a modern meaning of a bank that goes beyond a physical infrastructure, with services accessible from wherever a customer is.

The other pathways through which e-banking increase revenues is through operational cost reduction. This study found that electronic banking is reducing banking operational costs. E-banking uses less papers as a result finances that could be used for buying papers and printing equipment and materials are saved. Chidiadi and Okwu (2016) found similar conclusion in a Nigerian context.

4.2.3 E-banking Challenges:

The study found that there are internal and external challenges that commercial banks face in implementing e-banking. Some bank customers are facing network challenge limiting accessibility of e-banking services. Bank managers indicated that sometimes this problem is associated with weak connectivity from cellular network and/or internet providers who are commissioned to offer the services. Customers were also complaining the use of English in most e-banking services particularly those who were not conversant with English (Rural areas). This has something to do with customers' perspective and lack of sufficient technical know-how. This findings are similar to those by Derrick (2014) who found that networks and other technological issues were affecting the use of e-banking. Kim (2014) observed that some customers perceive the language used in e-banking services unfriendly for some reasons.

5. CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion:

E-banking has a significant role on customer enrollment and retention. Results have shown that e-banking increases attractiveness of banks and ultimately retention of customers. E-banking helps commercial banks in generating extra revenues that customers pay in using the financial and banking services. However, the effectiveness of e-banking is limited by network (internet and cellular connectivity) problems, insufficient technical know-how, and poor language proficiency among bank customers.

5.2 Recommendations:

The study recommends the following;

- More awareness programs have to be initiated to ensure that customers understand the benefits of e-banking and how to use them;
- E-banking menus should have friendly language to ensure that customers understand them well for smooth functioning;

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- Banks should ensure that e-banking services are available even in rural areas to expand their customer base and increase their market share and this should be done through promotional campaigns.
- Commercial banks have to be more innovative by designing more e-banking services to enable customers to enjoy more banking services.

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