

Ethiopian Banker's Perception of Electronic Banking in Ethiopia – A Case of Adama City

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Abstract- Traditionally banks are in the forefront in harnessing and using technology to improve their products and services. Over a period of time they have been using electronic and telecommunication networks extensively to provide products and services to the customers. This study attempts to understand and identify bankers perception of benefits and risks associated with electronic banking facilities in Ethiopia. Bank employees were the primary source of data and the data so collected was analyzed using mean score analysis. As per the findings of this study it is observed that bankers perceive 'a means to save time' and 'minimize inconveniences' as the most and the least advantage of electronic banking whereas 'Need for expertise and training' and 'charge a high cost for services' are considered as the most and the least risk associated with electronic banking.

Index Terms- Electronic banking, Internet Banking, SMS Banking, Banker's perception.

I. INTRODUCTION

Banks play a prominent role in improving economic efficiency by channelizing funds from resource surplus sectors to those sectors that are deficient, yet possessing better productive investment opportunities. Banks also play a vital role in trade and payment system by significantly reducing transaction costs and increasing convenience (NCA, 2006). Ethiopia is an emerging economy with a growing financial sector. With a double digit growth and internal stability unlike most economies in the African continent, Ethiopia is surging ahead to be a leader in the horn of Africa in the financial sector.

Electronic distribution channels provide alternatives for faster delivery of banking services to a wider range of customers (Kaleem and Ahmad, 2008). A very fast advancement in electronic distribution channels has produced tremendous changes in the financial industry in the recent years with an increasing rate of change in technology and competition among participants (Huges, 2001). IT-based distribution channels also reduce personal contact between the service providers and the customers, which inevitably leads to a complete transformation of traditional bank-customers relationships (Barnes and Howlett, 1998).

According to Kaleem & Ahmad (2008), increasing competition among banks and from non-bank financial institutions also raises concerns as to why some people adopt one distributional channel and others do not, and that identifying the factors that may influence this decision is vital for service providers. Literature also supports that the level of user's acceptance of electronic

banking is to a large extent determined by their perceptions of its effectiveness in terms of costs and benefits (Gefen & Straud, 2004; Abu-Musa 2005; 2009; Olatokun & Igbinedion 2009).

How bankers perceive the benefits and threats that are associated with electronic banking system has a strong implication on the services provided by the bank to its customers in case of emerging economies such as the Ethiopian economy.

2. OBJECTIVES OF THE STUDY

This paper reviews the existing literature on electronic banking and attempts to address the following objectives:

1. To find the benefits that bankers expect their customers to receive when they use electronic banking.
2. To examine bankers' perceptions of the risk associated to electronic banking.
3. To review the existing literature and provide insights for researchers and bankers interested in provided electronic distribution channels.

Commercial Banking in Ethiopia:

The history of modern banking in Ethiopia goes back to 1900 when an agreement was reached in 1905 between Emperor Minilik II and Mr. Ma Gillivray, representative of the British owned National Bank of Egypt. Currently as per National Bank of Ethiopia estimates there are 18 private and 3 state owned banks. Out of these 19 banks, the state owned commercial Bank of Ethiopia (CBE) is the largest and leading bank in financial operations.

The financial sector in Ethiopia is composed of the banking industry, insurance companies, microfinance institutions, saving and credit cooperatives and the informal financial sector. The banking industry accounts for about 95% of the total financial sector assets, implying that the financial sector is undeveloped, and activities that banks could perform are legally limited, which in turn contribute to lesser contestability. (Zerayehu, Kagne, & Teshome, 2013).

Commercial Banks as such provide all the banking services including ATM facility, Internet Banking, Telephone Banking, SMS banking and Mobile Banking beside the traditional banking activities.

Electronic Banking in Ethiopia:

The term electronic banking can be described in several ways. In very simple terms it means the provision of information or services by a bank to its customers, via a computer, television, telephone, or mobile phone. It as an electronic connection between bank and customer in order to prepare, manage and control financial transactions. (Daniel, 1999)

Furthermore, electronic banking is said to have three different means of delivery: telephone, PC, and the Internet. Daniel (1999), for example, introduces four different channels for electronic banking: PC banking, Internet banking, managed network, and TV-based banking.

Electronic banking is the newest delivery channel in many developed countries and there is a wide agreement that the new channel will have a significant impact on the bank market (Daniel, 1999).

According to Nehmzow (1997) Internet banking offers the traditional players in the financial services sector the opportunity to add a low cost distribution channel to their numerous different services.

Table No. 1
Delivery platform available for electronic banking

Types of service	Description
PC banking (private dial up)	Proprietary software, distributed by the bank, is installed by the customer on their PC. Access to bank via a modem linked directly to the bank
Internet banking	Access their bank via Internet
Managed network	The bank makes use of an online service provided by another party
TV based	The use of satellite or cable to deliver account information to the TV screens of customers (Also Internet based)
Telephone banking	Customers access their bank via telephone (Own personal ID and password required)
Mobile phone banking (SMS, WAP, 3rd generation)	Access with text message (SMS), Internet connection (WAP), or high speed 3rd generation mobile connection (also Internet based)

Source: Adapted from Daniel, 1999 and Karjaluoto, 2003

The appearance of E-banking in Ethiopia goes back to the late 2001, when the largest state owned, commercial bank of Ethiopia (CBE) introduced ATM to deliver service to the local users. Electronic banking facilities provided by most Ethiopian Banks are very basic. However e-banking facilities provided are at par with those in the region.

As per Zemen bank official web site(www.zemenbank.com) electronic banking facilities are multi channel based and include internet banking, ATM banking, Call centre banking and SMS banking.

Table No. 2
Features of Electronic banking services rendered by Ethiopian banks

Electronic Banking Service	Features of service rendered
Internet Banking	<ol style="list-style-type: none"> 1. PersonalProfile Administration 2. Balance enquiry 3. View daily transaction register, 4. Ability to link accounts together so that transfers can be completed from one account to another 5. Customer Service enquiry and resolution with in seconds 6. View check issuance status through the register 7. Password change and management features 8. Intrusion detection capability
ATM Banking	<ol style="list-style-type: none"> 1. All customers will receive an ATM Card and Personal identification Number (PIN). 2. The ATM allows you to receive cash at your convenience. It also allows you to check your balance, make transfers and deposit cash.
SMS Banking	<ol style="list-style-type: none"> 1. Authentication and verification 2. Check daily, weekly or monthly balance 3. Interactively receive account balance 4. Produce a mini statement on your mobile 5. Receive alerts and notification on: <ul style="list-style-type: none"> ✚ Low balance ✚ Deposit and withdrawal ✚ Transfer of funds from your account or into your account
	<ol style="list-style-type: none"> 1. Secure delegated 24 hour service 2. Authentication and verification

Call Center Banking	<ol style="list-style-type: none">3. Balance enquiry4. View daily transaction register5. Customer Service enquiry and resolution6. Request Online Statement
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(Source : adapted from www.zemenbank.com)

3. LITERATURE REVIEW

The following section discusses some Literature relating to benefits and risks associated with electronic banking.

Benefits associated with electronic banking

Perception of various stakeholders, especially bankers has attracted the attention of researchers as per the available literature on electronic banking. According to Berry (1984), maintenance of high level of employee satisfaction and retention is essential if customer satisfaction has to be achieved and employees must be essentially viewed as internal customers by the management.

Banks normally assign their managers responsibility for the promotion of the use of electronic channels to customers (Lymeropoulos, and Chaniotakis, 2004). Their input as delivery staff is important. It is also the manager's responsibility to ensure that branch staff is professional, well-trained and knowledgeable about the range of services provided by the bank (Moutinho, 1997).

The perceived benefits associated with electronic banking have been extensively documented in several studies. As per Thornton and White (2001) several electronic distribution channels are available for banks in United States, further they concluded that customer orientations towards convenience, service, technology, change, knowledge about computing and the Internet affected the usage of different channels.

Similarly, Highlighting the impact of ICT in recent years, Rao, Metts and Mong (2003) observed that the 1990s witness the proliferation and hyper growth of internet and internet technologies, which together are creating a global and cost-effective platform for business to communicate and conduct commerce. Oladejo and Dada (2008) investigated the impact of IT on the performance of Insurance companies in Nigeria.

Jen and Michael (2006) indicate that E-banking has created unprecedented opportunities for banks and businesses globally, in the ways they organize financial product development, delivery, and marketing via the Internet. While it offers new opportunities to banks, it also poses many challenges such as the innovation of IT applications, the blurring of market boundaries, the breaching of industrial barriers, the entrance of new competitors, and the emergence of new business models (Liao and Cheung 2003).

Convenience of conducting banking outside the branch official opening hours has been found significant in cases of adoption.

Banks provide customers convenient, inexpensive access to the bank 24 hours a day and seven days a week. Moutinho *et al.*, (1997) pointed out that each ATM could carry out the same, essentially routine, transactions as do human tellers in branch offices, but at half the cost and with a four-to-one advantage in productivity.

Robinson (2000) argued that the online banking extends the relationship with the customers through providing financial services right into the home or office of customers. The banks may also enjoy the benefits in terms of increased customers loyalty and satisfaction (Oumlil and Williams, 2000). However, Nancy, Lockett, Winklhofer, and Christine (2001), viewed the same situation differently and argued that customers like to interact with humans rather than machines.

Gerrard and Cunningham (2003) found a positive correlation between convenience and online banking and remarked that a primary benefit for the bank is cost saving and for the consumers a primary benefits is convenience. Multi-functionality of an IT based services may be another feature that satisfies customer needs (Gerson, 1998).

Howcroft *et al.*, (2002) found that the most important factors encouraging consumers to use online banking are lower fees followed by reducing paper work and human error, which subsequently minimize disputes (Kiang *et al.*, 2000).

Risks associated with electronic banking

As it is stated in different E-banking literature some of the problems related with adoption of E-banking are: Low level of internet penetration and poorly developed telecommunication infrastructure. According to Jensen (2003), most countries in Africa, except South Africa, have Internet infrastructure only in their major cities.

White and Nteli (2004) conducted a study that focused on why the increase in Internet users in the UK had not been paralleled by increases in Internet usage for banking purposes. Their results showed that customers still have concerns with the security and the safety aspects of the Internet.

Lack of specific laws to govern Internet banking is another important concern for both the bankers and the customers. This relates to issues such as unfair and deceptive trade practice by the supplier and unauthorized access by hackers. Larpsiri *et al.*, (2002) argued that it is not clear whether electronic documents and records are acceptable as sufficient evidence of transactions. They also pointed out that the jurisdiction of the courts and dispute resolution procedures in the case of using the Internet for commercial purposes are important concerns.

Disputes can arise from many sources. For instance, websites are not a branch of the bank. It is difficult for the court to define the location of the branch and decide whether they have jurisdiction (Rotchanakitumnuai and Speece, 2003).

Other risks associated to electronic banking are job losses, lack of opportunities to socialize and the development of a lazy society (Black *at al.*, 2001).

Lack of suitable legal and regulatory framework for E-commerce and Electronic payment is another impediment for the adoption of new technology in banking industry. There is no separate legislation that deals with electronic banking including enforceability of the validity of electronic contracts, digital signatures and intellectual copyright and restrict the use of encryption technologies and High rates of illiteracy. Low literacy rate is a serious impediment for the adoption of E-banking in Ethiopia as it hinders the accessibility of banking services. For citizens to fully enjoy the benefits of E-banking, they should not only know how to read and write but also possess basic ICT literacy (Gardachew 2010)

According to Ayana(2014) ,the major barriers Ethiopian banking industry faces in the adoption of Electronic banking are: security risk, lack of trust, lack of legal and regulatory frame work, Lack of ICT infrastructure and absence of competition between local and foreign banks.

Wondwossen & Tsegai (2005) observed the following reasons which may be considered as hindrance factors for the use of electronic payment system in Ethiopia. These hindrance factors include, lack of appropriate infrastructure for E-payment, lack of internet facilities with customer and learning how to interact with bank website. Moreover, factors that can affect adoption of E-banking in the country regarding the technological factor, organizational factor and Environmental factor.

Though problems aplenty a study conducted by Wondwossen and Tsegai (2005) revealed that an adequate legal structure and security framework could encourage the use of E-payments in Ethiopia. Therefore, a study of banker’s perception of electronic banking becomes more relevant.

4. METHODOLOGY

The study used a questionnaire that was administered in Adama City where almost all banks(except Zemen Bank, which is a single branch bank) have their branch offices. A questionnaire adopted from literature study was used as a tool and bank employees were requested to complete the questionnaire.

All banks and branches located in Adama and providing or planning to provide electronic banking were included in the study. At least one employee at each levels of officer, manager and executive were included. Out of a total 78 questionnaires distributed, 74 were completed and received back . A five point Likert scale was used to measure all the statements (1 = strongly disagree to 5 = strongly agree). Before the field work, a pilot study was conducted in order to refine the questions. Finally, data was analyzed via frequency analysis and mean score analysis.

5. RESULTS & DISCUSSIONS

**Table no. 3
Profile of the Respondents**

		N=74	%
Working Experience	1 to 5 Yrs	23	31.08
	6 to 10 Yrs	26	35.13
	More than 10 Yrs	25	33.78
Position	Executives	4	5.40
	Officers	50	67.56
	Managers	20	27.02
Qualification	Diploma	3	4.05
	Degree	66	89.19
	Master’s and Above	5	6.75
	Professional Qualification	nil	Nil
Age	Upto 25 Yrs	5	6.75
	26 to 35 Yrs	49	66.21
	36 to 45 Yrs	4	5.40
	46 Yrs and above	2	2.70
Gender	Male	50	67.57
	Female	24	32.43

(Source: Primary Data)

The personal characteristics of banker’s whose perception was sought is outlined in table 3. It is observed that 31.08 % of the respondents hold work experience between 1 to 5 years and 35.13 % between 6 to 10 yrs.

The position based classification of bankers includes Executive (5.4%), Officer (67.56%) and Manager(27.02%). A look into the educational qualification reveals that 6.75 %held Master degrees; 89.19% held Bachelor degrees while another 4.05 % bankers held diplomas..A further insight reveals that 72.96% of the bankers are aged below 35yrs.

**Table No. 4
Banker’s Perception of benefits of electronic banking**

Statements	Mean	Rank
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1. Electronic banking minimizes the cost of transaction	4.5	3
2. Electronic banking saves time	4.73	1
3. Electronic banking minimizes inconveniences	4.22	9
4. Electronic banking provides upto date information	4.43	6
5. Electronic banking increases operational efficiency	4.42	7
6. Electronic banking reduces HR requirements	4.24	8
7. Electronic banking facilitates quick response	4.46	4
8. Electronic banking improves service quality	4.44	5
9. Electronic banking minimizes the risk of carrying cash	4.72	2

(Source: Primary Data)

Table 4 shows the mean scores of banker’s perceptions of the benefits of electronic banking. It is observed that the statements, “*Electronic banking saves time*”, “*Electronic banking minimizes the risk of carrying cash*”, and “*Electronic banking minimizes the cost of transaction*” have the highest mean scores of 4.73 and 4.72 and 4.5.

The outcomes are not in line with those of earlier studies made by Moutinho et al., (1997), Thornton and White (2001), Howcroft et al., (2002) and Gerrard and Cunningham (2003). In these studies mean scores were highest for statements “*Electronic banking minimizes the cost of transaction*”, “*Electronic banking minimizes inconveniences*” and “*Electronic banking saves time*”

The bankers give average importance to the statements, “*Electronic banking facilitates quick responses*” (4.46), “*Electronic banking improves service quality*” (4.44), “*Electronic banking provides up-to-date information*” (4.43), “*Electronic banking increases operational efficiency*” (4.42). These outcomes are contrary to the findings of Moutinho and Phillips (2002) in case of UK and Aladwani (2001) in case of Kuwait, where the managers gave the highest priority to faster, easier and reliable IT services for customers.

The statements “*Electronic banking reduces HR requirements*” (4.24) and “*Electronic banking minimizes inconveniences*” (4.22) had the lowest mean scores. These findings are the opposite of those found by Birch and Young (1997) who found reductions in branches and associated staff with the introduction of Internet

banking. The low mean score for a reduction in HR requirements was associated with the low level and recent penetration of electronic banking in the country, Boon and Ming (2003) suggested in case of Malaysia that the top management of the banks should enhance their operations through a mixture of branch banking and e-channels like ATMs, phone banking and PC banking.

Table No. 5
Banker’s perception of risks associated with electronic banking

Statement	Mean	Rank
1. Electronic banking has the chance of data loss	3.10	4
2. Electronic banking has the chance of fraud	3.37	3
3. Electronic banking has the chance of government access	3.08	5
4. Electronic banking lacks information security	2.65	7
5. Electronic banking charge a high cost for services	2.14	9
6. Electronic banking has many legal and security issues	3.57	2
7. Electronic banking needs expertise and training	3.86	1
8. Electronic banking has inadequate information on the website	2.68	6
9. Electronic banking has less operational reliability	2.36	8

(Source: Primary Data)

Table 5 presents the bankers’ perceptions of the risks associated with electronic banking. The results show some very interesting facts. Bankers of all categories consider “*Electronic banking needs expertise and training*”, “*Electronic banking has many legal and security issues*” and “*Electronic banking has the chance of fraud*” as very serious concerns where as “*Electronic banking has the chance of data loss*” and “*Electronic banking has the chance of government access*” are given just about average importance. “*Electronic banking has inadequate information on the website*”, “*Electronic banking lacks information security*”, “*Electronic banking has less operational reliability*” “*Electronic banking charge a high cost for services*” are considered least important.

6. CONCLUSIONS

This study was conducted using attributes identified after a detailed literature review. It is aimed to cover the benefits and risks associated with electronic banking service in Ethiopia. This study investigated banks employees' perceptions of electronic banking using 18 attributes.

In one process of analysis, mean scores of benefits and risks associated with electronic banking were computed and ranked. Bankers consider "Saves time", "Minimizes the risk of carrying cash", and "Minimizes the cost of transactions" to be important benefits and "Needs expertise and training", "Many legal and security issues" and "Chance of fraud" to be very serious concerns of electronic banking. The bankers do not consider "Reduces HR requirements" and "Minimizes inconveniences" to be important benefits and "Less operational reliability" "High cost for services" to be important risks associated with electronic banking.

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