

Effect of Electronic Banking System on Operational Efficiency of Commercial Banks in Rwanda- A Case Study of Eco Bank

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Abstract: Commercial banks in Rwanda because according to NBR Report (2008) there were delays in payment of checks among banks; time wasted in banks as people line in queue waiting for service, errors as a result of manual work and fraud related cases were common. As a result some banking institutions in Rwanda were making losses because of the various risks that they were exposed to traditional system. The researcher achieved this by use of three specific objectives namely; to analyze the effect of internet banking on operation efficiency of Eco bank; to analyze the effect of mobile banking on operation efficiency of Eco bank and to examine the effect of electronic cards on operation efficiency of Eco bank. The research is of benefit to the researcher, Eco bank and JKUAT. The researcher reviewed both theoretical and empirical literature on the effect of electronic banking on operation efficiency of Eco bank. The researcher used descriptive method of study based on qualitative and quantitative approach in order to get better analysis of the study. The population size is 242 and sample taken was 151 respondents. Both primary and secondary sources with their relevant tools like questionnaire and documentary analysis in order to come up with required data was used. The data was processed by SPSS software but analyzed using frequency/percentages, mean and standard deviation. Eco bank uses Pay bill system: This was indicated by a strong mean of 4.4834 and heterogeneity standard deviation of .45747. This implies that Eco bank uses Pay bill system. Eco bank uses Quick response system: This was indicated by a strong mean of 4.4967 and homogeneity standard deviation of .55226. This implies that Eco bank uses Quick response system. Thus it can be concluded that mobile application contributes to positive operation efficiency of Eco bank as the findings above suggests. Findings show that Electronic mobile banking system has improved banking operation in Rwanda. EcoBank uses mobile banking system for money transfer and bank account control, Findings further shows that they use Mobile banking system like mob application system to transact with clients, express cash system, Pay bill system and quick response system. Electronic mobile banking system has improved banking operation in Rwanda. Eco Bank uses mobile banking for money transfer, purchasing, account control, etc.. Findings further shows that they use Mobile banking system like mob application system to transact with clients, express cash system, Pay bill system and quick response system.

1. Background of the Study

The new millennium brought with it new possibilities in terms of information access and availability simultaneously, introducing new challenges in protecting sensitive information from intruders while making it available to others. Today's business environment is extremely dynamic and experience rapid changes as a result of technological improvement, increased awareness and demands Banks to serve their customers electronically. Banks have traditionally been in the forefront of adapting technology to improve their products and services (Aladwani 2011).

The Banking industry of the 21st century operates in a complex and competitive environment characterized by these changing conditions and highly unpredictable economic climate. Information and Communication Technology (ICT) is at the centre of this global change curve of Electronic Banking System in Africa today (Stevens 2012). Assert that they have over the time, been using electronic and telecommunication networks for delivering a wide range of value added products and services, managers in Banking industry in Rwanda cannot ignore Information Systems because they play a critical impact in current Banking system, they point out that the entire cash flow of most fortune Banks are linked to Information System. The application of information and communication technology concepts, techniques, policies and implementation strategies to banking services has become a subject of fundamental

importance and concerns to all banks and indeed a prerequisite for local and global competitiveness Banking.

The advancement in Technology has played an important role in improving service delivery standards in the Banking industry (Christopher et al., 2006). In its simplest form, Automated Teller Machines (ATMs) and deposit machines now allow consumers carry out banking transactions beyond banking hours. With online banking, individuals can check their account balances and make payments without having to go to the bank hall. This is gradually creating a cashless society where consumers no longer have to pay for all their purchases with hard cash hence improving customer relationship management system. For example: bank customers can pay for airline tickets and subscribe to initial public offerings by transferring the money directly from their accounts, or pay for various goods and services by electronic transfers of credit to the sellers account. As most people now own mobile phones, banks have also introduced mobile banking to cater for customers who are always on the move. Mobile banking allows individuals to check their account balances and make fund transfers using their mobile phones. This was popularized in Rwanda first by Bank of Kigali; customers can also recharge their mobile phones via SMS. E-Banking has made banking transactions easier around the World and it is fast gaining acceptance in Rwanda.

Other scholars argued that, e-banking has transformed traditional banking practices to the extent that it has been found to create a paradigm shift in marketing practices resulting in positive performance in the banking sector (Gonzalez, 2008; Mahotra & Singh, 2007). This shows that the delivery of efficient and quality service is facilitated by information technology. Similarly, Christopher et al. (2006) indicated that e-banking provides an important channel to sell products and services of banks and is perceived to be a necessity for banks to be successful. Therefore, service quality and efficiency in the banking industry has increased tremendously worldwide in the world due to the integration of information technology into banking operation. The present study seeks to investigate the extent to which the e-banking concept has influence service quality of Rwanda financial institutions.

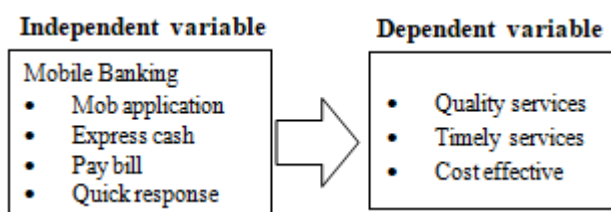
2. Statement of the Problem

According to NBR Report (2008) there were delays in payment of checks among banks; time wasted in banks as people line in queue waiting for service, errors as a result of manual work and fraud related cases were common. As a result some banking institutions in Rwanda were making losses because of the various risks that they were exposed to, others were forced to merge or being acquired by foreign banks, for example BCR was acquired by I& M bank due to losses they made (NBR Report, 2014). The researcher believes that adoption of electronic banking will ease banking transactions and attract customers. Since early 2000s, banks have decided to computerize their systems by developing and introducing payment cards for their customers as well as deploy ATM's systems for efficient services. Recently banks have even introduced mobile banking system where clients use mobile phone to pay and withdraw money from their accounts. It is based on the above background that the researcher would like to examine the effects of electronic banking on operational efficiency of financial institutions in Rwanda.

3. Objective of the study

To examine the effect of mobile banking system on operational efficiency of Eco Bank.

4. Conceptual Framework



1) Research Design

The study was a descriptive research design basing on both qualitative and quantitative approach. This is because quantitative research excels at summarizing large amounts of data and reaching generalizations based on statistical projections. Qualitative research on the other hand excels at story telling form the participants viewpoint, providing the

rich descriptive detail that sets qualitative results into their human context. For this study, the quantitative method investigated the effects of Electronic banking system on operational efficiency of commercial banks in Rwanda. The qualitative data collection method on the other hand investigated the extent to which the Electronic banking system affects operational efficiency of Eco bank.

2) Population of the Study

All the items under consideration in any field of inquiry constitute a 'universe' or 'population'. It can be presumed that in such an inquiry when all the items are covered no element of chance is left and highest accuracy is obtained (Kothari, 2004). A total of 242 staff of Eco bank all over the country was considered as the population.

3) Sampling technique

Slovene's formular was used to calculate the sample size. With regard to the level of accuracy, we used a confidence level of 95% as suggested by Kothari (2004), this means that there are 95 chances in 100 (or .5 in 1) that the sample results represent the true condition of the population within a specified precision range against 5 chances in 100 (or .5 in 1) that it does not. The slovin's formula is calculated as follows:

$$n = \frac{N}{1 + Ne^2}$$

Stephanie (2013)

n= Number of samples or sample size

N= Total population

e= Error tolerance

The population size of this research is 242 employees and clients of Eco bank. We take a sampling error of 5%, and then the sample size was:

$$n = 242 / 1 + 242 (0.05 * 0.05)$$

$$n = 242 / 1 + 242 * 0.0025$$

$$n = 242 / 1 + 0.605$$

$$n = 242 / 1.6$$

$$n = 151$$

Therefore the sample size was 151 respondents.

4) Data Collection Instruments

Questionnaire is an important method of data collection. Judd (2011) said that a questionnaire is justifiable in data collection mainly because; it enables the researcher to collect large amount of data within a short time period, it also provides opportunity for respondents to give frank, anonymous answers. One set of questionnaire was designed for the Ecobank staffs; it included both open and closed ended set of questions that to be answered. Also this research was used documentary technique in order to correct secondary data.

5. Data Analysis and Interpretation

Mobile Banking System and operational efficiency of EcoBank

This section describes Mobile Banking System and operational efficiency of Eco Bank

Table 1: Mobile Banking System in Eco Bank

Mobile Banking System in Eco Bank	Mean	Std. Deviation	Comments
Eco bank uses Mob application system	4.4172	.53364	Strong heterogeneity
Eco bank uses Express cash system	4.4503	.52521	Very Strong heterogeneity
Eco bank uses Pay bill system	4.4834	.53981	Strong heterogeneity
Eco bank uses Quick response system	4.4967	.55226	Strong heterogeneity
Valid N (list wise)	151		

Source: Primary data, 2018

Table 1 indicates how Mobile Banking System affects operational efficiency of EcoBank and the findings is analysed in details below; Ecobank uses Mob application system: This was indicated by a strong mean of 4.4172 and heterogeneity standard deviation of .53364. This implies that Eco bank uses Mob application system to transact with clients as seen in table1.

Eco bank uses Express cash system: This was indicated by a very strong mean of 4.4503 and homogeneity standard deviation of .52521. This implies that Eco bank uses Express cash system to disburse any time the client's needs the cash.

Eco bank uses Pay bill system: This was indicated by a strong mean of 4.4834 and heterogeneity standard deviation of .45747. This implies that Eco bank uses Pay bill system as seen in table 4.8

Eco bank uses Quick response system: This was indicated by a strong mean of 4.4967 and homogeneity standard deviation of .55226. This implies that Eco bank uses Quick response system. Thus it can be concluded that mobile application contributes to positive operation efficiency of Eco bank as the findings above suggests.

6. Conclusion

Electronic mobile banking system has improved banking operation in Rwanda. Eco Bank uses mobile banking for money transfer, purchasing, account control, etc.. Findings further shows that they use Mobile banking system like mob application system to transact with clients, express cash system, Pay bill system and quick response system.

7. Recommendations

- 1) Eco bank should effectively sensitize clients on how to use mobile banking technologies in order to improve their operational efficiency.
- 2) The bank should sensitize the clients on the importance of the security of their pin code in order to avoid sharing passwords with other friends and masquerades.

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