E-Banking Services and Performance of Cooperative Bank of Oromia

Tagay Mifta Aba-Bulgu*

* MBA, Atlas Business and Technology College

Abstract

Electronic banking service is growing rapidly in the world, Cooperative bank of Oromia is putting its maximum exertion to travel with technology of E- banking services. E-banking has its own effect on financial performance of the bank. This research mainly investigates the effect of E- banking on the financial performance of the Cooperative Bank of Oromia by focusing on the bank's performance and size. For primary data collection branch staffs and managers will be interviewed while secondary data will be collected from branch documents like report of daily transactions, profit of branch and customer related data will be reviewed.

Keywords: Mobile Banking, Performance, Bank

1.   Introduction

Globally, banking service providers saw an opportunity in the unbanked rural population and went on to exploit this opportunity by creating agencies down to the village level. This gave the banking sector a chance to create new possibilities, the chance to offer the market a fresher, more affordable pie. E-banking banking in Ethiopia has an infant stage. The Ethiopian commercial banking system is composed of two state owned commercial banks and 16 private banks. Though it is true that traditional banking has grown steadily over the years, in terms of technological based financial service/product the Ethiopian banking sector didn't fully benefit from ICT in general and M-banking in particular. Currently there are six commercial banks that commenced M-banking service, albeit the M-banking regulation directive was issued in January 2013.cooperative bank of Oromia is one of private bank that launched mobile banking service for its customer to improve their operation and to reduce costs. The bank launched the service by name of "COOPAY" in March 2019.

2.   Statement of problem

Banking industry has been changing rapidly and radical change came after introduction of technology like internet and mobile. Electronic Banking has been widely used in developed countries and is rapidly expanding in developing countries. Information communication technology play important role in the development of banking industry. As technology becomes the order of the day and new development in the economy creates new opportunities which are hard to assume, many organization are looking for ways on how to embrace technology as way of survival. 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. Mobile banking is seen as an extension to the payment system of bank which enables mobile network to extend its services in reach of customer (Krugel, 2007).

All of this study show various results in each countries therefore this study intended to fill the bank in local context. There is no known study that has considered the impact of mobile banking on financial while research has been made on factors influence the usage of mobile banking in Ethiopia (kalkidan 2016) and challenges of introducing Electronic banking in Ethiopia (Ayana 2012) there is no study conducted on impact of mobile banking on financial bank of Oromia therefore this study aims at filling gap by studying the impact of mobile banking on financial performance of cooperative bank of Oromia.

3.   Objective

The objective of this study is to determine the effect of E-banking services on financial Performance of cooperative bank of Oromia.

4.   Research Methodology

This part of the study aimed at explaining research design and data collection method, population, sample technique, sample analysis and data analysis method.

4.1.   Data collection method

In order to achieve the objective of this study the researcher used both primary and secondary data collection methods.

4.2.   Research Design

Research design is a comprehensive plan for data collection in an empirical research project. It is a "blueprint" for empirical research aimed at answering specific research questions or testing specific hypotheses. (Bhattacherjee, 2012). The main objective of this study is to examine the impact of e-banking services on performance of cooperative bank of Oromia. To achieve this objective explanatory type of research design with a quantitative approach is used.

4.3.   Sampling Technique

This study used purposive sampling method to draw the sample from the population. Purposive sampling enables to use a judgment to select cases that will best enable you to answer your research question(s) and to meet your objectives. (Saunders et al 2009).

4.4. Analytical Model

For this study, return on asset was used as a dependent variable which is determined by many factors. And those factors have chosen by taking in to account the availability of data and its influence on bank performance.

The analytical model was as follows

$$ROA = \alpha_0 + \beta_1 NATM + \beta_2 NPOS + \beta_3 NMBU + \beta_4 BS + \varepsilon$$

Where:

ROA is the dependent variable (Performance i.e. Return on Asset)

α_0 is the regression constant

β_1, β_2, β_3, and β_4 are the coefficients of independent variables, NATM is Number of ATM terminals

NPOS is Number of POS terminals

NMBU is Number of Mobile banking users

BS is the Bank Size

ε is the Error Term.

5. Data analysis, Results and Discussion

5.1. Introduction

This part covers the analysis of the data concerning the effect of e-banking services, the effect of mobile banking, the influence of agent banking, the influence of internet banking, and the impact of automated teller machines on the cooperative bank of Oromia' performance. This part also presents the research findings organized into the following sections: response rate, reliability tests, demographic characteristics, descriptive statistics, diagnostic tests, and inferential statistics.

5.2. Response Rate

The researcher administered questionnaires to participants who were from the targeted population of senior managers and operations managers. Logistical and financial constraints reduced the sample size respondents. However, some of the questionnaires were returned, which represents 83.33% response rate.

Table 5.1: Response Rate

Target Population	Questionnaires administered	Questionnaires filled and returned	Percentage
Senior Managers	40	40	40%

| Operations Managers | 80 | 60 | 60% |
| Total | 120 | 100 | 100.0 |

(Survey Data, 2019)

5.3. Reliability Test

The reliability of the data was checked using Cronbach's alpha (Table 5.2).

Scale	Cronbach's Alpha	N of Items
Mobile Banking	0.883	7
Agency Banking	0.781	4
Internet Banking	0.825	5
ATM Banking	0.723	4
Performance	0.845	4

(Survey Data, 2019)

In this case, all variables (Table 5.2) had Cronbach's alpha values that are greater than the threshold of 0.7. This finding implies that the variables used in the study are reliable and valid for regression analysis.

5.3 Descriptive Statistics

5.3.1 Mobile Banking and Performance

This section focuses the level of agreement on the impact of mobile banking on the banks' performance using a scale of 1-5 where 1 represents not at all (NAA) and 5 represents strongly agree (SA). The analysis was carried out using mean (M) and standard deviation (SD). The study results are as shown in Table 5.4.

Table 5.4: Mobile Banking and Performance

Statements	Mean	SD
Increases customers` patronage or loyalty and reduces transaction cost	4.21	0.80
Increases bank volume of sales	4.14	0.91
Improves general customer satisfaction	4.15	0.96
Quick response to customers` requirements/enquires	4.03	0.99
Increases efficiency in service delivery	4.10	0.91
Customers have ease of using the mobile banking app	4.00	1.19
Reduces the time involved in bank transactions	4.14	0.91

(Survey Data, 2019)

As shown in Table 5.4, most of the respondents agreed that mobile banking increases customers` patronage or loyalty and reduces transaction cost (M = 4.21, SD = 0.8), increases bank volume of sales (M = 4.41, SD = 0.91), improves the general customer satisfaction (M = 4.15, SD = 0.96), quickens response to customers` requirements/enquires (M = 4.03, SD = 0.99). The results also indicate mobile banking increases efficiency in service delivery (M = 4.10, SD = 0.91), eases use of mobile banking app (M = 4.00, SD = 1.19), and reduces the time involved in bank transactions (M = 4.14, SD = 0.96). These findings concur with those of Johnstone (2010), which indicated that mobile banking is competitive strategy that allows banks to penetrate diverse markets.

5.3.2 Internet Banking and Performance

The research sought to establish the level of agreement on the effect of internet banking on the performance of cooperative bank of Oromia using a scale of 1-5 where 1 represents not at all (NAA) and 5 represents strongly agree (SA). The study results are as presented in Table 5.6.

Table 5.6: Internet Banking and Performance

Statements	Mean	SD
Increased trust in transacting online	3.99	1.04
Improved internet banking access and transactions	3.97	1.04
Improved customer satisfaction by using internet banking	4.02	0.87
Reduction in customer complaints	3.92	1.25
Increased costs in maintaining online platforms	4.07	0.90

(Survey Data, 2019)

From Table 5.6 the study findings show that majority of the respondents agree that there were increased trust in transacting online (M = 3.99, SD = 1.04) and improved internet banking access and transactions (M = 3.97, SD = 1.04). Moreover, frequency distribution showed that there were improved customer satisfaction by using internet banking (M = 4.02, SD = 0.87), a reduction in customer complaints (M = 3.92, SD = 1.25), and increased costs in maintaining online platforms (M = 4.07, SD = 0.90). The findings are consistent with those of Furst et al. (2015) who found out that banks that adopted and utilized online strategies performed better than banks that restricted to traditional banking strategies.

5.3.3 Automated Teller Machine and Performance

The research sought to establish the level of agreement on the effect of automated teller machine on the performance of CBO

using a scale of 1-5 where 1 represents not at all (NAA) and 5 represents strongly agree (SA). The study results are as presented

in Table 4.7

Table 5.7: Automated Teller Machine and Performance

Statements	Mean	SD
Increased ATM withdrawal transactions	4.08	1.08
Increased costs in maintaining ATM machine infrastructure	4.16	1.12
Customer trust and ease in using ATMs has improved	4.07	0.90
Improved customer satisfaction	4.02	0.87

(Survey Data, 2019)

The study findings as shown in Table 5.7 indicate that most respondents agreed that there were increased ATM withdrawal

transactions (M = 4.08, SD = 1.08), increased costs in maintaining ATM machine infrastructure (M = 4.16, SD = 1.12), customer

trust and ease in using ATMs has improved (M = 4.07, SD = 0.90), and enhanced customer satisfaction (M = 4.02, SD = 0.87).

These findings are in agreement with Kato et al. (2014) who advised that banks to improve comfort, quality, convenience,

protection, satisfaction, security, and responsiveness to enhance delivery of baking services through ATM.

5.3.4 Performance

Concerning measuring the performance, the respondents were asked to indicate whether on average the bank performance

parameters were improving over the past 5 years. Table 5.8 illustrates these findings.

Table 5.8: Performance Parameters

Performance Parameters	Mean	SD
Customer's numbers	3.88	1.22
Profitability	4.14	0.75
Number of branches	3.92	1.25
Number of employees	4.07	0.90

(Survey Data, 2019)

As shown in Table 5.8 the study findings indicate that the majority of respondents agreed that customer's numbers (M = 3.88, SD

= 1.22), profitability (M = 4.14. SD = 0.75), number of branches (M = 3.92, SD = 1.25), and the number of employees (M = 4.07,

SD 0.90) improved over the past five years.

This section investigates how respondents rate statements on the performance of CBO.

Table 5.9: Rate of Performance of CBO

Statements	Mean	SD
There is a good improvement in ROE in the last 3 years	4.02	0.97
There is a good improvement in ROA in the last 3 years	4.27	0.69
There is better ROE than the industry average	4.08	1.08
There is better ROA than the industry average	4.02	0.87

 (Survey Data, 2019)

The study findings as shown in Table 5.9 indicate that most of the respondents stated that there were good improvements in ROE (M = 4.02, SD = 0.97) and ROA (M = 4.27, SD = 0.69) in the past three years. Furthermore, respondents indicated that ROE was better than the industry average (M = 4.08, SD = 1.08) and ROA was better than the industry average (M = 4.02, SD = 0.87).

5.4. Diagnostic Tests

Diagnostic tests were performed to check if the data meet the assumptions of linearity, reliability, and collinearity, which are necessary for robust regression analysis (Field, 2017). In this view, tests of linearity.

5.4.1 Linearity Test

Table 4.10 indicates outcomes of the linearity tests of the performance the bank and its connection with ATM banking, internet banking, mobile banking, and agency banking.

Table 5.10: Linearity Test

		Sum of Squares	df	Mean Square	F	Sig.
Performance of Banks * Mobile Banking	Deviation from Linearity	9.595	9	2.177	11.455	.465
Performance of Banks * Internet Banking	Deviation from Linearity	23.211	11	3.928	12.517	.231
Performance of Banks * ATM Banking	Deviation from Linearity	14.505	10	4.651	18.247	.091

(Survey Data, 2019)

Results indicates that mobile banking (p = 0.065), agency banking (p = 0.068), internet banking (p = 0.231), and ATM banking (p = 0.091) do not deviate significantly from the linearity. According to Field (2017), variables for regression analysis must exist on a continuous scale and exhibit linear relationships. In this case, mobile banking, agency banking, internet banking, and ATM banking met the assumption of linearity.

5.6.2 Collinearity Tests

Table 5.11 shows collinearity tests of agency banking, mobile banking, internet banking, and ATM banking.

Table 5.11: Collinearity Statistics

Model	Collinearity Statistics	
	Tolerance	VIF
Mobile Banking	.393	2.542
Internet Banking	.566	1.766
Automatic Teller Machine	.498	2.007

(Survey Data, 2019)

Collinearity statistics (Table 5.11) indicates that mobile banking, agency banking, internet banking, and ATM banking have tolerance values greater than 0.3 and variance inflation factor (VIF) less than 3.   According to Field (2017), tolerance values less than 0.2 and VIF values greater than 5 show the existence of the problem of multicollinearity.

In this case, all variables do not have multicollinearity problem, and thus, meet the assumption of regression analysis.

5.6.3. Regression Analysis

Multiple regression analysis was used to develop a model that predicts the effect of e- banking strategies on the performance of cooperative bank of Oromia. The regression model was used to test the following null hypotheses in line with the research objectives and questions.

H01: H01: Mobile banking is not a statistically significant predictor of the cooperative bank of Oromia' performance in Ethiopia.

H02: Agency banking is not a statistically significant predictor the cooperative bank of Oromia' performance in Ethiopia.

H03: Internet banking is not a statistically significant predictor of the cooperative bank of Oromia' performance in Ethiopia.

H04: ATM banking is not a statistically significant predictor of the cooperative bank of Oromia' performance in Ethiopia.

Table 5.12 shows the outcomes of multiple regression analysis examining the impact of internet banking, agency banking, mobile banking, and ATM banking on the performance of cooperative bank of Oromia.

Table 5.12: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.843[a]	.710	.698	.4992

(Survey Data, 2019

The regression model indicates that mobile banking, agency banking, internet banking, and ATM banking have a very strong relationship with the performance of banks (R =0.843). Moreover, R-square indicates that these e-banking strategies account for 71% of the variation in the performance of banks (R = 0.710). This variance implies that e- banking strategy accounts for most of the effects, leaving about 29% of the variance unexplained. Consequently, banks should adopt and implement e-banking services to boost their performance in the banking industry.

Table 5.13 indicates the Analysis of Variance (ANOVA) outcomes of the regression model in predicting the influence of internet banking, mobile banking, and ATM banking on the performance of banks.

Table 5.13: ANOVA of the Regression Model

Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	57.972	4	14.493	58.155	.000[b]
1	Residual	23.675	95	.249		
	Total	81.648	99			

(Survey Data, 2019)

The ANOVA shows that the regression model is statistically significant in forecasting the combined influence on e-banking strategies on the performance of cooperative bank of Oromia, $F(4,95) = 58.155$, $p = 0.000$. This shows that the model is fit for predicting the combined influence on strategies of e-banking on the performance of cooperative bank of Oromia.

6. Conclusions and Suggestions for further study

6.1. Conclusions

The study established that e-banking services predict cooperative bank of Oromia's performance in Ethiopia. As the study revealed agency banking and mobile banking are statistically significant predictors, it suggests that effective utilization of these- e-banking strategies would drive the growth and performance of banks in Ethiopia. Since the study found that internet banking and ATM

banking are insignificant predictors, it implies that banks should not rely on them as e-banking strategies to improve financial performance. For instance, limited numbers of customer have access to the internet, while ATM banking is prone to fraud and inconveniencing long queues.

6.2. Suggestions for Further Study

Since e-banking services account for 71% of the variance in the cooperative bank of Oromia's' performance in Ethiopia, further research should consider ascertaining other factors that explain the remaining 29% of the variation in the performance.

REFERENCES

1. Ayana G. (2012), Adoption of Electronic banking system in Ethiopian Banking industry: Barriers and Drivers, A Thesis Submitted to the School of Graduate Studies of Addis Ababa University.

2. Bhattacherjee A. (2012). Social Science Research: Principles, Methods, and Practices.USA University of South Florida, Global Text Project.

3. Kalkidan, (2016). Challenges and Opportunities of Electronic Banking in Ethiopian Banking Industry (Evidence from Selected Private Commercial Banks). Thesis. Addis Ababa.

4. Kurgel, (2008), Smart ATM card holders Attitude and usage level: A study of Sungai petani residents.

5. Saunders et al, (2009). Research methods for business students. England, London, Pearson.

6. Venter, R. and Rwigema, H. (2004).*Advanced entrepreneurship*.Capetown: Oxford University Press.World Bank Publications.