

The Effect of Location and Information Technology on Banks Deposit Mobilization Status in Ethiopia: Empirical Evidence on Private Commercial Banks in Adama Town

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Abstract: *The role of bank as financial intermediary is well recognized facts in the economy of various countries. Without enough deposits banks and financial institutions might fail to achieve their business targets. In this study, the effect of employees work experience, location and ICT service on the bank deposit mobilization status (increase in bank deposit) particularly in private commercial banks in Ethiopia has been examined. Using structured questionnaires and personal interview, the data were collected from 180 samples which were selected by employing simple random sampling and purposive sampling techniques. In order to achieve the research objective descriptive and econometrics (binary logit regression model) were employed for data analysis. The result of binary logit regression model revealed that employees work experience is less likely affects the deposit mobilization status of the bank. While introduction of ICT service has been more likely improves the deposit mobilization (increase in bank deposit) in private commercial banks in Ethiopia.*

Keywords: location, bank employees work experience, information technology and bank deposit mobilization status

1. Introduction

The role of bank as financial intermediary is well recognized facts in the economy of various countries. Bank the main intermediaries between those with excess money (depositors) and those individuals and businesses with viable projects but requiring money for their investment (creditors). Consequently, Banks play an important function in the economy of any country.

Despite their inherited function, deposit mobilization is among of the corner stone of the banking business. Banks and financial institutions are striving to mobilize deposits as a fundamental objective and basis of its operations. Without enough deposits banks and financial institutions might fail on achieving their business targets. Deposit mobilization activity is a process of giving money or security to a bank and to other who promises to preserve to use it and return it kind, especially the act of placing money in a bank for safety and conveniences. Deposit mobilization is one of the main functions of banking business and so an important source of working fund for the bank that were collected from public through its current, savings, fixed, recurring accounts and other specialized schemes.

Since deposits are normally considered as a cost effective source of working fund, the bank's ability to lend more as well as its success greatly lies on its deposit mobilization. However the bank's ability to mobilize enough funds from the public through its current, savings, fixed, recurring accounts and other specialized schemes will depend on the

systems employed in this highly competitive industry, (Digaria, 2011).

Technology has become an intrinsic part of banking, making it easier and cheaper to develop and deliver financial services. As a consequence of the highly technological environment developed around the world in the banking industry, the expansion of distribution channels for financial services relies on a very complex network of partnerships (Weissbourd , 2002). At the same time, in developing countries, only part of the population has access to basic financial services, such as a deposit account, for example. A number of studies (Claessens 2006; UNDP 2007) have claimed that technology will play a significant role in improving poor people's bank access, taking financial services in a sustainable way too far and underserved locations. There is a tremendous opportunity for banking technology to connect lower-income citizens at reduced costs and bring millions of consumers to the formal financial marketplace through electronic channels (Weissbourd, 2002). With the incorporation of innovation and technology, many aspects of banking has been automated and improved. Through innovation, customers have seen easy and accessible means of banking and have to a greater extent helped banks reach out to many of the unbanked population. With the support of technology, tedious processes of banking have been reduced and services have improved.

1.2. Statement of the Problem

Deposit mobilization is an indispensable factor to increase the sources of the banks to serve effectively. Mobilization of deposit plays an important role in providing satisfactory

service to different sectors of the economy. The successful functioning of commercial banks depends on the extent of funds mobilized. Deposits are the life blood of banking companies. There are different types of deposits, with different maturity pattern carrying different rates of interests. Deposit mobilization is depending on the cost of deposits. Mobilization of deposits for a bank is as essential as oxygen for human being, (Deb, 1988). "The survival of the fittest" has made applicable for the banks. To enhance profitability, banks take steps to minimize the expenditure and are forced to mobilize low cost deposits. (Shettar, 2014).

Mobilizing deposits domestically is crucial in many developing countries. Domestic funds provide a cheap and reliable source of funds for development, which is of great value in developing countries, especially when the economy has difficulty in raising capital in international markets. Yet, in many developing countries, there is a considerable amount of savings that are not intermediated through the formal sector. In particular, there exists a significant savings potential in the rural and/or semi-urban sector in many developing countries (Adams, 1978 and Vogel, 1984).

However, deposits mobilization is affected by self-fulfilling prophecies. If policy makers assume that certain people or institutions are too poor to save, and then implement policies that severely limit their access to deposit facilities, one should not be surprised when few deposits are mobilized. It goes without saying that individuals must have easy access to deposit services to facilitate deposit mobilization. Potential depositors are highly sensitive to the transaction costs that are imposed on them by deposit takers, especially the time and distance involved in making small deposits (Demirguc and Detragiache, 1998).

Given the importance of financial institutions deposits growth on economic development, the financial system in developing countries faces several difficulties that keep them from operating efficiently. These problems mostly come from legal system functions poorly, making it hard to make effective use of slow and burdensome (Frederic S. Mishkin, 1992). Since Most of the banks in many developing countries have been privatized, factors that affect deposits mobilization are important for the success not only to the financial institution but also to the entire economy. Despite large numbers of empirical evidence on deposit mobilization in developed countries, such studies are very limited in developing countries particularly in Ethiopia. Hence, this study is intended to fill this gap in literature.

1.3 Objectives of the study

- To examine the effect of information communication technology on deposit mobilization status of private commercial banks.
- to examine the banks employees work experience on deposit mobilization status of the private commercial banks
- To evaluate the effect of bank location of the on deposit mobilization status of the private commercial banks.

2. Methodology of the Study

To address the research objectives, qualitative and quantitative research design approach is employed in this study.

2.1 Data type and sources

Both Primary and secondary data were used in this study. The primary data were gathered through questionnaires and personal interview. While secondary data were gathered and complained from previous studies and bank annual report.

2.2 Population and sampling techniques

The Populations of the study were the employees of selected of Awash International Bank & Dashen Bank branches who were approximately 330. Dillman (2000) and Hill et al. (2003) argues that, a sample size of 100 and above is sufficient to present good concise research findings when the population contains a large number of units. Following the suggestions of Dillman (2000) and Hill et al. (2003), sample (n) of 180 employees is selected using simple random sampling and purposive sampling.

2.3 Method of Data Analysis

In this study descriptive and inferential method of data analysis (Binary logit model) were employed depending on the nature of the variables to be investigated.

3. Data Analysis and interpretation

3.1 Descriptive Analysis

3.1.1 Gender distribution of the Respondents

Table 1, presents the sex distribution of the respondents. From the total number of the respondents 31.1% (56) of the respondents are female respondents and the other 68.9 % (124) are male respondents and thus it can be concluded that majority of works were male.

Table 1: gender distribution of the respondents

Response	Frequency	Percent
Male	124	68.9
Female	56	31.1
Total	180	100

Source: survey data

Age of the respondents

In terms of age as described in table 2, below 48.9% (88) were respondents whose age was between 26-35 and 31.7% (57) were below 25 years old. 11.7% (21) of them are 35-45 years old & 7.8% (14) of them are 26-50 years old. From the sample respondents there were no respondents whose age were 51 and above.

Table 2: Age distribution of the age of the Respondents

Age category	Frequency	Percent
Below 25 years old	57	31.7
26-35 years old	88	48.9
46-45 years old	21	11.7
46-50 years old	14	7.8
Above 51	0	0
Total	180	100

Source: survey data

Work experience of the respondents

Work experience of employee's results shows that 52.2% of the respondent's work experiences were below 5 years and 43.9% of the respondents were between 6-15 years old and the rest 3.9% were between 16-25years.

Table 3: work experience of the respondents

Category of the respondents work experience in year	Frequency	Percent
Below 5 years	94	52.2
6-15 years	79	43.9
16-25 years	7	3.9
Above 26 years	0	0
Total	180	100

Source: survey data

Table 4: Name, Types, description and code of variables in the model

Name	Description	Type	Code
WrExp	Work experience of the respondents in bank in year	Dummy	1 if the respondents has \geq six years of experience in the bank, 0 otherwise
ICT	Whether the bank introduces ICT or not	Dummy	1 if the bank introduces ICT service, 0 otherwise
ATM	Whether the bank introduces ATM (Automatic teller machine) or not	Dummy	1 if the bank introduces ATM service, 0 otherwise
BankLoc	Whether the bank is located in main commercial centre or not	Dummy	1 if the respondents responded the bank is located main commercial centre, 0 otherwise
DepoStatu	Whether the bank deposit status increase over the last one year or not	Dummy	1 if the bank despite status increases over the last one year, 0 otherwise

Table 5: SPSS out for the variables in the equations

	B	S.E	Wald	Sig	Exp(B)
WrExp	-0.78***	0.43	3.28	0.070	0.458
ICT	0.663***	0.420	2.49	0.10	1.94
ATM	-0.563	0.455	1.53	0.216	0.569
EBL	0.108	0.448	0.058	0.810	1.114

Source: spss output survey data

Note: *, ** and *** indicate coefficient are statistically significant at 1%, 5% and 10% level of significance

Table 5 above indicates regresses the binary response variable, the probability that bank deposit status of being increase (Y=1). It is also evident that one variable are statistically significant at 10% or lower level. From the out model generated using SPSS, one predictor variables such as work experience of the employees is are significant at determining the likelihood or the probability of bank deposit increase.

3.2 Econometric data Analysis and Results

In this study econometric model (binary logit regression model) is used to test the hypothesis due the nature variables to investigate. The model contains one dependent variable (bank deposit mobilization status) which was explained by various covariates.

Binary Logistic Regression Analysis

The logistic regression model has become a widely used and accepted method of analysis of binary outcome variables (D.Hosmer, et al., 1997). Logistic regression is useful to predict the presence or absence of a characteristic or outcome based on values of a set of predictor variables. Hence, Logistic regression predicts the probability that the dependent variable event will occur (Y=1), given a values on the independent variables.

3.2.1 Determinates of Bank Deposit Status using Logit Model

Descriptive method of data analysis presents univariate distribution of the variable across the dataset. Hence, in this study, to present the impact of various predictor variables on dependent variable (bank deposit status), it goes beyond descriptive method of data analysis and requires employing econometric analysis. Thus, multivariate econometric analysis helps us to identify the determinants of bank deposit status. Therefore, using the deposit status of the bank as a dependent variable where value of 1 assigned if the bank deposit is increased over the last one year and 0, otherwise.

3.3 Interpretation of Variables from the Model Output (Binary Logistic-Regression)

Work Experience: The work experience and its effect on bank deposited status (increase in bank deposit) is generated using SPSS .Contrary with existing literature, coefficient of experience in this study found to be negative with dependent variable .Hence, experience of the banks employees is negatively related with the dependent variable (probability of increase in bank deposit) and is statistically significant at less than 10% level of significance. Similarly, it can be interpreted as; years of workers experience has less likely affects the increase in bank deposit status. The marginal effect shows, other things remaining constant, probability of bank deposit increase by 46 % as decrease in one more unite of year's experience of the workers.

Information Communication Technology (ICT): The estimated coefficient of ICT was positive and significant at the 5 percent level of significance, implying that the probability of using information communication with

increase in deposit status of the bank. The marginal effect result shows that, holding the other factors constant, the probability of adopting ICT increases by 1.94 percent of the deposit status the bank

ATM: The above Table shows that the estimated coefficient of ATM variable was negative and not statistically significance, implying that the introduction of ATM as Banking service have no strong predictive power on probability of increase in deposit of the bank.

Location banks: The estimated coefficient of location banks was positive and not statistically significance, this implied that the probability of growth in bank deposit is less likely determined by the bank position. The marginal effect result shows that, holding the other factors constant, the probability of adopting deposit growth increases by 1.1 percent when the bank branches are located at main commercial areas.

4. Conclusion and Recommendations

4.1 Conclusion

This study was intended to examine whether work experience of bank employees, introduction of ICT services ,ATM (Automatic Tailor machine) and location effects banks deposit mobilization status (increase in bank deposit) in private commercial banks case of Ethiopia .

To achieve the research objectives, descriptive and econometrics (binary logit model) were employed.

To this end, the result of binary logit model revealed that an employee work experience is negatively affects the likelihood of increase in bank deposit status. While the introduction of ICT service positively affects the likelihood of increase in banks deposit status particularly private commercial banks in Ethiopia.

4.2 Recommendations

Based on the finding of this study the following recommendations and suggestion has been extended for private commercial banks and other stakeholders which were possibly enhance their deposit status.

- It is observed that work experience of employees is negatively correlated with banks deposit status. This implied that as the workers get older, they may unproductive and unenergetic. Consequently, it is advised that banks employees must young and energy so that banks deposit status will be improved.
- Introduction of ICT and location were enhances deposit status of bank. The bank and concerned government office must improve the supply of these as they have significantly improves the deposit status of the bank

References

[1] Adams, Dale W, Douglas H.Graham and J.D. Von Pischke (eds.), (1984) , *Undermining Rural Development with Cheap Credit*. Boulder CO:Westview Press

- [2] Curtin, D., Panphil, P., and Boneventure, L., (2008), *Information Technology*, 1stEdition, MC Grew-I-Jill Companies Inc., USA.
- [3] Claessens, Stijn, (2006), *Access to financial services: a review of the issues and public policy objectives*, Journal of Financial Transformation, Capco Institute, vol. 17, pages 16-19.
- [4] Digaria, H.A. (2011), *Deposit mobilization*, M.A.E.E.R s MIT School of Management, PUNE: 411038, University of Pune.
- [5] Deb, K. (1988), *Indian Banking Since Independence*, Ashish Publishing House, New Delhi.
- [6] Dorothee Holl and Andrea Schertler,(2009) ,*Why do savings banks transform sight deposits into illiquid assets less intensively than the regulation allows?" Discussion Paper*
- [7] Rajeshwari M. Shettar,(2014), *Deposit Mobilization and Socio - Economic Impact: mA Case Study of Union Bank Of India*, IOSR Journal of Engineering (IOSRJEN).
- [8] Demirgüç-Kunt, A. and E. Detragiache (1998), *Financial Liberalization and Financial fragility*. Working paper of the International Monetary Fund (WP/98/83), Washington, D.C.. <http://www.imf.org/external/pubs/ft/wp/wp9883>.
- [9] Devinaga Rasiah,(2010),*Theoretical Framework of Profitability as Applied to Commercial Bank in Malaysia*. European Journal of Economics, Finance and Administrative Sciences, Multimedia University, Faculty of Business and Law, Melaka, Malaysia.
- [10] Daniel C. Giedeman(2005), *Branch Banking Restriction and Finance Constraints in Early 65*, No. Twentieth Century America. Cambridge University Press, The Journal of Economics History, Vol. 1, PP 129-151.
- [11] Eshetu Bekele & Mammo Muchie(2009), *Promoting Micro Small & Medium Enterprises(MSMEs) for sustainable rural livelihood" Diiper Research Series,Working Paper No.11, ISS 1902-8679*.
- [12] Eustacius N. Betubiza and David J. Leatham,(1995),*Factors Affecting Commercial Bank Lending to Agriculture" Southern Agricultural Economics Association*.
- [13] Evan Gatev, Til Schuermann and Philip E. Strahan,(2006),*"Managing Bank Liquidity Risk: How Deposit-Loan Synergies Vary With Market Conditions" Federal Reserve Bank of New York*.
- [14] Erna Rachmawati & Ekki Syamsulhakim,(2004).*"Factors Affecting Mudaraba Deposits in Indonesia. Working Paper in Economics and Development Studies" Padjadjaran University of Indonesia*.
- [15] Franklin Allen & Elena Carletti(2008). *"The Roles of Banks in Financial Systems" University of Pennsylvania, University of Frankfurt and CFS*.
- [16] George G. Kaufman,(1972) ,*Deposit Variability and Bank Size*. The journal of financial and pp quantitative analysis, Vol. 7, No. 5, University of Washington School of Business Administration, 2087-2096.
- [17] Herald Finger and Heiko Hesse, (2009) ,*Lebanon-Determinants of commercial banks Deposits in a Regional Financial Center*, IMF Working paper , WP/09/195

- [18] Harold L. Seligman,(1946) ,*The Problem of Excessive Commercial Bank Earnings* Oxford University Press, The Quarterly Journal of Economics, Vol. 60, No. 3, pp. 365 -389
- [19] Katherine Samolyk,(2004) ,*The Evolving Roles of Commercial Banks in US Credit Markets*, Federal Deposits Insurance Corporation, USA
- [20] Levine, R. (1997) , Financial Development and Economic Growth: views and agenda. *Journal of Economic Literature*, XXXV(II), 688-726.
- [21] Lorenzo Cappiello, Arjan Kadareja, Christoffer Kok Sorensen and MacroProtopapa(2010), Do Bank Loans and Credit Standards Have an Effect on Output? A Panel Approach for Euro Area” Working Paper Series, European Central Bank.
- [22] Mahendra Varman P.(2005). “Impact of Self-Help Groups on Formal Banking Habits” Economic and Political Weekly. Vol. 40, No. 17, pp. 1705-1713
- [23] Maria Soledad Martinez Peria and Sergio L. Schmukler(2001),*Do Depositors Punish Banks for Bad Behavior? Market Discipline, Deposit Insurance, and Banking Crises*, The Journal of Finance, Vol. 56, No. 3, pp. 1029-1051, Blackwell Publishing for the American Finance Association.
- [24] Medhat Tarawneh,(2004), *A Comparison of Financial Performance in the Banking Sector: Some Evidence from Omani Commercial Banks*. International Research Journals of Finance and Economics, Euro Journals Publishing.
- [25] Mohammad Namazi and Mahdi Salehi(2010) ,*The Role of Inflation in Financial Repression: Evidence from Iran*. IDOSI Publications, World Applied Sciences Journal 11(6): 653-661.
- [26] Mauri, Arnaldo (1983) ,*The Potential for Savings and Financial Innovation in Africa* ,*Savings and Development* Vol. 7.
- [27] Meyer, R.L(1985) "Rural Deposit Mobilization: An Alternative Approach for Developing Rural Financial Markets." *Economics and Sociology Occasional Paper No. 1168*. Department of Agricultural Economics and Rural Sociology, the Ohio State University, Ohio, 1985.
- [28] M. Shubik and M. J. Sobel,(1992), *On Matching Book: A Problem in Banking and Corporate Finance*. INFORMS, Management Science, Vol. 38, No. 6, pp. 827-839
- [29] N. Desinga Rao, (1975), “Deposit Mobilization by Co-operative Banks: A Comparison Economic and Political Weekly” No. 29, pp. 1098-1100
- [30] Rose, S.P & Fraser D.R (1988) “Financial Institutions”. Understanding and Managing Financial Services. 3rd Edition;, Homewood Illinois; BPI Irwin Business Publications, Inc
- [31].Rose, S.P (1996) “Commercial Bank Management”, 3rd Edition, Texas A&M University, Richard D. Irwin, Inc. Basing Hoke Press (75) Ltd.
- [32] Robert Weissbourd, Rw Ventures With Perpetual Motion, Inc. (June 2002) Banking On Technology: Expanding Financial Markets and Economic Opportunity.
- [33] Sheku A.F. Bangura,(2005) ,“Statistical Information and the Banking Sector” For Presentation at the Fourth meeting of the Committee on Development Information (CODI-IV)-Sub Committee on Statistics, Plenary Session 1: Information in Key Economics Sector, United Nations Conference Centre (UNCC),Addis Ababa, Ethiopia.
- [34] Soyibo, A. and E. O. Ogunkola (1996) “Savings Banks in Africa : Performance and Strategies for Improvement.” *African Review of Money, Finance and Banking* 1-2.
- [35] Strassman, P.A., (2006) Does information technology provide banks with profit?, *Information and Management*, 42(5), 781-787.
- [36] V. V. Bhatt(1970), Some Aspects of Deposit Mobilization” *Economic and Political Weekly*, Economic and Political Weekly, Vol. 5, No. 36, pp. 1495-1497.
- [37] Wilson, D. (2000), the Resurgence of growth in the late1990s: Is information technology the story? *Journal of Economic Perspectives* 14,3-22.
- [38] Yanne Goosens, Philipp Schepelmann and Isabel Van de Sand,(2007) ,Alternative Progress indicators to Gross Domestic Product(GDP) as a means towards sustainable development European Parliament
- [39] <http://www.awashinternationalbank.com> and <http://www.dashenbank.com>