

**The Influence of Bank Related Variables on Deposit Mobilization:  
An Analysis of Private Commercial Banks in Myanmar**

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**ABSTRACT**

*Deposit mobilization is a crucial for the banks and economic development. However, a certain low level of deposit is a concern for the economy. Apart from macroeconomic policies, the bank should find their own possible strategies to increase level of deposit. Therefore, the purpose of this study is to analyze the effect of bank specific factors such as bank asset, number of Auto Teller Machine (ATM) and number of Point of Sales (POS) terminal on deposits mobilization of private commercial banks in Myanmar.*

*This study analyzes 27 private Commercial Banks in Myanmar which constitute a sample. The effect of bank related factors on deposit mobilization is investigated using quarterly data over the period from fiscal year 2013/14 Q1 to 2018/19 Q2. The data are extracted from secondary data sources collected from quarterly Financial Statistics Bulletin of Central Bank of Myanmar, Statistical Year Books and Selected Monthly Economic Indicators published by CSO, Myanmar, annual reports of Myanmar Payment Union as well as other international financial statistics of IMF and World Bank.*

*The study is analyzed using inferential analysis including correlation analysis and multiple regression analysis, and descriptive analysis with the use of Statistical Package for Social Sciences (SPSS) software (version 25).*

*The findings show that all independent variables have a positive and significant impact on the deposit mobilization of private banks. Therefore, the study recommends that adopting proper strategies for improving bank asset, number of ATM and number of POS terminal would underpin to banks for enhancing deposit mobilization.*

*Keywords: Bank Related Variables, Deposit Mobilization, Commercial Banks*

## **1. Introduction**

### **1.1. Background of the study**

Inclusive financial system plays a key role in the process of the development of economy. It also supports to achieve the goal of financial inclusion that helps poverty reduction and opportunities for increasing economic growth.

Similar to other developing countries, the ratio of the banking sector's assets to the assets of all financial institutions in Myanmar is higher which includes nearly 90% of total financial sector assets[1].

A healthy banking system is a key for capital accumulation, productivity and economic growth. Bank can perform several crucial functions of the economy, more importantly playing financial intermediary role of financial services, performing supportive role of financial services for financial inclusion of the economy and helping the process of the growth of the economy. Therefore, strengthening of banks is critical to support such important functions.

Deposits are critical for banks and economy for several purposes. Deposits are one of the main sources of income and liquidity of the banks[2]. It is primary source of loanable funds for banks to get interest income for the banks' profit. Thus, collecting deposit plays crucial role for well-functioning of banking business, especially in the developing countries which experience undeveloped financial markets.

Additionally, deposit is also important for economic growth of the economy by channeling into productive investment [3]. Savings and investment play a key role in promoting economic growth[4]. The people's savings are the basis of investment resources of the country and are essential for development and growth. Increase of the savings will lead to the capital accumulation which will eventually lead to the economic growth.

In other side, deposit is important for the financial inclusion of the country. As stated by ([Tuyishime, Memba, and Mbera, 2015](#))[5], deposit mobilization is a new model of approaching savers via marketing and financial inclusion, and come up with new techniques which were not used by traditional banking. It is perceived and communicated through channels and the social system that facilitates its adoption.

A number of literatures have analyzed the level of deposit of banking system in Myanmar.[6] Although both private credit and deposits in the banking system have grown gradually, they remain low compared with other frontier and developing Asia countries and far below emerging Asia.

[7] The Myanmar's financial sector remains lagging behind with its regional peers in the Association of Southeast Asian Nations (ASEAN) in terms of domestic credit to private sector and depositors with commercial banks per 1,000 adults.

A study conducted by ([Tun, 2019](#))[8] indicated that the ratio of bank deposit to GDP in Myanmar in 2015 stood at 29.23% which is lower level compared to other ASEAN countries namely Cambodia (54.33% of GDP), Philippines (62.89% of GDP) and Thailand (116.16%). The study found a need to enhance bank deposit comparing to other ASEAN countries.

In the area of financial inclusion,[6]financial sector in Myanmar remains underdeveloped with financial inclusion and falling behind its peers. The financial inclusion is restricted with ownership of account at regulated financial institutions, savings and credit card ownership lagging its peers.

According to the ([MAP, 2015](#))[9], the levels of formal saving are low in Myanmar due to the barriers including lacking accessible providers, lacking trust in formal savings, low interest rates and lack of incentive from providers. Infrastructure which includes electronic

payments infrastructure, credit bureau, market infrastructures including capital market and a foreign exchange market are crucial role for providing access financial services.

As reported by FinScope survey ([FMT, 2018](#))[10] which was conducted in 2018 in Myanmar, it was indicated that 25% of adult people are banked while 75% of those are unbanked.

In this context, in line with the Universal Financial Access 2020 goal, Myanmar government adopted financial inclusion roadmap 2014-2020 to achieve the goal of increasing financial inclusion from 30 percent to 40 percent of adults by 2020. In this connection, several objectives are adopted to enhance the access to financial services. As a consequence, increasing regulated savings and the numbers of formal savings accounts are included one of the objectives of financial inclusion roadmap[9].

([GPFI, 2016](#))[11] According to the G 20 Financial Inclusion Indicators, financial inclusion can be measured in three dimensions which include access to financial services, usage of financial services, and the quality of the products and the service delivery. The indicators for financial access (Points of Service) include number of branches and number of ATMs (per 100,000 adults for each) and number of POS terminals per 100,000 inhabitants. Therefore, increasing number of branches, number of ATM and number of POS terminals are essential to provide easy access of financial services. In this context, banks play crucial role to provide required infrastructure for financial services.

In Myanmar, the use of electronic banking via information and communication technology has gradually developed. In 2011, ATM operations were relaunched. In 2012, Myanmar Payment Union (MPU) embarked its operations. At present, all cardholders of MPU, JCB and UPI can access any ATM of all member banks and make payments for goods and services at POS of all member banks.

According to the World Bank data, access to financial services such as ATM and branch (per 100,000 Adults for each) in Myanmar indicates low level in comparing with the regional peers of South East Asian Nations (Figure 1).

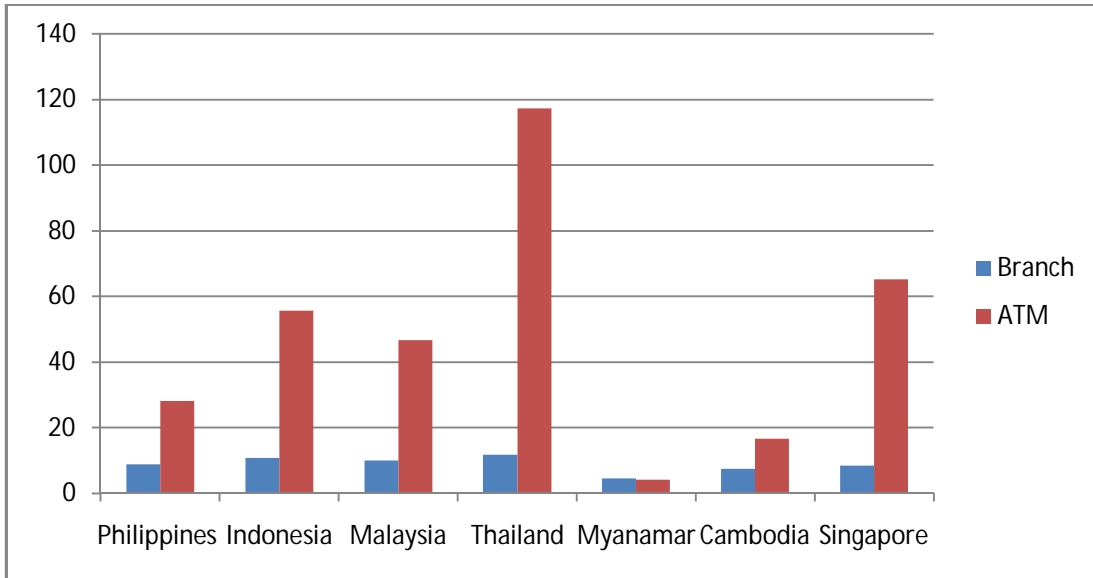
As of end of Fiscal year (FY) 2017/18, in term of total assets of banking sector, the asset of private commercial banks stood at the highest portion with 57.25% of total asset of banking system, followed by State-owned banks and foreign banks branches[8]. Moreover, in term of deposit, private bank's deposit indicated at the highest portion in the banking sector (Figure 2). In this vein, private banks dominate its banking sector in Myanmar in term of asset and deposit, among others.

In view of this, banks play key role to fulfill important functions including mobilizing deposit for making loan and providing access to financial services which are essential for the economy. Thus, this paper aims to identify the determinants of bank related factors on deposit mobilizations in the analysis of private commercial banks in Myanmar and will find out the strategies to enhance mobilization of deposit in Myanmar during the study period from FY 2013/14 Q1 to 2018/19 Q2.

## **Figure (1): Comparison of Access to Financial Services**

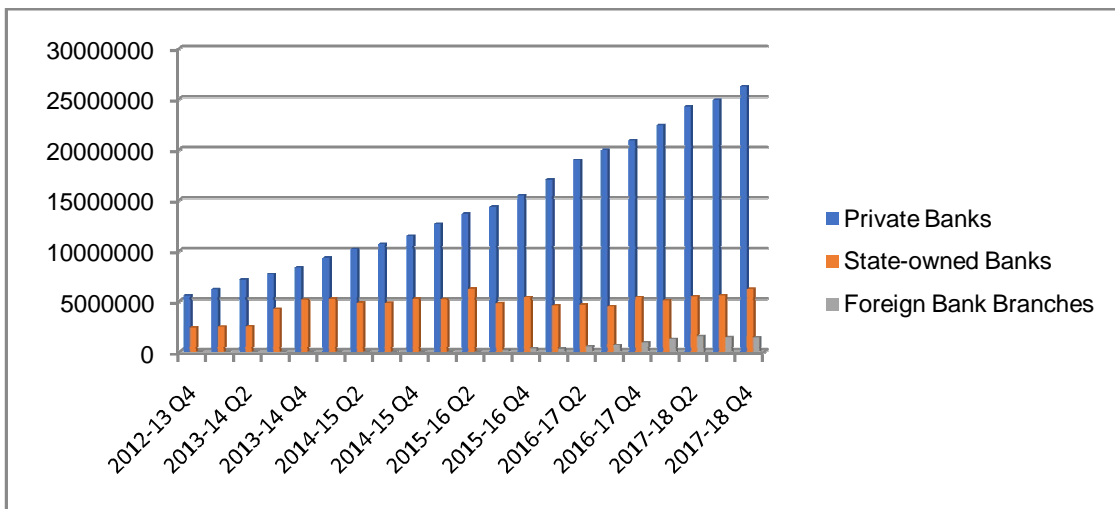
### **Branch and ATMs (Per 100000 Adults)**

**(Year 2017)**



Source: Compilation data from <https://data.worldbank.org/indicator/>

**Figure (2): Total Deposit of Banking System in Myanmar  
(Kyat in Million)  
(FY 2012/13 to FY 2017/18)**



Source: Compilation data from CSO, Myanmar (<https://www.csostatat.gov.mm>)

## **1.2.Statement of the Problem**

Mobilization of deposit plays a crucial source of working fund of banks and also important for the economic growth. The high level of deposit may contribute to the economic development and growth.

As discussed, previous section, a few literatures have identified the low level of deposit in Myanmar which is necessary for growth of the economy and financial inclusion. In that respect, finding appropriate strategies to enhance mobilizing of deposit are crucial. In analyzing the share of deposit within the banks in Myanmar, the large portion of deposit can be accumulated from private commercial banks among three types of banks including State-owned banks, private commercial banks and foreign bank branches. Given the dominant private commercial banks in terms of total deposit and total asset of Myanmar's banking sector, thus this study will investigate the determinant bank related factors on deposit, particularly for private commercial banks in Myanmar.

Albeit a few literatures analyzed the determinant of deposit mobilization in the approach of banks specific and macroeconomic factors, the emphasis of independent variables, analysis techniques of research and focus of the territories are different from one study to another. This study will specifically focus on determinants of bank related factors which include indicators of access to financial services for financial inclusion and innovation of banking technology affecting the mobilization of deposit from the evidence of private commercial banks in Myanmar by using inferential analysis. Thus, this study may bridge research gap relation to this area and may contribute to the management of banks in choosing appropriate ways in attracting mobilization of deposit against the backdrop of Myanmar.

## **1.3.Research Objectives**

The main objective of this study is to analyze the effect of bank related factors on deposits mobilization of private commercial banks in Myanmar for the period of FY 2013/14 Q1 to 2018/19 Q2. The specific objectives of the study are as follows:

- (1) To evaluate the impact of bank size on deposit mobilization of private commercial banks in Myanmar.
- (2) To identify the effect of number of ATM on deposit mobilization of private commercial banks in Myanmar.
- (3) To access the impact of number of POS terminal on deposit mobilization of private commercial banks in Myanmar.

## **2. Literature Review**

This chapter includes the conceptual framework, relevant theoretical and empirical review concerning the analysis of bank related factors on deposit mobilization of private commercial banks.

### **2.1 Theoretical Review**

#### **2.1.1.Bank-led Theory**

The study refers bank-led model of branchless banking. It is related to the focus the way of financial institution (especially a bank) offer financial services to unbanked people through a

retail agent. Individual retail agent is equipped to communicate electronically with the bank for working by using either a mobile phone or an electronic POS terminal [12].

Based on ([Tuyishime et al., 2015](#)) [5], the bank led theory can be a way of mobilizing deposit of commercial banks by using a new model for increasing financial inclusion. The model facilitates not only the transaction especially in the area where the bank is not located but also the increase of bank's deposits. Then, the later it leads to financial performance.

## **2.1.2. Diffusion of Innovations Theory**

Diffusion of Innovations Theory developed by Rogers finds to explain how, why, and at what rate new ideas and technology spread through social system. It is related to the study of the process of newness and implementation of innovation.

[13] Rogers argues that diffusion is the process by which an innovation is communicated through certain channels over time among the members of a social system. The four main elements in diffusion include the innovation, communication channels, time and the social system. The characteristics of an innovation determine its rate of adoption. The innovation theory identifies five characteristics which include relative advantage, compatibility, complexity, trialability and observability.

As stated by ([Tuyishime, Memba, and Mbera, 2015](#)) [5], new innovation has to be used and persuades the savers to make deposits in mobilization of deposit.

## **2.1.3. Interest Rate**

According to ([Mankiw, 2010](#)) [14], the interest rate is the return to saving as well as the cost of borrowing, a higher interest rate may reduce consumption and increase saving.

The study refers some economic theories related to the interest rate. In reference to the classical theory, the interest rate is determined by saving and investment alone [15].

Pursuant to the Neo-classical Theory of Interest or loanable funds theory of interest, the rate of interest is determined by not only savings but also hoarded wealth, bank loans, disinvestment wealth are another sources of funds available for investment to the borrowers [15].

## **2.2. Empirical review**

Many literatures have analyzed the determinants of deposit mobilization with different aspects. Typically, empirical researchers have investigated the determinants of deposit mobilization with the approach of bank aspect and macroeconomic determinants. This study is focused with bank aspect which includes variables such as bank asset, number of branch, deposit of interest rate, loan and advance as well as electronic banking technology such as ATM and POS which determine the deposit mobilization.

## **2.3. Bank Size**

[16] Investigated performance and operational efficiencies of publicly traded American banks comparing small banks with assets under \$10 billion versus larger banks of assets between \$10 billion and \$50 billion. The study revealed that generally, larger asset size of banks would generate better financial performance and increased return to scale than smaller banks.

The study by ([Madebo, 2013](#))[17] revealed that the influences of size of smaller bank on the deposit of the commercial banks has to generate less deposit to achieve the same deposit growth than larger banks in Ethiopia.

([Osei, 2015](#))[18] analyzed the determinants of deposit mobilization of rural banks in the case of Ghana during the study period from 2009 to 2013 using the panel least regression. The study found that bank size in term of asset is significant influence on deposits mobilization of rural banks in the case of Ghana over the study period.

([Garro, 2015](#))[19] observed that among other, the independent variables such as deposit rate, number of branches and total capital of each bank (a proxy for bank size) were included factors influencing the deposit volume in Ethiopia.

([Ferrouhi, 2017](#))[2] investigated the determinants of bank deposits in Morocco during the period from 2003 to 2014 using panel data regression with dependent variables including banks' size, banks' total assets, bank's capital to total assets ratio, external funding to total liabilities ratio and equity to total assets ratio, among others. The evidence showed that banks size was one of the positive correlated factors with deposits.

## 2.4. Numbers of Branches

Some empirical evidences demonstrate that the expansion of branch encourages increasing mobilizing deposit and customer base. The studies of ([Madebo, 2013](#))[17]; [Osei, 2015](#)[18]; ([Ambe, 2017](#))[20] and ([Teshome, 2017](#))[21] showed that number of branches and total deposit have positive and significant relationship in Ethiopia. The study concluded that expanding more number of branches banks may contribute to enhance more deposits in Ethiopia. The expansion of number of branches found important strategy of improving deposit mobilization of banks in the case of Ethiopia.

As stated in the study of ([Tareq, 2015](#))[22], the number of bank branches together with educating the individuals resulted the increase of total rural savings in Bangladesh in the case of Nationalized Commercial Banks.

As per findings from ([Ongeti, 2016](#))[23] under the analysis of the deposit of commercial bank in Kenya, the results indicated the influence of number of branches bank on savings mobilization.

The investigation by ([Gunasekara and Kumari, 2018](#))[24] on the influence factors of deposit mobilization in Sri Lanka revealed that branch expansion has a significant and positive impact on deposit mobilization.

## 2.5. Electronic Banking

Various researchers analyzed the influence of electronic banking on the level of deposit of banks. In term of definition of electronic banking and it related services are defined with different approaches.

([BCBS, 2001](#))[25] Electronic banking, or e-banking, includes the provision of retail and small value banking products and services through electronic channels as well as large value electronic payments and other wholesale banking services delivered electronically.

([Aduda and Kingoo, 2012](#))[26] Electronic banking is defined as the use of information technology in banking operations. The technological advancement played a crucial role in developing standards of service delivery in the banking industry.

([Rajapakse, 2017](#))[27] Electronic banking can be defined as the automated delivery of new and traditional banking products and services directly to customers via personnel commuter.

Electronic banking was established under the circumstances of different changes of technology which have affected the banking industry.

([Kaleem and Ahmad, 1970](#))[28] Electronic banking is the latest in the series of technological wonders of the recent past. ATMs, TeleBanking, Internet Banking, Credit Cards and Debit Cardshave developed as effective delivery channels for traditional banking products [29]. In Zambia, the major e-banking products include ATMs, POS, E-cheque image clearing system, internet banking, EFT, Mobile Money, Text Messaging, e-mails etc.

([CPMI, 2017](#))[30] ATMs are terminals that allow authorized users, generally by using a card, to access a range of services such as withdrawal of cash, enquiries of balance, transfers of funds and/or acceptance of deposits. ([Vijayaragavan, 2014](#))[31] ATMs are electronic machines operated by a customer to deposit or to withdraw cash from bank.([Wasilwa and Omwenga, 2016](#))[32]ATM machine connects to ATM network through processing center and the bank of card holder.

([CPMI, 2017](#))[30] POS terminals are devices generally used at a retail location to capture payment information electronically and in a number of cases on paper vouchers.

([Pino, Sánchez, and Sancha, 2014](#))[33] POS is a device which provides automatic transfer of purchasing price from seller's account via telephone or network connection to bank systems.

([Ismail and Osman, 1970](#))[34] EPOS is an electronic payment system that facilitates clients to pay for their purchases using ATM cards. The system transfers the purchases amount of ATM card holder from account of clients to the account of shopping store.

According to the ([Ostadi and Sarlak, 2014](#))[35], the findings showed that e-banking parameters of POS and ATM have positive and significant impact on bank deposits in the case of Isfahan Sepah Bank.

In the case of Equity Bank in Rwanda which was conducted by the study of ([Tuyishime et al., 2015](#)) [5], the results showed the impact of introduction of innovative banking technology tend to the increase in deposits at a low cost and made financial services available in the unbanked people. Then, it also resulted to the increase of profitability of the banks.

([Turhani and Hoda, 2016](#))[36] analyzed the determinant factors of banking system in Albania for the period of Jan 2005 to Dec 2014. Based on the findings, the study concluded that improving the level of technology has affected individual behavior towards banking system. Further, increased banking services via bank branches or ATMs affected the ability of banks to receive significant amounts of money in circulation.

As per study of ([Wasilwa and Omwenga, 2016](#))[32] on the effects of ICT Strategies on Performance of Commercial Banks in Kenya in the case of Equity Bank, the findings reveal that ICT strategies in the area of automated teller machines, internet banking and mobile banking had statistically significant influence on income, profitability and customer deposits of commercial banks in Kenya.

The study by (E.M.O. [PesaandW. Muturi, 2015](#))[37] on National Bank of Kenya, Kisii County in Kenya found the influences of agent transaction on deposit mobilization by bank agents in Kenya greatly. The study recommended a need of training for customer service of agent and importance of services to improve customer satisfaction.

Nonetheless, the findings of the study by ([Viswanadham, Tadele, and Bonso, 2015](#))[38] which was conducted to find the impact of location and information technology on deposit mobilization of private commercial banks in Ethiopia showed that introduction of ATM as banking services had no strong influence on the increase of banks' deposit.

## 2.6. Deposit Interest Rate

The relation of interest rates and savings (deposit) remains a debatable issue. ([Mushtaq and Siddiqui, 2016](#))[39] examined the effect of interest rate on bank deposit for non-Islamic and Islamic economies. The result showed that real interest rate has positive significant impact on bank deposits of non-Islamic countries Islamic countries while interest rate has positive insignificant impact on deposit of banks in Islamic countries.



The finding of the study analyzed by ([Mashamba, Magweva, and Gumbo, 2014](#))[40] on the relationship between savings rates and deposit mobilization in Zimbabwe during the study period from 2000 to 2006 showed a positive and statistically significant relationship between deposit rates and deposit of banks for the study period. Thus, the study concluded that deposit interest rate is an important factor affected on mobilizing of deposit in Zimbabwe.

([Garu, 2015](#))[19] found the influence of deposit interest rate on deposit volume of Commercial Banks in Ethiopia during the study period of 2001/2 to 2012/13. ([Jembere, 2016](#))[41] found that impact of interest rate on saving deposit of the bank in Ethiopia for the period of 2000-2014. Nevertheless, the contrary finding of ([Teshome, 2017](#))[21] showed that average deposit Interest rate had negative and significant effect on deposit of commercial banks in Ethiopia over the study period from 1999/2000 to 2014/2015.

In a study by ([Gunasekara and Kumari, 2018](#))[24] which was investigated the influence factors of deposit mobilization in Sri Lanka revealed that deposit interest rate has a significant and positive impact on deposit mobilization.

## **2.7.Loan and advances**

Different researchers investigated the influence of loan and advances (proxy of loan to asset and loan to deposit) on level of deposit.

([Ambe, 2017](#))[20] Total loans to total assets contribute a measure of income source of a bank. The largest sources of interest bearing assets of banks have to come from loans. If deposit can be transferred into more loans, the level of profit will be expected to be higher and to have a positive relationship with bank resource mobilization performance.

The analysis by ([Ambe, 2017](#))[20] on the determinants of deposit mobilization of commercial banks of Ethiopia found that the amount of loan together with number of customer and number of branches have positive and significant impact on total deposit. The study of ([Teshome, 2017](#))[21] found the positive and significant effect between loan to deposit ratio and deposit of commercial banks in Ethiopia.

The finding of the study on determinants of rural banks deposit mobilization in Ghana by ([Osei, 2015](#))[18] found that loan to asset ratio is significant influence on deposits accumulation in rural banks.

## **3. RESEARCH METHODOLOGY**

### **3.1.Population of Study**

As of September 2019, there are 27 private Commercial Banks which have 1710 branches across the country in Myanmar[42]. All 27 private commercial banks included sample of the study.

### **3.2.Source of Data and Data Collection Method**

The researcher uses secondary data sources to comply with the research objectives. The required data are extracted from quarterly financial statistics bulletin of Central Bank of Myanmar, annual reports of MPU, Statistical Year Books and Selected Monthly Economic Indicators published by CSO, Myanmar and International Financial Statistics of IMF and World Bank.

### **3.3.Data Analysis Technique**

Inferential analysis is used in order to observe the objectives of this study. The multiple linear regression models are adopted to identify the relationship between the dependent variable and the independent variables.

In order to find the comprehensive understanding of objectives of the study, the Statistical Package for Social Sciences (SPSS) software (version 25 for window) is applied to analyze the data.

### **3.4.Theoretical Framework**

The theoretical literature discussed above suggests that increasing the size of bank asset, expansion of bank branch, introducing electronic banking technology such as ATM and POS terminal are related on the increase of the level of deposit of banks. Given this background, the general regression model can be constructed as below model I:

#### **Model I**

Deposit = f (Bank Asset, Bank Branch, ATM, POS, Deposit Interest Rate, Loan and advance)

The relevant diagnostic tests including normality test, the test of autocorrelation and multicollinearity test are developed to determine the suitable variables and establish the model of linear equation.

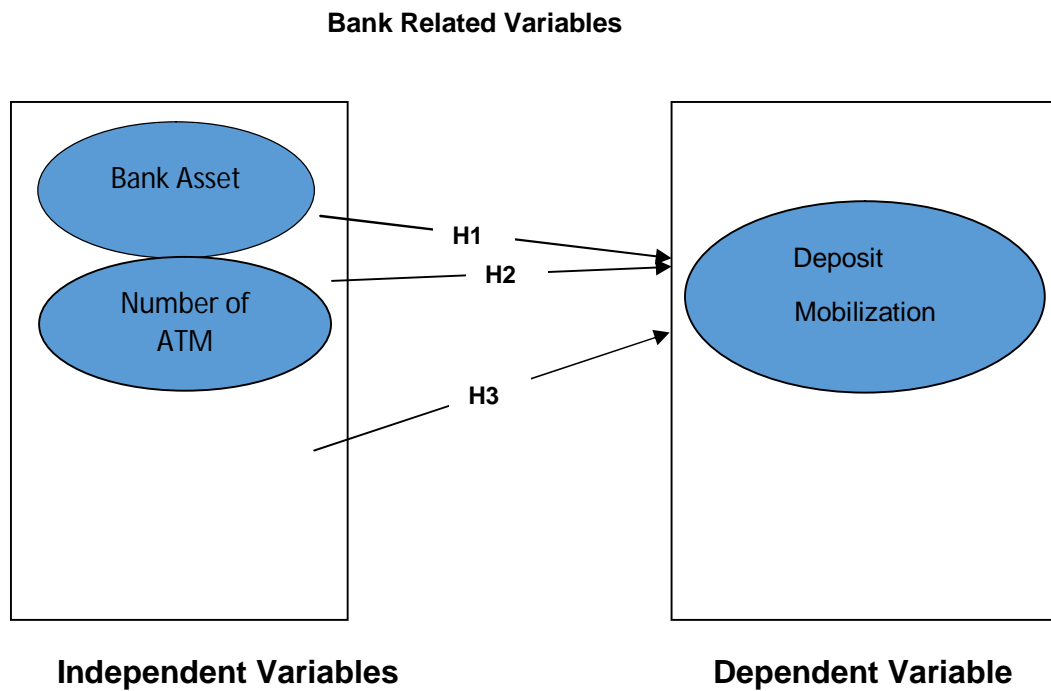
In order to test the normality of data for a normal distribution with the same mean and standard deviation of study sample, the researcher applies the Kolmogorov-Smirnov test (K-S) and Shapiro-Wilk (S-W) test. ([Elliott and Woodward, 2007](#))[43] The Kolmogorov-Smirnov and Shapiro-Wilk test under the analysis of SPSS can be used to investigate the normality of the data and recommends these tests only for a sample size which is less than 50. ([Ghasemi and Zahediasl, 2012](#))[44] Data are normally distributed as both p-values are higher than 0.05.

With a view to investigate the multicollinearity, the VIF (variance inflation factor) is used as an indicator of multicollinearity. As a rule of thumb by ([Gujarati, 2009](#))[45], the VIF value over 10 will be considered as a concern for multicollinearity.

With regard to examine the autocorrelation which is successive observations are related, Durbin-Watson statistic is applied. ([Karadimitriou and Marshall, 2017](#))[46] The Durbin-Watson statistic should be within 1.5 and 2.5 and there is no autocorrelation.

Nevertheless, after making diagnosis tests including normality test, autocorrelation test, multicollinearity test for the above model I, VIF of the variables including number of bank branch, deposit interest rate, and loan and advance are higher than 10. Therefore, such independent variables are removed from the model I and the final conceptual framework can be drawn as follows:

**3.5. Conceptual Framework of the Study**



**Sources: Developed by Author (2019)**

**3.6. Research Hypotheses**

The following research hypotheses are derived based on the specific objectives and conceptual framework of the study:

Hypothesis 1: Bank Asset has a significant impact on deposit mobilization of private commercial banks in Myanmar.

Hypothesis 2: Number of ATM has a significant effect on deposit mobilization of private commercial banks in Myanmar.

Hypothesis 3: Number of POS terminal has a significant impact on deposit mobilization of private commercial banks in Myanmar.

Depending on theoretical views and empirical reviews, the multiple regression of this study can be described with below model II and equation:

**Model II**

Deposit = f (Bank Asset, ATM, POS)

$$DEP = \alpha + \beta_1 BAS + \beta_2 ATM + \beta_3 POS + \mu$$

The variables, symbols, measurement and expected sign can be found as below Table 1:

**Table 1: Summary of Variables, Symbols, Measurement and Expected Sign**

Variable	Notation	Measurement	Expected Sign
<b>Dependent Variable</b>			
Deposit	DEP	Total deposit of private commercial banks	
<b>Independent Variables</b>			
Bank Asset	BAS	Total amount of asset of commercial banks	+
Auto Teller Machine	ATM	Total numbers of ATMof private commercial banks	+
Point of Sale Terminal	POS	Total numbers of POSof private commercial banks	+
	$\alpha$	intercept (or) regression constant	
	$\beta$	Estimated coefficient	
	$\mu$	The stochastic error term of the linear regression model	

**Source: Developed by Author (2019)**

#### **4. Results and Discussions**

This chapter contains the results and findings as well as discussion related to the analysis of findings.

**4.1.Descriptive Statistics**

Table 2 presents the descriptive statistics of bank factors affecting the deposit mobilization. The model shows the characteristics used by revealing the statistical mean and standard deviation.

**Table 2: Summary of Descriptive Statistics**

Variables	Mean	Std. Deviation	Minimum	Maximum
DEP	16.1995	7.07481	6.19	27.5
BAS	21.0818	12.26153	0.67	4.85
ATM	13.2195	6.51322	2.7	22.5
POS	41.4677	30.55725	10.00	117.67
Observations	66			
N (t)	22			

**Source: SPSS output computed by Author (2019)**

**4.2.The Summary of Regression Outputs**

To analyze the influence of the bank related factors on the deposit mobilization of private commercial banks in Myanmar, a regression model is developed as shown in Table 3.

**Table 3: Summary of Multiple Regression Model<sup>b</sup>**

R	R Square	Adjusted R Square	Std. Error of The Estimate	Sig Value	Durbin-Watson
0.992 <sup>a</sup>	0.985	0.982	0.93634	0.000	1.62

**Source: SPSS output computed by Author (2019)**

Based on the model summary of table 3, the result shows that R of 0.992. It indicates that the variables have a high degree of positive relationship. The adjusted R Squares of 0.982 describes that the independent variables, namely bank asset, number of ATMs and number of POS terminal explain the variations on deposit mobilization by 98.2%. As the value of Durbin-Watson (D.W) shows to have approximately 2, it is minimal autocorrelation.

**4.3.Analysis of Variance (ANOVA)**

This study applies the ANOVA to test the fitness of the regression model and to analyze whether the differences between group means are statistically significant.

The below table 4 indicates that F-value of 393.634 with P value of 0.000 which is less than 0.01 or 1% significant level. This means that the results are statistically significant.

**Table 4: Results of ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1035.33	3	345.104	393.634	0.000 <sup>b</sup>
	Residual	15.781	18	0.877		
	Total	1051.111	21			

a. Dependent Variable: Deposit mobilization  
b. Predictors: (Constant), Bank Asset, Number of ATM, Number of POS

**Source: SPSS output computed by Author (2019)**

**4.4. Summary of Regression Results**

The researcher reveals the multiple regression analysis in order to determine the relationship between bank related factors such as bank asset, number of ATMs and number of POS terminal affecting the deposit mobilization of private commercial banks in Myanmar. The coefficient of results can be found in Table 5.

**Table 5: Summary of Regression Results**

Variables	Coefficients	Std. Error	t	P- Value	Collinearity Statistics	
					Tolerance	VIF
(Constant)	3.089	0.467	6.611	0.000*		
BAS	1.96	0.328	5.969	0.000*	0.258	3.878
ATM	0.462	0.066	6.966	0.000*	0.224	4.466
POS	0.069	0.011	6.211	0.000*	0.358	2.794

a. Dependent Variable: Deposit Mobilization  
\* Represents significant at a 1% level.

**Source: SPSS output computed by Author (2019)**

$$\text{DEP} = 3.089 + 1.96 \text{BAS} + 0.462 \text{ATM} + 0.069 \text{POS}$$

Table 5 indicates the summary results of regression results. The results show that observed value (P-value) of 0.000 is significant at 1% level and the research accepts hypothesis of H1, H2 and H3. As the results indicate that P value of bank related independent variables such bank asset, number of ATM and number of POS terminal are less than 0.01 and all independent variables are statistically significant at 1% level. Additionally, all independent factors are found positive relationship with deposit mobilization of private commercial banks in Myanmar. Among independent variables, the bank asset is found to be the strongest relationship on the level of deposit of private commercial banks with a factor of 1.96.

As the results of all VIF (variance inflation factor) values show less than 10, multicollinearity may not result.

#### **4.5. Summary of Findings**

##### **4.5.1. Bank Asset**

In the case of bank asset, evidence is found significant at 1% level and the positive relationship between bank asset and private bank deposits in Myanmar. A rise in bank asset leads to an increase of bank deposit of private commercial banks.

##### **4.5.2. Number of ATM**

In term of ATM, findings of the study show that a number of ATMs is a significant at 1% level and positive relationship with banks' deposit mobilization. An increase in number of ATM contributes to the banks to absorb the level of deposit of private commercial banks.

##### **4.5.3. Number of POS Terminal**

With regards to POS, the findings of the study indicate that number of POS terminal is statistically significant at 1% level and a positive relationship with banks' deposit mobilization. An increase in number of POS terminal affects the improvement of total deposit of private commercial banks.

### **5. Conclusions and Recommendations**

The main objective of this study is to examine the determinants of bank related factors on the deposit mobilization of private commercial banks in Myanmar for the study period from FY 2013/14 Q1 to 2018/19 Q2.

On the basis of overall analysis, the conclusions can be drawn that bank related factors such as bank asset and the indicators for access to financial services on financial inclusion as well as electronic banking technology, namely number of ATM and number of POS terminal have

positive and significant relationships on the deposit mobilization of private commercial banks in Myanmar.

Pertaining to the findings of this research, the study recommends the following:

- (1) The analysis shows that the large bank size in term of total asset has an influence on enhancing more deposit. The large bank has more scopes to extend opening more branches in the necessary regions for receiving more available access to financial services. It also has more rooms to facilitate the functioning their operations. This in turn, makes an increase of deposit of banks. Therefore, the study suggests that finding possible ways for improving bank asset would contribute to enhance the mobilization of deposit of commercial banks.
- (2) Evidence indicates that increasing number of ATM and number of POS terminal make positive and significant impact on the increased amount of deposit. Enhancing availability of access to financial services via electronic banking technology can contribute to people for providing easy access of financial services including deposit and cash withdrawals. Hence, strategies to increase electronic banking technology would help to enhance the level of bank's deposit. This also can contribute to the unbanked people for easy access of financial services and may lead to the financial inclusion.
- (3) Ensuring the quality of electronic banking channel and efficiency of electricity supply will play a supportive role for achieving the success of electronic banking which is important for mobilizing deposit and improving financial inclusion of the economy.
- (4) Although technology advancement may provide better services to customers, the challenges which may appear by using electronic banking technology should be vigilant by management of banks to prevent the risks of customers.

## **6. Suggestion for Further Research**

As a result of the data availability for some bank related variables, this study is restricted to bank related factors such as bank asset, number of ATMs and number of POS terminal that determine the deposit of private commercial banks in Myanmar. Thus, this study suggests for future studies to include additional bank related factors that affect the deposit mobilization to be greater results.

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