

# Factors Affecting the Ability to Mobile Deposits of Joint Stock Commercial Banks

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## ABSTRACT

**Purpose:** This study shows the level of influence of factors on the ability to mobilize deposits of joint stock commercial banks through survey and analysis of data recovery of 37 joint stock commercial banks in Vietnam.

**Design/methodology/approach:** The article uses two basic research methods including: qualitative and quantitative research. In which, the qualitative method is a synthesis of research works related to the article, thereby determining the research hypothesis. The quantitative method is implemented on the basis of building a scale for 8 factors affecting the ability to mobilize deposits and survey data, analysis from 37 joint stock commercial banks in Vietnam to test the published hypotheses.

**Findings:** The research results show that 5/8 factors have an impact on the ability to mobilize deposits of joint stock commercial banks in Vietnam, including: bank brand (BB), interest rate policy (IRP), marketing policy (MP), service quality (SQ) and depositor awareness (DP).

**Conclusion:** Of which, bank brand is the strongest impact factor, depositor awareness has the weakest impact on the ability to mobilize deposits of commercial banks Vietnam.

**Limitations/significance of the study:** From the results of this study, the author makes recommendations for commercial banks in Vietnam in their deposit mobilization activities.

**Practical significance:** The results of this study are completely consistent with previous domestic and foreign studies.

**Contribution in terms of documents:** The study provides necessary information to help joint stock commercial banks in Vietnam improve their ability to mobilize deposits in the coming time.

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**Keywords:** Factor, Impact, Commercial banks, Deposits, Mobilization capacity, Vietnam.

## 1. INTRODUCTION

Capital is always one of the basic input factors in the business process of every enterprise. Mobilized capital determines the bank's payment capacity as well as the scale of lending, investment, guarantee activities, etc. It also affects the bank's competitiveness, position and reputation in the market, directly determining the existence and development of commercial banks' business activities (Kutan, 2010). Mobilizing deposits is as important to commercial banks as oxygen is to human life. Commercial banks may not achieve their business goals if they do not have enough deposits. The existence of the banking industry depends heavily on deposit growth (Viswanadham & Nahid, 2015).

A bank's ability to lend depends heavily on its ability to attract deposits, making it the bank's ultimate source of profit and growth (Selvaraj & Balaji Kumar, 2015).

Therefore, commercial banks pay great attention to mobilizing capital to fully meet business needs, in which deposit capital accounts for the highest proportion of total capital mobilization of commercial banks.

## **2. THEORETICAL BASIS AND RESEARCH OVERVIEW**

### *2.1. Theoretical Basis for Mobilizing Deposits of Commercial Banks*

The operational concern of every commercial bank depends heavily on deposits collected from customers. Deposit mobilization is the process of encouraging customers to deposit cash at the bank or attracting new customers to open accounts at the bank (Banson, Sey, & Sakoe, 2012; Georgiou, Christodoulou, & Christofides, 2015; Azolibe, 2019).

Deposit mobilization is the process by which financial institutions mobilize capital from surplus units to deficit units to create better production investment opportunities (Onay & Ozsoz, 2013).

Thus, deposit mobilization is one of the conditions that determine the existence, development and expansion of commercial banks' operations.

### *2.2. Literature Gaps*

From the overview of the research, the author has drawn the research gap of the article as follows:

*First*, the research works compiled by the author have systematically and richly presented issues related to the ability to mobilize deposit capital. Some studies focus on analyzing the ability of specific commercial banks to mobilize deposits, while each bank has its own business characteristics and requires its own research to increase its ability to mobilize deposits. deposit capital. Therefore, it is necessary to systematize theories suitable for the research sample.

*Second*, research works stating the influence of factors on the ability to mobilize deposits of commercial banks have been approached by the authors from many different angles. In fact, each commercial bank has different business characteristics, so it will have different methods and strategies for mobilizing deposits. Therefore, the ability of commercial banks in Vietnam to mobilize deposits is influenced by specific factors, so an appropriate inspection model is needed.

*Third*, increasing the ability to mobilize deposits is a necessary issue because in the current period, commercial banks in Vietnam are facing many risks and challenges. Specifically: (i) Competitive pressure in the domestic banking market is increasingly fierce due to the presence of foreign banks. (ii) Financial potential is modest, banking technology is still far away from banks in the region and the world. (iii) The opening of the banking and financial market during the integration process may lead to consequences arising from cross-ownership issues. Therefore, studying the factors that determine deposit mobilization is very necessary.

### *2.3. Research Aim*

The research objective of the article is to evaluate the influence of factors on the ability to mobilize deposits of commercial banks in Vietnam. Thereby, the author offers some recommendations to improve the ability of these banks to mobilize deposits in the coming time.

### *2.4. Research Questions*

To achieve the proposed research objectives, the article was conducted to answer the following questions:

Question 1: What is the ability of commercial banks to mobilize deposits?

Question 2: What factors affect the ability of commercial banks to mobilize deposits in Vietnam?

Question 3: How do these factors affect the ability of commercial banks to mobilize deposits in Vietnam?

Question 4: What recommendations should be made to improve the ability of commercial banks to mobilize deposits in Vietnam in the near future?

### *2.5. Research Methodology Used*

(i) Qualitative research method to synthesize research works related to the topic, thereby determining the research hypothesis

(ii) Quantitative method to test the given hypotheses.

### *2.6. The Structure of the Paper*

The structure of this paper is as follows: 1. Introduction, 2. Literature review, 3. Research Methodology, 4. Results, 5. Discussion, 6. Conclusion.

The article demonstrates appropriate research directions, providing useful information for bank administrators to increase the bank's financial potential. This article will address some limitations in previous studies and provide some recommendations to help improve the ability of commercial banks to mobilize deposits in Vietnam.

### 3. LITERATURE REVIEW AND RESEARCH HYPOTHESES

#### 3.1. Literature Review

The author has compiled a number of studies related to the article as follows.

[Asfaw \(2021\)](#) applies both qualitative and quantitative approaches, through primary and secondary data sources, to evaluate factors affecting the ability of global banks to mobilize deposits. Primary data with purposive sampling method through questionnaire was used to survey 9 branches of Debub global bank and head office staff located in Addis Ababa city. Secondary data sources are extracted from this bank's annual reports from 2015 to 2019. Research shows that factors affecting this bank's ability to mobilize deposits include: (1) Quality quality of banking services; (2) Interest rate policy; (3) Brand; (4) Branch network.

[Femi, Nwankwo, and James \(2021\)](#) examines the factors that may influence the deposits of commercial banks in Nigeria during the period 2000 to 2019 using panel data of banks listed goods. The study used secondary data obtained from statistical and analyzed bank annual reports. Panel data technique determines random effects model using Hausman test. Research shows that influencing factors include: (1) Interest rate policy, (2) Marketing strategy and (3) Bank service quality.

[Legass, Shikur, and Ahmed \(2021\)](#) conducted a study to investigate the main factors leading to deposit growth in commercial banks in Ethiopia with clear inference on specific variables industry and macroeconomics. The study used secondary data from 2010 - 2019. Research results clearly show that Brand is the factor that has the strongest influence on the deposit growth rate of these banks.

[Banke and Yitayaw \(2022\)](#) examines macroeconomic and bank-specific factors for deposit mobilization from science and technology in banks in Ethiopia using audited financial statements of 14 commercial banks from 2011 to 2020 through quantitative research methods. Model results demonstrate that: (1) Bank brand, (2) Bank service quality, (3) Deposit mobilization form, (4) Deposit safety, (5) The bank's branch network and (6) Depositors' awareness have a positive and statistically significant impact on commercial bank deposit growth.

[Debesso and Kant \(2023\)](#) provided a conceptual framework for deposits and identified factors affecting deposit mobilization from science and technology in commercial banks in Ethiopia. Regression analysis results show: (1) Bank branch network, (2) Bank technology, (3) Deposit safety, (4) Deposit interest rate policy, (5) Marketing strategy and (6) Deposit mobilization method have a positive and significant correlation with the explained variable.

In addition, many other authors have studied the ability of commercial banks to mobilize science and technology deposits such as [Islam, Ali, and Wafik \(2019\)](#); [Addisalem \(2021\)](#); [Aberham \(2023\)](#) and [Moussa and Marzouk \(2024\)](#).

#### 3.2. Research Hypotheses

The author builds hypotheses to research factors affecting the ability of commercial banks to mobilize deposits as follows.

##### 3.2.1. Bank Brand (BB)

Brand is one of the factors that customers are very interested in when deciding to deposit money at a bank. Customers always expect a safe place for their deposits, most of the time they tend to deposit money in institutions or banks with big brands ([Samarasiri, 2009](#)). The larger the bank's brand, the more trust it will create for customers to deposit money, thereby promoting the creation of transaction relationships between customers and the bank.

From the above analysis, we can establish hypothesis H1: bank brand has a positive impact on the ability to mobilize deposits of Vietnamese joint stock commercial banks.

### 3.2.2. Interest Rate Policy (IRP)

One of the most effective factors in deciding to deposit money in the banking system is interest rates (Namazi & Salehi, 2010). Interest rate policy is always considered an important factor in mobilizing deposits of commercial banks (Athukorala & Sen, 2004; Garo, 2015).

Low deposit interest rates hinder the mobilization of savings (Mustafa & Seyra, 2009; Philips, 1968). Interest rates have a positive relationship with deposit growth at banks (Masson & Mussa, 1996). This result is similar to the research results of Haron and Wan Azmi (2008). A decrease in real interest rates can reduce savings deposits and term deposits. Therefore, interest rates and bank deposits have a positive relationship (Namazi & Salehi, 2010).

From the above analysis, we can establish hypothesis H2: interest rate policy has a positive impact on the ability to mobilize deposits of Vietnamese joint stock commercial banks.

### 3.2.3. Marketing Policy (MP)

Commercial banks have marketing policies that will attract customers and improve competitiveness in the market. Previous research results have shown that promotions have a positive influence on customers' bank selection decisions (Bahia & Nantel, 2000; Mokhlis, Mat, & Salleh, 2008).

From the above analysis, we can establish hypothesis H3: marketing policy has a positive impact on the ability to mobilize deposits of Vietnamese joint stock commercial banks.

### 3.2.4. Service Quality (SQ)

Good customer care policy will be implemented in the way that customers deposit money and are taken care of by bank staff according to each segment, gifts or congratulations to customers on holidays, New Year, birthdays, announcements of new interest rate policies, announcements of maturity savings accounts and advice to customers on deposit products and deposit terms that optimize customer benefits.

Besides, service quality is also demonstrated through the application of information technology in almost all banking activities (Mokhlis, Salleh, & Mat, 2011; Ugochukwu Uche, 2000).

Thus, we can establish hypothesis H3: service quality positively affects the ability to mobilize deposits of Vietnamese joint stock commercial banks.

### 3.2.5. Form of Deposit Mobilization (FDM)

If banks want to easily mobilize capital from deposits, they must first diversify forms of capital mobilization. Banks' forms of mobilizing deposit capital are increasingly diverse and flexible, the more likely it is to attract capital from the economy. This comes from differences in the needs and psychology of customers. The higher the diversity of deposit forms, the easier it is to meet customers' needs, because they can all find a suitable and safe form of deposit for themselves.

From the above analysis, we can establish hypothesis H5: The form of deposit mobilization has a positive impact on the ability to mobilize deposit capital of Vietnamese joint stock commercial banks.

### 3.2.6. Branch Network (BN)

Branch expansion is when a bank increases the number of branches, attracting more customers, especially those in remote areas that do not have access to banks. There is a link between bank branch expansion and bank deposit growth. Larger branch networks help banks mobilize more deposits than banks with small networks (Tara, Irshad, Khan, Yamin, & Rizwan, 2014; Ünvan & Yakubu, 2020).

The convenience of branch location and opening hours are important to attract deposits (Gunasekara & Kumari, 2018). Exists a significant and positive correlation between the location of a bank branch and deposit mobilization (Bhattacharjee, 2012; Samuel, 2012).

From the arguments mentioned above, we can establish hypothesis H6: branch network has a positive impact on the ability to mobilize deposits of Vietnamese joint stock commercial banks.

### 3.2.7. Deposit Safety (DS)

The safety of banks affects the psychology of depositors. If a bank implements deposit insurance well, depositors will no longer worry about the bank's risk because their deposits are insured in case the bank goes bankrupt. Therefore, deposit safety is a factor affecting deposit mobilization (McNeal, 2014; Samarasiri, 2009).

Based on the above analysis, the author can establish hypothesis H7: deposit safety has a positive impact on the ability to mobilize deposit capital of Vietnamese joint stock commercial banks.

### 3.2.8. Depositors' Awareness (DP)

Customer perception when considering depositing money depends on many factors such as the bank's brand, return on investment ratio, service quality, deposit safety (Garro, 2015; Kanthi & Singu, 2015).

From the above analysis, we can establish hypothesis H8: depositors' awareness has a positive impact on the ability to mobilize deposits of Vietnamese joint stock commercial banks.

## 4. RESEARCH METHODOLOGY

The article uses two basic research methods: qualitative research method to synthesize research works related to the article, thereby determining research hypotheses and quantitative method to test hypotheses have been proposed.

### (i) Qualitative Research Methods

- The author synthesized previous domestic and foreign research results to deeply understand the factors affecting the ability of commercial banks to mobilize deposits and draw out gaps for the article. .
- At the same time, the author continues qualitative research by discussing and exchanging directly with experts about influencing factors to discover factors suitable to practical conditions in Vietnam. This will be the basis for the author to build a model for validation research.

(ii) Quantitative research method: through the results of interviews with experts, the author uses those results to develop scales of factors affecting the ability of commercial banks to mobilize deposits. Vietnam trade, is the input base for quantitative research methods. The author uses statistical methods and multiple regression models to test research hypotheses and measure and explain the influence of each factor on the ability to mobilize deposits of these banks.

### 4.1. Research Model

From the research hypotheses, the author builds a research model as follows.

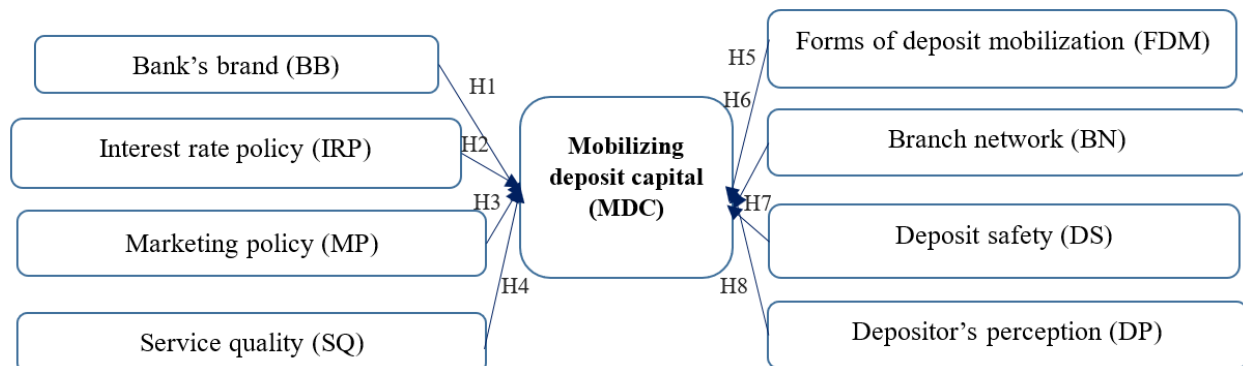


Figure 1. Research model of factors affecting the ability to mobilize deposits of Vietnamese commercial banks.

Figure 1 illustrates the research model of factors affecting the ability to mobilize deposits of Vietnamese commercial banks.

Based on the proposed 8 factors affecting the ability of Vietnamese commercial banks to mobilize deposits, the author builds the following research equation.

$$MDC_i = \alpha + \beta_1 BB_i + \beta_2 IRP_i + \beta_3 MP_i + \beta_4 SQ_i + \beta_5 FDM_i + \beta_6 BN_i + \beta_7 DS_i + \beta_8 DP_i + \varepsilon$$

In there:

\* Dependent variable.

MDC: Mobilizing deposit capital

\* Independent variables:

- BB: Brand of the bank.
- IRP: Interest rate policy.
- MP: Marketing policy.
- SQ: Service quality.
- FDM: Form of deposit mobilization.
- BN: Branch network.
- DS: Deposit safety.
- DP: Depositors' awareness.

$\alpha$  is the constant,  $\beta$  is the explanatory coefficient of variation,  $\epsilon$  is the residual and  $i$  is the number of observations.

#### 4.2. Build a Measuring Scale

The composition of variable groups in the research model is shown in [Table 1](#).

**Table 1.** Factors affecting the ability to mobilize deposits of commercial banks.

Numerical order	The scale	Encode	Reference
<b>Dependent variable</b>			
Mobilizing deposit capital (MDC)	Ensuring the bank's solvency	MDC1	<a href="#">Asfaw (2021)</a>
	Reduce capital mobilization costs	MDC2	<a href="#">Banson et al. (2012)</a>
	Decide on the scale of lending, investment, guarantee activities...	MDC3	<a href="#">Viswanadhan, Tadele, and Bonso (2014)</a> and <a href="#">AlHares, Mohamed, Al Bahr, and Al Khelaifi (2023)</a>
<b>Independent variables</b>			
Bank brand (BB)	Create trust for customers	BB1	<a href="#">Roger (2006); Onay and Ozsoz (2013)</a> and <a href="#">Garo (2015)</a>
	Create transaction relationships between customers and banks	BB2	
	Increase the value of the bank	BB3	
Interest rate policy (IRP)	Decide on the scale of deposit mobilization	IRP1	<a href="#">Samarasiri (2009); Iswarya (2015)</a> and <a href="#">Hair, Black, Babin, and Anderson (2010)</a>
	Compete with other banks	IRP2	<a href="#">Philips (1968)</a> and <a href="#">Mhaibes, Al-Janabi, and Hussein (2024)</a>
	Decide on the customer's choice	IRP3	<a href="#">Garo (2015)</a> and <a href="#">Miftari (2023)</a>
Marketing policy (MP)	Valuation method	MP1	<a href="#">Mokhlis et al. (2008)</a> and <a href="#">Bahia and Nantel (2000)</a>
	Product policy	MP2	
	Distribution policy	MP3	
Service quality (SQ)	Technology level	SQ1	<a href="#">Viswanadhan et al. (2014)</a> and <a href="#">Onay and Ozsoz (2013)</a>
	Skills and expertise of employees	SQ2	<a href="#">Sureshchandar, Rajendran, and Kamalanabhan (2001)</a> and <a href="#">Banke and Yitayaw (2022)</a>
	Facilities system	SQ3	<a href="#">Mokhlis et al. (2011)</a> and <a href="#">Zilberfarb (1989)</a>
Forms of deposit mobilization (FDM)	Diversify capital mobilization forms	FDM1	<a href="#">Banke and Yitayaw (2022)</a> and <a href="#">Debesso and Kant (2023)</a>

	Meet the needs of different customer groups	FDM2	
	Affects customer psychology	FDM3	
Branch network (BN)	Branch convenience and opening hours	BN1	<a href="#">Gunasekara and Kumari (2018)</a> and <a href="#">Thetlek, Kraiwanit, Limna, Shaengchart, and Moolngearn (2024)</a>
	Branches are widespread, located near residential areas	BN2	<a href="#">Mokhlis et al. (2008)</a> and <a href="#">Hedayatnia and Eshghi (2011)</a>
	Increase customer accessibility	BN3	<a href="#">Banke and Yitayaw (2022)</a>
Deposit safety (DS)	Helps improve the bank's reputation	DS1	<a href="#">Samarasiri (2009)</a>
	Use diverse security technologies	DS2	<a href="#">McNeal (2014)</a>
	Increase customer trust	DS3	
Depositor perception (DP)	Needs to be provided by the bank through promoted knowledge	DP1	<a href="#">Kanthi and Singu (2015)</a>
	Customers carefully review bank information before depositing money	DP2	<a href="#">Garo (2015)</a>
	Decide on the choice of bank to deposit money	DP3	

The study uses a Likert scale: The attributes of the ability to mobilize deposits of Vietnamese joint stock commercial banks are measured using a 5-point Likert scale ([Likert, 1932](#)) from 1 "not at all". agree" to 5 "completely agree".

*Data collection subjects:* Research sample collected from 37 joint stock commercial banks in Vietnam. The author collects data on 8 attributes (scales) representing the ability to mobilize deposits in Vietnam over a three-year period, from 2020 to 2023, by sending surveys directly or indirectly. contact (through acquaintances, via email or google.doc tool). The author sent 03 coupons to each bank including.

- 01 questionnaire sent to managers who are General Director/Director or Deputy General Director/Deputy Director.
- 01 questionnaire sent to the representative of the bank's Board of Directors.
- 01 questionnaire sent to the bank's financial administrator.

*Research sample size:* In this study, the author distributed 148 survey questionnaires, receiving 148 questionnaires. After cleaning the data, the author included 140 votes for analysis.

- For exploratory factor analysis (EFA): the minimum sample size is 5 times the total number of observed variables ([Comrey, 1973](#); [Hair et al., 2010](#); [Roger, 2006](#)).
- For multivariate regression analysis: the minimum sample size needed is calculated according to the formula:  $N = 50 + 8 * m$  (where m is the number of independent variables) ([Tabachnick & Fidell, 1996](#)).

Based on the above arguments, the author calculates and chooses a minimum sample size of 135 observations. Based on the proposed research model, the steps of quantitative research are carried out including designing a questionnaire, determining the research sample, collecting data, and analyzing data through SPSS 22 software.

## 5. RESEARCH RESULTS

### 5.1. Cronbach's Alpha

The results of assessing the reliability of the scale using Cronbach's Alpha coefficient are shown in [Table 2](#).

**Table 2.** Testing the scale using Cronbach's Alpha reliability coefficient.

Observed variable	Scale mean if item deleted	Scale variance if item deleted	Corrected item-total correlation	Cronbach's alpha if item deleted
Cronbach's alpha = 0.976				
MDC1	10.93	9.444	0.897	0.980
MDC2	10.87	9.099	0.954	0.965
MDC3	10.91	9.079	0.950	0.966
MDC	10.93	9.227	0.960	0.963
Cronbach's alpha = 0.776				
BB1	7.450	2.539	0.551	0.778
BB2	7.306	2.598	0.501	0.843
BB3	7.375	2.564	0.527	0.741
BB	7.468	2.816	0.908	0.493
Cronbach's alpha = 0.896				
IRP1	7.2032	1.643	0.715	0.880
IRP2	7.3687	1.355	0.773	0.849
IRP3	7.2513	1.423	0.769	0.852
IRP	7.2302	1.773	0.879	0.774
Cronbach's alpha = 0.849				
MP1	11.75	4.434	0.641	0.827
MP2	12.12	3.813	0.571	0.884
MP3	11.77	4.322	0.655	0.821
MP	11.88	3.934	0.999	0.698
Cronbach's alpha = 0.892				
SQ1	12.00	5.031	0.558	0.917
SQ2	12.06	4.025	0.753	0.852
SQ3	12.12	3.831	0.755	0.856
SQ	12.06	4.075	0.998	0.770
Cronbach's alpha = 0.896				
FDM1	8.62	1.895	0.716	0.898
FDM2	8.39	1.801	0.725	0.896
FDM3	8.47	1.823	0.718	0.875
FDM	8.58	1.868	0.930	0.728
Cronbach's alpha = 0.866				
BN1	8.57	1.987	0.725	0.830
BN2	8.36	1.864	0.685	0.882
BN3	8.45	1.872	0.651	0.824
BN	8.50	2.136	0.864	0.732
Cronbach's alpha = 0.849				
DS1	8.26	1.989	0.651	0.860
DS2	8.59	1.998	0.638	0.874
DS3	8.31	1.975	0.624	0.862
DS	8.42	2.071	0.921	0.640
Cronbach's alpha = 0.835				
DP1	8.12	1.882	0.656	0.857
DP2	8.15	1.888	0.678	0.862
DP3	8.17	1.876	0.615	0.832
DP	8.22	1.893	0.631	0.841

Source: SPSS analysis results.



The results of Cronbach's Alpha testing of factors in the research model show that the MDC variable has Cronbach's Alpha = 0.976 > 0.6, so it meets the standard to retain. The component scales (MDC1, MDC2 and MDC3) all correlate with the total variable > 0.3, so they meet the requirements to retain.

Similar arguments for the remaining variables result in the observed variables and the scale ensuring reliability.

From the above results, it shows that all factors are statistically significant and reach the necessary reliability coefficient. The research model after evaluating the reliability of the scale using Cronbach's Alpha coefficient has 8 factors with 27 observed variables.

### 5.2. Exploratory Factor Analysis

The author conducted exploratory factor analysis and the results are shown in [Table 3](#).

**Table 3.** Test of KMO and Barlett coefficients.

<b>Kaiser-Meyer-Olkin measure of sampling adequacy.</b>		<b>0.722</b>
Bartlett's test of sphericity	Approx. chi-square	529.977
	df	3
	Sig.	0.000

Source: SPSS analysis results.

The results of testing the KMO and Barlett coefficients show that the KMO coefficient = 0.722 > 0.5, proving that the factor analysis table is suitable for the research data. On the other hand, the Barlett test is statistically significant (Sig. < 0.05). That confirms EFA results are completely reliable for analytical use.

The author tested the total explained variance and the results are shown in [Table 4](#).

**Table 4.** Total variance explained.

Component	Initial eigenvalues			Extraction sums of squared loadings			Rotation sums of squared loadings		
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	7.563	32.882	32.882	7.563	32.882	32.882	5.124	22.278	22.278
2	3.355	14.587	47.469	3.355	14.587	47.469	2.690	11.694	33.971
3	2.250	9.783	57.252	2.250	9.783	57.252	2.313	10.055	44.026
4	1.595	6.934	64.186	1.595	6.934	64.186	2.199	9.562	53.588
5	1.403	6.099	70.285	1.403	6.099	70.285	2.197	9.553	63.140
6	1.258	5.470	75.755	1.258	5.470	75.755	2.098	9.123	72.263
7	1.015	4.412	80.167	1.015	4.412	80.167	1.644	7.148	79.412
8	1.010	3.087	83.254	1.710	3.087	83.254	.884	3.842	83.254

Note: Extraction method: Principal component analysis.

Source: SPSS analysis results.

[Table 4](#) shows that Initial Eigenvalues ranging from 1.010 to 7.563 are >1 and meet the requirements, the extracted variance value is 83.254%.

The author tested the rotation matrix and the results are shown in [Table 5](#).

Table 5. Rotation matrix.

Component matrix <sup>a</sup>								
	Component							
	1	2	3	4	5	6	7	8
BB1	0.546							
BB2	0.674							
BB3	0.680							
IRP1		0.643						
IRP2		0.623						
MP1			0.706					
MP2			0.652					
MP3			0.755					
SQ1				0.705				
SQ2				0.787				
SQ3				0.774				
FDM1					0.761			
FDM2					0.868			
FDM3					0.719			
BN1						0.784		
BN2						0.817		
BN3						0.669		
DS1							0.882	
DS2							0.654	
DS3							0.709	
DP1								0.882
DP2								0.655
DP3								0.560

**Note:** Extraction method: Principal component analysis.  
a. 8 components extracted.

**Source:** SPSS analysis results.

The results of factor analysis based on the rotated matrix show that the factor groups are drawn from observed variables with loading factors on the factors being quite high (> 0.5), the loading factors are considered is meaningful.

### 5.3. Person Correlation Analysis

After checking reliability and analyzing EFA, the author used the Person correlation coefficient to test the correlation between the dependent variable and the independent variable.

**Table 6.** Person correlation analysis.

<b>Correlations</b>										
		<b>MDC</b>	<b>BB</b>	<b>IRP</b>	<b>MP</b>	<b>SQ</b>	<b>FDM</b>	<b>BN</b>	<b>DS</b>	<b>DP</b>
MDC	Pearson correlation	1	0.744**	0.090	0.039	0.023	0.347**	0.347**	0.347**	0.347**
	Sig. (2-tailed)		0.000	0.000	0.000	0.000	0.061	0.058	0.062	0.000
	N		139	139	139	139	139	139	139	139
BB	Pearson correlation		1	0.374**	0.062	0.034	0.431**	0.431**	0.431**	0.431**
	Sig. (2-tailed)			0.000	0.469	0.692	0.000	0.000	0.000	0.000
	N			139	139	139	139	139	139	139
IRP	Pearson correlation			1	0.335**	0.273**	0.109	0.109	0.109	0.109
	Sig. (2-tailed)				0.000	0.001	0.202	0.202	0.202	0.202
	N				139	139	139	139	139	139
MP	Pearson correlation				1	0.739**	0.130	0.130	0.130	0.130
	Sig. (2-tailed)					0.000	0.128	0.128	0.128	0.128
	N					139	139	139	139	139
SQ	Pearson correlation					1	0.058	0.058	0.058	0.058
	Sig. (2-tailed)						0.501	0.501	0.501	0.501
	N						139	139	139	139
FDM	Pearson correlation						1	1.000**	1.000**	1.000**
	Sig. (2-tailed)							0.000	0.000	0.000
	N							139	139	139
BN	Pearson correlation							1	1.000**	1.000**
	Sig. (2-tailed)								0.000	0.000
	N								139	139
DS	Pearson correlation								1	1.000**
	Sig. (2-tailed)									0.000
	N									139
DP	Pearson correlation									1
	Sig. (2-tailed)									
	N									

**Note:** \*\* . Correlation is significant at the 0.01 level (2-tailed).

**Source:** SPSS analysis results.

Table 6 shows the correlation between the independent variables and the dependent variable as follows. Sig. of the 5 independent variables including BB, IRP, MP, SQ and DP compared to the dependent variable are all less than 0.05. Thus, these 5 independent variables have a linear relationship with the dependent variable. Sig. of 03 independent variables including FDM, BN and DS compared to the dependent variable are all greater than 0.05. Thus, these three independent variables do not have a linear relationship with the dependent variable. Besides, the table above shows the correlation between independent variables as follows. The three independent variables FDM, BN and DS have Sig less than 0.05, so the possibility of collinearity between them is relatively high. These three variables need to be removed from the regression model.

**5.4. Check the Fit of the Model**

The author checked the model's suitability and the results are shown in Table 7.

**Table 7.** Summary model table to check model fit.

<b>Model summary<sup>b</sup></b>					
<b>Model</b>	<b>R</b>	<b>R square</b>	<b>Adjusted R square</b>	<b>Std. error of the estimate</b>	<b>Durbin-Watson</b>
1	0.775 <sup>a</sup>	0.600	0.585	0.660	1.504

**Note:** a. Predictors: (Constant), DP, SQ, IRP, BB, MP

b. Dependent variable: MBS

**Source:** SPSS analysis results.

Table 7 shows: Durbin – Watson index = 1.504 in the range of  $1.5 < D < 3$ , indicating no autocorrelation phenomenon. The adjusted  $R^2$  correlation coefficient value is  $0.585 > 0.5$ . Therefore, this is an appropriate model to use to evaluate the relationship between independent variables and the dependent variable. The adjusted  $R^2$  coefficient in the model is 0.585, meaning that the built linear regression model fits the data set at 58.5%. This also means that the deposit mobilization of Vietnamese joint stock commercial banks is explained by 8 independent variables with an influence of 58.5%, the remaining parts are due to random errors.

### 5.5. Regression Analysis

The author conducted regression analysis and the results are shown as follows.

Table 8. ANOVA regression analysis.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	86.869	5	17.374	39.893	0.000 <sup>b</sup>
	Residual	57.923	133	0.436		
	Total	144.791	138			

Note: Dependent variable: MDC  
 b. Predictors: (Constant), DP, SQ, IRP, BB, MP  
 Source: SPSS analysis results.

In the ANOVA analysis Table 8, it shows: Sig value. =  $0.000 < 0.05$ , which leads to the conclusion: the set linear regression model including 05 independent variables: BB, IRP, MP, SQ and DB is appropriate.

Table 9. Multiple regression analysis.

Coefficients <sup>a</sup>								
Model		Unstandardized coefficients		Standardized coefficients	t	Sig.	Collinearity statistics	
		B	Std. error	Beta			Tolerance	VIF
1	(Constant)	0.234	0.554		0.423	0.673		
	BB	1.242	0.099	0.828	12.581	0.000	0.695	1.439
	IRP	0.451	0.117	0.244	-3.855	0.000	0.752	1.329
	MP	0.079	0.131	0.051	0.607	0.003	0.426	1.310
	SQ	0.035	0.124	0.023	0.286	0.002	0.451	1.218
	DP	0.014	0.097	0.009	0.143	0.001	0.792	1.212

Note: a. Dependent variable: MDC  
 Source: SPSS analysis results.

Table 9 shows: the variance inflation factor (VIF) of 05 independent variables with values from 0,014 to 1.439 are all less than 2, so multicollinearity does not occur.

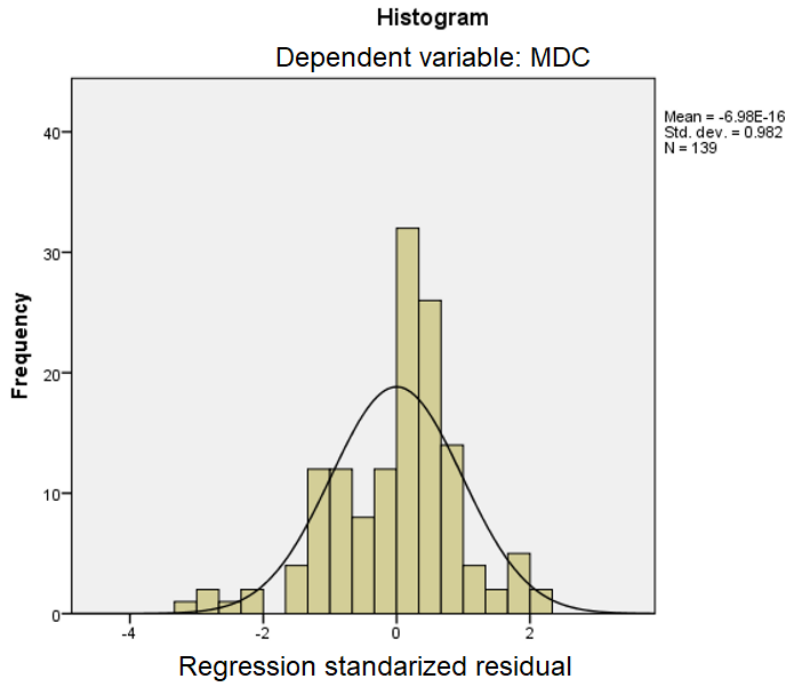
All 5 variables BB, IRP, MP, SQ and DP have Sig.  $< 0.05$  proves that all of these variables are significant in the regression model. We can write the equation about the factors affecting the ability to mobilize deposits of Vietnamese joint stock commercial banks as follows:

$$MDC = 0.234 + 0.828 \text{ BB} + 0.244 \text{ IRP} + 0.051 \text{ MP} + 0.023 \text{ SQ} + 0.09 \text{ DP}$$

The correlation analysis results of table 10 show that hypotheses H1, H2, H3, H4, H8 are all accepted. Specifically, the variables BB, IRP, MP, SQ and DP (equivalent to hypotheses H1, H3, H4, H7 and H8) all have a positive impact on the dependent variable (MDC), of which the strongest impact is is the BB variable ( $\beta_1=0.828$ ), followed by the IRP variable ( $\beta_2=0.244$ ), MP variable ( $\beta_3= 0.051$ ), SQ variable ( $\beta_4= 0.023$ ) and DP ( $\beta_8 = 0.009$ ).

### 5.6. Residual Analysis

The average value of the residuals is shown in the following graphs.



**Figure 2.** The frequency of the standardized residuals.

Figure 2 shows the frequency of the standardized residuals. According to the Histogram chart above, mean = -6.98E-16 is close to 0, the standard deviation is 0.982, close to 1. Thus, the residual distribution is approximately normal, assuming the normal distribution of residuals is not violated.

The Normal P-P Plot of the regression results is as follows.

Normal P-P plot of regression standardized residual  
Dependent variable: MDC

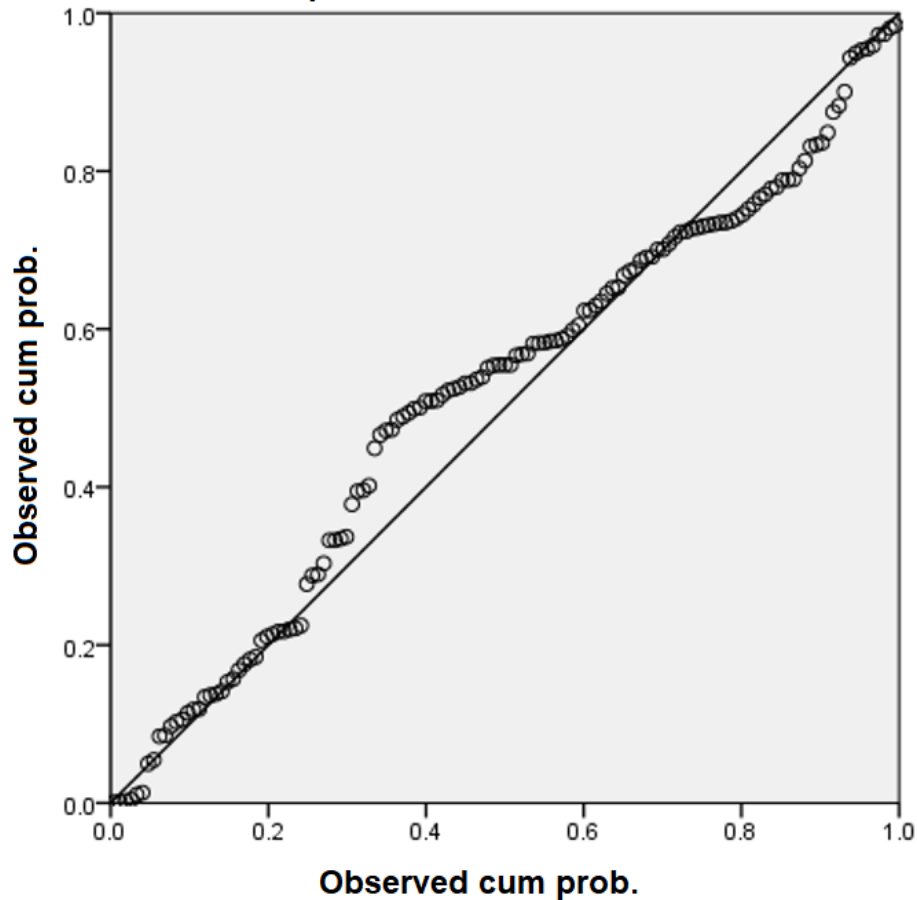


Figure 3. The normal distribution of standardized residuals.

Figure 3 shows the normal distribution of standardized residuals. According to the chart above, the actual observed points are concentrated quite close to the diagonal of the expected values, so the residuals have an approximately normal distribution, assuming the normal distribution of the residuals is not violated. The Scatter Plot chart checks the linear relationship assumption of the regression model as follows.

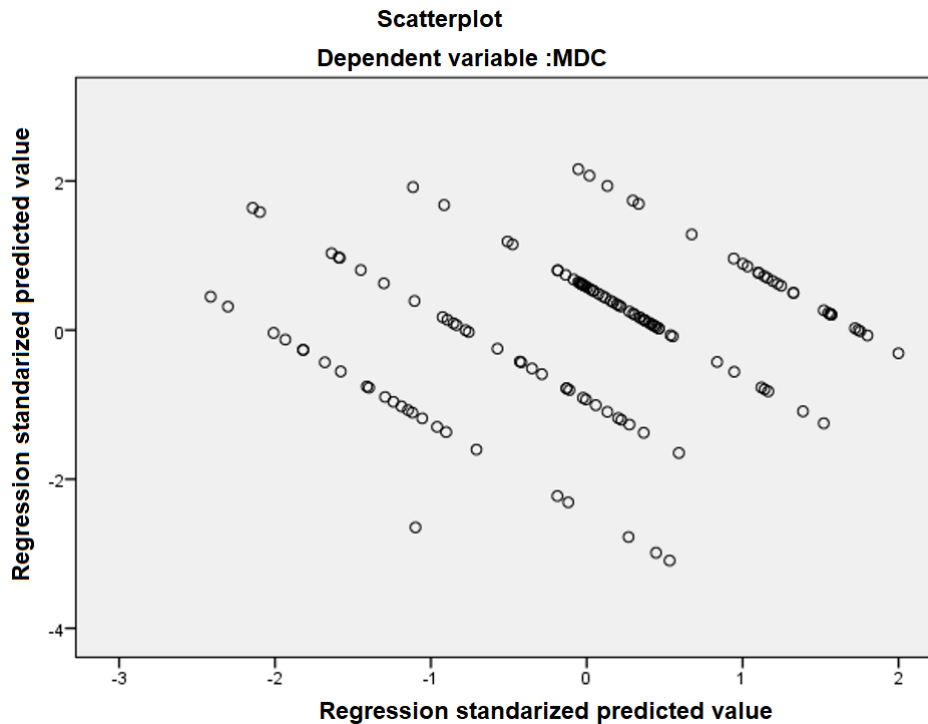


Figure 4. The random distribution of standardized residuals.

Figure 4 shows the random distribution of standardized residuals. According to the chart above, the data points are distributed around the 0-intercept line and tend to form a straight line, so the linear relationship assumption is not violated.

## 6. DISCUSSION

Research results have clearly shown: there are 05 factors affecting the ability to mobilize deposits of commercial banks in Vietnam including: bank brand, interest rate policy, marketing strategy, service quality. banking services and depositors' perceptions.

The remaining three factors do not affect the ability of commercial banks to mobilize deposits in Vietnam, including: Form of deposit mobilization, branch network and deposit safety.

- The Factor "Bank Brand"

The factor "bank brand" (BB) is positively related to the ability of Vietnamese commercial banks to mobilize deposits from science and technology with coefficient  $\beta = 0.828$  and Sig = 0.000 < 0.05. That means the bigger the bank's brand, the higher the ability of Vietnamese commercial banks to mobilize deposits. The results of this study are also similar to the results of previous research works.

In banking business, as well as all other brands, the core of the brand is customer trust (Gamble, Tapp, & Marsella, 2005). In fact, through experience, experience, and information received, customers will have their own feelings about the "bank image" and "brand feel". However, only "brand feel" can truly create an impression and remember the next time you consider choosing a product or service.

- The Factor "Interest Rate Policy"

The factor "interest rate policy" (IRP) is positively related to the ability of Vietnamese commercial banks to mobilize deposits from science and technology with coefficient  $\beta = 0.244$  and Sig = 0.000 < 0.05. That means the more flexible a bank's interest rate policy is, the higher the ability of Vietnamese commercial banks to mobilize deposits.

This explains that, any increase in interest rates, will lead to an increase in deposits in commercial banks. When a bank's interest rate policy is attractive and flexible, it will attract deposits into the bank, thereby helping the bank improve liquidity risk and have abundant resources to meet growth needs.

- Factor "Marketing Strategy"

The factor "marketing strategy" (MP) has a positive relationship with the ability to mobilize deposits of Vietnamese commercial banks with coefficient  $\beta = 0.051$  and  $\text{Sig} = 0.03 < 0.05$ . That means the more effective a bank's marketing strategy is, the higher the ability of Vietnamese commercial banks to mobilize deposits.

Marketing plays an increasingly important role in banking business in general and in deposit mobilization activities in particular. To survive and develop in today's business environment with increasing competitive pressure and many risks, applying marketing strategies in banking business is extremely necessary. It is the key to the success of commercial banks. Marketing in banks with synchronous policies and solutions will contribute to the growth of mobilized deposits, helping commercial banks optimize deposit mobilization.

- The Factor "Service Quality"

The factor "service quality" (SQ) is positively related to the ability to mobilize deposits of Vietnamese commercial banks with coefficient  $\beta = 0.023$  and  $\text{Sig} = 0.02 < 0.05$ . That means the better the bank's service quality, the higher the ability of Vietnamese commercial banks to mobilize deposits.

The results of this study are similar to the results of previous studies. In the current context of fierce competition among banks, increasing service quality is considered the foundation for commercial banks to attract and retain customers through customer satisfaction.

Customer satisfaction has a positive impact on loyalty, and loyalty will then have a positive impact on behavior to use the service more in the future, with a higher likelihood of loyalty (Ünvan & Yakubu, 2020).

- Factor "Depositors' Awareness"

The factor "depositor awareness" (DP) is positively related to the ability to mobilize deposits of Vietnamese commercial banks with coefficient  $\beta = 0.009$  and  $\text{Sig} = 0.01 < 0.05$ . That means the better the depositors' awareness, the higher the ability of Vietnamese commercial banks to mobilize deposits.

Depositors' awareness will determine their attitude toward commercial banks' deposit mobilization activities. From there, customers will make choices such as continuing to use the product or recommending the service to friends. Thus, if Vietnamese commercial banks invest a lot of effort to improve depositors' awareness, they will attract more customers to deposit money.

## 7. CONCLUSION

Given the current situation of capital mobilization results, there are still limitations in cost, scale as well as stability and efficiency, improving capital mobilization capacity, specifically deposit mobilization, becomes an important issue for commercial banks. In recent years, the commercial banking system in Vietnam has mobilized a large amount of capital for production - business and investment in economic development. However, in order to create new steps for the economy, deposit mobilization activities of commercial banks in Vietnam are facing new challenges, requiring bank administrators to really pay attention. Focus and attention to improve deposit mobilization efficiency.

From research results published in other international journals, the project has identified factors affecting the ability of commercial banks to mobilize deposits in Vietnam. The research results of the project show that there are 5 variables that are statistically significant and 3 variables that are not statistically significant. The author hopes that the research results of the topic and a number of recommendations proposed by the author based on the research results will serve as a useful scientific basis for bank administrators to improve their ability to mobilize money. sent in the near future.

### *\*Limitations of the Article and Future Research Directions*

This research has brought certain results in identifying and evaluating factors affecting the ability to mobilize deposits of Vietnamese commercial banks. That will help managers at Vietnamese commercial banks understand the attitudes and desires of consumers when choosing a commercial bank to deposit money.

However, this study also has limitations and that is the direction of research for the next topics.

*First*, the sample size is still limited. If there are enough resources and survey conditions to expand all commercial banks in Vietnam, the results can be better representative.

*Second*, more extensive qualitative research may be needed to continue perfecting the research model and measurement scale.



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## INSTITUTIONAL REVIEW BOARD STATEMENT

The Ethical Committee of the [institute/ University name], COUNTRY has granted approval for this study on DATE..... (Ref. No. ....).

## TRANSPARENCY

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

## DATA AVAILABILITY STATEMENT

The author committes that the data in the article are collected, investigated and implemented honestly

## COMPETING INTERESTS

Authors declare that there is no conflict of interest.

## AUTHORS' CONTRIBUTIONS

Conceptualization — V.T.L.; Methodology — V.T.L.; Validation — V.T.L.; Formal Analysis — V.T.L.; Investigation — V.T.L.; Resources — V.T.L.; Data Curation — V.T.L.; Writing — Original Draft — V.T.L.; Writing — Review & Editing — V.T.L.

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