

CHAPTER 2

DEVELOPMENT OF FINANCE, ACCOUNTING AND AUDITING

DETERMINANT OF CUSTOMER SATISFACTION AT VIETCOMBANK-A LARGEST COMMERCIAL BANK IN VIETNAM

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Abstract. *The study builds a model of the factors affecting customer satisfaction with service quality at Vietcombank. Data were collected from primary and secondary sources. The research uses the combination of qualitative and quantitative methodology with the Cronbach's alpha reliability analysis, Exploratory Factor Analysis (EFA) method, Confirmation Factor Analysis (CFA), and Structural Equation Modelling (SEM) through SPSS data analysis software. The survey was conducted with 130 questionnaires with the convenient sampling method. The result shows that the research results show that customer satisfaction with the quality of banking services depends on the following factors: service capacity; responsibility; sympathy. Therefore, the author suggests some managerial implications to Vietcombank management at the Nguyen Oanh branch to improve customer satisfaction. This research still has some limitations: the study does not investigate other influencing factors; the convenient sampling method has not been generalized well; the research is only conducted for Vietcombank at the Nguyen Oanh branch.*

Keywords: *satisfaction; customer; service quality; Vietcombank.*

JEL Classification: *G21, G24, F30*

Formulas: *0; tabl.: 2; fig.: 1; bibl.: 19*

Introduction. Vietnam is in a period of renovation and renewal in the management and the market mechanism. It has brought many opportunities and challenges for businesses in Vietnam. The country's economy is developing day by day, and the banking industry plays a role in economic development (Dang & Nguyen, 2021a; Nguyen & Dang, 2022). In times of market economy and rapid rise in living standards, they demand more advanced services. Commercial banks are more established, and customers have more choices of a financial service provider for them. With such a competitive market, customers are the decisive factor in the existence and development of the bank. The bank that wins a lot of attention and customer loyalty, that bank will be successful. The previous studies agree that customers or investor always analyze bank environment or performance to invest or use their service (Abuzayed et al., 2018; Nguyen & Dang, 2020; Nguyen, 2021a). In addition, in ASEAN countries, Vietnam is one of the countries that have an increasing financial market recently (Dang & Nguyen, 2021a; Nguyen, 2020, 2022; Nguyen & Dang, 2022). Therefore, the research in commercial banks in Vietnam is very important.

In addition, In Vietnam, Vietcombank is the First State-owned Commercial Bank selected by the Government to pilot equitization. Nearly half a century of operation in

the market, Vietcombank has always maintained its position as a leading provider of financial services in the field of international trade; in traditional activities such as capital trading, capital mobilization, credit, project financing as well as modern banking services: trading foreign currencies and derivatives, card services, banking electronic... Some previous studies find that Vietcombank play important role in Vietnamese financial market (Dang et al., 2020; LE, 2020; Viet & Tuan, 2018).

Therefore, all other businesses always consider a customer-oriented business strategy as the top strategy. Based on that reason, the author conducts the topic: “Determinant of customer satisfaction at Vietcombank-A largest commercial bank in Vietnam”.

Aims. This study has the following research objectives:

- Determining the factors affecting customer satisfaction with service quality at Vietcombank – Ho Chi Minh City, Vietnam.
- Measuring customer satisfaction with service quality at Vietcombank.

Methods. *Research data.* Secondary data are data collected from available sources, and it has been aggregated and processed at least once. Secondary data sources for the study of the topic are diverse, mainly taken from the following sources:

- Internal data sources: the company's business performance reports, accounting, and financial reports...
- Books, newspapers, magazines, professional documents: to provide the theoretical basis of the methods used in the topic.
- Web: update news and reports related to research issues.
- Primary data is the initial data collected directly from the research subject without processing.

How to proceed?

- *Step 1: Build the questionnaire*
 - Develop a questionnaire based on the information collected in the research model and related satisfaction studies.
 - Select and edit the questions based on the opinions of experts (banker and Master Tran Phi Hoang). Interview 10 random customers to test the clarity of the questionnaire.
 - Edit and finalize the questionnaire, and issue the official questionnaire.
- *Step 2: Determine sample size and scale for the survey*
- *Step 3: Send a survey to customers*
- *Step 4: Contact the customer to track the response result*
 - After a week, if there is no response from the customer, the sender will call back to ask the customer to answer.
 - Customers who come to make transactions at the bank's counters will answer directly on the survey. They will take the survey and send it back to the bank staff at the counter.
- *Step 5: Get feedback from customers.*
- *Step 6: Process data through the use of the SPSS tool and conduct data analysis.*

Table 1. Scales and scale coding

No.	Variable	Content Interpretation
RELIABILITY		
1	DTC1	The bank always does what it promised.
2	DTC2	Customer information is always strictly confidential.
3	DTC3	Vietcombank is a bank trusted by customers.
4	DTC4	The bank made the correct transaction the first time.
5	DTC5	Safe transactions.
RESPONSIBILITY		
6	DU1	Transaction processing time at Vietcombank is always rapid.
7	DU2	Bank staff is always ready to listen and meet the needs of customers.
8	DU3	The staff is always enthusiastic to guide customers about the procedure.
9	DU4	Wide and convenient transaction network.
10	DU5	Staff always answer the phone and email quickly.
11	DU6	Convenient working time.
12	DU7	Reasonable transaction fees.
SYMPATHY		
13	SDC1	Staff always treat customers properly.
14	SDC2	Bank employees often ask customers.
15	SDC3	Employees always understand the specific needs of each customer.
16	SDC4	Employees always actively care about the difficulties of customers.
17	SDC5	The staff is always enthusiastic and customer-friendly.
SERVICE CAPABILITIES		
18	NLPV1	The staff is happy and enthusiastic when customers enter the bank.
19	NLPV2	The staff consults and answers clearly and satisfactorily the questions of customers.
20	NLPV3	Employees deal with customers' transactions very quickly and accurately.
21	NLPV4	The staff is highly knowledgeable.
EQUIPMENT		
22	PTHH1	The transaction counter is arranged reasonably and impressively.
23	PTHH2	The bank's equipment is modern and attractive.
24	PTHH3	The bank's equipment is modern and attractive.
25	PTHH4	The customer service facilities are good. (toilet, television, newspaper, water to drink...)
26	PTHH5	Parking is very convenient and safe.
GENERAL EVALUATION		
27	SHL1	The bank's equipment is modern and attractive.
28	SHL2	Customers will introduce Vietcombank bank to friends and relatives.
29	SHL3	Customers will continue to use the services of Vietcombank bank.

Source: develop by author

The subject of the survey is a group of individual customers who have been directly transacting and using Vietcombank's services.

The sample size is determined based on the 5:1 standard of Bollen (1998). It ensures good data analysis (exploratory factor analysis EFA). It takes at least five observations for one measurement variable, and the number of observations should not be less than 100. The survey model in the study includes five independent factors with 26 observed variables. Therefore, the required number of samples is from $26 \times 5 = 130$ samples or more. So the sample size of the study is $n = 130$ samples.

Research model. SERVPERF is a model built by Cronin Jr and Taylor (1992) based on the argument that the SERVQUAL model does not have the necessary reliability in many studies for banking or fast food. Therefore, the SERVPERF model is built based on the SERVQUAL model, but it removes the evaluation of expectations and only retains the evaluation of customer feelings.

Besides, the SERVPERF model can influence customer satisfaction at Vietcombank. When the density of customers is high, utilities such as television, newspapers, and drinking water... have an impact on customers. The way banker handle customer transactions quickly and accurately also affects customer satisfaction.

Regression analysis will determine the relationship between the dependent variable (customer satisfaction) and the independent variables (tangible means, responsiveness, service capacity, reliability). The regression analysis model will describe the form of the relationship and thereby help predict the degree of the dependent variable when the value of the independent variable is known in advance. The selected analysis method is the Stepwise selection method with FIN input standard of 0.05 and FOUT output criterion of 0.1. It is the most widely used method.

$$\text{Equation shape: } Y = \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5$$

In there:

- X1: EQUIPMENT
- X2: SERVICE CAPABILITIES
- X3: RESPONSIBILITY
- X4: RELIABILITY
- X5: SYMPATHY

Results and discussion.

1. Descriptive statistics of observed variables. Statistical results are described in Table 2.

Table 2. Descriptive statistics of factors to assess satisfaction level

	N	Minimum	Maximum	Mean	Std. Deviation
DTC1	120	1	5	3,04	,864
DTC2	120	2	5	2,81	,802
DTC3	120	1	5	2,84	,745
DTC4	120	1	5	2,78	,804
DTC5	120	1	5	2,92	,836
DU1	120	2	5	3,02	,845
DU2	120	1	5	3,12	,822
DU3	120	2	5	3,20	,922
DU4	120	1	5	3,17	1,051
DU5	120	1	5	2,94	,813
DU6	120	1	5	3,13	,766
DU7	120	1	5	3,02	,855
SDC1	120	1	5	3,04	,738
SDC2	120	1	5	3,28	,900
SDC3	120	1	5	3,18	,907
SDC4	120	1	5	3,23	,905
SDC5	120	1	5	3,20	,846
NLPV1	120	1	5	3,07	,857
NLPV2	120	1	5	3,13	,805
NLPV3	120	1	5	3,11	,818
NLPV4	120	1	5	3,32	,907
PTHH1	120	1	5	2,74	,804
PTHH2	120	1	5	2,94	,910
PTHH3	120	1	5	3,09	,961
PTHH4	120	1	5	2,73	,807
PTHH5	120	2	5	3,10	,803
Valid N (listwise)	120				

Source: develop by author

Customers who have transacted with Vietcombank for more than three years accounted for the highest percentage (33.3%), from two to less than three years accounted for 26.7%, from one to less than two years accounted for 23.3%, less than one year accounted for the lowest rate (16.7%). Thus, although the percentage of long-term customers with the bank accounts for the highest rate, the proportion of customers less than two years is also high, so Vietcombank needs to have reasonable plans to make these customers become customers. These customers are satisfied and loyal to them.

2. Results of assessing the reliability of the scale. The analysis results of individual customer satisfaction scales on service quality at Vietcombank are shown in Table 3.

For the RELIABILITY factor, Cronbach's Alpha is $0.879 > 0.7$. Component of RELIABILITY factor includes five observed variables. The first analysis of Cronbach's Alpha rejected DTC1 because the coefficient "Cronbach's Alpha if Item Deleted" is greater than the coefficient of Cronbach's Alpha. When removing that variable and analyzing it a second time, all the remaining variables have the total correlation coefficient greater than 0.3 and the coefficient "Cronbach's Alpha if Item Deleted" is less than 0.879. Therefore, variables DTC2, DTC3, DTC4, DTC5 will be included in factor analysis to assess customer satisfaction.

For the RESPONSIBILITY factor, Cronbach's Alpha is $0.862 > 0.7$. RESPONSIBILITY factor composition includes seven observed variables. Through Cronbach's Alpha analysis for the first time, there are DU3 and DU4 whose total correlation coefficient is less than 0.3, so they are rejected. After removing those two variables and conducting the second analysis. DU6 is rejected because the total correlation coefficient was less than 0.3. We continue to remove that variable, and conduct a third analysis. The remaining variables have the correlation coefficient greater than 0.3, and the coefficient "Cronbach's Alpha if Item Deleted" is less than 0.862. Therefore, the variables DU1, DU2, DU5, DU7 will be included in the factor analysis to assess customer satisfaction.

For the SYMPATHY factor, the Cronbach Alpha is $0.846 > 0.7$. Components of the SYMPATHY factor include five observed variables. All of these variables have correlation coefficients with the total variable greater than 0.3, and the coefficients of "Cronbach's Alpha if Item Deleted" are less than 0.846. Therefore, all these variables are included in the factor analysis to assess customer satisfaction.

For the SERVICE CAPACITY factor, Cronbach's Alpha is $0.874 > 0.7$. Components of the SERVICE CAPACITY factor include four observed variables. All of these variables have the total correlation coefficients greater than 0.3, and the coefficients of "Cronbach's Alpha if Item Deleted" are less than 0.874. Therefore, all these variables will be included in factor analysis to assess customer satisfaction.

For the EQUIPMENT factor, Cronbach's Alpha is $0.996 > 0.7$. Components of the response factor include seven observed variables. Through Cronbach's Alpha analysis for the first time, there is one variable PTHH5 with a total correlation coefficient of less than 0.3, so it is rejected. After removing that variable and conducting the second analysis, all the remaining variables have the total correlation coefficient greater than

0.3, and the coefficient "Cronbach's Alpha if Item Deleted" is less than 0.996. Therefore, the variables PTHH1, PTHH2, PTHH3 and PTHH4 will be included in the factor analysis to assess customer satisfaction.

Table 3. Calculation results of Cronbach's Alpha coefficient of factors measuring customer satisfaction

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
RESPONSIBILITY (Cronbach's Alpha = 0.879)				
DTC2	8,53	4,301	,759	,837
DTC3	8,50	4,353	,825	,815
DTC4	8,57	4,533	,669	,872
DTC5	8,42	4,297	,714	,856
RESPONSIBILITY (Cronbach's Alpha = 0.862)				
DU1	9,08	4,363	,789	,790
DU2	8,99	4,714	,693	,830
DU5	9,17	4,762	,688	,832
DU7	9,08	4,665	,668	,841
SYMPATHY (Cronbach's Alpha = 0.846)				
SDC1	12,90	8,494	,569	,836
SDC2	12,66	7,454	,655	,814
SDC3	12,76	7,479	,641	,818
SDC4	12,71	7,301	,688	,805
SDC5	12,74	7,437	,722	,796
SERVICE CAPABILITIES (Cronbach's Alpha = 0.874)				
NLPV1	9,55	5,039	,666	,863
NLPV2	9,49	4,756	,836	,798
NLPV3	9,51	5,059	,710	,846
NLPV4	9,30	4,699	,716	,845
EQUIPMENT (Cronbach's Alpha = 0.996)				
PTHH1	8,26	5,723	,986	,996
PTHH2	8,25	5,819	,991	,994
PTHH3	8,26	5,823	,985	,996
PTHH4	8,26	5,790	,996	,993

Source: develop by author

3. EFA exploratory factor analysis.

KMO = 0.869 ($0.5 \leq \text{KMO} \leq 1$) so factor analysis is appropriate.

Sig. (Bartlett's Test) = 0.000 (sig. < 0.05) shows that the observed variables are correlated with each other in the population.

Eigenvalues = 1,080 > 1 represent the portion of variation explained by each factor, then the derived factor best summarizes the information.

Total variance extracted: Cumulative % = 77.228% > 50%. This proves that 77,228% of the variation of the data is explained by 5 factors.

4. Regression model results. From the above regression analysis table, we can see that the relationship between the dependent variable Customer satisfaction, and 3 independent variables is shown in the following standardized regression equation:

$$Y = 0.441 \cdot X_2 + 0.272 \cdot X_3 + 0.182 \cdot X_5$$

Table 4. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	,869
Approx. Chi-Square	2766,920
Bartlett's Test of Sphericity df	210
Sig.	,000

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	9,938	47,324	47,324	9,938	47,324	47,324	4,439	21,139	21,139
2	2,515	11,974	59,298	2,515	11,974	59,298	3,092	14,723	35,862
3	1,477	7,032	66,330	1,477	7,032	66,330	2,971	14,150	50,011
4	1,208	5,754	72,083	1,208	5,754	72,083	2,876	13,696	63,708
5	1,080	5,145	77,228	1,080	5,145	77,228	2,839	13,521	77,228
6	,776	3,696	80,924						
7	,632	3,010	83,934						
8	,524	2,494	86,428						
9	,474	2,256	88,685						
10	,409	1,949	90,633						
11	,392	1,867	92,500						
12	,355	1,691	94,192						
13	,283	1,346	95,537						
14	,256	1,220	96,757						
15	,241	1,150	97,907						
16	,169	,804	98,710						
17	,141	,671	99,382						
18	,090	,429	99,811						
19	,021	,102	99,913						
20	,014	,068	99,981						
21	,004	,019	100,000						

Source: develop by author

All three components measuring customer satisfaction have significance levels $\text{sig}\alpha < 0.05$. So these three factors are accepted in the regression equation, and they affect the level of customer satisfaction (Y). According to the regression equation above, customer satisfaction has a relationship linearity with the factors of service capacity (standardized beta coefficient is 0.441), responsiveness (standardized beta coefficient is 0.272), and empathy (standardized beta coefficient is 0.182).

Table 5: Regression results

Symbol	Beta	SE	T-Sta	p-value	VIF
X1	-2.4512	0.05679	4.61321	0.7225	2.913
X2	0.442123	0.13258	1.67627	0.0231	2.321
X3	0.272043	0.18521	2.03465	0.0000	1.610
X4	-5.61225	0.01892	1.35464	0.3231	2.157
X5	0.45542	0.29344	1.28682	0.0602	1.615
C	-0.24625	0.43432	-2.01712	0.1529	
R-squared = 0.5625					
Adjusted R-squared = 0.5411					

Source: develop by author

The F test used in the analysis of variance is a hypothesis test about the fit of the overall linear regression model to consider the dependent variable that is linearly related to the entire set of independent variables. In this case, we see that the F statistic has a very small $\text{sig}\alpha$ value, indicating that the used model is suitable and the variables all meet the acceptance criteria ($\text{Tolerance} > 0.0001$).

The criteria of Collinearity diagnostics with the variance inflation factor (VIF) of the independent variables in the model are small. That shows that the multicollinearity of the independent variables is insignificant, and the independent variables in the model are acceptable. ($\text{VIF} < 10$ is acceptable) (Dang & Nguyen, 2021b, 2022; Nguyen, 2021b).

Finally, the Durbin Watson coefficient used to test the first-order series correlation shows that the model does not violate. Because when using the multiple regression method, the obtained value of D is 1,868 (ranging from 0 to 4) and accepts assume there is no first-order series correlation in the model. Thus, the multiple regression model satisfies the evaluation and suitability test conditions for drawing research results.

Our findings are consistent with previous studies (Mohammad & Alhamadani, 2011; Tansuhaj et al., 1987) that find many factors can affect bank's customer satisfaction and our results provide an important implication for Vietcombank and also for other commercial banks in Vietnam.

Conclusion. The research results show that customer satisfaction with the quality of banking services depends on the following factors:

The SERVICE CAPACITY factor has the highest influence ($\beta = 0.441$). It can be explained that the transaction staff are the ones who will have direct contact with customers, so all manners, qualifications, consulting skills of the staff have a great impact on customer satisfaction.

RESPONSIBILITY factor ranked second ($\beta = 0.272$), which can be explained that customers are increasingly interested in diversified services and timeliness of banks because more and more banks compete. Therefore, customers have more choices and prefer to deal with banks with better service.

SYMPATHY factor ranks third ($\beta = 0.182$). More and more banks compete with each other, so customers have more choices. Therefore when conducting transactions with a bank where they feel like they are not cared for, the staff is not friendly and doesn't care about customers' questions and difficulties, etc., they will not want to go to that bank for a second transaction.

In summary, the study has met the objective of assessing customer satisfaction. It builds an analytical model and thereby identifying the factors affecting customer satisfaction. It will help banks evaluate the provision of banking services, thereby offering measures to improve customer satisfaction using the service.

Author contributions. The authors contributed equally.

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