

IMPACT OF SERVICE QUALITY FACTORS ON CUSTOMER ACCEPTANCE BEHAVIOR TOWARDS SELF-SERVICE BANKING: A STUDY IN VIETNAM**Dinh Thu Quynh**

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Abstract

This study aims to measure the impact of service quality at Vietnamese retail banks on customer acceptance behavior towards self-service banking. The research conducted a formal survey of 261 individual customers using various banking services such as electronic banking, ATMs, etc. The results show that service quality factors such as reliability, ease of use, enjoyment, perceived control, and convenience have a positive impact on behavioral intention. Furthermore, this behavioral intention positively influences customer acceptance behavior.

Keywords:

Self-service banking, service quality, intention, behavior

1. Introduction

In the era of integration and economic development, Vietnam has continuously improved and promoted industrialization and modernization to comprehensively and firmly develop the country. The development of information technology and the Internet has created a new transaction method, namely self-service transactions through technology. According to Meuter et al. (2000), self-service technology is an interface that allows customers to receive services without direct involvement of service company employees. In the banking sector, self-service banking, hereinafter referred to as SSB, refers to self-service services based on the bank's technology, where customers perform financial transactions such as deposits and withdrawals, transfers, bill payments, lending, currency exchange, and asset management through self-service devices. According to Ky Phong (2024) published in the Financial Journal, by the end of 2023, non-cash payments reached about 11 billion transactions, nearly 50% higher than in 2022. The total transaction value exceeded VND 200 trillion. Specifically, internet payments reached nearly 2 billion transactions, with a value of over VND 52 trillion (an increase of over 56% in quantity and 5.8% in value compared to 2022); mobile banking reached over 7 billion transactions with a value of over VND 49 trillion (an increase of over 61% in quantity and nearly 12% in value compared to 2022); QR code payments reached nearly 183 million transactions, with a value of over VND 116 trillion (an increase of nearly 172% in quantity and over 74% in value compared to 2022). ATM transactions amounted to about VND 2.6 trillion, down more than 9% compared to 2022. Online account opening, launched since late March 2021, has nearly 27 million eKYC-activated payment accounts and 12.9 million eKYC-issued cards in circulation. Therefore, by converting transactions from direct interaction with tellers to self-service, banks can promote digital transformation to reduce the number of branches, lower costs, increase customer loyalty, and improve business efficiency. Due to the importance and significant benefits of implementing self-service banking, many studies have been conducted in existing literature, both theoretical and empirical, to understand customer adoption behavior (Gunawardana et al., 2015; Iqbal et al., 2017; Magotra et al., 2019).

2. Theoretical Foundation and Research Hypotheses**2.1. Service Quality Factors**

Parasuraman et al. (1988) argued that dimensions of service quality include reliability, responsiveness, assurance, empathy, and tangibles. Dabholkar (1996) studied dimensions of self-service technology quality, including delivery speed, ease of use, reliability, enjoyment, control. Self-service technology quality was further conceptualized by Lin and Hsieh (2011), who developed a clear framework to quantify the quality of services provided by self-service technology, comprising seven dimensions: functionality, enjoyment, security, design, assurance, convenience, and customization. Bebli (2010)

asserted that some research works demonstrate how to measure the quality of online banking services such as reliability, controllability, and privacy. Narteh's (2013) study indicated that factors like reliability, convenience, security and privacy, ease of use, completion, and responsiveness have been employed to measure ATM service quality. Gunawardana et al. (2015) measured the quality of self-service technology of banks, including security, efficiency, ease of use, reliability, and convenience. Recent studies by Iqbal et al. (2018) and Maune (2022) affirm that self-service technology service quality encompasses functionality, enjoyment, security/privacy, assurance, design, convenience, and customization. Based on the findings from relevant previous studies, this research focuses on 5 aspects of self-service technology quality, including reliability, ease of use, enjoyment, perceived control, and convenience.

Several popular models utilize customer evaluations of self-service technology service quality to predict satisfaction and behavioral intention (Chen et al., 2009; Lin & Hsieh, 2007). These are significant indicators of whether customers will stay or leave a company, provide positive feedback, endorse the company's products, be willing to pay higher prices, and commit to loyalty (Reichheld & Sasser, 1990; Rust & Zahorik, 1993; Parasuraman et al., 1994). Some studies have attempted to explore the intention to use self-service technology by users, and the results suggest that self-service technology factors positively influence user behavioral intentions (Curran et al., 2003; Weijters et al., 2007). Cronin & Taylor (1992) and Gremler & Brown (1996) explain that service quality must be a prerequisite for customer behavioral intentions. Perceived control is deemed a critical factor in customer evaluations of self-service technology (Collier & Sherrell, 2010). According to Dasgupta et al. (2011), ease of use and reliability significantly and positively impact customer behavioral intentions to use banking services. Iqbal et al. (2017) also confirm that self-service technology service quality such as enjoyment and convenience have a positive and significant relationship with behavioral intention. Thus, the authors propose the following hypotheses:

Hypothesis H1: Reliability positively influences behavioral intention.

Hypothesis H2: Ease of use positively influences behavioral intention.

Hypothesis H3: Enjoyment positively influences behavioral intention.

Hypothesis H4: Perceived control positively influences behavioral intention.

Hypothesis H5: Convenience positively influences behavioral intention.

2.2. Behavioral Intention

Consumer behavior literature has relied on the Theory of Reasoned Action (Fishbein & Ajzen, 1975). The Theory of Reasoned Action posits that behavior is displayed as a result of the intention that an individual holds to perform a specific behavior (Fishbein & Ajzen, 1975). The Theory of Planned Behavior (Ajzen, 1991) originated from the Theory of Reasoned Action (Fishbein & Ajzen, 1975), states that behavioral intention is an important factor in explaining customer behavior, through which a strong intention of an individual to perform a specific behavior can lead to the behavioral outcome. Han & Ryu (2006) defined behavioral intention as the willingness expressed to perform purchasing behavior.

Ajzen & Fishbein (1975) asserted that individual intention is the determining factor in usage behavior. According to the Technology Acceptance Model, behavioral intention determines usage behavior (Luarn & Lin, 2005). According to the Theory of Planned Behavior (Ajzen, 1991), behavioral intention determines the actual behavior of an individual. Behavioral intention is considered to include motivating factors influencing individual behavior. Additionally, behavioral intention is seen as a precursor and the best predictor of usage behavior. Behavioral intention is a decisive factor for usage behavior. Venkatesh et al. (2003) also found a direct and significant relationship between behavioral intention and usage behavior. Gupta & Arora (2019) found that behavioral intention influences usage behavior for payment usage in India. Martins et al. (2014) found that behavioral intention is an important factor in explaining the intention to use online banking. Purwanto1 & Loisa (2020) argued that the influence of behavioral intention on user usage behavior is positive and significant. Thus, the authors propose the following hypotheses:

Hypothesis H6: Behavioral intention positively influences usage acceptance behavior.

3. Research Data

The data were collected from 261 individual customers using banking services, with the majority being female, accounting for 59.7%. The age range of banking service users is from 23 to 27 years old, accounting for 41.3%, followed by 28 to 32 years old, accounting for 20.3%. This result is consistent with the context, as this age group mainly consists of working individuals who have the need to use

banking services for transactions and other activities. Regarding occupations, office workers account for 42.4%, followed by business professionals at 28.1%. The majority of educational backgrounds are at the university level, accounting for 44%. In terms of income, the majority falls within the range of 10 to less than 20 million VND, accounting for over 60%, which is considered a common income level in Vietnamese society. The usage time of banking services is evenly distributed in the ranges from 1 to less than 2 years at 28.1%; from 2 to less than 3 years at 23.3%; and 3 years or more at 33.5%.

4. Research Methodology

Reliability Analysis using Cronbach's Alpha: This coefficient is a measure that helps us determine whether observed variables for a factor are appropriate or not. This test reflects the degree of correlation between observed variables within the same factor. It indicates which variables contribute to measuring the concept of that factor and which do not. The reliability test of the Cronbach's Alpha scale is commonly used to assess the reliability of a scale and evaluate whether variables measure the same value, allowing us to eliminate inappropriate variables. According to Nunnally and Bernstein (1994), the criteria for evaluating the reliability of a scale are observed variables with a total correlation coefficient greater than 0.3; the Cronbach's Alpha value of the scale is greater than 0.6, and if the Cronbach's Alpha value after removing variables of the observed variables is less than the overall Cronbach's Alpha value of the group.

Confirmatory Factor Analysis (CFA): This analysis is used to evaluate the model's fit with the research data, confirming that the measurement scales ensure reliability, convergence, and discrimination. Conducting tests for convergence, discrimination, and reliability is necessary in CFA. If factors do not ensure validity and reliability, they will cause bias in the analysis results, and the obtained figures will not reflect the meaning of the data and reality. To test the validity and reliability of CFA, researchers use several measures including: Standardized Loading Estimates, Composite Reliability, and Average Variance Extracted.

Structural Equation Modeling (SEM): The method of analyzing linear structural models SEM is used to test the research model, hypotheses, and analyze the multidimensional relationships between multiple variables in the model (Haenlein and Kaplan, 2004). SEM examines the existing relationships between variables in the model as well as the significance level between observed variables in the model.

5. Research Results

Table 1: CFA Testing

	BI	CV	EJ	EU	PC	RL	UB	Cronbach's Alpha	ρ_c	AVE
BI1	0.835							0.824	0.83	0.74
BI2	0.902									
BI3	0.843									
CV1		0.862						0.839	0.878	0.67
CV2		0.803								
CV3		0.760								
CV4		0.847								
EJ1			0.898					0.895	0.895	0.826
EJ2			0.911							
EJ3			0.919							
EU1				0.938				0.915	0.934	0.854
EU2				0.912						
EU3				0.922						
PC1					0.837			0.810	0.828	0.635
PC2					0.781					
PC3					0.739					
PC4					0.828					
RL1						0.773		0.823	0.84	0.651

RL2						0.794			
RL3						0.849			
RL4						0.811			
UB1							0.893		
UB2							0.950		
UB3							0.915	0.909	0.928
									0.846

Table 1 shows that the factors of reliability, ease of use, enjoyment, perceived control, and convenience; behavioral intention; acceptance behavior have Cronbach's Alpha reliability coefficients of 0.823, 0.915, 0.895, 0.81, 0.824, 0.909 respectively, all greater than 0.6, and the composite reliability (ρ_c) of these factors is also greater than 0.6. On the other hand, the Average Variance Extracted (AVE) of these factors are all greater than 0.5, and in the factor rotation matrix, the loading coefficients are all greater than 0.55 and converge to representative factors.

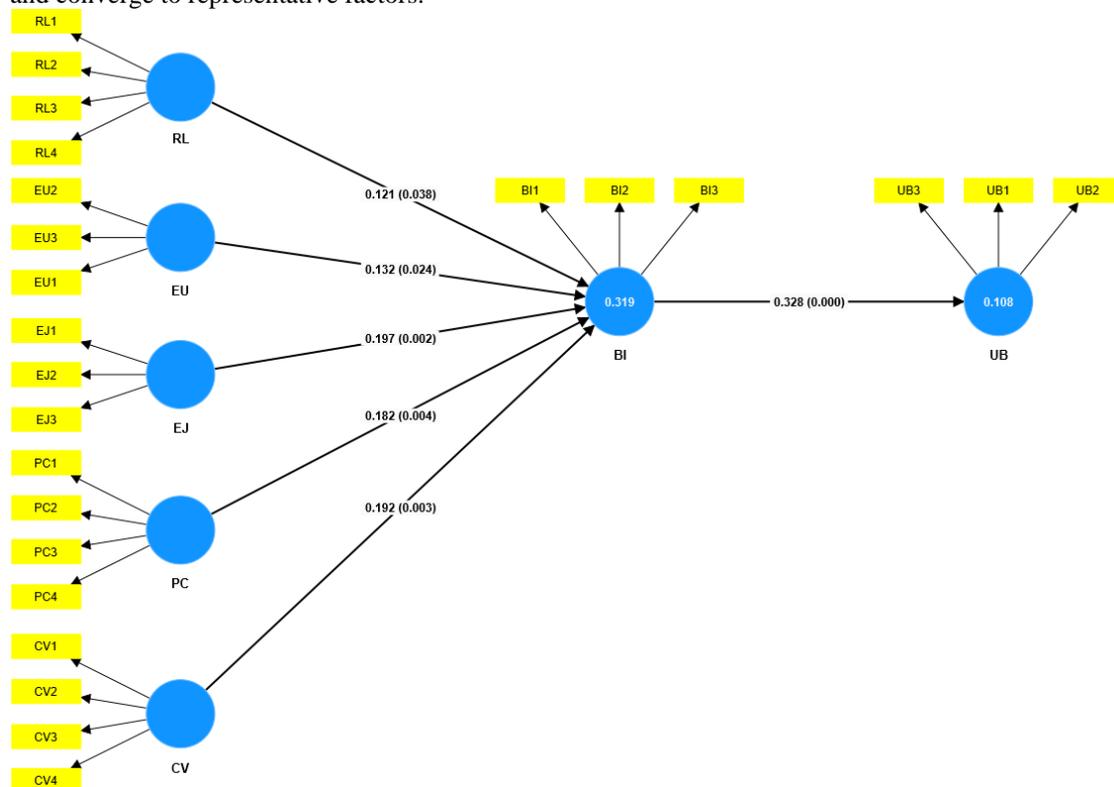


Figure 1. Testing the Structural Equation Modeling (SEM) Model

6. Management Implications

Firstly, banks need to invest in information security systems, develop stronger encryption methods, and authentication methods with higher security to prevent fraudulent activities from external parties. Enhancing customer protection measures and promptly resolving customer complaints in case of transaction errors caused by the bank's faults to make customers feel comfortable and secure when using the bank's self-service technology. Banks should regularly promote information to customers about the safe and highly secure platforms of self-service technology services. Additionally, self-service technology services need to be regularly upgraded to limit the occurrence of errors during transactions such as slow transaction processing or transaction rejections.

Secondly, services should be designed with simple transaction processes that are easy to understand to ensure that all customers can use them. There needs to be promotional activities for services to increase customer awareness. Investment in technology infrastructure to meet high-speed transaction processing,

smoothness, and access to services anytime, anywhere.

Thirdly, banks should incorporate the above content into technology applications regarding transaction processes as well as content about the bank's products and services to convey to customers in an interesting way, spreading into the hearts and minds of users so that users can quickly carry out transactions and remember more about the bank's products and services.

Fourthly, self-service technology services should be designed to ensure simplicity in transaction steps, with user-friendly interfaces that do not require much effort from users to use the service. There should be specific instructions for each service to help customers understand and use them easily. Instructions for customer service usage through information on the website, ATM waiting screens, in the lobby of the transaction office... There needs to be promotional activities for services to increase customer awareness.

Fifthly, build a positive image of the bank in the minds of customers, always ensuring the bank's commitments to customers so that customers perceive that they have made the right decision when using the bank's self-service banking services.

Sixthly, with the emergence and popularity of new devices and technologies such as mobile phones, the internet, television... gradually dominating the daily habits of people, not only playing the role of communication devices but these devices also help people manage their lives, study, exchange knowledge, conduct commercial transactions, and entertain... Providing good services and good online support is also a way to leave a good impression on customers during transactions. Therefore, banks can promote self-service banking services to potential customers through organizations and individuals. In addition, banks need to improve service quality, support to resolve issues and challenges that customers encounter during the usage process, help customers feel secure in using the self-service banking services provided by the bank, become a bridge to introduce to family, relatives, and friends. Besides, the bank should also provide preferential policies for those who introduce and create a good impression on those who have used the services.

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