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# THE IMPACT OF SERVICE QUALITY ON THE CONTINUANCE INTENTION TO USE SELF-SERVICE TECHNOLOGY AT COMMERCIAL BANKS IN VIETNAM

***Ta Thi Kieu Trang***

*Vietnam Aviation Academy*

**ABSTRACT**

***In the context of the Fourth Industrial Revolution, the rapid advancement of digital technologies has encouraged Vietnamese commercial banks to adopt self-service banking models to enhance operational efficiency and improve customer experience. This study examines the impact of service quality on customers' continuance intention to use self-service technologies in Vietnamese commercial banks. By synthesizing theoretical foundations and previous studies, the paper highlights the role of service quality as a key determinant of customer satisfaction and behavioral intention. The findings are expected to provide practical evidence for bank managers in developing strategies to improve service quality, thereby strengthening customer engagement and fostering continued use of self-service technologies.***

***Keyword: Service quality; continuance intention; self-service technology; commercial banks; Vietnam.***

## 1. INTRODUCTION

Against the backdrop of a vigorous Fourth Industrial Revolution, advanced technologies such as artificial intelligence, big data, cloud computing and the Internet of Things have been fundamentally reshaping operational structures and development strategies across many sectors, including the financial and banking industry. The diffusion of these technological waves has created pressure that forces banks to transform rapidly if they do not want to fall behind in the race to digitize services. The intensive integration and application of digital technologies have helped the banking system strengthen governance capacity, increase transparency, reduce operating costs and most importantly, substantially improve user experience. One notable advancement that clearly demonstrates the role of technology in banking is the emergence and development of the self-service banking model. This modern trend fully leverages technological achievements to deliver banking services without direct support from staff. In a financial services market characterized by volatility and fierce competition, banks face increasing pressure to seek out and deploy alternative channels to attract customers and enhance brand recognition (Parasuraman et al., 2005). Zagel (2015) emphasizes that service quality is crucial for differentiating in the service business. Therefore, service providers must maintain high levels of service quality. If customers are satisfied, they will continue to use the service; conversely, if customers are dissatisfied, they will cancel or switch to other services. Self-service banking technology is expected to shape customers' behavioral intentions toward a specific bank. Given the importance and benefits of applying self-service technology in banking and because banks are progressively adopting more self-service technologies in their operations, the author chose to investigate the topic: "The impact of service quality on the continuance intention to use self-service technology at commercial banks in Vietnam." The study aims to clarify the effects of service quality on customers' continuance intention and from that derive managerial implications to enhance customer satisfaction and attract more customers to adopt self-service technology at Vietnamese commercial banks.

## 2. THEORETICAL FOUNDATION

### *2.1. Service quality of self-service technology*

According to Lin and Hsieh (2011), the service quality of self-service technology was developed to measure service quality in the interaction between consumers' perceptions and behaviors toward self-service technologies. Service quality of

self-service technology in the banking sector refers to the effectiveness of automated services provided by banks, including ATMs, self-service payment kiosks, mobile banking applications and online customer service portals, in fulfilling customers' needs and expectations (Iqbal et al., 2018).

Parasuraman et al. (1988) proposed the SERVQUAL model to measure service quality by assessing consumers' expectations and perceptions across five dimensions: tangibles, reliability, responsiveness, assurance and empathy. In the banking field, SERVQUAL is widely applied to measure service quality because banking services are typically intangible, difficult to evaluate immediately and heavily dependent on customers' experiences throughout the transaction process. In particular, in the current context of strong digital transformation in banking, factors such as reliability, responsiveness and assurance continue to play a pivotal role in enhancing overall service quality and strengthening customers' attachment to their banks.

Davis (1986) developed the Technology Acceptance Model (TAM) to explain and predict users' readiness to adopt a technology. According to the Technology Acceptance Model (TAM), the adoption of a technology is primarily influenced by two factors: perceived usefulness and perceived ease of use. In the banking sector, particularly in the context of digital transformation and the rise of smart banking services, TAM has been widely employed to explain customers' acceptance and usage behavior. The application of TAM also assists banks in designing communication strategies and user training to help customers understand the benefits, convenience and ease of using new technologies, thereby promoting acceptance and long-term use of services.

This study is conducted in the context of self-service banking; therefore, the assessment of service quality mainly focuses on factors directly related to the technology platform. Drawing on Parasuraman et al.'s (1988) SERVQUAL model, Davis's (1986) TAM and recent studies on self-service banking by De Leon et al. (2020) and Othman et al. (2020), the research concentrates on four representative factors to measure the service quality of self-service technology: reliability, security, convenience and ease of use.

### *2.2. Customer satisfaction*

Customer satisfaction is regarded as a psychological and emotional state formed from the comparison between pre-consumption expectations and the actual performance of a product or service. Satisfaction reflects the extent to which the final performance meets or exceeds customers' initial expectations (Kotler & Keller, 2016). Tjiptono (2014) emphasizes that customers may experience satisfaction or dissatisfaction depending on the magnitude of the gap between expectations and actual experience after using the service. Similarly, Mei et al. (2017) define customer satisfaction as a positive emotional response formed after consumption, thereby underscoring its important role in a firm's long-term success.

### *2.3. Continuance intention*

Bhattacherjee (2001) defines continuance intention as the tendency of users to continue using an information system after the initial acceptance phase. This decision is formed based on actual usage experience, which can reinforce or alter the initial decision and may even lead to abandonment of the system if the experience does not meet expectations. Zhang et al. (2017) argue that continuance intention is the degree of users' willingness to maintain use of a product or service following their initial experience. The concept not only reflects immediate satisfaction but also expresses customers' belief in the long-term value and sustainability of the service, particularly in the context of continuously evolving technology.

### *2.4. Continuance behavior*

According to Bhattacherjee (2001), continuance behavior is influenced by prior usage experience and can even lead to behavioral changes compared with the initial adoption stage. For self-service technologies, Dong et al. (2008) define continuance behavior as customers' willingness to continue participating in usage and co-creating the service in the future. Likewise, Al-Debei et al. (2013) assert that continuance behavior pertains to the sustained use of an information system after it has been initially accepted or adopted.

### *2.5. Research hypotheses*

Results from Iqbal et al. (2018) show that high service quality of self-service technology leads to higher customer satisfaction. Data analysis in the

study by Satria and Hidayat (2019) indicates that the service quality of self-service technology has a positive effect on the satisfaction of e-banking customers at Indonesian banks. Leon et al. (2020) also confirm that the service quality of self-service technology has a positive and significant effect on customer satisfaction in mobile banking applications. Self-service technology is considered reliable when the system provides the ability to perform transactions accurately; these capabilities ultimately translate into good service for customers and yield customer satisfaction (Iberahim et al., 2016). Narteh (2015) argues that security has a positive impact on customer satisfaction. Service providers convincing users that their data or personal information will be effectively protected will increase customer satisfaction (Alfred & Dwomoh, 2017). With self-service technology, providers typically offer customers greater convenience to compensate for the loss of staff interaction, such as flexibility of time and place for transactions through self-service technologies deployed at 24/7 locations or via the Internet (Moghavvemi et al., 2018). Rezaei and Amin (2013) find that ease of use positively affects customer satisfaction. This indicates that customers tend to feel more satisfied when they perceive a new technology or product as simple and requiring little effort to learn and understand. In the banking context, Rahi et al. (2019) maintain that when customers perceive digital banking platforms as accessible and free of major technological barriers, they tend to be more satisfied. Therefore, the author proposes the following hypotheses:

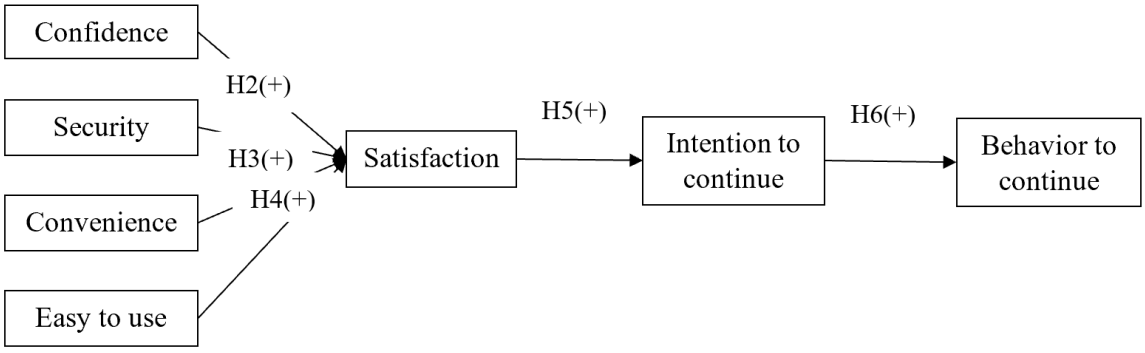
- H1: Reliability has a positive effect on satisfaction.
- H2: Security has a positive effect on satisfaction.
- H3: Convenience has a positive effect on satisfaction.
- H4: Ease of use has a positive effect on satisfaction.

Collier and Sherrell (2010) found that satisfaction is a motivating factor that influences continuance intention to use self-service technology. In the banking context, Sharma and Sharma (2019) conclude that customers who are satisfied with e-banking services are more likely to continue using those services. Findings from Albashrawi (2021) suggest that user satisfaction is key to increasing continuance intention. Therefore, the author proposes the following hypothesis:

- H5: Satisfaction has a positive effect on continuance intention.

Venkatesh et al. (2003) indicate that behavioral intention serves as an important predictor with a positive and direct effect on actual usage behavior. This means that when users form a strong intention to use a technology, they tend to translate that intention into concrete action. Building on this view, Purwanto and Loisa (2020) also affirm that continuance intention positively affects users' continuance behavior, particularly in the context of increasingly widespread digital technologies. Therefore, the author proposes the following hypothesis:

- H6: Continuance intention has a positive effect on continuance behavior.




## 3. RESEARCH METHODOLOGY

The study was conducted in two phases: qualitative research and quantitative research. The qualitative phase was conducted through focus group discussions with experts to adapt the measurement scales originally developed in previous studies, to the context of commercial banks in Vietnam. The formal quantitative study

was conducted via a survey of customers aged 18 and over who are using self-service banking services at Vietnamese commercial banks. Survey results were compiled and the data were analyzed using SmartPLS software.

After the survey period from March 2025 to May 2025, the author collected 516 responses; after filtering out invalid responses, 19 were excluded, leaving 497 valid responses.

## 4. RESEARCH RESULTS

### *4.1. Measurement model assessment*

For the measurement of observed variables: to evaluate which observed indicators are appropriate or not in the measurement model, Hair et al. (2017) recommend using outer loadings. Based on the results in Table 4.1, the outer loadings of the observed indicators are all greater than 0.7; therefore, the indicators are significant and appropriate for the model.

**Table 4.1: Results of the assessment of observed indicator quality for the measurement scales**

| | CO | EU | SA | UB | RE | SE | UI |
|---|---|---|---|---|---|---|---|
| **CO1** | 0.787 | | | | | | |
| **CO2** | 0.945 | | | | | | |
| **CO3** | 0.945 | | | | | | |
| **CO4** | 0.905 | | | | | | |
| **EU1** | | 0.813 | | | | | |
| **EU2** | | 0.790 | | | | | |
| **EU3** | | 0.810 | | | | | |
| **EU4** | | 0.807 | | | | | |
| **SA1** | | | 0.911 | | | | |
| **SA2** | | | 0.909 | | | | |
| **SA3** | | | 0.842 | | | | |
| **UB1** | | | | 0.854 | | | |
| **UB2** | | | | 0.772 | | | |
| **UB3** | | | | 0.849 | | | |
| **RE1** | | | | | 0.853 | | |
| **RE2** | | | | | 0.841 | | |
| **RE3** | | | | | 0.823 | | |
| **RE4** | | | | | 0.853 | | |
| **SE1** | | | | | | 0.897 | |
| **SE2** | | | | | | 0.906 | |
| **SE3** | | | | | | 0.894 | |
| **SE4** | | | | | | 0.891 | |
| **UI1** | | | | | | | 0.908 |
| **UI2** | | | | | | | 0.814 |
| **UI3** | | | | | | | 0.893 |

Regarding the reliability and convergent validity of the scales, Hair et al. (2017) recommend using two indices, Cronbach's alpha and Composite Reliability rho_c (CR), to evaluate reliability. Convergent validity is assessed through the Average Variance Extracted (AVE). From the results in Table 4.2, Cronbach's alpha and CR for the scales are all greater than 0.7 and the AVE values for the scales are all greater than 0.5; therefore, the scales meet the requirements for reliability and convergent validity.

**Table 4.2: Results of the reliability and convergent validity assessment of the measurement scales**

| | Cronbach's alpha | Composite reliability (rho_c) | Average variance extracted (AVE) |
|---|---|---|---|
| **CO** | 0.919 | 0.943 | 0.806 |
| **EU** | 0.819 | 0.880 | 0.648 |
| **SA** | 0.866 | 0.918 | 0.789 |
| **UB** | 0.774 | 0.865 | 0.682 |
| **RE** | 0.864 | 0.907 | 0.709 |
| **SE** | 0.919 | 0.943 | 0.805 |
| **UI** | 0.844 | 0.905 | 0.761 |

Regarding discriminant validity of the scales: Henseler et al. (2015) proposed an approach to evaluate discriminant validity using the HTMT (heterotrait–monotrait) ratio. From the results in Table 4.3, the HTMT indices are below 0.85, hence discriminant validity is well established.

**Table 4.3: Results of the discriminant validity assessment of the measurement scales**

| | CO | EU | SA | UB | RE | SE | UI |
|---|---|---|---|---|---|---|---|
| **CO** | | | | | | | |
| **EU** | 0.635 | | | | | | |
| **SA** | 0.653 | 0.607 | | | | | |
| **UB** | 0.098 | 0.188 | 0.104 | | | | |
| **RE** | 0.523 | 0.454 | 0.571 | 0.164 | | | |
| **SE** | 0.735 | 0.635 | 0.665 | 0.096 | 0.510 | | |
| **UI** | 0.663 | 0.526 | 0.606 | 0.151 | 0.508 | 0.703 | |

## 4.2. Assessment of the structural model

Multicollinearity: According to Hair et al. (2017), an Inner VIF (variance inflation factor) value less than 3 indicates that the model does not suffer from multicollinearity. From the results in Table 4.4, the Inner VIF values are all below 3, therefore the variables do not exhibit multicollinearity.

**Table 4.4: Results of the multicollinearity assessment**

| | VIF |
|---|---|
| **CO -> SA** | 2.128 |
| **EU -> SA** | 1.591 |
| **SA -> UI** | 1.000 |
| **RE -> SA** | 1.379 |
| **SE -> SA** | 2.086 |
| **UI -> UB** | 1.000 |

The linear structural model analysis method is used in studies to test the theoretical research model. The Bootstrapping test results with N = 5,000 are as follows:

**Table 4.5: Assessment of the impact relationships among the factors in the research model**

| | Original sample (O) | P values |
|---|---|---|
| **RE -> SA** | 0.210 | 0.000 |
| **SE -> SA** | 0.249 | 0.000 |
| **CO -> SA** | 0.228 | 0.000 |
| **EU -> SA** | 0.172 | 0.000 |
| **SA -> UI** | 0.529 | 0.000 |
| **UI -> UB** | 0.127 | 0.002 |

Based on the results of testing the impact relationships among factors in the research model via Bootstrapping with N = 5,000 in Table 4.5, all p-values were below 0.05, indicating that the effects are statistically significant. Specifically, reliability positively affects satisfaction with β = 0.210; security positively affects satisfaction with β = 0.249; convenience positively affects satisfaction with β = 0.228; ease of use positively affects satisfaction with β = 0.172; satisfaction positively affects continuance intention with β =

0.529; and continuance intention positively affects continuance behavior with β = 0.127. Therefore, hypotheses H1–H6 are supported.

## 5. MANAGERIAL IMPLICATIONS

The study's findings indicate that factors such as reliability, security, convenience and ease of use act as important levers for enhancing customer satisfaction in digital banking services. First, reliability helps banks build solid trust: when customers believe that transactions are processed accurately and stably, their long-term commitment to the bank increases. Second, security plays an essential role in protecting personal and financial data, minimizing risks and reinforcing users' sense of safety. Third, convenience, reflected in the widespread accessibility of services and the integration of diverse functions, enables customers to save time and enhances service efficiency. Finally, system ease of use, through user-friendly interfaces and simple operations, reduces technical barriers, creates positive experiences and encourages continued use.

Therefore, to improve customer satisfaction, banks need to pay concurrent attention to reliability, security, convenience and ease of use when delivering services. Reliability can be ensured by maintaining stable technology infrastructure, processing transactions quickly and accurately and providing transparent information and timely customer support to bolster trust. Security is pivotal for protecting customer data and privacy; banks should invest in advanced technologies such as multi-factor authentication and data encryption, clearly communicate privacy and security policies and raise user awareness of information security. Convenience should be promoted by diversifying transaction channels, integrating multiple services within a single platform and optimizing processing speed so customers can access services easily. Lastly, ease of use should be emphasized through intuitive interface design, clear language, visual guidance, cross-platform support and personalization of the user experience. The harmonious combination of these four factors not only enhances satisfaction but also drives continuance intention, laying a solid foundation for the bank's long-term competitive advantage.

**Notes:** Author's information: Ta Thi Kieu Trang, Vietnam Aviation Academy, Email: trangttk@vaa.edu.vn.

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