# CUSTOMER EXPERIENCE AND SATISFACTION WITH DIGITAL BANKING SERVICES

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**Abstract**

Digital banking services bring many benefits to banks such as reducing the number of employees, branches, increasing the number of transactions... thereby reducing costs and increasing profits. Research results show that (1) Brand trust, (2) Customer convenience (3) Customer satisfaction, (4) Digital banking innovation, (5) Digital banking service quality, (6) Employee engagement, (7) Risk perception, (8) Perceived value are important reasons importantly to accept retail banking customers.

**Keywords:** Digital banking services, information technology, quality, satisfaction.

## Introduction

Consumers are gradually adapting to technological advances and want every service to be accessible digitally. To prolong customer relationships, user experience is analyzed by industries to provide more efficient services.

As of January 2023, Vietnam has 77.93 million Internet users, equivalent to 79.1% of the total population. With this number, Vietnam is the country with the 12th highest number of Internet users worldwide and ranks 6th out of 35 countries/territories in Asia.

Vietnam is has a high percentage of Internet users who shop online for goods weekly (over 60%), higher than the global average (57.6%). The scale of Vietnam's Internet economy in 2022 will reach 23 billion USD and is forecast to reach 49 billion USD in 2025. Digital transformation, regardless of form, is built on the Internet and therefore, the Internet always needs to be broader to meet the requirements of development (vmnetwork.vn)

## Theoretical basis

### 2.1. E-commerce

Along with the continuous development of new technology, research in the field of e-commerce is also attracting more and more attention (Wigand, 1997). This shows that successful businesses in the field of electronic sales, just like in the field of traditional sales, are businesses that know how to take better care of customers than their competitors and provide better customer service. provide better solutions to customers (Blackwell et al., 2001).

However, the term e-commerce is still not fully understood (Wigand, 1997). There are many different definitions of e-commerce, some reputable organizations in the world define e-commerce as follows:

"E-commerce includes the production, advertising, sales and distribution of products that are bought, sold and paid for on the Internet, but delivered and received tangibly" (WTO)

**• Benefits and risks of e-commerce**

The use of the Internet, a major means of e-commerce, brings a lot of convenience to both suppliers and customers in using e-commerce in a network environment.

Recent studies show that e-commerce service providers will have the following benefits: 1) open 24 hours, 365 days; 2) low price; 3) achieve high efficiency; 4) market expansion; 5) adapt quickly to market conditions; 6) influence customer purchasing power and 7) improve customer care services (Kotler, 2000).

• **Risks of e-commerce**

Risks in e-commerce are accidents, incidents, and disasters that occur randomly and objectively beyond human will, causing losses to participating parties during the transaction process. ecommerce. These can be divided into four basic types: Data risks; Technology risks; Risks related to the organization's transaction procedures; and Risks related to laws and technology standards.

**2.2. Electronic banking service distribution channel**

Home banking service: with this service, customers transact with the bank online, but it is an internal network built specifically by the bank.

Telephone banking service: This is a product that provides banking information over the phone completely automatically.

Banking service via mobile phone/message: is a form of online payment via mobile phone network.

Central phone service: this service manages data centrally, so customers with accounts at any branch still call this center's fixed phone number to be provided with all general information and individual.

**2.3. Electronic payment means**

To make electronic transactions people use different payment methods:

Cryptocurrency: Cryptocurrency is a means of payment on the Internet. Customers who want to use cryptocurrency send a request to the bank.

Electronic check: this means also using the same technique as above to transfer electronic checks and drafts on the Internet.

Smart card - Electronic wallet: A type of plastic card attached to a microprocessor. Card users load money onto the card and use it to make purchases.

**2.4. Quality of electronic banking services**

In competition, service quality is considered a decisive condition for establishing and maintaining close, long-term relationships with customers. Previous studies have proven that service quality is an important factor affecting customer satisfaction (Spreng and Mackoy, 1996). Service quality can differentiate one organization from another and thereby achieve a competitive advantage (Mohr, 1982). The continuous increase in the quality of electronic services has made online companies more efficient, more attractive, more satisfied and retained more customers (Gronroos et al., 1984).

**3. Digital Banking**

Digital Banking is a form of banking that digitizes all traditional banking activities and services. Accordingly, all banking transactions are performed over the Internet through forms such as GPRS/3G/4G/Wife, taking place anytime, anywhere. Customers do not have to go to a branch or bank transaction office, just need a few simple steps, in 1 - 2 minutes they can make all online transactions.

**3.1. Benefits of digital banking**

Digital banking is growing stronger and bringing many benefits to users, specifically:

Digital banking is a form of banking that digitizes all traditional banking activities and services. It is by operating based on the connection of platforms that users can fully proactively transact anytime, anywhere. From there, customers do not need to depend on the time and location of banking systems. In addition, identification and information security are also increased when users fully manage their personal information and assets. Paperwork is also reduced when users choose to transact online through the digital banking system

**3.2. Compare digital banking with electronic banking**

Compared to traditional payment methods, digital banking and electronic banking play an extremely important role, bringing many benefits to banks and users.

For users, digital banking and electronic banking will help customers save time and effort on travel when they need to make transactions; 24/7 trading only on digital platforms; Carry out transaction and payment procedures quickly with just a few clicks or touches, while increasing customer safety before making transactions. Transact and pay anytime, anywhere quickly with just one click

For banks, digital banking and e-banking help save personnel costs, increase transaction speed and labor productivity, thereby increasing revenue and reducing the burden of administrative and operational procedures.; Help banks expand their scope of operations

## Research model and hypothesis

### 4.1. Research models

There is a need to increase public awareness about the digital platforms available in banking. Financial performance is significantly related to investment behavior and this result identifies an increase in personal beliefs about its ability to help develop behavioral investing among investors. The quality of Internet banking services continues to be good due to favorable attention to individual needs, website links, user accessibility and website efficiency (Amin, 2016). The three stages of digitalization in banking include developing which are cutting-edge technology used by customers. Digital services satisfy customers in many ways compared to traditional banks (Maha Lakshmi, 2016). Transforming technology in the banking sector to improve revenue, operations and effective risk management (Khan, 2020a),

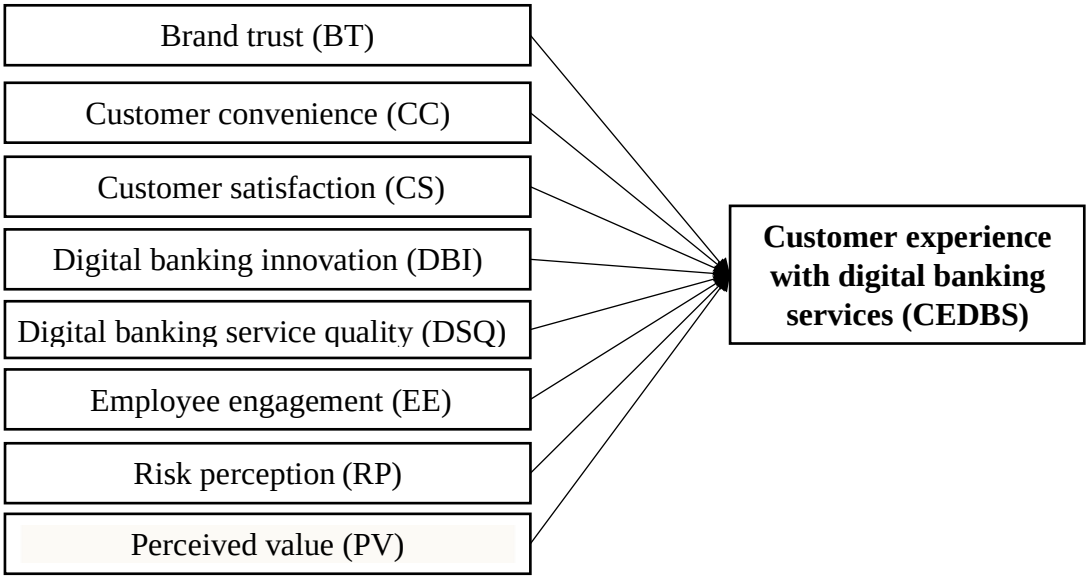


**Figure 1: Customer digital banking service experience model**

### 4.2. Research hypothesis

In this study, the hypothesis is made because there is a significant relationship between the factors included in the study.

H1: Brand trust has a positive relationship with customer experience

H2: Customer convenience has a positive relationship with customer experience

H3: Customer satisfaction has a positive relationship with customer experience

H4: Digital banking innovation has a positive relationship with customer experience

H5: Digital banking service quality has a positive relationship with customer experience

H6: Employee engagement has a positive relationship with customer experience

H7: Risk perception has a positive relationship with customer experience

H8: Perceived value has a positive relationship with customer experience

- **Analyze and interpret descriptive statistics data**

**Table 1: Respondent profile**

| Measure | Customer data | Frequencies | Percentage |
|---|---|---|---|
| **Gender** | Male | 190 | 57.40 |
| | Female | 141 | 42.60 |
| **Age group** | less than 25 | B | 51.96 |
| | 26 - 40 | 122 | 36.86 |
| | 41 - 60 | 29 | 8.76 |
| | 61 and above | 8 | 2.42 |
| **Qualification** | Post graduate | 69 | 20.85 |
| | Under graduate | 228 | 68.88 |
| | Diploma | 18 | 5.44 |
| | School | 16 | 4.83 |
| **Customer of banks** | State Bank of VN | 103 | 31.12 |
| | HD Bank | 92 | 27.79 |
| | SH Bank | 48 | 14.50 |
| | Techcom Bank | 30 | 9.06 |
| | PV Bank | 28 | 8.46 |
| | Others | 30 | 9.06 |

Respondents are using Digital banking highly for paying bills (40.18%) followed by transfer of funds (27.79%), checking balance (14.50%), e-statements (9.06%) and digital wallets (8.46%).

**Table 2: Reliability test**

| No | Variables | Cronbach's alpha | Composite Reliability | AVE |
|---|---|---|---|---|
| 1 | Brand trust | .726 | .846 | .644 |
| 2 | Convenience | .748 | .828 | .693 |
| 3 | Customer satisfaction | .862 | .914 | .758 |
| 4 | Digital banking innovation | .835 | .849 | .743 |
| 5 | Digital banking service quality | .742 | .846 | .662 |
| 6 | Employee customer engagement | .776 | .854 | .686 |
| 7 | Perceive risk | .926 | .928 | .834 |
| 8 | Perceived value | .814 | .890 | .652 |

- **Verify the suitability of market data, with the model**

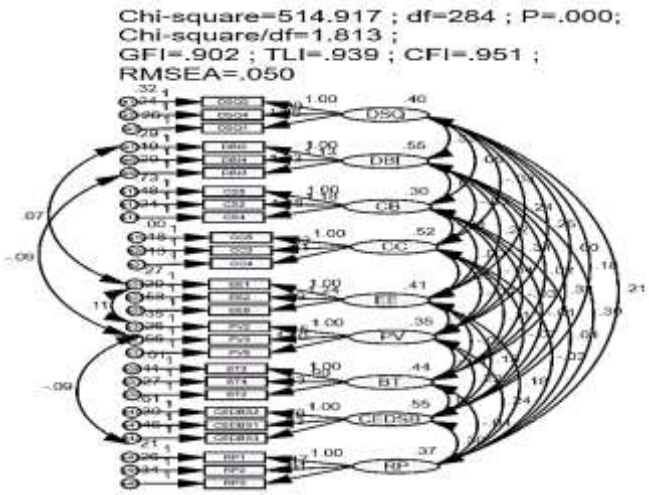


**Figure 2: CFA results of factors in the critical model.**
**(Source: Calculation results from survey data)**

CFA testing of the scale factors in the critical model is described in Figure 2: df=284, chi-square = 514,917; P = .000 < .05; Chi-square/df = 1.813 < 2. GLI = .902 > .9; TFI = .939 > .9 and CFI = .951 > .9; RMSEA = .050 < 0.08 is acceptable (Hair et al. (2010). Thus, the indexes measuring the model's suitability are all satisfactory, therefore, the conclusion is that market data is compatible with the measurement model.

**Table 3: Testing the discriminant value of CFA**

| | | | Estimate | S.E. | C.R. | P |
|---|---|---|---|---|---|---|
| DSQ | <--> | DBI | .325 | .040 | 8.052 | *** |
| DSQ | <--> | CB | .049 | .024 | 2.013 | .044 |
| DSQ | <--> | EE | .243 | .035 | 7.018 | *** |
| DSQ | <--> | PV | .247 | .034 | 7.233 | *** |
| DSQ | <--> | CEDSB | .177 | .038 | 4.721 | *** |
| DSQ | <--> | RP | .210 | .031 | 6.695 | *** |
| DBI | <--> | CB | .073 | .028 | 2.636 | .008 |
| DBI | <--> | EE | .223 | .036 | 6.137 | *** |
| DBI | <--> | PV | .336 | .040 | 8.345 | *** |
| DBI | <--> | CEDSB | .316 | .047 | 6.760 | *** |
| DBI | <--> | RP | .299 | .037 | 8.073 | *** |
| CC | <--> | BT | .114 | .027 | 4.258 | *** |
| CC | <--> | CEDSB | -.069 | .035 | -1.977 | .048 |
| EE | <--> | PV | .155 | .031 | 5.049 | *** |
| EE | <--> | CEDSB | .183 | .038 | 4.889 | *** |
| EE | <--> | RP | .181 | .030 | 6.019 | *** |
| PV | <--> | CEDSB | .224 | .039 | 5.771 | *** |
| PV | <--> | RP | .240 | .032 | 7.462 | *** |
| BT | <--> | RP | -.045 | .025 | -1.819 | .049 |
| CEDSB | <--> | RP | .304 | .042 | 7.210 | *** |

❖ **Test the suitability of the theoretical model using CB-SEM**

All CFA testing criteria of the measurement model satisfy the statistical testing requirements. Figure 3 describes the indicators in testing the theoretical model as follows: df=285, chi-square = 517.978; P = .000 < .05; CMIN/df = 1.817 < 2 so very good. Indicators: GFI = .902; TLI = .939 > .9 meets the requirements. As for CFI = .950> .9, it is acceptable. RMSEA coefficient = .050 < .08, so it meets the requirements (Hair et al., 2010). The proposed theoretical model is compatible with market data.

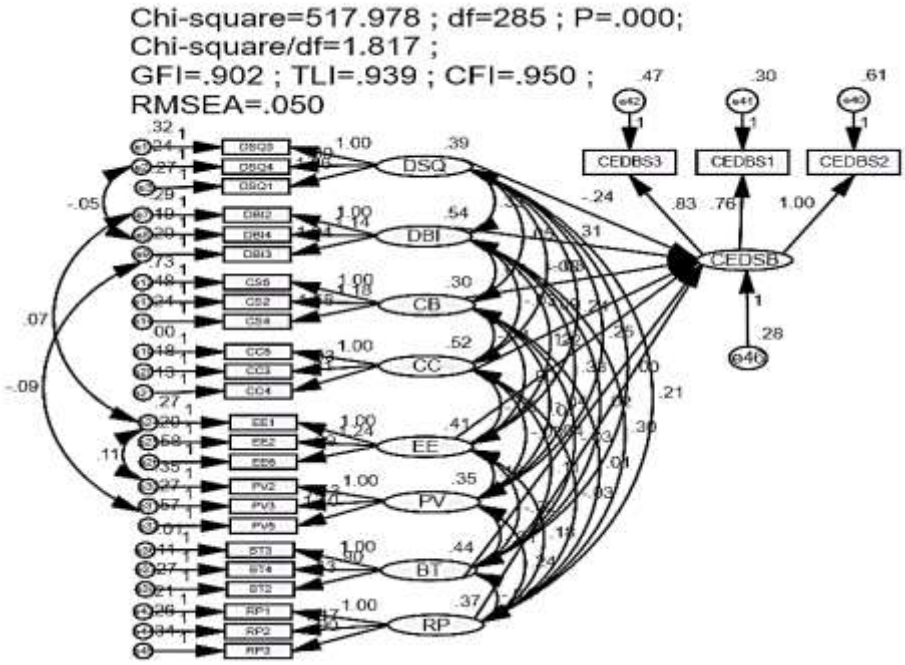


**Figure 3: CB-SEM testing results of the theoretical model**
**(Source: Calculation results from survey data)**

**• Bootstrap testing**

Bootstrap testing is used to retest the model and evaluate the reliability of the estimates. Bootstrap is a repeated sampling method with replacement, in this study the number of repeated samples N = 1000.

Table 4 presents the Bootstrap results showing that the CR index all have absolute values less than or equal to 2, so it can be said that the deviation is very small. Therefore, the estimated indexes meet the testing requirements.

**Table 5: Estimated results using Bootstrap**

| Parameter | | | SE | SE-SE | Mean | Bias | SE-Bias | CR |
|---|---|---|---|---|---|---|---|---|
| CEDSB | ←- | DSQ | .191 | .004 | -.214 | -.011 | .006 | -1.83 |
| CEDSB | ←- | DBI | .375 | .008 | .382 | .023 | .012 | 1.92 |
| CEDSB | ←- | CB | .181 | .004 | -.125 | -.013 | .006 | -2.17 |
| CEDSB | ←- | CC | .077 | .002 | -.085 | .004 | .002 | 2.00 |
| CEDSB | ←- | EE | .133 | .003 | .107 | -.002 | .004 | -0.50 |
| CEDSB | ←- | BT | .096 | .002 | .069 | .001 | .003 | 0.33 |
| CEDSB | ←- | RP | .259 | .006 | .688 | .01 | .008 | 1.25 |
| CEDSB | ←- | PV | .577 | .013 | -.14 | -.033 | .018 | -1.83 |

**Conclusions and Recommendations**

**5.1. Discuss**

Based on the results of running the model, some basic conclusions are drawn as follows:

First, the model best explains the relationship between overall digital banking quality and customers' digital banking experience in Vietnam. From this model, it shows that digital banking service quality has a positive relationship with customers' digital banking service experience.

Second, according to the research results, there is a basis to conclude that Brand trust has a positive relationship with customer experience.

Third, according to customer reviews, if the quality of customer utilities is improved (more accessible, more accurate and safer), the number of customers using digital banking services will increase.

Fourth, according to this result, to improve customer satisfaction with digital banking services, banks need to improve the quality of banking products and services (diversify banking services, provide services that customers need, and provide additional free online services...).

Fifth, This suggests the marketing strategy of banks. To gain loyal customers, banks need to satisfy customers.

Seventh, because in Vietnam the cost of switching banks (time, effort, money) is not large because Vietnam's commercial banking system currently has many banks with branch networks. wide, creating conditions for customers to access the bank quite easily.

Eighth, because digital banking transactions have been performed quite well by banks in recent times, Vietnamese commercial banks have received quite a lot of support and guarantees from the state bank, so customers can safely trust their digital transactions, so trust does not affect this relationship. On the other hand, according to statistics, customers using digital banking services are often highly qualified, young customers, concentrated in big cities, so they are less affected by the trust factor, this result. It may be different if the target audience is older people or not in cities.

**5.2. Some recommendations drawn from research results for commercial banks**

**5.1.1. Improve digital infrastructure**

The banks need to invest in modern digital infrastructure, so they will have good service quality and thus be able to satisfy customer needs.

**5.1.2. Strengthen marketing of digital banking services**

To be successful in the digital banking service marketing strategy, banks need to focus on the following factors after implementation. Use a variety of media forms for propaganda and advertising such as advertising in newspapers, radio and television. Use billboards and advertising posters in public, crowded locations, and distribute flyers advertising new services to customers.

**5.2. Limitations and Future Research Directions**

The research has contributed positively to banks in studying customer experience and satisfaction with digital banking services and proposing solutions to help banks compete successfully in the field, of the digital banking service sector.

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