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Factors affecting young consumer satisfaction with bank card services in Hanoi city

Nguyen Hung Cuong [1], Le Thi Lieu [1], Nguyen Huy Hoang [2, *]

[1]*Faculty of Management, University of Transport Technology, Hanoi, Vietnam*
[2]*Faculty of Transport Economics, University of Transport Technology, Hanoi, Vietnam*

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ABSTRACT

This study examines the factors that influence young consumers' satisfaction with banking card services in Hanoi using the SERVPERF model. The research applies Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA), and Structural Equation Modeling (SEM). Data are analyzed using IBM SPSS 25 and AMOS 25 software. The findings show that three factors significantly affect young consumers' satisfaction: Reliability (RE), Empathy (EM), and Price (P). Among these, Empathy has the strongest impact, followed by Price and Reliability. Based on these results, the study proposes several practical recommendations for banks to improve the satisfaction level of young consumers with banking card services in Hanoi.

1. Introduction

The trend of paying with bank cards is becoming increasingly popular among young consumers due to its superior features and convenience compared to cash in completing transactions (Tan et al., 2014). According to Acheampong et al. (2017), the electronic payment system has the upper hand by offering convenience and flexibility for customers who want to make digital transactions online. The benefits of cashless payments include being usable everywhere, easy to carry, safer, and providing trust in the accuracy of transactions. The premise for the development of bank card payments is Industry Revolution 4.0. The development of science and technology, especially information technology, has enabled commercial banks to diversify cashless payment services to meet customer needs, thereby opening up opportunities to enhance competitiveness and increase profits. One of the characteristics reflecting the impact of information technology development is the rapidly increasing use of the Internet. The use of electronic payments in other countries like Malaysia has been found in many banking companies, online payment service providers, and software developers (Ming-Yen Teoh et al., 2013).

In Vietnam, according to reports from NAPAS (Vietnam National Payment Joint Stock Company), the number and value of cash withdrawal transactions are decreasing, demonstrating a shift in people's habits from withdrawing cash at ATMs to using cards for direct payments at card-accepting points such as restaurants, supermarkets, and cinemas. According to statistics from BOV (Bank of Vietnam), by the end of 2023, the number of circulating bank cards reached over 140 million cards, with more than 105 million domestic cards and 41.86 million international cards.

BOV also noted a significant increase in transactions through bank cards: As of December 31, 2021, the total system transactions reached nearly 1.6 billion, equivalent to 4.44 quadrillion VND; by December 31, 2022, total system transactions reached nearly 2.2 billion, equivalent to 4.86 quadrillion VND; and by July 2023, total system transactions reached nearly 1.3 billion, equivalent to 2.63 quadrillion VND. Recent evidence suggests that consumers in Vietnam are increasingly reducing their reliance on cash and shifting toward digital payment methods. Younger consumers appear to be leading this transition, with a large proportion adopting digital payments in everyday transactions. The provision of diverse card services by banks has also contributed to the growth in the use of bank cards (Phan et al., 2019). Banks are increasingly competitive in providing services and modern infrastructure to meet customer needs. These developments make it easier for consumers—especially tech-savvy young users—to open cards, use them for various spending needs, and manage

* Corresponding Author.
Email Address: hoangnh.iseas@gmail.com (N. H. Hoang)
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Corresponding author's ORCID profile:
https://orcid.org/0009-0001-7036-0023

their finances efficiently (Singh et al., 2020). Effective service quality results in satisfied customers, who are then more likely to become loyal patrons (Ngo and Nguyen, 2016). At the same time, banks can use superior service to customers as a competitive advantage. However, alongside these conveniences, customers using bank card services still face potential risks related to security, privacy, counterfeit cards, lost cards, etc. (Dang et al., 2022). Therefore, to mitigate these risks, a comprehensive study on customer satisfaction, especially among young customers, regarding bank card services is necessary. Researching the factors influencing the satisfaction of young consumers with bank card services in Hanoi will provide valuable insights for policymakers, researchers, and banks to improve service quality in the payment card service market in Hanoi, in particular, and in Vietnam in general.

2. Literature review

The assessment of customer satisfaction in the financial sector has largely been predicated on the application of the SERVPERF model. However, empirical results demonstrate significant inconsistencies regarding the influence of its five core dimensions—Reliability (RE), Responsiveness (RS), Assurance (AS), Tangibles (TA), and Empathy (EM)—across various contexts.

Initial studies applying core SERVPERF dimensions often yielded varying results regarding the statistical significance of all five factors. For instance, research conducted in Vietnam by Wang et al. (2014) found that only a subset of three core factors–typically including Reliability, Responsiveness, and Assurance or Tangibles–significantly affected satisfaction with payment and credit cards. This variability suggests that not all dimensions hold equal importance across different user groups or service types.

As financial services transitioned toward digital platforms, external factors gained prominence. Kissi et al. (2017), investigating university students' intentions to use debit cards, highlighted the importance of trust in online transactions, indicating the theoretical framework needed to move beyond the traditional service setting.

Recent literature has increasingly focused on augmenting the SERVPERF model to reflect the specific complexities of the modern banking environment, particularly for young consumers. The inclusion of non-core quality factors, such as security and cost, became essential:

- Studies by Khaing (2019) established the critical influence of security as a factor affecting card satisfaction.
- Concurrently, the element of Price emerged as a salient predictor of customer loyalty and satisfaction in the card service market. Truong et al. (2020) emphasized that pricing and service features affect customer loyalty in Vietnam. This was reaffirmed by Sathiyamoorty (2022), who included Service charges as a key variable influencing debit card satisfaction.

Although recent studies have introduced additional service quality attributes, the core SERVPERF dimensions remain widely validated in the banking sector. Empirical evidence indicates that the five SERVPERF factors collectively influence customer satisfaction. In particular, reliability and trust are often reported as key determinants of satisfaction in banking services. However, the relative importance of SERVPERF dimensions varies across empirical contexts.

The existing literature confirms the foundational relevance of the SERVPERF framework while simultaneously indicating the critical, yet inconsistent, role of an external factor like Price in financial service satisfaction. A distinct research gap exists regarding the comprehensive empirical examination of the extended SERVPERF model (SERVPERF+Price) applied specifically to the context of young, tech-savvy consumers in the rapidly evolving Hanoi market. This study aims to address this gap by proposing and testing a model comprising six dimensions: Reliability (RE), Responsiveness (RS), Assurance (AS), Tangibles (TA), Empathy (EM), and Price (P)

3. Theoretical basis and research model

According to Clause 1, Article 3 of Circular 19/2016/TT-NHNN, a bank card is a payment instrument issued by a card-issuing organization and used to conduct transactions in accordance with the terms agreed upon between the parties. A bank card serves as a non-cash payment method issued by banks or financial institutions. It allows users to perform various transactions, such as cash withdrawals and bill payments, under the terms and conditions agreed upon between the issuing organization and the cardholder.

Various scholars have proposed definitions of customer satisfaction, each emphasizing different aspects of the customer experience. Here are a few notable definitions. Tse and Wilton (1988) conceptualized customer satisfaction as the consumer's reaction resulting from comparing their pre-consumption expectations with their direct experience post-consumption. Further refining this idea, Fornell (1995) framed satisfaction as the customer's reaction stemming from the discrepancy between pre-purchase expectations and the actual perception of the product after use.

In the 1990s and early 2000s, scholars expanded this perspective by emphasizing emotional and cognitive elements. Oliver (1997) described satisfaction as the customer's emotional reaction when their needs are fulfilled. Hoyer and MacInnis (2001) associated satisfaction with affective states such as joy, acceptance, and excitement, highlighting its experiential nature. Kotler and Keller (2011) integrated both cognitive comparison and emotional response, arguing that satisfaction results from

assessing perceived performance relative to expectations, which may lead to dissatisfaction, satisfaction, or high satisfaction. They defined satisfaction as the pleasure or disappointment experienced after comparing perceived outcomes with expectations.

Further contributions emphasized cumulative experience and evaluative processes. Sureshchandar et al. (2002) argued that satisfaction reflects consumers' overall experiences during interactions with the service provider. Kim et al. (2004) proposed that satisfaction comprises both an emotional state and a cognitive evaluation of that state. Gustafsson et al. (2005) additionally noted that satisfaction reflects customers' assessments of ongoing performance over time.

Generally, customer satisfaction reflects the customer's attitude developed from comparing their pre-use expectations with the actual experience of the product or service.

Therefore, within the scope of this study, customer satisfaction with bank card services is the customer's perception developed from evaluating the experience of using bank card services compared to their expectations before using the card services.

The measurement of customer satisfaction is fundamentally rooted in several prominent theoretical models, including the Theory of Reasoned Action (TRA) (Fishbein and Ajzen, 1975), the SERVQUAL model (Parasuraman et al., 1985), and the SERVPERF model (Cronin and Taylor, 1992). These models embody distinct approaches to capturing the drivers of satisfaction:

- Firstly, the Expectancy Disconfirmation Approach (Parasuraman et al., 1985) measures satisfaction by proposing that customers compare their pre-consumption expectations with their post-consumption perceptions (performance). This comparative structure forms the foundation of the SERVQUAL model, which uses a multi-item Likert scale to gauge customer expectations and perceived performance across a set of general service attributes to determine satisfaction.
- Secondly, the Performance Only Approach, championed by Cronin and Taylor (1992), argued that customer satisfaction is solely influenced by the customer's perceptions of the product or service performance, thus dispensing with the need to explicitly measure expectations or perceived importance. This conceptualization is the basis for the SERVPERF (Service Performance) model, where customers rate only their perceived performance of service attributes to assess satisfaction.

Given the aim of investigating how specific attributes of bank card services impact satisfaction among young consumers, this study adopts the Performance Only Approach. This methodology is chosen to effectively isolate the influence of the attributes' delivered performance on customer satisfaction, focusing on how well the service attributes are executed rather than the gap between expectation and performance.

3.1. Research model

The initial theoretical framework for this study was derived from the well-established SERVPERF model, augmented by the factor of Price (P), which has been empirically identified as highly relevant in the financial services sector. To ensure the proposed model was relevant and justified for the target demographic of young consumers in Hanoi, the model structure was rigorously refined through a Focus Group Discussion (FGD) technique.

To validate and tailor the proposed factors, an FGD was conducted involving 2 experts, 2 banking card service managers, and 8 young consumers currently using banking cards. The primary objective of the FGD was to determine the most salient service attributes influencing the satisfaction of this specific demographic, thereby providing an empirical justification for the final model structure.

Process and justification: The discussion confirmed the foundational relevance of the five core SERVPERF dimensions. Crucially, key themes emerging from the FGD overwhelmingly emphasized the need to include the Price (P) factor due to consumer sensitivity regarding service fees and cost transparency, particularly among young, financially aware individuals. This validation process ensures the proposed model is not arbitrary but grounded in both theory and local context.

Definition of constructs: Based on the theoretical adoption of the SERVPERF framework and the empirical validation of Price, the study defines the six constructs influencing customer satisfaction (SA) as follows, derived primarily from the core dimensions proposed by Parasuraman et al. (1988):

(1) Reliability (RE): Refers to the performance and trustworthiness of the service provider, meaning the provider performs the promised service accurately the first time. This is reflected through accurate payments, fulfilling commitments, and delivering services at the designated time.
(2) Responsiveness (RS): Involves the willingness to assist customers when they encounter issues during service usage, providing prompt service, and accurately resolving problems.
(3) Assurance (AS): Demonstrated through knowledgeable, professional, and courteous staff who can effectively communicate and instill confidence and security in customers when using the service.
(4) Tangibles (TA): Represented by the physical facilities, the appearance of personnel, and the tools and equipment used to provide the service.
(5) Empathy (EM): Reflects the care and attention the company provides to its customers.
(6) Price (P): Price plays a crucial role in business, being one of the determinants of a product or service. Here, price refers to the fee for using the banking card services.

Consequently, the final research model, grounded in theory and validated by FGD, proposes that these six factors collectively affect customer satisfaction (SA).

3.2. Proposed research model and hypotheses

Based on the theoretical foundation (SERVPERF) and the empirical validation from the focus group discussion, the following hypotheses regarding the impact of the six identified factors on customer satisfaction (SA) are proposed (Fig. 1):

H1: The factor of Reliability affects the satisfaction of young consumers with banking card services in Hanoi.
H2: The factor of Responsiveness affects the satisfaction of young consumers with banking card services in Hanoi.
H3: The factor of Assurance affects the satisfaction of young consumers with banking card services in Hanoi.
H4: The factor of Tangibles affects the satisfaction of young consumers with banking card services in Hanoi.
H5: The factor of Empathy affects the satisfaction of young consumers with banking card services in Hanoi.
H6: The factor of Price affects the satisfaction of young consumers with banking card services in Hanoi.

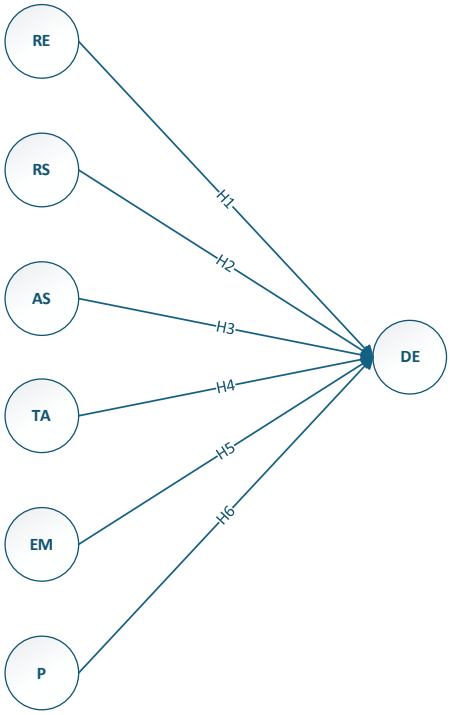

Fig. 1: Research model

This study employs a quantitative research approach to empirically investigate the hypothesized relationships between the six independent factors and young consumer satisfaction with banking card services in Hanoi. The measurement scale was developed based on established theoretical models, primarily the SERVPERF framework (Cronin and Taylor, 1992), and adapted to fit the specific context of bank card services for the young demographic in Hanoi. The final instrument utilizes a 7-point Likert scale (ranging from 1 = Completely disagree to 7 = Completely agree). The scale is composed of 28 observed variables (25 variables measuring the six independent constructs (RE, RS, AS, TA, EM, P) and 3 variables measuring the dependent construct, Satisfaction). Utilizing a quantitative approach, data were collected through a pre-designed questionnaire via convenience sampling. The survey targeted young customers currently using Bank card services in Hanoi, from January 2025 to March 2025. The demographic characteristics of the respondents are presented in Table 1. For the EFA test, the minimum sample size is equal to the scale multiplied by the total number of observed variables (Hair et al., 2019). (The scale = 7 and the study's questionnaire = 28). Thus, the minimum sample size = 7*28 = 196 samples. The research issued 300 questionnaires to local young customers. After eliminating unsuitable responses, 259 valid questionnaires were collected (> 196), meeting the criteria for the study. The data were coded and processed using IBM SPSS 25 and AMOS 25 software for analysis.

The collected primary data were meticulously coded and subsequently processed using the statistical software packages IBM SPSS 25 and AMOS 25. Descriptive statistics of the observed variables are presented in Table 2, providing an overview of the mean values and standard deviations of the measurement items. The analytical procedures encompassed several stages to ensure model robustness:

1. Reliability Testing using Cronbach's Alpha.
2. Exploratory Factor Analysis (EFA) to reduce the data and identify the underlying latent structures.
3. Confirmatory Factor Analysis (CFA) to test the unidimensionality and validity of the measurement model.
4. Structural Equation Modeling (SEM) to test the hypothesized relationships between the independent variables and customer satisfaction.

4. Research results

4.1. Reliability testing of the scale

Prior to proceeding with factor analysis, the internal consistency of the multi-item measurement scale was assessed using Cronbach's Alpha (α) coefficients. This step is essential to confirm that all observed variables within each latent construct reliably measure the same underlying dimension. The results of the reliability analysis are summarized in Table 3. As presented in Table 3, the Cronbach's Alpha values for all constructs ranged from 0.843 (Reliability) to 0.883 (Satisfaction). All calculated coefficients significantly exceed the established reliability criterion of 0.6.

Table 1: Characteristics of study subjects

Content		Frequency	Percentage (%)
Gender	Female	142	54.83
	Male	117	45.17
Age	18-25	168	64.86
	25-30	91	35.14
Household income (million VND)	< 10	84	32.43
	From 10 to 20	111	42.86
	From 20 to 30	31	11.97
	> 30	33	12.74
Total		259	100

Table 2: Descriptive statistics (N =259)

Item	Minimum	Maximum	Mean	Std. deviation
RE1	2	7	5.99	1.031
RE2	2	7	6.05	1.051
RE3	1	7	5.48	1.333
RE4	2	7	6.00	1.034
RE5	1	7	5.75	1.198
RS1	2	7	6.13	0.991
RS2	1	7	6.10	1.039
RS3	2	7	6.20	1.003
RS4	2	7	6.10	0.966
RS5	1	7	5.91	1.074
AS1	2	7	6.23	0.960
AS2	2	7	6.14	0.992
AS3	1	7	5.83	1.133
AS4	2	7	5.88	1.037
TA1	1	7	5.81	1.124
TA2	1	7	6.02	0.986
TA3	1	7	5.74	1.178
TA4	1	7	5.76	1.088
EM1	1	7	5.85	1.054
EM2	1	7	5.85	1.043
EM3	1	7	5.80	1.095
EM4	1	7	5.65	1.268
P1	1	7	5.68	1.325
P2	1	7	5.62	1.225
P3	1	7	5.81	1.223
SA1	1	7	6.02	1.055
SA2	1	7	6.09	1.099
SA3	1	7	6.03	1.129

Furthermore, the item-to-total correlation for every observed variable was confirmed to be above the critical threshold of 0.3, which further supports the strong internal consistency and homogeneity of the scale (Hair et al., 2019).

Based on these results, it is concluded that all observed variables are reliable measures of their respective latent constructs, thus validating the measurement scale for further advanced statistical analysis, including Exploratory Factor Analysis (EFA).

Table 3: Cronbach's alpha

Variable	Observed variables	Cronbach's alpha
Reliability (RE)	5	0.843
Responsiveness (RS)	5	0.872
Assurance (AS)	4	0.851
Tangible (TA)	4	0.844
Empathy (EM)	4	0.881
Price (P)	3	0.876
Satisfaction (SA)	3	0.883

4.2. Exploratory factor analysis

Through the exploratory factor analysis results (Table 4), the first is that the KMO is 0.950 (> 0.5), the cumulative variance of the model is 65.556% (> 50%), and the Bartlett test is statistically significant due to Sig. = 0.000 < 0.05, so EFA analysis is appropriate (Hair et al., 2019). The EFA shows that RE4, RS5 (load factor < 0.5) so excluded from the original analytical model.

4.3. Confirmatory factor analysis

The results of the Confirmatory Factor Analysis (CFA), as illustrated in Fig. 2, show that the threshold model with standardized values has model fit indices with the following values: CFI = 0.918 > 0.9; RMSEA = 0.074 < 0.080, CMIN/DF = 2.412 < 3; GFI = 0.829 > 0.8; TLI = 0.904 > 0.9; all of which meet the required criteria (Hair et al., 2019). Therefore, the results of the CFA ensure the necessary significance level, and the measurement scales are reliable.

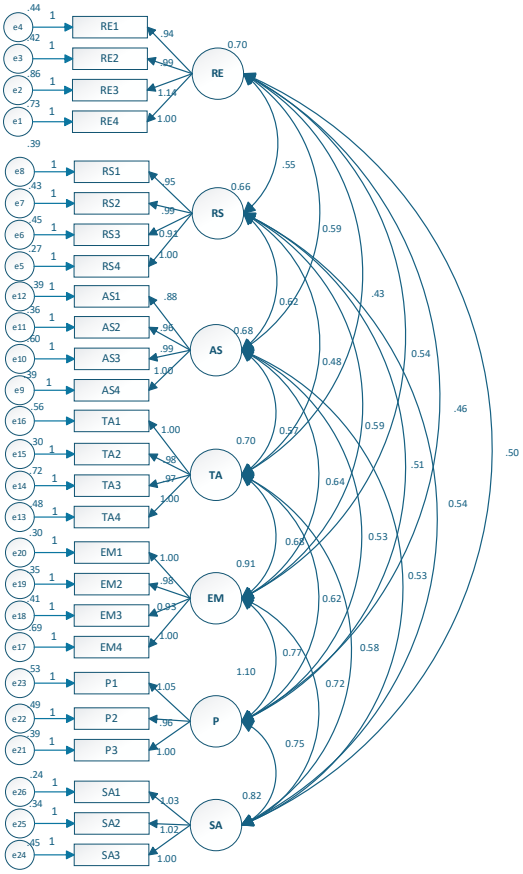

Fig. 2: Results of confirmatory factor analysis for measurement scales

4.4. Structural equation modeling analysis

The standardized critical model was employed to assess the fit, incorporating the following constructs: (i) Reliability (RE); (ii) Responsiveness (RS); (iii) Assurance (AS); (iv) Tangibles (TA); (v) Empathy (EM); (vi) Price (P); and (vii) Satisfaction (SA). The unstandardized path coefficients are presented in Fig. 3. Table 5 presents the model's impact coefficients of the independent variables on

satisfaction. The analysis shows that three variables: Reliability (RE), Empathy (EM), and Price (P) have P-values of 0.049, 0.034, and 0.013, respectively, which are less than 0.05. Thus, these three factors have a positive and statistically significant impact on the dependent variable, which is the satisfaction of young consumers in Hanoi. In contrast, the variables including Responsiveness (RS), Assurance (AS), and Tangibles (TA) have P-values = 0.061, 0.089, and 0.075, respectively, greater than 0.05. Therefore, these three factors do not have a statistically significant impact on the dependent variable, which is the satisfaction of young consumers in Hanoi, and need to be excluded from the model. Adjusted Model (Fig. 4), the research model includes three components: (i) Reliability (RE); (ii) Empathy (EM); (iii) Price (P); and (iv) Satisfaction (SA).

Table 4: Rotated component matrix

Item	Component						
	1	2	3	4	5	6	7
RE1	0.625						
RE2	0.569						
RE3	0.713						
RE5	0.792						
RS1		0.689					
RS2		0.687					
RS3		0.758					
RS4		0.678					
AS1			0.654				
AS2			0.631				
AS3			0.516				
AS4			0.557				
TA1				0.665			
TA2				0.548			
TA3				0.638			
TA4				0.803			
EM1					0.553		
EM2					0.569		
EM3					0.554		
EM4					0.553		
P1						0.784	
P2						0.766	
P3						0.783	
SA1							0.671
SA2							0.637
SA3							0.623

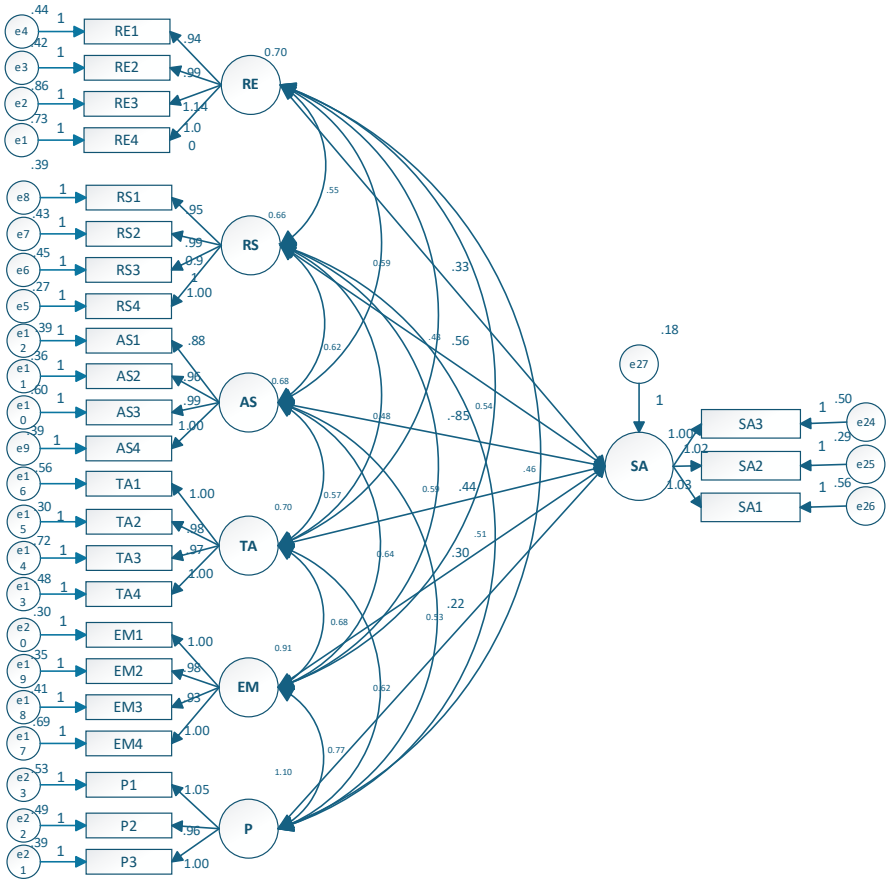

Fig. 3: Complete structural equation model with unstandardized coefficients

Table 5: Summary of impact coefficients of variables in the model

Path			Estimate	S.E.	C.R.	P
SA	<---	RE	0.333	0.169	1.953	0.049
SA	<---	RS	0.564	0.301	1.875	0.061
SA	<---	AS	-0.851	0.500	-1.703	0.089
SA	<---	TA	0.445	0.249	1.782	0.075
SA	<---	EM	0.305	0.144	2.120	0.034
SA	<---	P	0.223	0.090	2.484	0.013

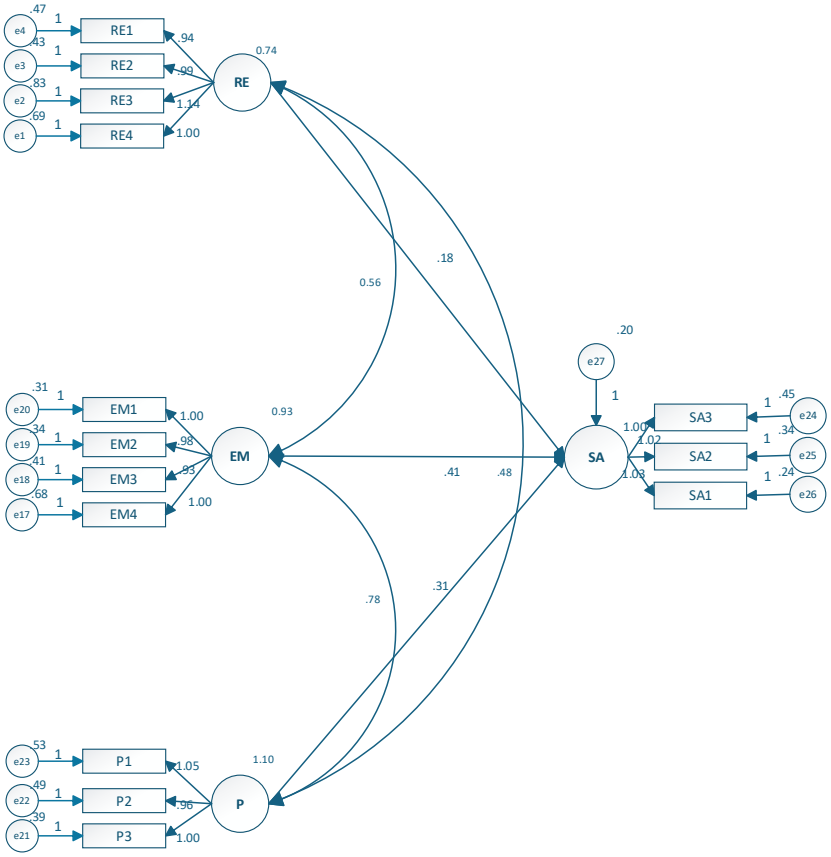

Fig. 4: SEM results of the model after adjusting unstandardized coefficients

The model yields the following test values: The P-value of these estimates is less than 0.05; CFI = 0.955 > 0.9; GFI = 0.909 >0.8; CMIN/DF = 2.509 < 3; TLI = 0.942 ≥ 0.9; and the RMSEA coefficient = 0.076 < 0.08. All indices meet the required criteria, indicating that the model is a good fit (Hair et al., 2019).

5. Discussion and finding

Based on the SEM analysis results, conclusions can be drawn regarding the hypothesis testing as follows. The SEM analysis, as detailed in Table 6, indicates that three of the six hypothesized factors significantly and positively affect customer satisfaction (SA) at the 5% level (P<0.05). These factors are Reliability (RE), Empathy (EM), and Price (P). Conversely, the factors Responsiveness (RS), Assurance (AS), and Tangibles (TA) were found to be statistically non-significant (P>0.05) in predicting satisfaction. The final adjusted model demonstrated a good fit to the data, with the three significant factors explaining 76% of the variance in satisfaction ($R^2 = 0.76$).

Table 6: Summary of results of testing research hypotheses

Hypothesis	Content	Test Result
H1	The factor of reliability affects the satisfaction	Accepted
H2	The factor of responsiveness affects the satisfaction	Rejected
H3	The factor of assurance affects the satisfaction	Rejected
H4	The factor of tangibles affects the satisfaction	Rejected
H5	The factor of empathy affects the satisfaction	Accepted
H6	The factor of price affects the satisfaction	Accepted

The standardized regression coefficients reveal the descending order of impact on SA: Empathy (β = 0.435), Price (β = 0.360), and Reliability (β = 0.175). According to Table 7, the standardized regression coefficients for the three variables affecting young consumers' satisfaction are 0.175, 0.435, and 0.360, respectively. Therefore, the variables impact in decreasing order as follows: Empathy (EM), Price (P), and Reliability (RE).

Table 7: Standardized regression coefficients

Path			Estimate
SA	<---	RE	.175
SA	<---	EM	.435
SA	<---	P	.360

The models of factors affecting the satisfaction of young consumers in Hanoi when using Banking card services:

$$SA = 0.175 * RE + 0.435 * EM + 0.36 * P$$

Empathy was identified as the strongest predictor of satisfaction (β = 0.435). This suggests that while young consumers are technologically sophisticated, they highly value personalized care and attention from their banking providers. When digital systems inevitably fail or pose complex problems (e.g., fraudulent charges, technical errors), the ability of the bank to provide individualized, caring, and prompt human support becomes paramount. This finding aligns with the definition of Empathy, which reflects the care and attention the company provides to its customers, demonstrating that human interaction remains vital even in a digital service environment.

Price demonstrated the second-highest impact on satisfaction (β = 0.360). This result strongly supports the theoretical extension of the SERVPERF model and the findings of the Focus Group Discussion. Young consumers in Hanoi, often early in their careers or focused on managing personal finances efficiently, are highly sensitive to service fees, transactional costs, and the overall transparency of pricing. This finding is consistent with previous studies that highlighted the influence of pricing and service charges on loyalty and satisfaction in the card service market. For a competitive and largely commoditized service like a bank card, cost-effectiveness is a key differentiator.

Reliability maintained a positive and statistically significant impact, emphasizing its foundational role (β = 0.175). Reliability ensures the bank performs the promised service accurately the first time. Although its effect size is smaller than that of Empathy and Price, it signifies that consistent, error-free operation is a basic prerequisite for satisfaction. If the service is unreliable (e.g., payment failure, inaccurate balance), no amount of empathy or favorable pricing can recover the relationship.

The most notable finding is the rejection of the hypotheses concerning Responsiveness, Assurance, and Tangibles. This challenges the traditional application of the SERVPERF model in this modern, specific context.

The insignificance of these factors suggests that for young, tech-savvy consumers, these are potentially "Hygiene Factors" rather than "Satisfiers."

Tangibles (TA): In the modern banking card service environment, transactions primarily occur digitally (online banking, mobile apps). Customers are less focused on the physical appearance of branches or personnel uniforms, rendering Tangibles less critical for satisfaction than for traditional in-branch services.

Responsiveness (RS) and Assurance (AS): Young consumers expect digital services to be responsive (quick transaction times) and secure/assured (safe data handling) by default. These are minimum expectations of service competence. If a bank fails on these aspects, it leads to immediate dissatisfaction (a hygiene failure). However, simply meeting these basic expectations does not generate the extra pleasure or differentiation needed for high satisfaction; this is instead achieved through Empathy and Price.

This insight, that the digital nature of the service shifts RS, AS, and TA from key satisfiers to essential hygiene requirements, represents a primary contribution of this research to the service quality literature in developing markets.

6. Conclusion

The article aimed to identify the factors affecting customer satisfaction with banking card services among young consumers in Hanoi. The findings reveal that three factors significantly impact customer satisfaction: Reliability (RE), Empathy (EM), and Price (P). Conversely, Responsiveness (RS), Assurance (AS), and Tangibles (TA) were found to be non-significant in affecting satisfaction. This finding suggests a critical conceptual shift: for the tech-savvy young consumer demographic in Hanoi, these non-significant factors likely function as hygiene factors. They represent basic expectations and prerequisites for service usability; failing to meet them guarantees dissatisfaction, but merely meeting them does not generate heightened satisfaction or competitive advantage. The primary contribution of this research lies in empirically validating this shift in factor salience within the context of digital financial services in a developing urban market.

The results necessitate a strategic realignment of bank card service delivery, shifting focus from baseline transactional efficiency to emotional connection and cost management, by:

- Enhance empathy for digital service recovery: Given Empathy's dominant role as the strongest driver of satisfaction, banks must invest heavily in personalized customer support. This involves training staff to exhibit genuine care and individualized attention, particularly when young customers encounter complex technical errors or security issues that digital self-service cannot resolve. These empathetic human interactions serve as the main differentiating factor in an otherwise standardized service environment.
- Optimize pricing transparency and competitiveness: Since Price is the second most impactful factor, banks must offer cost-effective solutions and ensure complete transparency regarding fee structures (including maintenance, transaction, and withdrawal charges). Strategic

pricing models tailored for young consumers' income levels are essential for driving satisfaction and retaining loyalty.

- Maintain foundational reliability: Reliability remains a positive and necessary condition for satisfaction. Banks must continually invest in technological infrastructure to ensure error-free, dependable execution of all card transactions. Failures in Reliability will fundamentally undermine trust, negating any positive impact gained from Empathy or Price.

While Responsiveness, Assurance, and Tangibles were not found to be satisfiers, management cannot neglect them. These factors must be maintained at competent performance levels to avoid customer dissatisfaction. Banks should focus on ensuring adequate speed (Responsiveness) and security (Assurance) as baseline service competence, while avoiding excessive investment in traditional physical infrastructure (Tangibles), which holds diminishing relevance for the digitally focused youth market.

Despite the valuable insights provided by this study on the factors influencing customer satisfaction with banking card services among young consumers in Hanoi, several limitations should be noted: Sample Size and Representativeness; Geographical Limitation; Survey Limitations… Future research will explore broader dimensions and incorporate new elements to provide a more comprehensive and accurate understanding of customer satisfaction with banking card services.

List of abbreviations

AMOS	Analysis of moment structures
AS	Assurance
ATM	Automated teller machine
BOV	Bank of Vietnam
CFA	Confirmatory factor analysis
CFI	Comparative fit index
CMIN/DF	Chi-square divided by degrees of freedom
C.R.	Critical ratio
EFA	Exploratory factor analysis
EM	Empathy
FGD	Focus group discussion
GFI	Goodness-of-fit index
KMO	Kaiser–Meyer–Olkin measure
NAPAS	Vietnam National Payment Joint Stock Company
P	Price
RE	Reliability
RMSEA	Root mean square error of approximation
RS	Responsiveness
SA	Satisfaction
SEM	Structural equation modeling
SERVPERF	Service performance model
SERVQUAL	Service quality model
Sig.	Statistical significance
SPSS	Statistical package for the social sciences
S.E.	Standard error
TA	Tangibles
TLI	Tucker–Lewis index
TRA	Theory of reasoned action
VND	Vietnamese dong

Compliance with ethical standards

Ethical considerations

The study was conducted in accordance with ethical standards. All participants were informed about the research's objectives and provided their informed consent voluntarily. The data collected was kept confidential and used strictly for academic research purposes to ensure the privacy of all respondents.

Conflict of interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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