Research Article

Assessing Customer Satisfaction in Online Shopping on E-Commerce Platforms in Vietnam

Lan Ngoc Thi Uong[1], Nam Danh Nguyen[1]

[1]Thanh Dong University, Hai Duong, Vietnam

Corresponding author: Lan Ngoc Thi Uong, Email: lanutn@thanhdong.edu.vn

ARTICLE INFO	ABSTRACT
	The study measured customer satisfaction in online shopping on e-commerce platforms in Vietnam using a structured questionnaire to survey and collect data from 386 customers. The collected data were analyzed using SPSS 26 software for descriptive statistics, exploratory factor analysis, correlation analysis, and linear regression. The results revealed nine factors that affect customer satisfaction, ranging from high to low, when shopping online on e-commerce platforms in Vietnam: product quality, payment methods, customer service, information quality, response time, delivery service, price, website design, and security. These results provide a crucial foundation for proposing several solutions to improve customer satisfaction during online shopping on e-commerce platforms in Vietnam. **Keywords**: satisfaction, online shopping, e-commerce, Vietnam.

1. Introduction

The explosion of digital technology in the 4.0 era has profoundly changed all aspects of social life, especially consumer behavior. Whereas consumers primarily shopped in traditional stores in the past, online shopping through e-commerce platforms has gradually become a popular trend, helping to shape a new consumption habit that is convenient, flexible, and enhances the overall experience.

In Vietnam, alongside the popularization of the Internet and the rapid development of technology platforms, e-commerce has made significant strides in both scale and speed of growth. According to data from the Ministry of Industry and Trade (2022), the scale of e-commerce revenue reached nearly 13.7 billion USD. It has continued to maintain a strong growth momentum, thanks to the shift in consumer shopping habits, particularly in the context of the COVID-19 pandemic, which has significantly encouraged online shopping behavior. Amid the fierce competition among e-commerce platforms such as Shopee, Tiki, Lazada, and Sendo, understanding customer psychology, behavior, and satisfaction has become vital in determining business success in the online environment. Customer satisfaction reflects the positive feelings experienced after using a service and directly impacts the ability to foster loyalty and encourage repeat business. Nevertheless, considering the unique characteristics of the Vietnamese market in terms of consumer culture, customer psychology, and technological infrastructure, it is essential to determine which factors significantly influence customer satisfaction in online shopping and the impact of each factor. A gap still exists that requires further investigation. Building on that practice, measuring customer satisfaction in online shopping on e-commerce platforms in Vietnam is crucial. Research provides a basis for e-commerce businesses to better understand customer expectations and experiences, enabling them to develop solutions that enhance service quality and improve the user experience in Vietnam's online shopping environment.

2. Literature review and hypothesis development

2.1. E-commerce and online shopping

E-commerce encompasses the production, advertising, selling, and distribution of products bought, sold, and paid for online, which are then delivered and received in a tangible form. Both these delivered products and digitized information are transmitted through the Internet environment" (WTO, 1998). According to Nguyen (2015), e-commerce utilizes electronic means, such as the Internet, to exchange and purchase products or services. Thus, e-

Research Article

commerce is the conduct of commercial transactions on the Internet through communication networks and other electronic means.

According to Kotler and Armstrong (2004), Online shopping is a form of purchase made through electronic connections between buyers and sellers on online platforms. Online shopping enables buyers to connect with new suppliers, reduce purchase costs, and expedite order processing. Online shopping is a process in which customers purchase goods or services directly from a seller for an extended period through the Internet, without the use of intermediary services; it is a form of e-commerce (Bui, 2014). Thus, online shopping refers to the process of commercial transactions and exchanges between buyers and sellers on an Internet platform. Online shopping offers numerous benefits to both buyers and sellers, including finding customers, accessing product information, facilitating the interaction process, enabling price comparison, ensuring quality, and facilitating product distribution.

2.2. Online shopping behavior

The explosion of 4.0 technology and the rapid development of the Internet have drastically increased the number of online shoppers, and shopping habits have shifted from traditional purchases to online purchases. Customer behavior refers to the specific actions an individual takes when making decisions to purchase, use, and dispose of products or services (Kotler, 2000). In other words, a customer's behavior combines their actions, reactions, and thoughts during the purchase process. It begins when the customer has a need and ends after they purchase. This process is commonly referred to as the customer purchase decision-making process. Accordingly, customer behavior focuses on aspects of the purchase decision-making process, including demand recognition, information search, purchase evaluation, purchase, post-purchase reaction, and the interaction between the purchase process and external factors that directly or indirectly affect it. Similar to other consumer behaviors, online shopping behavior refers to customers purchasing goods or services through Internet stores or websites using online shopping transactions (Monsuwe et al., 2004).

2.3. Customer satisfaction

According to Ting et al. (2016), customer satisfaction is a key factor in the success of e-commerce platforms, particularly in the B2C market. Satisfaction is a state of enjoyment that arises from customers comparing the outcomes after using a better product, good, or service with their expectations. Customer satisfaction plays a crucial role in maintaining long-term relationships with customers while enhancing the profitability of online retailers (Kotler & Amstrong, 2004). Customer satisfaction refers to a favorable assessment by the customer after using products, goods, and services (Oliver, 2010). Research indicates a strong correlation between service quality and customer satisfaction within the service sector (Hong & Wu, 2003) and, specifically, in online shopping services (Ha & Dinh, 2018). Nevertheless, service quality and customer satisfaction are considered two separate perspectives (Zeithaml & Bitner, 2000), and the findings indicate that service quality is the foundation of customer satisfaction (Cronin & Taylor, 1992; Ahmad & Kamal, 2002).

Thus, customer satisfaction is a positive perception that occurs when a product, good, or service meets customers' expectations. In this study, customer satisfaction is defined as the customer's continued shopping for products, goods, or services on e-commerce platforms.

2.4. Research hypothesis

This study is based on EtailQ (Wolfinbarger & Gilly, 2003), encompassing four key factors: reliability, website design, safety, and customer service. Simultaneously, the study used models of Parasuraman et al. (2005) to identify the factors that affect customer satisfaction when shopping on e-commerce reward platforms:

- The E-S-Qual model includes four factors: Efficiency, System Availability, Fulfillment, and Privacy.
- The E-ReS-Qual model consists of three factors: Responsiveness, Compensation, and Contact.

Additionally, studies on customer satisfaction in online shopping have been of interest to many scholars. However, each study identifies and outlines different determinants of customer satisfaction (Lee & Lin, 2005; Yang & Tsai, 2007; Hasina et al., 2011; Myers et al., 2012; Vu & Tran, 2013; Nguyen, 2014; Nguyen et al., 2017; Ha & Dinh,

Research Article

2019; Alam et al., 2020; Nguyen & Uong, 2024). Table 1 presents the key factors that influence customer satisfaction in online shopping, as identified in the research literature of various scholars.

Table 1: Summary of related research works

Lee and Lin (2005)	Yang and Tsai (2007)	Hasina et al. (2011)	Myers et al. (2012)	Vu and Tran (2013)	Nguyen (2014)	Nguyen et al. (2017)	Ha and Dinh (2019)	Alam et al. (2020)	Nguyen and Uong (2024)
Website design	Efficiency	Advertisement	Experience	Product price	Fulfillment	Characteristics of goods	Reliability	Customer service	Efficiency
Reliability	System Availability	Product quality	Shopping innovation	A diverse range of products and brands	Privacy	Information quality	Customer service	Information quality	System availability
Responsiveness	Fulfillment	Brands	Interest	Information quality of website	Web design	Feedback	Website design	Response time	Fulfilment
Trust	Privacy	Online shopping experience	Perceived usefulness	Product quality	System availability	Payment method	Safety	Transaction capability	Privacy
	Responsiveness		Attitude	Delivery		Customer service		Delivery	Responsiveness
	Compensation		Tactile importance			Product quality		Merchandise attributes	Compensation
	Contact		Convenience					Security/privacy	
								Convenient payment method	
								Price	

Source: Summary by the author

Building on the preceding studies and actual surveys, the author has identified factors that directly impact customer satisfaction when engaging in online shopping on e-commerce platforms in Vietnam and proposed the following research model:
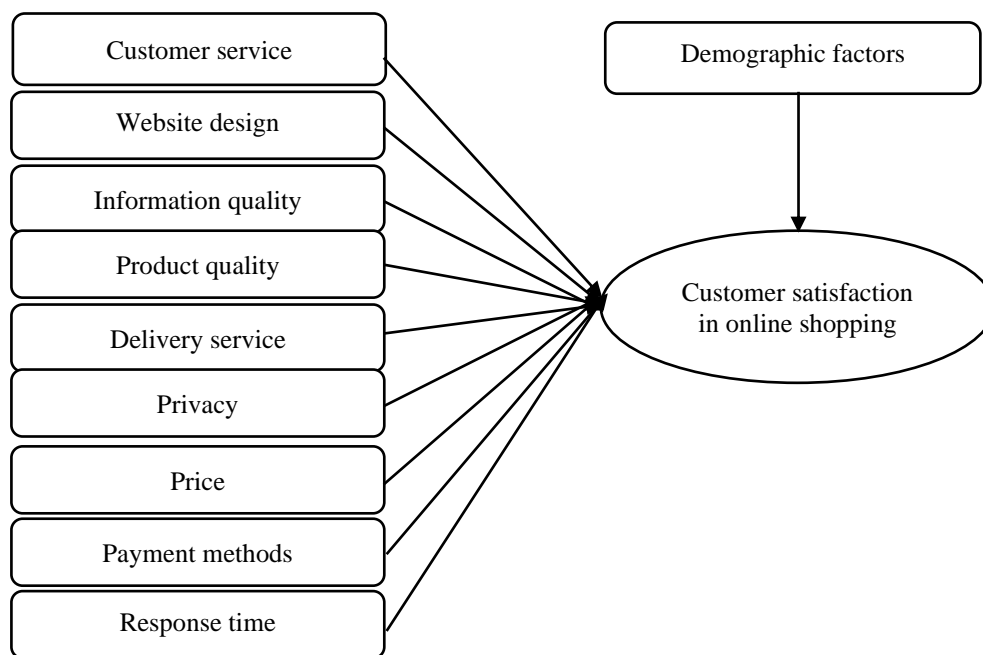
Research Article

Figure 1: Research model

Source: Recommended by the author

All constructs are comprehensively summarized in Table 2 along with references from previous studies:

Table 2: Constructs description and supporting literature

Construct	Description	Supported literature
Customer service	Customer service is about supporting, consulting, and resolving customer needs through online channels (chat, email, social media, hotline) before, during, and after shopping. They aim to ensure customer satisfaction, foster reliable relationships, retain existing customers, and acquire new ones.	Nguyen et al. (2017), Ha and Dinh (2019)
Website design	Website design involves building and arranging the interface and sales functions of an e-commerce site to create a seamless and visually appealing shopping experience for products and services. It offers clients choices when accessing and executing transactions online.	Lee and Lin (2005), Nguyen (2014), Ha and Dinh (2019)
Information quality	Information quality includes completeness, accuracy, clarity, transparency, and reliability of product, service, price, image, and policy information on the website, aiding customers in their purchasing decisions. This ensures that online goods or services meet expectations, enhancing satisfaction and reducing transaction risks.	Vu and Tran (2013), Nguyen et al. (2017), Alam et al. (2020)
Product quality	Product quality reflects how well a delivered product matches the description, images, and expectations on the website (e-commerce platform), including design accuracy, color, size, durability, operational features, and suitability for use, ensuring customer satisfaction and enhancing the seller's reputation and brand in online shopping.	Hasina et al. (2011), Vu and Tran (2013), Nguyen et al. (2017)
Delivery service	Delivery service refers to the process of transporting goods from the seller to the buyer after order confirmation on an e-commerce	Vu and Tran (2013), Alam et al. (2020)

Construct	Description	Supported literature
	platform. It includes packaging, shipping, order tracking, and timely delivery to ensure goods arrive safely and fulfill customer commitments, enhancing prestige and satisfaction.	
Privacy	Privacy refers to the protection of personal information, accounts, and payment data during online transactions (e-commerce), safeguarding details such as name, address, bank card number, password, and purchase history from leaks or unauthorized use. It fosters customer confidence in shopping for products and services, thereby enhancing the reputation and trustworthiness of e-commerce websites and promoting greater satisfaction.	Yang and Tsai (2007), Nguyen (2014), Ha and Dinh (2019), Alam et al. (2020), Nguyen and Uong (2024)
Price	Price is what a customer pays for a product, good, or service on e-commerce platforms. Each item's price is listed, though it may vary due to promotions, discounts, shipping fees, or market factors. Comparing prices helps customers make informed shopping decisions that suit their needs and budget, resulting in greater satisfaction with clear pricing.	Vu and Tran (2013), Alam et al. (2020)
Payment methods	Payment methods refer to the options that allow customers to pay for online products, goods, or services. These include card payments, e-wallets, and transfers, allowing customers to select the most suitable option. Prioritizing convenience enhances satisfaction.	Nguyen et al. (2017), Alam et al. (2020)
Response time	Response time is the time from when a customer submits a request, question, or complaint about a product or service to when they receive a response from the seller or customer service. Quick response times indicate effective support services, enhancing the shopping experience, creating satisfaction, and increasing customer reliability on e-commerce platforms and online sales systems.	Lee and Lin (2005), Yang and Tsai (2007), Alam et al. (2020), Nguyen and Uong (2024)

Source: Compiled by the author

Table 3 presents a summary of the research hypotheses as follows:

Table 3: Research hypotheses

Hypothesis	Description	Expected
H1	Customer service will be positively associated with customer satisfaction in online shopping	+
H2	Website design will be positively associated with customer satisfaction in online shopping	+
H3	Information quality will be positively associated with customer satisfaction in online shopping	+
H4	Product qualty will be positively associated with customer satisfaction in online shopping	+
H5	Delivery service will be positively associated with customer satisfaction in online shopping	+
H6	Privacy will be positively associated with customer satisfaction in online shopping	+
H7	Price will be positively associated with customer satisfaction in online shopping	+
H8	Payment methods will be positively associated with customer satisfaction in online shopping	+

Research Article

H9	Response time will be positively associated with customer satisfaction in online shopping	+
H10	*Customer satisfaction in online shopping varies according to demographic factors*	

Source: Compiled by the author

3. Methodology

3.1. Measurement scales

The author develops a preliminary scale by drawing on domestic and foreign studies to adapt it to the research context. The author discussed the proposed research model with 20 regular online shoppers (who shop at least three times) to identify and adjust factors, reviewing observed variables in the preliminary scale. Simultaneously, the author conducted in-depth interviews with 10 booth owners and three e-commerce platform managers to explore factors and compare theory and practice regarding the relationship between variables in the research model. The majority analyzes and votes on this information to establish an formal scale.

The results indicated that members agreed on the factors and relationships within the proposed research model, which includes nine independent factors and one dependent factor. Additionally, the author corrected some terms in the observed variables to ensure that the content of the formal scale is straightforward, easy to understand, and avoids confusion for survey participants. The study employed a 5-level Likert scale (1 = Very dissatisfied to 5 = Very satisfied).

3.2. Sample and data collection

The research used a sample size ratio of 10:1, as recommended by Hair et al. (2010), analyzing 46 observed variables and resulting in 460 required samples. This research employed a convenient non-probability method to survey customers who shopped online on e-commerce platforms such as Tiki, Lazada, Shoppe, Sendo, and TikTok Shop. Surveys are sent online (accounting for 80 percent of all responses) to customers with successful orders and in person (contributing 20 percent of all responses). The survey period runs from October 2024 to January 2025. Responses were collected from 386 questionnaires, yielding a response rate of 83.9 percent. Of these, 43.5% identified as male and 56.5% as female. Most participants were aged 18-25 (36.8%), followed by those aged 26-35 (28.5%) and 36-45 (22.0%). Office workers comprise the largest occupational group, accounting for 38.9%, followed by students at 25.4%. Other groups, such as freelancers and housekeepers, account for lower proportions of 17.6% and 18.1%, respectively. Furthermore, an income range of 5 to 10 million constitutes the highest proportion (32.1%), followed by the 10 to 20 million group (29.8%). Customers with undergraduate and postgraduate education make up the majority, accounting for 64.2%, almost twice as many as those without university degrees (35.8%). Additionally, Shopee is the most preferred e-commerce platform, with a remarkable rate of 49.2%, showing a consistent gap compared to other platforms, such as Tiki (22.0%), Lazada (15.0%), and Sendo (5.7%). Fashion and cosmetics are the most popular product categories, accounting for 30.1%, followed by food (24.6%) and home appliances (18.7%). Finally, the percentage of customers who shop 1 to 2 times a month is the highest (39.4%), followed by those who shop 1 to 2 times a week (33.7%), while only 14. Meanwhile, they rarely shop online.

3.3. Data analysis

The collected data were processed using SPSS26 software to test the research hypothesis at a significance level of 5 percent. The research model is represented by three regression equations as follows:

$$CSOS = \beta_0 + \beta_1*CS + \beta_2*WD + \beta_3*IQ + \beta_4*PQ + \beta_5*DS + \beta_6*Priv + \beta_7*Pri + \beta_8*PM + \beta_9*RT + \varepsilon$$

In which:

CSOS: Customer satisfaction in online shopping

Independent variables include (X_i): Customer service (CS), Website design (WD), Information quality (IQ), Product quality (PQ), Delivery service (DS), Privacy (Priv), Price (Pri), Payment methods (PM), Response time (RT).

Research Article

β_k: Regression coefficients (k = 0. 1, 2,…,9)

ε: Residual

4. Results and discussion

4.1. Reliability Testing and EFA

The second round of reliability results, following the rejection of the observed variables IQ4, PQ3, and Priv3, indicated that the total Cronbach's Alpha was greater than 0.6 and the corrected item-total correlation was more significant than 0.3. Simultaneously, the Cronbach's Alpha if item Deleted was less than the total Cronbach's Alpha. Hence, the scales demonstrate reliable and discriminant validity, making them suitable for Exploratory factor analysis (EFA) (see Table 4).

The EFA results revealed that the Kaiser-Meyer-Olkin (KMO) coefficient attained a value of 0.08, which exceeds 0.5 yet remains below 1, accompanied by a statistically significant value with a significance level of 0.000, which is below the threshold of 0.05. Furthermore, a total of 39 observed variables were extracted from 9 factors, with the explained variance extracted amounting to 78.155%. It indicates that the variance elucidates 78.155% of the variability within the study data. The outcomes of the factor loadings all surpass the minimum threshold of 0.5, thereby ensuring the robustness of the EFA as outlined in Hair et al. (2010) (refer to Table 4).

Table 4: Reliability and EFA of independent factors

Scales	Sign	Cronbach's Alpha	Factor loadings	Scales	Sign	Cronbach's Alpha	Factor loadings
Customer service	CS1	0.813	0.791	Privacy	Priv1	0.771	0.747
	CS3		0.778		Priv4		0.725
	CS2		0.765		Priv5		0.713
	CS4		0.754		Priv2		0.698
Website design	WD2	0.780	0.740	Payment methods	PM2	0.814	0.799
	WD3		0.721		PM4		0.783
	WD4		0.723		PM1		0.756
	WD1		0.709		PM3		0.741
Information quality	IQ3	0.769	0.757	Price	Pri2	0.825	0.815
	IQ1		0.742		Pri3		0.790
	IQ2		0.734		Pri1		0.789
	IQ6		0.721		Pri4		0.772
	IQ5		0.718		Pri5		0.747
Delivery service	DS1	0.833	0.825	Response time	RT3	0.797	0.778
	DS2		0.801		RT1		0.754
	DS3		0.796		RT2		0.729
	DS4		0.772		RT4		0.716
Product quality	PQ1	0.802	0.807		KMO = 0.819		
	PQ2		0.793	Barlett's Test	Approx. Chi-Square		9183.005
	PQ5		0.764		df		450
	PQ6		0.742		Sig.		0.000
	PQ4		0.730	% of Variance			78.155

Source: Data from authors' survey

The analysis results in Table 5 indicate that the total Cronbach's Alpha coefficient exceeds 0.6, and the corrected item-total correlation coefficient is greater than 0.3. Additionally, the EFA of the dependent variable extracted 1 factor and explained 80.754 percent of the variability in the study data. The Eigenvalue coefficient reached 2.053, which is greater than 1; the Sig value is 0.000; and the factor loadings are more significant than 0.5. Thus, the results demonstrate conformity and satisfaction of the set requirements (Hair et al., 2010).

Research Article

Table 5: Reliability and EFA of the dependent factor

Scale	Sign	Cronbach's Alpha	Factor loadings
Customer satisfaction in online shopping	CSOS1	0.842	0.839
	CSOS2		0.825
	CSOS3		0.810
	CSOS4		0.796
	CSOS5		0.784
	KMO = 0.808		
Barlett's Test	Approx. Chi-Square		314.506
	df		5
	Sig.		0.000
% of Variance			80.754

Source: Data from authors' survey

The results indicate that the independent variables are strongly correlated with the dependent variables. The significance values of the correlation levels are below 0.05 and 0.01, indicating that the independent variables are suitable for inclusion in the model to explain the dependent variable and are appropriate for multivariate regression analysis (see Table 6).

Table 6: Correlation analysis

	CSOS	CS	WD	IQ	PQ	DS	Priv	Pri	PM	RT
CSOS	1									
CS	0.689**	1								
WD	0.712*	0.195**	1							
IQ	0.744*	0.203*	0.203*	1						
PQ	0.793**	0.188**	0.245**	0.190*	1					
DS	0.697**	0.236*	0.159*	0.213**	0.249*	1				
Priv	0.707*	0.192**	0.216**	0.188*	0.186**	0.178**	1			
Pri	0.652**	0.265*	0.187**	0.257**	0.275*	0.231*	0.172*	1		
PM	0.715**	0.141**	0.198*	0.201*	0.209**	0.199**	0.225**	0.215**	1	
RT	0.671**	0.267*	0.230**	0.268**	0.187*	0.255*	0.186*	0.193*	0.276**	1

* significant at $p < 0.05$; ** significant at $p < 0.01$

Source: Data from authors' survey

The results indicate that the significance value of the F test is 0.001, which is less than the threshold of 0.05, thereby suggesting that a suitable regression model is established. Furthermore, the corrected R^2 value is determined to be 0.788, implying that nine independent variables included in the regression analysis account for 78.8% of the variation in the dependent variable. Additionally, the Durbin-Watson statistic satisfactorily adheres to the assumption concerning the absence of first-order autocorrelation. Moreover, the significance value associated with the t test corroborates that all values are below 0.05, while the Variance Inflation Factor (VIF) is observed to be less than 2 for each independent variable, indicating the absence of multicollinearity within the model. Consequently, the findings derived from the multivariate regression model fully meet the requisite evaluation criteria and are duly accepted for the study.

Table 7: Multiple linear regression analysis results

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	Constant	0.219	0.031		4.125	0.003		
	CS	0.342	0.027	0.359	5.609	0.000	0.413	1.815

Research Article

WD	0.235	0.020	0.258	6.246	0.002	0.309	1.756
IQ	0.313	0.024	0.326	7.189	0.001	0.675	1.808
PQ	0.381	0.019	0.393	4.327	0.000	0.512	1.733
DS	0.286	0.021	0.295	5.911	0.003	0.527	1.692
Priv	0.214	0.024	0.233	6.789	0.002	0.611	1.749
Pri	0.260	0.022	0.275	4.234	0.000	0.456	1.821
PM	0.367	0.018	0.372	5.072	0.000	0.394	1.710
RT	0.305	0.030	0.311	6.134	0.001	0.310	1.846

F = 131.096; Sig. = 0.001

R^2 = 0.791; Adjusted R^2 = 0.788; Durbin-Watson = 1.846

a. Dependent variable: F_CSOS

Source: Data from authors' survey

In assessing the adherence to the assumptions of linear regression, the scatterplot indicates that the residuals exhibit no discernible pattern in relation to the predicted values; they are dispersed randomly rather than conforming to a specific shape, thereby confirming that the linear contact hypothesis remains unviolated. The accompanying histogram presents a standard residual distribution with an exceedingly small mean (Mean = -3.17E - 15) and a standard deviation of 1 (SD = 0.994). The P-P plot graph illustrates the actual observation points that are concentrated closely along the diagonal of the expected values, signifying the residual data adhering to a standard distribution. This evidence supports the hypothesis regarding the constant regression model's appropriateness. Consequently, the multivariate return model comprehensively meets the evaluation criteria and is deemed acceptable for research purposes.

The model assessed the disparities among demographic variables utilizing ANOVA and a One-Sample t-test. The findings indicate that there exist differences in satisfaction levels based on gender, specifically revealing that female customers exhibit a greater propensity for satisfaction than their male counterparts when engaging in shopping activities on e-commerce platforms. The results were similar for the age group with differences: the highest satisfaction was found in those aged 18-25 years, followed by the 26-35 and 36-45 age groups, while the 46-55 age group recorded the least satisfaction. Furthermore, there exists a disparity in income variables concerning satisfaction levels when engaging in shopping on e-commerce platforms. Individuals with an income ranging from 5 to 10 million VND exhibit the highest satisfaction levels, followed by those earning less than 5 million VND, while individuals with an income of 20 million VND or more do not attain satisfaction during their shopping experiences on these platforms. However, no significant variation in satisfaction is noted in relation to educational attainment and professional status while shopping on e-commerce platforms.

Table 8: Hypothesis Testing

Hypothesis	Description	Conclusion	Order
	Demographic factors		
H10	Customer satisfaction in online shopping on e-commerce platforms varies by gender	Accepted	
	Customer satisfaction in online shopping on e-commerce platforms varies by ages	Accepted	
	Customer satisfaction in online shopping on e-commerce platforms varies by income	Accepted	
	Customer satisfaction in online shopping on e-commerce platforms varies by education level	Rejected	
	Customer satisfaction in online shopping on e-commerce platforms varies by profession	Rejected	
	Independent factors		
H1	Customer service will be positively associated with customer satisfaction in online shopping	Accepted	3

Research Article

H2	Website design will be positively associated with customer satisfaction in online shopping	Accepted	8
H3	Information quality will be positively associated with customer satisfaction in online shopping	Accepted	4
H4	Product qualty will be positively associated with customer satisfaction in online shopping	Accepted	1
H5	Delivery service will be positively associated with customer satisfaction in online shopping	Accepted	6
H6	Privacy will be positively associated with customer satisfaction in online shopping	Accepted	9
H7	Price will be positively associated with customer satisfaction in online shopping	Accepted	7
H8	Payment methods will be positively associated with customer satisfaction in online shopping	Accepted	2
H9	Response time will be positively associated with customer satisfaction in online shopping	Accepted	5

Source: Data from authors' survey

The standardized regression equation comprises nine independent variables that directly influence customer satisfaction in online shopping on e-commerce platforms. These variables include product quality, payment methods, customer service, information quality, response time, delivery service, price, website design, and privacy. The regression equation, as determined by the normalized Beta coefficient, is articulated as follows:

$$\text{COSO} = 0.393*PQ + 0.372*PM + 0.359*CS + 0.326*IQ + 0.311*RT + 0.295*DS + 0.275*Pri + 0.258*WD + 0.233*Priv + \varepsilon$$

The aforementioned results exhibit similarities to previous research conducted by Lee and Lin (2005), Hasina et al. (2011), Vu and Tran (2013), Nguyen et al. (2017), Ha and Dinh (2018), Alam et al. (2020), and Nguyen and Uong (2024). However, in comparison to earlier studies, the coefficients of impact and the sequence of influence of the factors have altered due to the investigation being conducted within distinct spatial and temporal parameters.

5. Conclusion and implications

Initially, e-commerce platforms must enhance the process of verifying the origin of products, ensuring that when items reach customers, they align accurately with their descriptions and advertised quality. This action is essential to minimize the risks of discrepancies in design and quality, thereby augmenting customer satisfaction and fostering trust, which in turn encourages repeat patronage.

Secondly, the diversification, security, and flexibility of payment methods facilitate a convenient shopping experience for customers, thereby reducing barriers associated with purchasing decisions. E-commerce platforms should enhance their payment options by incorporating e-wallets, digital banking, interest-free installments, and pay-later options, while also optimizing a user-friendly and transparent payment interface.

Thirdly, e-commerce platforms must enhance their customer care services at all stages of the shopping process, including pre-purchase, during, and post-purchase phases. It is essential for these platforms to promptly address inquiries and resolve any concerns voiced by customers. Furthermore, a follow-up should be conducted approximately three to five days after the transaction to evaluate the quality of support services, assess product quality, and actively consider all customer feedback. Most significantly, commercial platforms ought to provide greater incentives and sustained support to customers who frequently engage with the e-commerce platform, while also expressing gratitude to customers who make purchases on the website.

Fourth, e-commerce platforms are required to disseminate information regarding products and goods in a manner that is both clear and transparent. Concurrently, these platforms must possess certification from authorized management agencies affirming the quality of their products or implement mandatory classifications for genuine goods, as asserted by distributors, to enhance customer reliability. Furthermore, e-commerce platforms should

acknowledge and prominently display public reviews from customers who have previously utilized these products and goods, thereby enabling prospective customers to consider this feedback prior to making purchasing decisions.

Fifth, e-commerce platforms ought to prioritize investments in chatbots, AI-driven online support, and customer care teams across various platforms to ensure that customers receive timely feedback.

Sixth, e-commerce platforms must make commitments to customers to ensure the availability of goods and products throughout the delivery process and to expedite the overall delivery timeline. It is essential to employ a variety of delivery methods to meet customer requirements. Implement screening processes, reduce delivery costs for customers, and enhance promotional offers for free shipping on high-value orders or bulk purchases.

Seventh, e-commerce platforms should establish collaborations with businesses and distributors of goods and products to devise promotional strategies, including significant discounts during holidays or special pricing during peak hours, aimed at encouraging increased consumer purchasing behavior.

Eighth, e-commerce platforms are required to design visually appealing websites that are impressive, recognizable, and capable of stimulating visual interest to attract the attention of customers. Furthermore, the website interface should present goods and products in a seamless, clear, and easily navigable manner. Operations conducted on the website must facilitate a swift and intuitive process for selecting goods and products, comparing prices, and executing convenient payments through various methods. Additionally, e-commerce platforms should enhance feedback and interaction on their websites by incorporating a prompt question-and-answer section or a review platform.

Ultimately, commercial transactions must prioritize protecting personal information during interactions. It will mitigate the risks of account theft and data exposure, garner goodwill, and increase customer satisfaction by avoiding online shopping inconveniences.

The limitations of the study pertain to the use of a straightforward regression model based on a convenient survey sample size. The analysis focuses exclusively on four prominent e-commerce platforms: Tiki, Lazada, Shopee, and Sendo, which have the largest number of traders. Furthermore, the model requires consideration of additional factors and other influential relationships. Additionally, this research needs validation in other research markets. The findings will serve as a foundation for future studies conducted by the author.

Tài liệu tham khảo

[1]   Ahmad, J., & Kamal, N. (2002). Customer satisfaction and retail banking: an assessment of some of the key antecedents of customer satisfaction in retail banking. *International Journal of Bank Marketing, 20*(4), 146-161. https://doi.org/10.1108/02652320210432936

[2]   Alam,S. S., Ali, S., Omar, M. H., N. A., & Hussain, W. M. H. W. (2020). Customer satisfaction in online shopping in growing markets: An empirical study. *International Journal of Asian Business and Information Management*, 11(1), 78-91.

[3]   Bui, T. T. (2014). Expectations and benefit perceptions of online shopping. *Journal of Economics & Development*, 201, 79-86.

[4]   Cronin, J. J., Jr., & Taylor, S. (1992). Measuring service quality: A reexamination and extension. *The Journal of* Marketing, 56(3), 55-68. https://doi.org/10.2307/1252296

[5]   Ha, N. K. G., & Dinh, L. T. V. (2018). Customer satisfaction at Sendo.vn e-commercial room. *Journal of Economics and Engineering*, 24, 21-35.

[6]   Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis* (7th ed.). Prentice Hall.

[7]   Hasina, M., Islam, M. A., Ariffin, K. H. K., & Karim, A. (2011). Customers satisfaction on online shopping in Malaysia. *International Journal of Business and Management*, 6(10), 162-169. http://dx.doi.org/10.5539/ijbm.v6n10p162

[8]   Hong, S. C., & Wu, H. (2003). An Empirical Assessment of Service Quality and CustomerSatisfaction in Professional Accounting Firms. *Thirty-Second Annual Meting*, March 27-29, Northeast Decision Sciences Institue, Providence, Rhode Island, USA.

[9] Kotler, P. (2000). *Marketing Management: The Millennium Edition*. Person Prentice Hall, Upper Saddle River.

[10] Kotler, P., & Armstrong, G. (2004). *Principles of marketing* (10th ed.). Pearson-Prentice Hall.

[11] Lee, G. G., & Lin, H. F. (2005). Customer perceptions of e-service quality in online shopping. *International Journal of Retail & Distribution Management*, 33(2), 161-176. https://doi.org/10.1108/09590550510581485

[12] Myers, C. A., & Mintu-Wimsatt, A. (2012). Exploring antecedents influencing internet shopping satisfaction: The case of the apparel industry. *International Journal of Business and Social Science*, 3(8), 1-8.

[13] Nguyen, D. L. (2015). Overview of e-commerce in Vietnam. *Review of Finance*. Retrieved from https://tapchitaichinh.vn/tong-quan-ve-thuong-mai-dien-tu-o-viet-nam.html

[14] Nguyen, D. N., & Uong, T. N. L. (2024). The impact of e-service quality on customer satisfaction and trust in online shopping – A case study of the generation Z. *Science & Technology Development Journal: Economics-Law & Management, 8*(1), 5017-5028. https://doi.org/10.32508/stdjelm.v8i1.1305

[15] Nguyen, T. M. T. (2014). Online Service Quality and Customer Satisfaction: A Study of Online Shopping in Vietnam. *Journal of Economic Development*, 287, 120-132.

[16] Nguyen, T. N., Nguyen, T. U., & Dang, T. K. N. (2017). Factors affecting the satisfaction of customers shopping online: The case study in Kon Tum. *Danang Univerity Journal of Science and Technology*, 2(2), 69-73.

[17] Oliver, R. L. (2010). *Satisfaction: A behavioral perspective on the consumer* (2nd ed.). M.E. Sharpe.

[18] Parasuraman, A., Zeithaml, V. A., & Malhotra, A. (2005). E-S-Qual: A multiple-item scale for assessing electronic service quality. *Journal of Marketing*, 7, 213-233.

[19] Ting, O. S., Ariff, M. S. M., Zakuan, N., Sulaiman, Z., & Saman, M. Z. M. (2016). E-service quality, e-satisfaction and e-loyalty of online shoppers in business to consumer market: Evidence from Malaysia. *IOP Conference Series: Materials Science and Engineering*, 131(1). https://doi.org/10.1088/1757-899X/131/1/012012

[20] Vu, H. T., & Tran, M. T. (2013). Customer satisfaction with group online shopping. *Journal of Economics & Development*, 19, 53-62.

[21] Wolfinbarger, M., & Gilly, M. G. (2003). EtailQ: Dimensionalizing, measuring and predicting etail quality. *Journal of Retailing*, 79(3), 183-199.

[22] Yang, H. E., & Tsai, F. S. (2007). General ES-QUAL scales applied to websites satisfaction and loyalty model. *Communications of the IIMA*, 7(2), 115-126.

[23] Zeithaml, V. A., & Bitner, M. J. (2000). *Services marketing: Integrating customer focus across the firm*. Irwin McGraw-Hill.