

RESEARCH ARTICLE

## Impact of E-Commerce Service Quality on Customer Loyalty: A Case of Vietnam

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### Abstract

The study measures service quality and customer loyalty among logistics service providers, with customer satisfaction mediating these variables. The survey questionnaire was used to collect 401 data from consumers in Vietnam. Data were analyzed using least-squares analysis (PLS-SEM). The results show that service quality variables such as customer service; product quality; information quality; delivery service; perceived price, and reverse logistics positively influence customer loyalty through customer satisfaction. The results show that customer satisfaction has a direct relationship with customer loyalty. The study recommends that service providers need to upgrade and improve the quality of their services.

**Keyword:** E-commerce; Service Quality; Customer Loyalty; Vietnam

### Introduction

In recent years, "e-commerce" is no longer a strange concept in society or a new field in our country. In the era of digital technology 4.0 and the rapid development of the Internet, the trend of online business or online sales has brought economic efficiency to many business lines in Vietnam.

The e-commerce market is increasingly expanding with many models and participants, and supply chains are also gradually changing towards a more modern direction with the support of digitalization and information technology. Especially in the context of the COVID-19 epidemic, the e-commerce market is becoming more vibrant. Applying digital technology and building new distribution channels is becoming an effective solution for businesses. Viet Nam overcame difficulties and brought new opportunities from the market demand based on changing consumers' buying habits, switching from traditional buying habits to buying goods through e-commerce.

With the strength of a young population and a large proportion of smartphone users, many people transact e-commerce on smartphones. The e-commerce market in Vietnam is currently growing quite rapidly with 35.4 million users and creating generated more than \$2.7 billion in revenue in 2019. The 2019 Southeast Asian e-commerce report by Google, Temasek, and Brain&Company predict the average growth rate for 2015-2025 of Vietnam's e-commerce is 29%. In 2020, the COVID-19 pandemic brought many changes to the economy. The explosive growth of e-commerce has made Vietnam one of the most potential markets in the ASEAN region. It is forecasted that by 2025, Vietnam's e-commerce scale will reach 43 billion USD and rank third in ASEAN.

Wicks and Roethlein (2009) have shown that an organization that consistently satisfies its customers will maintain higher gains and greater profits through increased customer loyalty. Accordingly, most businesses have always strived to win customers' hearts by providing customers with the best benefits so that they become loyal customers to the business's brand. Customers form their preferences regarding perceptions and attitudes about competing brands in their minds, so when customers have a good perception of a brand, they will always choose that brand as a priority in their purchasing decisions. Businesses must find ways to meet customer satisfaction comprehensively by understanding and capturing customer needs; How do customers make their purchasing decisions and see if they are satisfied with what the business offers? Therefore, customer satisfaction and loyalty are also considered practical competitive tools.

### Literature review

#### E-commerce and satisfaction

Service quality is assessed based on the actual performance of the service through the unique attributes of the service in specific contexts. In contrast, customer satisfaction is evaluated according to the overall experience. services, of which service quality is an aspect. (Oliver, 1993). In the service literature, the causal relationship between banking service quality and customer satisfaction is the subject of debate and disagreement on this issue (Bahia & Nantel, 2000). Some researchers describe customer satisfaction as an antecedent of service quality (Bitner et al., 1990; Carman, 1990; Parasuraman et al., 1985), and others have argued that service quality is an antecedent of customer

satisfaction (Amin & Isa, 2008; Cronin et al., 2000; Kashif et al., 2015; Sheng and Liu, 2010; Yap et al., 2012).

Information quality in online shopping refers to “the ease and accessibility of finding products and locations” (Choi et al., 2019) and the availability of reliable information, price and product specifications. (Alemu, 2016) states that information quality reflects how customers perceive the information provided by online retailers about products that customers can buy. She concluded a significant positive relationship between information quality and customer satisfaction. Product quality refers to a product's ability to satisfy customers' needs and meet their expectations (Hondoko, 2016). Product quality is considered the foundation for building customer satisfaction (Bei & Chiao, 2001). Product quality encourages customers to increase their use of online shopping (Olasanmi, 2019) and has a positive impact on customer satisfaction (Hondoko, 2016; Razak, Nirwanto, & Triatmanto, 2016). Product quality is assessed through the following metrics: similarity of product quality to store-bought products (Vasic, Kilibarda, & Kaurin, 2019) and availability of actual reviews on product quality.

According to (Hedin, Jonsson, & Ljunggren, 2006), delivery service is considered a driving factor in customer satisfaction. Delivery service refers to the supplier's ability to provide the customer with the requested product at the desired time at the selected location and the minimum cost (Vasic et al., 2019). Ziaullah, Feng, & Akhter (2014) and (Hondoko, 2016) conclude that delivery service positively influences online customer satisfaction. The delivery service will be evaluated for its commitment to the delivery time notified to the customer, its accuracy in delivery location, and the delivery service's cost. Customers may be charged additional shipping fees that make the final product price the same or higher than the offline price (Choi et al., 2019).

Customer service refers to an online retailer's responsiveness to a customer's request (Rajendran et al., 2018). The level of customer service can influence a customer's purchasing decision (Kaňovská, 2010) and, ultimately, their level of satisfaction. Customer service includes after-sales support or other logistics services performed on behalf of the customer after completing a transaction (Choi et al., 2019). Liu, He, Gao, & Xie (2008) revealed that customer service positively impacts customer satisfaction; This result was also confirmed by Rajendran et al. (2018). Customer service is rated on the ease of access to customer service, the quality of staff contacts, and the ability to solve customer problems.

Reverse logistics refers to after-sales transactions responsible for managing returns from customers due to disproportionate criteria from the customer's point of view (Rajeendran et al., 2018). Proper management of customer returns improves customer service (Lysenko-Ryba, 2017). Revindran et al. (2020) said that reverse logistics significantly influences online shopper satisfaction. Reverse logistics will be assessed for ease of collection,

availability of a clear return policy, and return fees (Cao, Ajjan, & Hong, 2018).

Thus, the author proposes the following research hypothesis:

H1: Delivery service has a positive impact on customer satisfaction using e-commerce service

H2: Information quality has a positive effect on customer satisfaction using e-commerce's service

H3: Product quality has a positive impact on customer satisfaction using e-commerce's service

H4: Customer service has a positive impact on customer satisfaction using e-commerce's service

H5: Reverse logistics has a positive impact on customer satisfaction using e-commerce's service

H6: The perceived price has a positive impact on customer satisfaction using e-commerce's service

### Satisfaction and Loyalty

Many studies have provided empirical evidence to support the claim that customer satisfaction positively correlates with customer repurchase intention and loyalty (Aksoy, 2014; Amin et al., 2013; Sharifi and Esfidani, 2014; Zeithaml et al., 1993). Amin et al. (2016) found a significant relationship between online customer satisfaction and online customer loyalty in the banking sector. Consumers who are satisfied with online banking are more likely to enter into a consistent relationship with online banking in the future and demonstrate a more loyal behavior (Baker & Levy, 1992; Wong and Zhou, 2006).

However, customers may complain about service and engage in negative WOM (Caruana, 2002). They will switch to other service providers (Amin et al., 2011; Cheema et al., 2010; Wirtz et al., 2007). If online banking does not provide customers with the channels, it becomes more challenging to develop relationships with customers (Amin et al., 2013; Bloemer et al., 1998). ; Levy, 2014). As a result, customers satisfied with internet banking will show high loyalty to their bank. For this reason, customer satisfaction is considered an essential determinant of online customer loyalty (Amin et al., 2013; Bloemer et al., 1998). Thus, the author proposes the following research hypothesis:

H7: Customer satisfaction positively affects customer loyalty using e-commerce services.

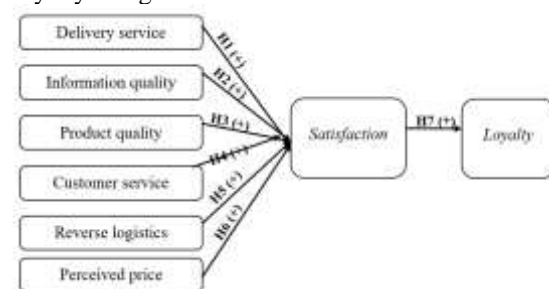


Figure 1. Research Model

**Methodology**

**Research Sample**

Our objective is to see how service quality affects e-commerce client loyalty. We did literature research to find concepts and gaps in the service quality framework. To better understand e-commerce service quality in Vietnam, we selected the key elements of the service quality framework and developed research questions. First, ten experts were given questionnaires to see how well they understood the issue. We then utilized the final questionnaire form to gather data after making changes based on feedback from the participants in the two sessions.

**Table 1.** Respondent information

		Frequently	Percent (%)
Gender	Male	169	42.14
	Female	232	57.86
Age	18 - < 24	346	86.28
	24 - < 34	43	10.72
	34 - < 44	10	2.49
	> 44	2	0.48
Income	< 5 million VNĐ	302	75.31
	5 – 10 million VNĐ	45	11.22
	10 – 15 million VNĐ	24	5.99
	15 – 20 million VNĐ	17	4.24
	> 20 million VNĐ	13	3.24
Frequently	1 time/month	96	23.94
	2 -5 times/month	230	57.36
	6 -10 times/month	42	10.47
	11 -15 times/month	11	2.74
	> 15 times/month	22	5.49

According to Hair et al. (2014), the research sample is critical in ensuring the research's quality. In the PLS path

**Table 2.** Construct Reliability and Validity

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Customer service	0.912	0.912	0.938	0.791
Product quality	0.902	0.902	0.931	0.772
Information quality	0.865	0.865	0.917	0.787
Delivery service	0.855	0.856	0.912	0.776
Perceived price	0.874	0.875	0.923	0.799
Reverse logistics	0.792	0.794	0.906	0.828
Satisfaction	0.903	0.903	0.939	0.838
Loyalty	0.908	0.908	0.942	0.844

model, the minimum sample size should be ten times the maximum number of arrowheads pointing to a latent variable (Hair et al., 2014). Consumers provided us with 419 survey questions to use as examples. 401 survey questions have analytical value after filtering the data, accounting for 95.5 percent of the total. The information provided by respondents is shown in Table 1.

**Data Analysis Techniques**

Our research has provided empirical evidence for a framework that identifies critical aspects of service quality and describes the relationship between service quality, satisfaction, and loyalty. After collecting the survey questionnaires, the data was encrypted, cleaned, and then imported into SPSS for reliability analysis and EFA discovery factor analysis. Then, we used a comprehensive, valid, and reliable tool (SPSS 26 and SmartPLS 3.0 software) to evaluate rigorous statistical tests, including convergence validity, discriminative validity, reliability, and AVE, to analyze and verify the gathered data the hypothesis developed.

**Data Analysis**

**Reliability and Validity of Model**

The existence of convergent and discriminant validity determines to construct validity, which indicates how well the assessment items connect to the constructs. We employed three tests to verify convergent validity: item reliability, composite reliability, and AVE. Cronbach's alphas also show that composite dependability is appropriate, with values over 0.6 indicating. Table 2 shows that all our constructions' composite reliabilities were over 0.7, and their Cronbach's alphas were above 0.6. The AVE ratio is the number of variances captured by a construct's items to the number of variations attributable to measurement error. The clash recovered for each construct was more than the suggested value of 0.5. (Hair et al., 2016). As a result, we concluded that all our constructs had sufficient convergent validity.

We utilized two tests to determine discriminant validity: a comparison of item loadings with item cross-loadings and a comparison of the variance extracted from the construct with shared variance. Each component should have a higher priority on its intended build than on others. Henseler et al. argued that leading coefficients more

significant than correlation coefficients in the same column (Fornell-Larcker matrix coefficient) satisfy the criteria (2015). Table 3 revealed that all the items met the criteria for discriminant validity.

**Table.** Discriminant validity (Fornell-Larcker Criterion)

	Customer service	Product quality	Information quality	Delivery service	Perceived price	Reverse logistics	Satisfaction	Loyalty
Customer service	0.889							
Product quality	0.836	0.879						
Information quality	0.818	0.856	0.887					
Delivery service	0.779	0.820	0.843	0.881				
Perceived price	0.815	0.793	0.796	0.792	0.894			
Reverse logistics	0.824	0.758	0.723	0.717	0.723	0.910		
Satisfaction	0.816	0.833	0.838	0.810	0.850	0.750	0.915	
Loyalty	0.768	0.753	0.798	0.774	0.826	0.698	0.859	0.919

**PLS Structural Model Results**

We next examined the overall explanatory power of the structural model. We explained the variance by the independent variables and the magnitude and strength of its paths, where each of our hypotheses corresponds to a specific structural model path. We used R Square Adjusted to measure the model’s explanatory power, interpreted in the same way as regression analysis. The analysis revealed that the structural model explained about 81.5% of the variation in Satisfaction, and 73.7 % of the variation in

Loyalty, suggesting that the structural model provided an adequate explanatory (see Table 4).

**Table 4.** R square

	R Square	R Square Adjusted
Satisfaction	0.818	0.815
Loyalty	0.738	0.737

To evaluate the structure model, we conducted the test with sample size Bootstrapping N = 5000 (Henseler et al., 2015). With p-value <1%, 5%, and 10%, the proposed hypotheses are considered as statistically significant at the 99%, 95% and 90% reliability levels.

**Table 5.** Hypothesis result.

	Hypothesis	P Values	Hypothesis result
<b>H1</b>	Delivery service → Satisfaction	0.123	Rejected
<b>H2</b>	Information quality → Satisfaction	0.007	Supported
<b>H3</b>	Product quality → Satisfaction	0.022	Supported
<b>H4</b>	Customer service → Satisfaction	0.398	Rejected
<b>H5</b>	Reverse logistics → Satisfaction	0.044	Supported
<b>H6</b>	Perceived price → Satisfaction	0.000	Supported
<b>H7</b>	Satisfaction → Loyalty	0.000	Supported

Based on the results of the direct relationship analysis from Table 4, it indicates that the hypothesis (H1 and H4 is rejected, H2, H3, H5, H6 and H7 are accepted)

**Conclusion**

This study has identified the factors affecting customer loyalty when buying products in the electronic market by applying qualitative and quantitative research methods with 401 observed samples to test a linear structure. Based on the research results, some suggested governance implications for businesses doing business in the electronic market are as follows:

In the complicated situation of the Covid-19 epidemic, freight forwarding activities face many difficulties due to social distancing directives and blockade of areas. Therefore, businesses selling domestic goods on the electronic market should take measures to avoid risks arising when transacting online. Domestic sales enterprises need to have links with shipping businesses to minimize the delay of delivery staff. Companies need to promptly grasp changes in the delivery process so that goods can reach consumers promptly and safely. In addition, businesses selling on the electronic market need to ensure the quality of goods to reduce customers' fears by choosing reputable suppliers or inspecting goods before delivering them to customers. The prolonged Covid-19 epidemic will



make the Vietnamese economy decline, so many customers also reduce their income in life. Specifically, domestic businesses should have an online sales consulting program on the online trading floor, consult through the customer care system, and increase staff arrangements to answer questions and complaints of customers. Thereby, businesses will increase customers' trust in both pressures from the epidemic and reduce frustration when not being taken care of immediately or adequately after purchase. In addition, businesses need to provide sufficient information about the origin of the product to create trust and reduce anxiety for customers when buying products of unknown origin or confused with products originating from developing countries—epidemics such as China and India. In addition, electronic market management enterprises in coordination with retailers should prioritize buying and selling domestic products on the electronic market. In addition, to carry out consumer behavior education, e-commerce platforms should have promotions for domestic's goods. Enterprises doing business in the electronic market need to strengthen the quality and offer reasonable prices to promote customer loyalty to Vietnamese goods in the electronic market. Because of the impact of the Covid-19 pandemic, the issue of social distancing led to a change in the time to access shopping on the online market. Therefore, businesses need to expand the most reasonable advertising and marketing time frames to increase access to domestic products to customers in the best way.

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