## RESEARCH ON FACTORS AFFECTING ONLINE SHOPPING INTENTION OF CUSTOMERS: THE EVIDENCE IN VIETNAM

**Thuy Hang Vu Thi**\(^A\), **Thuy Nguyen Thi**\(^B\)

### ARTICLE INFO

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### Keywords:

- Brand Reputation
- Trust
- Customer Service
- Online Shopping Intention
- Vietnamese Consumer

### ABSTRACT

**Objective:** The research clarifies the relationships among the four key factors: brand reputation, trust, customer service quality, and online shopping intentions.

**Theoretical Framework:** The research adopted the E-S-QUAL four dimensions to measure e-service quality, customer trust, and purchase intention in virtual environments. The research explores the role of seller reputation in the relationship between trust and online shopping by building a model with four variables, six hypotheses, and 21 observed variables.

**Method:** The snowball sampling technique was used. Quantitative research was used to evaluate and test the theoretical model with a sample size of N = 395 through the online survey. This study examined the scale through exploratory factor analysis (EFA), confirmatory factor analysis (CFA), and structural equation modeling (SEM).

**Results and Discussion:** The results show that the research scales achieve unidirectional reliability, convergent validity, and high discriminant validity. Brand reputation has a positive impact on customer service through trust. Trust has a positive impact on online shopping intention through customer service.

**Research Implications:** This study only examines the role of brand reputation in the relationship between trust, customer service quality, and online shopping intention. Other important factors that affect this relationship may not be mentioned in the research.

**Originality/Value:** The article recommends improving Vietnamese consumers' confidence and online shopping intention by offering solutions for consumers, electronic sellers, and related associations and organizations.

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**PESQUISA SOBRE OS FATORES QUE AFETAM A INTENÇÃO DE COMPRA ON-LINE DOS CLIENTES: AS EVIDÊNCIAS NO VIÊTNAME**

**RESUMO**

**Objetivo:** A pesquisa esclarece as relações entre os quatro principais fatores: reputação da marca, confiança, qualidade do atendimento ao cliente e intenções de compras on-line.

**Estrutura Teórica:** A pesquisa adotou as quatro dimensões do E-S-QUAL para medir a qualidade do serviço eletrônico, a confiança do cliente e a intenção de compra em ambientes virtuais. A pesquisa explora o papel da reputação do vendedor na relação entre confiança e compras on-line, criando um modelo com quatro variáveis, seis hipóteses e 21 variáveis observadas.

**Método:** Foi utilizada a técnica de amostragem bola de neve. A pesquisa quantitativa foi usada para avaliar e testar o modelo teórico com um tamanho de amostra de N = 395 por meio de pesquisa on-line. Este estudo examinou a escala por meio de análise fatorial exploratória (EFA), análise fatorial confirmatória (CFA) e modelagem de equações estruturais (SEM).

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Resultados e Discussão: Os resultados mostram que as escalas da pesquisa alcançam confiabilidade unidirecional, validade convergente e alta validade discriminante. A reputação da marca tem um impacto positivo no atendimento ao cliente por meio da confiança. A confiança tem um impacto positivo sobre a intenção de compra on-line por meio do atendimento ao cliente.

Implicações da Pesquisa: Este estudo examina apenas o papel da reputação da marca na relação entre confiança, qualidade do atendimento ao cliente e intenção de compra on-line. Outros fatores importantes que afetam essa relação podem não ser mencionados na pesquisa.

Originalidade/Valor: O artigo recomenda melhorar a confiança dos consumidores vietnamitas e a intenção de compras on-line, oferecendo soluções para consumidores, vendedores eletrônicos e associações e organizações relacionadas.

Palavras-chave: Reputação da Marca, Confiança, Atendimento ao Cliente, Intenção de Compra On-line, Consumidor Vietnamita.

INVESTIGACIÓN SOBRE LOS FACTORES QUE INFLUYEN EN LA INTENCIÓN DE COMPRA EN LÍNEA DE LOS CLIENTES: LAS PRUEBAS EN VIETNAM

RESUMEN
Objetivo: La investigación aclara las relaciones entre los cuatro factores clave: reputación de marca, confianza, calidad del servicio al cliente e intención de compra en línea.

Marco Teórico: La investigación adoptó las cuatro dimensiones E-S-QUAL para medir la calidad del servicio electrónico, la confianza del cliente y la intención de compra en entornos virtuales. La investigación explora el papel de la reputación del vendedor en la relación entre la confianza y la compra en línea mediante la construción de un modelo con cuatro variables, seis hipótesis y 21 variables observadas.

Método: Se utilizó la técnica de muestreo de bola de nieve. Se utilizó la investigación cuantitativa para evaluar y probar el modelo teórico con un tamaño de muestra de N = 395 a través de la encuesta en línea. En este estudio se examinó la escala mediante análisis factorial exploratorio (AFE), análisis factorial confirmatorio (AFC) y modelización de ecuaciones estructurales (SEM).

Resultados y Discusión: Los resultados muestran que las escalas de la investigación alcanzan una fiabilidad unidireccional, una validez convergente y una alta validez discriminante. La reputación de marca tiene un impacto positivo en el servicio al cliente a través de la confianza. La confianza influye positivamente en la intención de compra en línea a través del servicio al cliente.

Implicaciones de la Investigación: Este estudio sólo examina el papel de la reputación de marca en la relación entre la confianza, la calidad del servicio al cliente y la intención de compra on-line. Es posible que en la investigación no se mencionen otros factores importantes que afectan a esta relación.

Originalidad/Valor: El artículo recomienda mejorar la confianza y la intención de compra en línea de los consumidores vietnamitas ofreciendo soluciones a los consumidores, los vendedores electrónicos y las asociaciones y organizaciones relacionadas.

Palabras clave: Reputación de Marca, Confianza, Servicio al Cliente, Intención de Compra en Línea, Consumidor Vietnamita.

1 INTRODUCTION

Digital retailing gives consumers more ways to shop and more access to products and services than ever before. Consumers embrace the freedom of shopping whenever and wherever they please, as online sales capture a higher share of retail dollars in some markets. Service quality, customer satisfaction, trust, and behavioral intentions have been proven to significantly impact traditional businesses since the dawn of the service industry. In the new era of the Fourth Industrial Revolution, with the burst of technological advancement in the late 1990s and early
2000s allowing more and more people to gain access to the Internet, new forms of business were shaped in the online environment. Compared with traditional face-to-face commerce, e-commerce or online shopping possesses many unique customer advantages, such as incredible convenience, better prices, a great variety of products, infinite choice, easy access to consumer reviews, no-pressure sales, etc.

As e-commerce grows, electronic service quality has positively influenced the success of online businesses (Yang & Fang, 2004), (Zeithaml et al., 1990), (Tran & Vu, 2019). This success also often includes the contribution in service of the following factors: electronic service quality of the businesses (1); electronic trust of the customers (Windham & Orton, 2000) (2); electronic satisfaction of the customers (Kim & Stoel, 2004) (3); and behavioral intentions of customers (4). These literatures mainly propose and proves the relationships that occur between the dimensions of electronic service quality and its impact on successful e-commerce.

Despite the provided literature and proof, few studies have examined the relationships among e-service quality, e-trust, brand reputation, and online shopping intention.

On November 19th, 1997, Vietnam entered the digital age as it gained access to the Internet. In the almost three decades since then, Vietnam has become one of the countries with the highest internet users worldwide. It is predicted that by 2023, nearly 80 percent of the country will have access to the internet. The Internet has become integral to daily life for many Vietnamese people. Most internet users in Vietnam spend at least three hours daily serving multiple purposes, such as connecting with others, working, studying, entertaining, and more (Statista, 2023). Thanks to the government’s effort to promote digitalization and highly connected consumers, Vietnam has become one of the fastest-growing e-commerce markets in Southeast Asia. The country's digital economy expansion has also led to an increasing usage of digital services in Vietnam. As Vietnam’s e-commerce is rapidly developing, conducting, investigating, and clarifying this study is crucial so that digital marketers and e-business runners can have a reliable basis and further understanding of the e-service market. Therefore, the authors examine the relationship between e-service quality, e-trust, brand reputation, and online shopping intention among customers in Vietnam.
2 THEORETICAL FRAMEWORK

2.1 E-TRUST

According to Crosby et al, from the perspective of the relationship between sellers and buyers, trust is the confidence that the sellers will act in the customers’ interests (Crosby et al., 1990). Trust is an expectation that sellers will fulfill their obligations, act fairly, and avoid taking advantage of personal interests (Zaheer et al., 1998). Issues in online trust, including the internet, websites, and technology, differ from traditional beliefs. Online trust is mainly associated with trust on the internet, particularly e-commerce (Taddeo & Floridi, 2011). Trust is a confident attitude in an online risk situation that one's vulnerabilities will not be exploited (Beldad et al., 2010).

The relationship is supposed to be grounded on the trustor’s beliefs about the trustee’s capabilities and the context in which the relationship occurs (Gambetta, 1988). Trust is even more required in an online environment, as its complexity far exceeds the traditional one. Petrovic et al. (2003) addressed the fact that online transactions and exchange relationships are characterized by uncertainty, anonymity, lack of control, and potential opportunism, making risk and trust crucial elements of e-commerce (Petrovic, 2003). As a causality, e-trust occurs in environments that do not present any sign of direct or physical contact; interactions are only mediated through electronic devices. E-trust is an intangible tool that effectively reduces the uncertainty and complexity of transactions and relationships in electronic markets. These are the basic differences between trust and e-trust. Trust in digital environments is mainly associated with trust over the Internet, especially with e-commerce. E-trust is often reduced to security (Taddeo & Floridi, 2011).

However, recent innovations and developments in web development and authorities have made it possible to fulfill trust requirements in the digital area. Identity confirmations, chats, logs, and IP addresses all contribute to the foundation of e-trust in such uncertain environments. Petrovic et al demonstrated a figure explaining the phases of a transaction and the trust level of each phase. A transaction has three main phases: information, agreement, and settlement (Petrovic, 2003).
2.2 E-SERVICE QUALITY

With technological advancements, many new products and services are coming out to fulfill the needs of and further improve human living standards. Living standards have upgraded to a point where people demand quality in every aspect, and quality has become a key factor in considering a buying decision rather than price tags. In addition, there are various definitions of service quality. Depending on each approach, service quality is defined differently, based on a reliable scientific basis that aims to resolve specific problems in particular fields.

In this research, the authors defined service quality as the level of fulfilling customers' needs. A few typical definitions of service quality related to the author's approach are from Parasuraman who defined service quality as a measure of how well the service level delivered matches customer expectations, considered service quality as an overall judgment similar to attitude towards the service, or also the ability of the organization to meet or exceed customer expectations (Parasuraman et al., 1988). Feigenbaum (1991) indicated that service quality is a customer's decision based on their realistic experience with the product/service, measured by customer requests. Lee and Lin tested an integrative framework that not only analyzes the positive personal outcome of e-service quality and predicts it at both individual and organizational levels (Lee & Lin, 2005).

For an organization to gain a competitive advantage it must use technology to gather information on market demands and exchange it between organizations to enhance the service quality (Seth et al., 2005). More specifically, e-service quality is the consumers’ overall evaluation and judgment of the delivery of service in a virtual market. The Internet is considered as a primary channel for delivering e-service (Lu et al., 2010), (Parasuraman et al., 2005).

2.3 BRAND REPUTATION

Brand reputation is the perception of a brand based on factors such as company history, customer service, product quality, advertising, and employee behavior. A strong brand reputation can drive business success, while a negative reputation can harm growth and profitability. Brand reputation is how consumers perceive a brand based on its image, values, and performance. A good reputation establishes trust, credibility, and loyalty, while a negative reputation can cause a company to lose credibility and sales (Chiang & Jang, 2007). A strong brand reputation, both online and offline, is crucial for gaining the trust of customers and
increasing the likelihood of them purchasing your products or services. The key to developing a successful brand reputation strategy is to understand that you don't have to wait for customers to form their own opinions about your brand. Instead, by tailoring your brand experiences to align with the needs, wants, values, and opinions of your target customers, you can proactively shape their perception of your company (Van & Hang, 2024).

2.4 ONLINE SHOPPING INTENTION

Shopping intention is one of two decisive factors influencing consumers’ shopping behaviors (Ajzen, 1991). Intended behavior is closely related to actual behavior and has diagnostic value. Behavioral intentions are important for management to understand whether customers will remain with or defect from the company (Zeithaml et al., 1996). Behavioral intentions in traditional and virtual settings are similar (Parasuraman et al., 2005). Online shopping intention refers to the likelihood of consumers doing future online shopping. To persuade online consumers to consume more, retailers need to identify factors that hinder and promote consumers’ online shopping intentions (Lohse et al., 2000). The service quality takes responsibility for the purchase intention. Therefore, investing in service quality alone does not guarantee winning new customers or keeping old ones.

3 RESEARCH MODELS AND HYPOTHESES

After synthesizing the theoretical foundations and research overview, the author observed that the studies confirmed the positive impact of trust on the intention to shop online (Koufaris, 2002), (Tangmanee & Rawsena, 2016), (Chawla & Kumar, 2022). Seller reputation plays a causal role: website reputation has the highest degree of positive impact while trust contributes the least to purchase intention, i.e., the higher the website quality or trustworthiness, the stronger the purchase intention (Tangmanee & Rawsena, 2016). The quality of customer service is the mediating factor in promoting the online shopping intention of consumers. The research adopted the E-S-QUAL four dimensions to measure e-service quality, customer trust, and purchase intention in virtual environments. The research explores the role of seller reputation in the relationship between trust and online shopping by building a model with four variables, six hypotheses (Figure 1).
The research model hypotheses are explained below.

3.1 BRAND REPUTATION

Brand reputation is defined as the consumers’ perception of a brand as high-quality and trustworthy (Afzal et al., 2009). Reputation has a direct influence on trust, as indicated by (Anderson, 1985), (Doney & Cannon, 1997), (Grazioli & Jarvenpaa, 2000). Companies build their reputation by practicing care and honesty toward their customers (Doney & Cannon, 1997). According to (Jarvenpaa et al., 2006), consumers are more likely to trust a company with a sound reputation. People rely on a company’s reputation to build trust if they do not have enough information and experience (Gefen, 2000). A brand's reputation is the buyer's perception of how the seller takes care of their customers; it affects the relationship between frustration and purchase satisfaction, influencing purchase intention after a customer has a poor service experience. Additionally, the reputation of a shopping website helps to shape customers' online trust, which also positively impacts their purchase intention (Tangmanee & Rawsena, 2016).

Based on these insights, the author hypothesizes the following:

H1a: Brand reputation (BR) has a positive effect on trust (TR).
H1b: Brand reputation (BR) has a positive effect on customer service quality (CS).
H1c: Brand reputation (BR) has a positive effect on online shopping intention (SI).
3.2 CUSTOMER SERVICE QUALITY

The three main elements of a vendor's service-customer communication, delivery, and after-sales service significantly relate to online buyers’ trust (Thang & Do, 2016). Regarding communication, although customers can obtain product-related information from recommendations, photos, and reviews from other online buyers, they may still need to contact the supplier directly through phone or instant messaging for further explanations or clarifications. In these situations, the customer experience is significantly influenced by the supplier representatives’ communication, inspiring customer trust and confidence through their professionalism and empathy (Gustavsson & Johansson, 2006). Concerning delivery, online shoppers are not in the same geographical location as the supplier. If the buyer receives the goods as promised, confidence in the supplier's ability and commitment to fulfill their promises is enhanced. Moreover, there may be cases where customers are disappointed by the product's non-conformity with their expectations. Unless e-vendors empathize with these concerns and offer opportunities to return products, online shoppers will not be willing to transact with them again. Based on these findings, the author hypothesizes that:

H2: Customer service quality (CS) positively impacts online shopping intention (SI).

3.3 TRUST

Trust can be defined as the customers’ tendency to repurchase a specific electronic supplier's products with a lower degree of doubt when they have experienced past satisfaction with that supplier (Thang & Do, 2016). The specific beliefs about integrity, ability, and benevolence are seen as preconditions for overall trust (Gefen, 2000). A lack of trust has been noted as one of the main reasons that discourage consumers from shopping online (Grazioli & Jarvenpaa, 2000). If trust is not established, online transactions are impossible. Therefore, customers' trust in online sellers is the foundation of online shopping (Chen & Barnes, 2007). Trust is crucial in online shopping because customers perceive higher transaction risks in the online environment as they do not have direct contact with the seller or the product they intend to buy (Grazioli & Jarvenpaa, 2000), (Pavlou, 2003). Trust is established when online providers offer good quality products and services (Gefen, 2000). Therefore, when consumers have established trust based on past experiences, the challenge for the providers is to continually
improve service quality to meet customers' expectations. Otherwise, the customer's trust in the seller quickly diminishes.

Based on the above arguments, we propose the following hypotheses:

H3a: Trust (TR) has a positive effect on customer service quality (CS).
H3b: Trust has a positive effect on online shopping intention (SI).

3.4 ONLINE SHOPPING INTENTION

Intention is a factor used to assess the ability to perform a behavior in the future. According to (Ajzen, 1991), intention is the motivating factor that encourages an individual to be willing to perform a behavior. Therefore, online shopping intention is the certainty of consumers' ability to make purchases over the internet (Delafrooz et al, 2011). Shopping intention is typically viewed as one of the two factors that decisively influence consumer buying behavior.

4 RESEARCH METHOD

This study's sample subjects are Vietnamese consumers. Hair et al. proposed that the minimum sample size to be achieved must be greater than or equal to m*5; the best is m*10 (where m is the number of variables) (Hair et al., 2011). In this study, with 21 observed variables, the minimum sample size had to be greater than or equal to 105; the best is 210. However, to ensure high reliability, the team surveyed 400 consumers. During the investigation, 395 valid votes were obtained, and the remaining 7 respondents had no previous experience shopping online.

The authors combined two research methods: qualitative and quantitative. Qualitative methods were utilized for subject observation and the review of research materials; quantitative methods were implemented for surveying using questionnaires with a Likert scale with seven levels ranging from (1) “Completely no influence” to (7) “Completely influence.” This study used SPSS software to ensure the accuracy of the data and the reliability of the scale based on Cronbach's alpha coefficient analysis. In addition, the group also analyzed the EFA, which made it possible to examine the relationship between variables in all the different groups to discover observed variables that were loaded more or factored differently from the beginning.
Next, the variables, after being validated, were analyzed by the partial least squares structure model (PLS-SEM) using the SmartPLS 4.0 software (Haenlein & Kaplan, 2004).

5 RESEARCH RESULTS

5.1 SAMPLE PROFILE

According to the survey results of 395 consumers, the percentage of Vietnamese female online consumers (56.71%) is higher than that of men (43.29%), showing that Vietnamese women tend to be more interested in shopping and consumption than men. Regarding age, many participants in this survey are young people under 24 years old (44.05%). 150 people were 25 to 34 years old, accounting for 37.97%, and 37 were 35 to 44 years old, accounting for 9.36% of the total. The age group over 45 accounts for 8.62%; this age group is considered the elderly, less exposed to the internet and online shopping than young people. Most people in this group earn an income under 10 million VND, approximately 405.19 USD (329 people), and the remaining earn an income of over 10 VND (66 people). The research sample represents consumers from many different regions, with most respondents coming from the Red River Delta and Northeast Coast, specifically the capital, Hanoi. This is a developed economic area with high living standards and good technological infrastructure; therefore, their online shopping experience is also more diverse than in other regions.

Of the 395 consumers who responded to the survey, 191 reported that they had shopped online before, and 204 intended to continue buying online. Regarding shopping channels, Vietnamese consumers prefer using e-commerce platforms (Tiki, Shopee, Lazada, etc.). Regarding shopping channels, social media channels such as Facebook and Instagram accounted for 7.3% of online purchases, while online shopping applications made up 3.6%, and seller websites accounted for 3.2%. These findings demonstrate the growing popularity of e-commerce platforms in the online shopping market due to their convenience, competitive prices, and variety of products. Customers can research, compare prices, and read product reviews, leading to changes in their purchasing habits.

The frequency of online shopping among Vietnamese consumers is relatively low; the majority stated that they shop less than once a week (47.6%), followed by one to three times per week (29.4%). Only 17.2% of consumers shop online three to five times a week, and the lowest number of respondents (5.8%) shop more than five times weekly. Fashion is the most
commonly purchased category online, followed by cosmetics and personal care products. These results reflect that most respondents are interested in beauty care products. Only 38.5% of respondents were comfortable buying products with a short shelf life, such as food. The pharmaceutical and functional foods industry had the lowest of online shoppers at 25.6%. Regarding payment methods, 49.6% of the respondents who shopped online preferred e-wallets because of their convenience and speed, followed by credit cards (21.3%), cash on delivery (24.8%), and debit cards (4.3%).

5.2 RESULTS OF THE MODEL TEST

Cronbach's alpha coefficient has a variable value in the interval [0,1]. According to (Nunnally, 1994), a reliable scale should have a Cronbach’s alpha reliability of 0.7 or higher. Besides, according to (Cristobal et al., 2007), on a reliable scale, the observed variables have a corrected item–total correlation value of 0.3 or more. The results of each scale’s analysis are recorded in the following table. The scales in the research provided by the author is highly reliable, with Cronbach's alpha coefficient greater than 0.8 (Table 1).

<table>
<thead>
<tr>
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<th>Scale</th>
<th>Corrected Item-Total Correlation</th>
<th>Cronbach's Alpha if Item Deleted</th>
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<tbody>
<tr>
<td>CS1</td>
<td>While communicating with the seller, I appreciated their service attitude</td>
<td>0.720</td>
<td>0.950</td>
</tr>
<tr>
<td>CS2</td>
<td>The delivery of goods is on time and fast</td>
<td>0.827</td>
<td>0.943</td>
</tr>
<tr>
<td>CS3</td>
<td>The delivery of goods is punctual and fast</td>
<td>0.857</td>
<td>0.941</td>
</tr>
<tr>
<td>CS4</td>
<td>Goods are purchased from quality-assured sellers</td>
<td>0.803</td>
<td>0.944</td>
</tr>
<tr>
<td>CS5</td>
<td>Return service is available</td>
<td>0.831</td>
<td>0.943</td>
</tr>
<tr>
<td>CS6</td>
<td>On-time goods return service</td>
<td>0.826</td>
<td>0.943</td>
</tr>
<tr>
<td>CS7</td>
<td>Warranty service for goods is available</td>
<td>0.861</td>
<td>0.941</td>
</tr>
<tr>
<td>CS8</td>
<td>Warranty service for goods on time</td>
<td>0.812</td>
<td>0.944</td>
</tr>
</tbody>
</table>

Brand Reputation (BR): Cronbach's Alpha Reliability = 0.918, Mean = 21.337, Variance = 29.457, Std.Deviation = 5.4275

Table 1

Evaluating the reliability of the scale with Cronbach's alpha coefficient
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<table>
<thead>
<tr>
<th>BR1</th>
<th>The seller is well known</th>
<th>0.820</th>
<th>0.890</th>
</tr>
</thead>
<tbody>
<tr>
<td>BR2</td>
<td>The seller has a good reputation</td>
<td>0.876</td>
<td>0.870</td>
</tr>
<tr>
<td>BR3</td>
<td>The sellers are known to be extremely honest</td>
<td>0.795</td>
<td>0.899</td>
</tr>
<tr>
<td>BR4</td>
<td>I feel familiar with the seller’s name</td>
<td>0.756</td>
<td>0.912</td>
</tr>
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Trust (TR): Cronbach's Alpha Reliability = 0.910, Mean = 22.676, Variance = 41.179, Std.Deviation = 6.4171

<table>
<thead>
<tr>
<th>TR1</th>
<th>I believe online sellers are trustworthy</th>
<th>0.734</th>
<th>0.897</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR2</td>
<td>I believe that the information provided by online sellers is trustworthy</td>
<td>0.829</td>
<td>0.877</td>
</tr>
<tr>
<td>TR3</td>
<td>believe that online sellers keep their promises and commitments to customers</td>
<td>0.790</td>
<td>0.886</td>
</tr>
<tr>
<td>TR4</td>
<td>I believe that the online seller has my best interests at heart</td>
<td>0.796</td>
<td>0.884</td>
</tr>
<tr>
<td>TR5</td>
<td>I believe that the online seller's behavior meets my expectations</td>
<td>0.710</td>
<td>0.902</td>
</tr>
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</table>

Online Shopping Intention (SI): Cronbach’s Alpha Reliability = 0.889, Mean = 19.078, Variance = 29.474, Std.Deviation = 5.4290

<table>
<thead>
<tr>
<th>SI1</th>
<th>I love shopping online even though this is not the only sales channel to buy the items I need</th>
<th>0.753</th>
<th>0.859</th>
</tr>
</thead>
<tbody>
<tr>
<td>SI2</td>
<td>I really like using the Internet to buy things when needed</td>
<td>0.804</td>
<td>0.840</td>
</tr>
<tr>
<td>SI3</td>
<td>I will shop online whenever I need something</td>
<td>0.756</td>
<td>0.858</td>
</tr>
<tr>
<td>SI4</td>
<td>I will recommend friends and relatives to shop online</td>
<td>0.717</td>
<td>0.872</td>
</tr>
</tbody>
</table>

Source: Data processing results using SPSS

5.2.1 Analysis of structural equation modeling (SEM)

When evaluating the SEM, the research model must go through two evaluation steps: the evaluation of the measurement model and the structural model (Henseler & Chin, 2010). To assess reflective measurement models, four criteria need to be considered: outer loadings, internal consistency reliability, convergent validity, and discriminant validity. Table 2 presents the results for the outer loadings, Composite Reliability (CR), and the Average Variance Extracted (AVE) of all sub-constructs. Before evaluating the model, we must assess the quality of the observed variables (indicators). According to (Hair Jr et al, 2014), the outer loading coefficient must be greater than 0.4 to be reliable in exploratory research. (Moores & Chang, 2006) accepted a study with an outer loading factor >0.6. Additionally, (Hair et al., 2016) believe that an observed variable is high quality if the outer loading factor is greater than or equal to 0.708. The results below demonstrate that all observed variables have high outer loading coefficients (>0.785), indicating that the quality of the observed variables in the study is guaranteed. According to Hair et al, quality can be assessed by evaluating the outer loading
factor, which needs to be equal to or greater than 0.708 for the observed variable (Hair et al., 2016). This means that if the latent variable explains at least 50% of the variation in the observed variable, it is considered to be of good quality. The researchers rounded this threshold to 0.7 for ease of use. All items in the research have an outer loading greater than 0.785. Many researchers prefer Composite Reliability (CR) over Cronbach’s Alpha as it is believed to underestimate reliability compared to CR. Chin suggests that the CR value should be 0.6 or higher when conducting exploratory research (Chin, 1998). On the other hand, a threshold of 0.7 is considered an appropriate level of the CR index for confirmatory studies (Henseler et al., 2015). Other researchers like agree that 0.7 is the appropriate assessment threshold for most cases (Hair et al., 2016; Bagozzi & Yi, 1988). The data collected in the study was internally consistent and reliable as all the constructs had CR values above 0.7, ranging from 0.924 to 0.959. The authors rely on the average variance extracted index AVE (Average Variance Extracted) to evaluate convergence. A scale has convergent validity if the AVE is 0.5 or higher (Fornell & Larcker, 1981). Table 2 below shows that all measurement items have shell loadings greater than the 0.6 thresholds (Sarstedt et al., 2020). AVE, a measure of common variance within a construct, was found to be at least 0.50 for all 4 constructs, with AVE values ranging from 0.735 to 0.803.

Table 2

<table>
<thead>
<tr>
<th>Items</th>
<th>Outer loadings</th>
<th>CR</th>
<th>AVE</th>
<th>VIF</th>
<th>Factor loading in EFA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>CS</td>
</tr>
<tr>
<td>CS</td>
<td>0.959</td>
<td></td>
<td>0.745</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CS1</td>
<td>0.785</td>
<td>2.509</td>
<td>0.545</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CS2</td>
<td>0.869</td>
<td>3.884</td>
<td>0.788</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CS3</td>
<td>0.894</td>
<td>4.673</td>
<td>0.796</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CS4</td>
<td>0.851</td>
<td>3.026</td>
<td>0.732</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CS5</td>
<td>0.876</td>
<td>4.292</td>
<td>0.836</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CS6</td>
<td>0.869</td>
<td>4.371</td>
<td>0.902</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CS7</td>
<td>0.896</td>
<td>4.801</td>
<td>0.938</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CS8</td>
<td>0.859</td>
<td>4.033</td>
<td>0.880</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR</td>
<td>0.933</td>
<td>0.735</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR1</td>
<td>0.845</td>
<td>2.477</td>
<td>0.602</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR2</td>
<td>0.897</td>
<td>3.497</td>
<td>0.867</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR3</td>
<td>0.868</td>
<td>2.782</td>
<td>0.843</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR4</td>
<td>0.868</td>
<td>3.175</td>
<td>0.820</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR5</td>
<td>0.807</td>
<td>2.170</td>
<td>0.665</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BR</td>
<td>0.942</td>
<td>0.803</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BR1</td>
<td>0.902</td>
<td>3.882</td>
<td>0.890</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BR2</td>
<td>0.937</td>
<td>4.960</td>
<td>0.945</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
According to (Garson, 2016), when the HTMT index is less than 1, it guarantees the difference between two latent variables. (Henseler et al., 2015) suggest that distinction will be guaranteed if the value is below 0.9. (Clark & Watson, 1995), (Kline, 2015) use a more rigorous standard threshold of 0.85. SmartPLS software prioritizes the threshold of 0.85 in evaluation. The HTMT index of this study is below the threshold, which means that it meets the standard requirements. According to the results in the table 3, all HTMT values are less than 0.85, indicating that the discriminant validity of the scale is excellent. Therefore, all factors meet the requirements for discriminant validity.

Table 3
Heterotrait-Monotrait Ratio (HTMT)

<table>
<thead>
<tr>
<th></th>
<th>BR</th>
<th>CS</th>
<th>SI</th>
<th>TR</th>
</tr>
</thead>
<tbody>
<tr>
<td>BR</td>
<td>0.866</td>
<td>2.771</td>
<td>0.752</td>
<td></td>
</tr>
<tr>
<td>CS</td>
<td>0.858</td>
<td>2.382</td>
<td>0.737</td>
<td></td>
</tr>
<tr>
<td>SI</td>
<td>0.924</td>
<td>0.752</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SI1</td>
<td>0.867</td>
<td>2.372</td>
<td>0.686</td>
<td></td>
</tr>
<tr>
<td>SI2</td>
<td>0.895</td>
<td>2.866</td>
<td>0.848</td>
<td></td>
</tr>
<tr>
<td>SI3</td>
<td>0.864</td>
<td>2.374</td>
<td>0.787</td>
<td></td>
</tr>
<tr>
<td>SI4</td>
<td>0.841</td>
<td>2.062</td>
<td>0.747</td>
<td></td>
</tr>
</tbody>
</table>

Source: Data processing results using SmartPLS

To evaluate the PLS-SEM structural model, our research team conducted bootstrap analysis with 5000 bootstrap iterations. When evaluating the structural model, we considered the following criteria: Variance Inflation Factor (VIF) coefficient evaluation, multicollinearity evaluation, impact factor evaluation, significance of impact levels, R-squared coefficient, and F-squared d coefficient. According to (Hair Jr. et al, 2014), if the VIF index is 5 or greater, the model has a very high probability of having multicollinearity. Based on the results in the table 2, the structures in the SEM model with VIF coefficients ranging from 2.062 to 4.960 are all less than 5, indicating that the model does not have multicollinearity. The PLS estimation results for the structural model, path coefficients value as well as item loadings for the research constructs are shown in Table 4, 5 and 6.
# Table 4

*Path coefficients*

<table>
<thead>
<tr>
<th>Path</th>
<th>Hypothesis</th>
<th>Original sample (O)</th>
<th>T Statistics</th>
<th>P-value</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand Reputation (BR) -&gt; Trust (TR)</td>
<td>H1a</td>
<td>0.573</td>
<td>13.648</td>
<td>0.000</td>
<td>Positive and significant</td>
</tr>
<tr>
<td>Brand Reputation (BR) -&gt; Customer Service Quality (CS)</td>
<td>H1b</td>
<td>0.489</td>
<td>8.800</td>
<td>0.000</td>
<td>Positive and significant</td>
</tr>
<tr>
<td>Brand Reputation (BR) -&gt; Online Shopping Intention (SI)</td>
<td>H1c</td>
<td>0.101</td>
<td>1.809</td>
<td>0.071</td>
<td>Positive and not significant</td>
</tr>
<tr>
<td>Customer Service Quality (CS) -&gt; Online Shopping Intention (SI)</td>
<td>H2</td>
<td>0.328</td>
<td>5.655</td>
<td>0.000</td>
<td>Positive and significant</td>
</tr>
<tr>
<td>Trust (TR) -&gt; Customer Service Quality (CS)</td>
<td>H3a</td>
<td>0.289</td>
<td>5.621</td>
<td>0.000</td>
<td>Positive and significant</td>
</tr>
<tr>
<td>Trust (TR) -&gt; Online Shopping Intention (SI)</td>
<td>H3b</td>
<td>0.414</td>
<td>8.185</td>
<td>0.000</td>
<td>Positive and significant</td>
</tr>
</tbody>
</table>

Source: Data processing results using SmartPLS

Original Sample is the normalized impact factor of the original data. P-values is the significance level of the t-test. The authors compare this level of significance with comparison thresholds such as 0.05. The results above show that all P-values of the effects are less than 0.05, except BR to SI, so these effects are all statistically significant. The Original Sample column (O) displays the particular relationship between the variables in the SEM model, where SI is the dependent variable, influenced by two variables, TR and CS, with normalized impact coefficients of 0.414 and 0.328, respectively; CS is the dependent variable, affected by two variables, BR and TR, with normalization coefficients of 0.489 and 0.289, respectively; and finally, SI is affected by CS with a normalization factor of 0.328.

The authors looked at the adjusted R-squared results. The adjusted R-squared of CS, SI, TR is respectively 0.481, 0.531, and 0.327, so the independent variables affecting it, explain 48.1%, 53.1%, and 32.7% of the variation (variance) of the variable. As shown in the table below, the adjusted R-squared value for SI is 0.531, indicating that the independent variables account for 53.1% of the variation (variance). The remaining 46.9% is attributable to system errors and external factors not accounted for in the model.

# Table 5

*Effect size value R-squared*

<table>
<thead>
<tr>
<th></th>
<th>R-square</th>
<th>R-square adjusted</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS</td>
<td>0.484</td>
<td>0.481</td>
</tr>
<tr>
<td>SI</td>
<td>0.535</td>
<td>0.531</td>
</tr>
<tr>
<td>TR</td>
<td>0.328</td>
<td>0.327</td>
</tr>
</tbody>
</table>

Source: Data processing results using SmartPLS
To see whether the impact of the independent variables on the dependent variable is strong, medium or weak, the authors used the $f$ square coefficient. (Hair et al., 2016) proposed the $f$ Square index to evaluate the importance of independent variables. In many situations, the order of magnitude of the standardized impact coefficient coincides with the order of strength of the $f$ square coefficient, so both indices can be used to compare the impact, the strength and weakness of independent variables when they affect the same dependent variable. In table 6, the impact of BR on TR is high impact, BR on CS, CS on SI, and TR on SI are medium. The impact of BR on SI, and TR on CS are small (Cohen, 1988).

Table 6

<table>
<thead>
<tr>
<th>Effect size value $F$-squared</th>
</tr>
</thead>
<tbody>
<tr>
<td>BR</td>
</tr>
<tr>
<td>BR</td>
</tr>
<tr>
<td>CS</td>
</tr>
<tr>
<td>SI</td>
</tr>
<tr>
<td>TR</td>
</tr>
</tbody>
</table>

Source: Data processing results using SmartPLS

The chart below illustrates the results of the PLS-SEM linear structure model.

Figure 2

Results of the PLS-SEM linear structural model

Source: Data processing results using SmartPLS
Structural equation modeling estimation results indicate that BR does not affect SI but positively impacts CS and TR. Meanwhile, CS has a positive influence on SI. Vietnamese consumers' trust positively affects both CS and SI.

6 IN CONCLUSION

6.1 RECOMMENDATIONS

The authors recommend two solutions for consumers. Firstly, choose reputable online product/service providers: Consumers must be more careful when choosing online sellers. They should consider the seller's reputation, product quality/services, and information provided. This can help avoid risky situations in the online environment. Secondly, actively staying updated on trends and new forms of online shopping, such as continuously updating information, can help consumers stay up-to-date and access new and improved shopping models to protect their interests.

In addition, the research recommends e-sellers. First, ensure the credibility of after-sales and warranty policies. The study's survey results showed that consumers tend to be more satisfied with the quality of services provided by online sellers when their warranty service is always available. Therefore, sellers must always be available to assist customers when support is required. Second, invest in marketing campaigns. E-sellers should deploy appropriate forms of online marketing. Sellers need to constantly research and expand the scope of marketing to various platforms and online channels. Third, demonstrate community responsibility and actively participate in customer and community-oriented activities. Corporate social responsibility is essential for online sellers from a social responsibility standpoint. Committing to business ethics and contributing to sustainable economic development can improve the quality of life for employees and their families, local communities, and society. Fourth, ensure the quality of information on information and sales pages. Online sellers must pay more attention to the accuracy and completeness of information about their products and services. Short, easy-to-understand messages are essential as an effective way to facilitate decisions. Fifth, strengthen market research activities: Online sellers must collect information from various sources. In addition, they need to regularly monitor the development and trends of the sales platforms they use and competitors' business activities to determine the most appropriate strategy for their business.
With related associations and organizations, the research recommends some solutions. First, actively protect the interests of online consumers. Associations of businesses in various fields need to encourage individuals and organizations to provide quality products and services while building a reputable brand name in the market. Activities that reward and honor organizations and individuals for protecting consumer interests should be promoted. Social organizations that protect consumer interests should continue to be reliable sources of advice and support, assisting consumers in resolving complaints with service and goods providers. Second, messages and exchanges that raise online consumers’ awareness should be promoted. Promoting regulations, policies, and laws related to consumer rights and responsibilities is necessary. Organizations and individuals that trade goods and services should be made aware of their duties, as should state management agencies and social organizations that protect consumers' interests. Third, it focuses on supporting and resolving consumer concerns about the risks they may face when participating in online shopping. Organizations and associations that protect consumer interests should pursue their role in guiding and consulting to resolve consumer complaints.

6.2 LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

The study only examines the role of brand reputation in the relationship between trust, customer service quality, and online shopping intention. Other important factors that affect this relationship may not be mentioned in this research. In the future, explore and identify other factors that affect the relationship between trust and purchase intention in online shopping.

REFERENCES


Thi, T. H. V., & Thi, T. N. (2024). Research on Factors Affecting Online Shopping Intention of Customers: The Evidence in Vietnam


