THE INFLUENCE OF ONLINE CUSTOMER EXPERIENCE ON IMPULSIVE BUYING ON E-COMMERCE PLATFORMS: A STUDY OF VIETNAMESE CUSTOMERS

The 13th International Conference on Emerging Challenges: Business Dynamics in Disruptive Economy

Trinh Phuong Ly[1*], Pham Thuy Hien[2], Nguyen Bich Minh Anh[3]

[1] Faculty of Management, School of Economics and Management, Hanoi University of Science and Technology, Hanoi, Vietnam

[2] Widogame Joint Stock Company, Hanoi, Vietnam

[3] Phan Dinh Phung High School, Hanoi, Vietnam

[*]Corresponding author: ly.trinhphuong@hust.edu.vn

Abstract: This research aims to investigate the influence of online customer experience (OCE) on impulsive buying (IPB) in the Vietnamese market, an emerging market with significant growth in e-commerce. The study used quantitative research methods with data collected from 305 Vietnamese customers who had shopped through e-commerce platforms. The research results indicate that IPB on e-commerce platforms is influenced by the psychological dimension of OCE, which includes trust, convenience, and enjoyment, while the functionality dimension of OCE, which includes website interactivity, informativeness, visual engagement, navigation and search ease, has no effect on IPB. Convenience, however, has the opposite impact. Based on the research findings, the authors have provided recommendations to e-commerce platforms and online merchants to improve customer experience and generate sustainable development.

Keywords: e-commerce platforms, impulsive buying, online customer experience.

Research purpose:

This research aims to investigate the influence of online customer experience (OCE) on impulsive buying (IPB) within the Vietnamese market, a country seeing significant growth in e-commerce.

Research motivation:

Online shopping is becoming a popular type of purchasing for Vietnamese customers. Also, Vietnam is a country that has made a lot of progress in e-commerce. Research on customer experience and their behaviors in the online context will contribute to the field of customer behavior research and provide recommendations to help e-commerce platforms and online retailers improve their operational efficiency in the Vietnamese market.

Research design, approach, and method:

The study used quantitative research methods with data collected from 305 Vietnamese customers who had shopped through e-commerce platforms.

Main findings:

According to the research findings, impulsive buying on e-commerce platforms is influenced by the psychology dimension of OCE, which includes trust, convenience, and enjoyment, while the functionality dimension of OCE, which includes website interactivity, informativeness, visual engagement, navigation and search ease, has no effect on impulse buying. Convenience, however, has the opposite impact.

Practical/managerial implications:

The authors have provided recommendations to e-commerce platforms and online merchants based on the research results to improve customer experience and generate sustainable development.

1. INTRODUCTION

The Internet has made almost everything available with just a few clicks from the customers. Among the services created by the development of the Internet, online shopping the most prominent and remarkable service (Jaiswal & Singh, 2020). With online shopping, especially in the retail sector, customers are not limited by space and time, besides, customers also have a variety of choices and can consider many sites before making a final decision (Jaiswal & Singh, 2020; Reibstein, 2002).

Online shopping, especially after the Covid-19 pandemic, has become increasingly popular and favored by customers. One of the forms of shopping favored by consumers in recent times is shopping through e-commerce platforms. According to the 2024 digital economy report issued by the United Nations Conference on Trade and Development, the total value of global e-commerce in 2024 reached 6.3 trillion USD, an increase of 17% compared to 2023 (Linh, 2024). These figures demonstrate the development of e-commerce worldwide and show that e-commerce has become a preferred shopping channel for consumers.

One of the key concerns for e-commerce businesses is enhancing customer experience because experience, as it a factor that can significantly influence customers' future shopping behavior (O. Pappas et al., 2014). Therefore, enhancing customer experience increases the likelihood of customer repurchase intention, customer satisfaction and customer loyalty (Jain et al., 2017; Klaus, 2014). As stated by O. Pappas et al. (2014), customer experience is considered an essential factor that helps form perceptions related to customers' expectations of online sellers. Positive customer experiences will increase customers' confidence and influence their future behavioral intentions, while negative experiences will have the opposite effect. From this observation of O. Pappas et al. (2014), e-commerce platforms need to focus on creating positive customer experiences to encourage customers to spend more on purchasing products and services (Bleier et al., 2018; Rose et al., 2011). In the online setting, customer experience refers to the cumulative effect of customer interactions across different virtual touchpoints (cited in Gulfraz et al. (2022), p. 3). According to Klaus (2013), OCE encompasses two dimensions: functionality dimension and psychological dimension. With the functionality dimension, customers can reach out to other customers and e-commerce platform employees through virtual means to get more information during the shopping process. Virtual interactions through e-commerce platforms are important in helping customers achieve their shopping goals (Gulfraz et al., 2022). As noted by Pandey & Chawla (2018), the elements of functionality factor of OCE includes: interactivity, informativeness, visual engagement and ease of navigation and search. Psychological dimensions of customer experience consist of trust, convenience and enjoyment (Klaus, 2013; Pandey & Chawla, 2018). Both functionality dimension and psychological dimension of OCE influence consumer behavior including impulsive buying behavior.

In the online shopping environment, customers often exhibit unplanned and spontaneous purchasing behaviors, refer to as “online impulsive buying” (Gulfraz et al., 2022; Verhagen & Van Dolen, 2011). Some studies have indicated that about 40% of global online shopping can be classified as IPB (Chan et al., 2017; Gulfraz et al., 2022; Verhagen & Van Dolen, 2011). Impulsive buying behavior is more emotional than rational, so it usually occurs immediately and within a short period of time, which is suitable for the context of online shopping (Verhagen & Van Dolen, 2011). IPB by customers poses a problem for practitioners in balancing the pressure to increase sales and providing appropriate and ethical ways as well as not exploiting the impulse buying trend of customers which is associated with negative effects on customers such as over-consumption, challenges in sustainable development and financial consequences created by reckless spending (Gulfraz et al., 2022). In

addition, according to Gulfraz et al. (2022), the increase in IPB behavior also has environmental consequences, customers sometimes buy items they do not really need, which affects the creation of sustainable e-commerce. Previous studies have shown the influence of OCE on customer shopping behavior, including IPB (Gulfraz et al., 2022; Klaus, 2013; Pandey & Chawla, 2018). Accordingly, Gulfraz et al. (2022) points out the impact of customers' online customer experience (including functionality and psychological dimensions) on customers' impulse buying. One of the limitations of the study identified by the authors is that it was only conducted in China, which may limit the ability to generalize the results of the study. Therefore, Gulfraz et al. (2022) encourage future studies to examine the impact of OCE on IPB in other contexts to verify the research results. Following the proposal of Gulfraz et al. (2022), the authors conduct this study to examine the impact of OCE on IPB of customers on e-commerce platforms in Vietnam.

The research results shows that the components of the functionality dimension of OCE including website interactivity, website informativeness, visual engagement, navigation and search ease have no impact on IPB, the components of the psychological dimension of OCE including trust, convenience and enjoyment all have an impact on impulse buying on e-commerce platforms. However, convenience has the opposite influence.

This study made the following contributions: Theoretically, the authors continue to explain the online customer experience model of Klaus (2013), Pandey & Chawla (2018) and analyze the influence of OCE on IPB in the online retail environment in a novel research scenario. Practically, the authors have provided several recommendations for online retailers and e-commerce platforms operating in Vietnam to improve consumer experience as well as develop a sustainable buying environment.

In the following sections, the authors will present the literature review, methodology, results and discussions, implications and contributions

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1 Theoretical foundation

2.1.1 Online customer service experience conceptual model (Klaus, 2013)

According to Klaus (2013), creating an excellent online customer experience will influence customers' online shopping behavior. Klaus (2013) also believes that OCE is more complex than the traditional shopping experience because in the online context, customers not only play the role of buyers but also play the role of visitors and users of information technology. OCE is defined as: “the customers’ overall mental perception of their interaction with the online service provider and other customers expressed in its dimensions functionality and psychological factors” Klaus (2013). According to Klaus (2013), OCE includes functionality, psychological dimension and 8 sub-dimensions. Functional dimensions include factors related to the technical performance of the website and important service parts that enable customers to fulfill their shopping requirements. The sub-dimensions of functionality factor encompass usability, product presence, communication, social presence and interactivity. Psychological dimension plays an important role in the online shopping process of customers. This dimension includes factors that help customers feel more secure when shopping because of the characteristics of online shopping channels such as lack of familiarity with the brand, with the shopping site, and the presence of physical elements (physical presence). Psychological dimension consists of context familiarity, trust and value for money.

Klaus (2013) also points out that the functional and psychological dimensions of OCE and sub-dimensions can have a positive or negative effect on customers' online shopping behavior as well as on their interactions with service providers during their shopping journey.

When customers shop with e-commerce platforms, it is essentially a process of customers interacting with touchpoints during the shopping journey (Lemon & Verhoef, 2016). On the online shopping journey, the stages of the customer journey include: "search for information, evaluation of information, choice, transaction and evaluation of outcome". Klaus (2013)'s OCE model has shown that each sub-dimension of functionality and psychological dimension also plays a certain role according to each stage of customer interaction with service providers.

From the above analysis, Klaus (2013)'s OCSE model is suitable to examine the influence of customer experience on their impulse buying on e-commerce platforms. Because this model has studied customer experience in a specific field, which is services, and argues that customer experience in the online environment is different from offline shopping. Moreover, this model also argues that OCE includes two factors: functionality and psychological and these dimensions have an impact on customers' buying behavior in the online environment.

2.1.2 Online customer experience (Pandey & Chawla, 2018)

In line with Klaus (2013), Pandey & Chawla (2018) argue that OCE also includes functionality and psychological dimensions. However, according to Pandey & Chawla (2018), the sub-dimensions of functionality and psychological are different from Klaus (2013). Pandey & Chawla (2018) state that the sub-dimensions of functionality include website interactivity, website informativeness, visual engagement, website navigation and search ease while psychological dimensions comprise e-distrust, e-negative beliefs, e-self-inefficacy, e-logistic ease, e-convenience, e-enjoyment. Pandey & Chawla (2018) also argue that the elements of functionality and psychological dimensions can promote or inhibit customers' online shopping behavior.

In this study, the authors will combine the research results of Klaus (2013) and Pandey & Chawla (2018) to examine the impact of OCE on customers' IPB behavior on e-commerce platforms. Drawing from the findings of Gulfraz et al. (2022), the authors will examine the functionality dimension using four factors: website interactivity, website informativeness, visual engagement, website navigation and search ease (Pandey & Chawla, 2018); and the psychological dimension based on three factors: trust, convenience and enjoyment (Klaus, 2013; Pandey & Chawla, 2018).

2.1.3 Stimulus-Organism-Response (S-O-R) Framework (Mehrabian & Russell, 1974)

The S-O-R theoretical framework was developed by Mehrabian & Russell (1974). According to this theoretical framework, stimuli received from the environment (stimulus) can affect the internal evaluation state of humans (organism), thereby leading to positive or negative reactions of humans to the stimuli. Previous studies have used the S-O-R framework to explain customer loyalty, purchase intention, and purchase behavior (Zhu et al., 2020). The S-O-R framework is considered an information processing model with input data being stimuli from the environment, then these data are processed through the human cognitive system, thereby leading to responses (cited in Zhu et al. (2020)).

In addition, customer experience is created through the process of customers interacting with businesses through touch points, resulting in positive and negative emotions towards the business, which leads to subsequent behaviors such as purchase intention, purchase decision, loyalty or word of mouth (Gentile et al., 2007; Jain et al., 2017; Lemon & Verhoef, 2016). In this

study, online customer experience is considered as a stimulus factor (stimulus), which contributes to creating positive or negative emotions with customers (organism) and impulse buying is considered as a response to the stimulus element. Therefore, in addition to the online customer experience model of Klaus (2013) and Pandey & Chawla (2018), the authors also choose the S-O-R framework (Mehrabian & Russell, 1974) as the theoretical framework for this study.

2.2 Research constructs

2.2.1 Online Customer Experience

Prior studies have demonstrated the impact of customer experience in creating key marketing outcomes such as repurchase intention, customer satisfaction, loyalty, and word-of-mouth intention (Jain et al., 2017; Klaus, 2014; Verhoef et al., 2009). Furthermore, creating a positive customer experience also helps businesses gain a competitive advantage in the market (Gentile et al., 2007). With the growth of technology and smart devices, customer shopping behavior has experienced significant change compared to before, online shopping is increasingly favored by customers. The unique characteristics of online shopping such as interactivity, two-way communication, flexibility in presenting product options, and diversity of customer behavior data all affect OCE (Pandey & Chawla, 2018).

In this study, the authors use the concept of online customer experience by Klaus (2013), according to which online customer experience is understood as: "…the customers' overall mental perception of their interaction with the online service provider and other customers expressed in its dimensions functionality and psychological factors"

As mentioned above, in this research, the functional dimension will be approached based on four factors: website interactivity, website informativeness, visual engagement, website navigation and search ease and the psychological dimension will be approached using three factors: trust, convenience and enjoyment.

Functionality Dimension

- Website interactivity: Interactivity refers to the dialogue between a website and users and vice versa Klaus (2013). In the context of online shopping, interactivity is understood as communication between customers and businesses and between customers (Pandey & Chawla, 2018). Accordingly, customers can interact with other customers and employees of the e-commerce platform through "virtual" means to get more information to serve the shopping process (Gulfraz et al., 2022).

- Website informativeness: According to Kim & Niehm (2009), informativeness is one of the criteria to evaluate the information quality of a website. Website informativeness refers to a website providing customers with resourceful, helpful, accurate information about product features, prices, policies (Gulfraz et al., 2022; Lim & Ting, 2012; Pandey & Chawla, 2018).

- Visual engagement: As noted by Bressolles et al. (2014), in the online shopping environment, the aesthetic factor of a website is also one of the factors to evaluate service quality. This aesthetic factor refers to the characteristics of a website such as graphics, colors, images, motion effects, etc. Visual engagement essentially refers to the overall aesthetic view of a website and the vivid display of products (Pandey & Chawla, 2018).

- Website navigation and search ease: One of the factors in the functionality dimension in Klaus's (2013) study is usability. This factor refers to the ease and efficiency of using a website. Customers' perceptions of "ease of use" influence their online

experience (Chung & Shin, 2010; Klaus, 2013). Ease of use refers to customers' ability to find information and make transactions with minimal effort (Bressolles et al., 2014). Thus, website navigation and search ease are also factors that reflect the "ease of use" of an e-commerce website, accordingly, website navigation and search ease refer to the features and tools of a website that help customers easily search for products, shop, and place orders (Gulfraz et al., 2022; Pandey & Chawla, 2018).

Psychological Dimension

- Trust: Since online shopping is inherently risky (Ashraf et al., 2014), trust serves as a crucial role in online shopping. These risks exist due to the characteristics of online shopping such as physical distance, lack of personal contact, and anonymity of the Internet. Therefore, trust is related to safety and reducing uncertainties when shopping through a website (Klaus, 2013). Ashraf et al. (2014) state that trust is the extent to which customers expect online sellers to meet their transaction expectations without engaging in self-serving behavior. In this study, trust is understood as customers' confidence in e-commerce platforms that these platforms will provide customers with the values as promised (Gulfraz et al., 2022).

- Convenience: One of the reasons that makes customers prefer online shopping is because of the convenience of this shopping channel. Convenience and efficient use of time are important factors that motivate customers to make online purchases (Faqih, 2016; Pandey & Chawla, 2018). Therefore, convenience is understood as: “the freedom of making purchase without strict geographical or time limitations” (Gulfraz et al., 2022).

- Enjoyment: Enjoyment refers to the affective aspect of website design (Gulfraz et al., 2022). Accordingly, webpages of e-commerce platforms need to be designed to increase customer interaction by optimizing search and online chat options, these features will affect the enjoyment of shoppers (Gulfraz et al., 2022; Pandey & Chawla, 2018).

2.2.2 Impulsive buying

In this study, IPB is examined in the online setting; therefore, the authors utilize the concept of IPB by Verhagen & Van Dolen (2011), according to which impulsive buying is defined as: “a sudden and immediate online purchase with no pre-shopping intentions; it is unplanned, spontaneous, and decided on the spot”.

2.3 Hypothesis development

2.3.1 The impact of website interactivity on impulse buying

Interactivity is important because it promotes faster, stronger, and more relevant information exchange between a website and customers (Pandey & Chawla, 2018). Customers can interact with other customers and e-commerce platform employees to get information during the purchase process, read reviews from other customers; virtual interactions on e-commerce platforms help customers exchange pertinent information at the right time to make purchase decisions (Gulfraz et al., 2022). These types of interactions via e-commerce platforms can promote customers' impulse buying (Zhang & Shi, 2022). Gulfraz et al. (2022)’s study also indicates the positive impact of website interactivity on customers' IPB. From the above arguments, the authors propose hypothesis H1:

H1: Website interactivity has a positive influence on customers' impulse buying on e-commerce platforms.

2.3.2 The impact of website informativeness on impulse buying

Information on e-commerce platforms is considered a measure of customer perception in evaluating the quality of products and services provided by e-commerce platforms (Bressolles et al., 2014). Also, according to Bressolles et al. (2014), in the process of online shopping, with the "absence" of the seller, it requires clarity and accuracy in terms of information. Research by Chen et al. (2019), Gulfraz et al. (2022) demonstrate that a website needs to provide complete and accurate information about products, prices, policies... this will promote customers' IPB. Therefore, the authors propose the following research hypothesis:

H2: Website informativeness has a positive influence on customers' impulsive buying on e-commerce platforms.

2.3.3 The impact of visual engagement on impulse buying

Chen et al. (2019) posit that a website with strong visual will create a strong impression on customers, increase their perception of the business's honesty and thereby make them return to visit the website more often. Chen et al. (2019) also point out that visual appeal and image affect the intention to engage with online shopping. Research by Liu et al. (2013), Gulfraz et al. (2022) indicate that visual elements related to factors such as "frames, graphics, text, pop-up windows, ... site layout dimensions", "font type, different shapes, colors and photos" ... have an impact on customers' IPB. Based on the above discussions, the authors introduce the hypothesis:

H3: Visual engagement has a positive influence on customers' impulse buying on e-commerce platforms.

2.3.4 The impact of website navigation and search ease on impulse buying

Research by Liu et al. (2013) illustrate that ease of information search on the website and ease of navigation on the website have an impact on customers' IPB. Because ease of search and navigation is related to customers' "ease of use" and "ease of use" has a positive effect on customers' impulse buying (Bressolles et al., 2007). Gulfraz et al. (2022) also demonstrate a positive impact of website navigation and search ease on customers' IPB in the context of customers' shopping on two leading e-commerce platforms in China. Therefore, the authors propose the hypothesis:

H4: Website navigation and search ease have a positive influence on customers' impulse buying on e-commerce platforms.

2.3.5 The impact of trust on impulse buying

In the realm of online shopping, trust reduces uncertainty, making customers feel more secure when purchasing (Klaus, 2013). Due to the potential risks in online shopping, when customers feel distrustful, they will limit sharing personal information, which will affect their shopping process (Ku, 2012; Pandey & Chawla, 2018). Research by Ha & Stoel (2012) also reveal that factors related to privacy/ security of a website affect customers' online shopping intentions. In addition, when a customer has trust in a shopping website, they will spend more time browsing products, thereby increasing their ability to make impulse purchases (Gulfraz et al., 2022). Building on the arguments outlined, the authors propose the hypothesis:

H5: Trust has a positive influence on customers' impulse buying intention on e-commerce platforms.

2.3.6 The impact of convenience on impulse buying

The benefits that make customers engage in shopping through e-commerce platforms are convenience, time and cost savings, variety in product selection, and ease of product comparison (Chen et al., 2019; Pandey & Chawla, 2018). The convenience

factor in online customer experience helps customers to make purchases without being hindered by space and time barriers; therefore, the more e-commerce platforms improve this convenience factor, the more it promotes customers' IPB (Gulfraz et al., 2022). Thus, the authors propose the following research hypothesis:

H6: Convenience has a positive influence on customers' impulse buying on e-commerce platforms.

2.3.7 The impact of enjoyment on impulse buying

Enjoyment refers to the affective aspect of website design. Accordingly, when a website is designed in a way that brings joy to customers during their interactions with the website such as searching, comparing and purchasing products (Gulfraz et al., 2022; Liu et al., 2013). Pandey & Chawla (2018) also suggest that e-commerce platforms need to optimize search engines and create online chat options to increase customer engagement, thereby enhancing customers' enjoyment while shopping online (Pandey & Chawla, 2018) and when customers enjoy the online interactions created by e-commerce platforms, their ability to make impulse purchases is also higher (Gulfraz et al., 2022). Drawing from the arguments above, the authors propose the following hypothesis:

H7: Enjoyment has a positive influence on customers' impulsive buying on e-commerce platforms.

The research model is presented in figure 1.

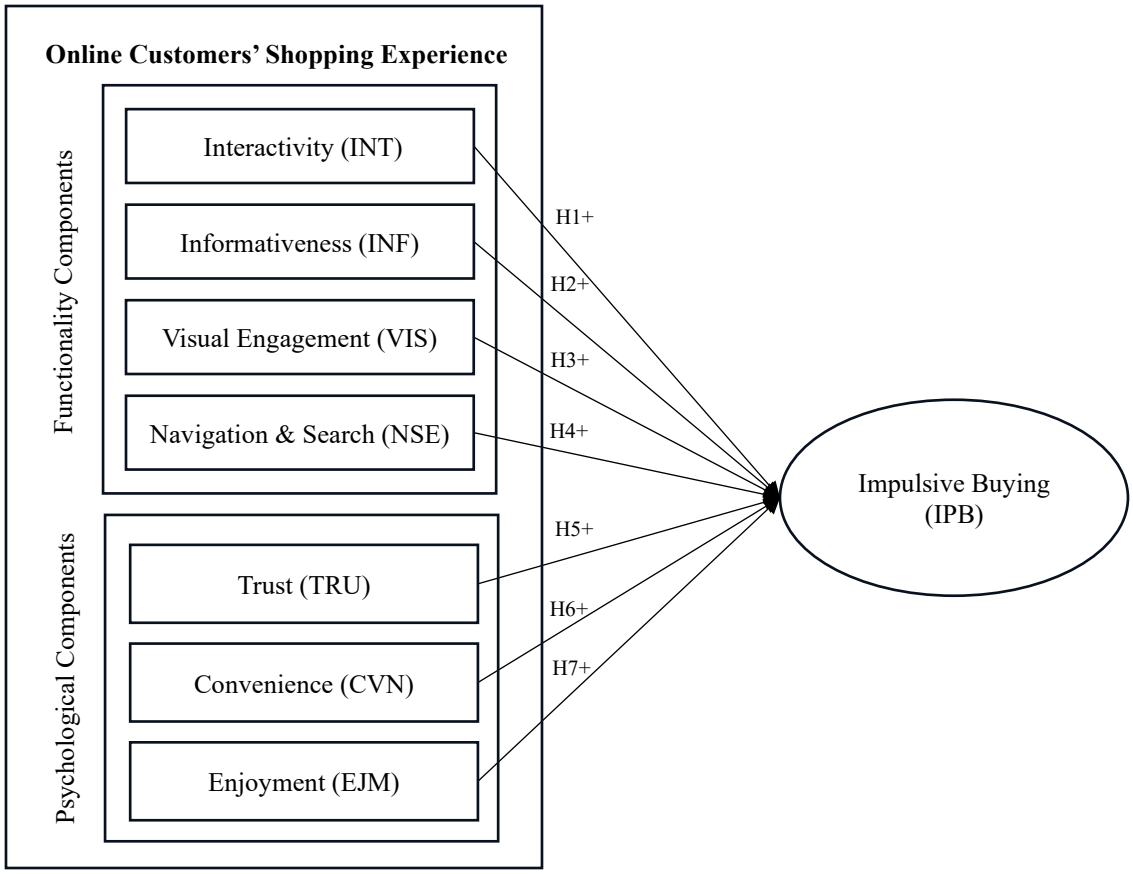


Fig. 1. Conceptual Model

(Source: The authors)

3. METHODOLOGY

3.1 Research Method

This study employs quantitative methods to analyze, test, and evaluate the relationship between various facets of the online shopping experience, encompassing functional components (interaction, information, visual interaction, navigation, and search) and psychological components (trust, convenience, and enjoyment) in relation to impulsive buying behavior. Despite being a relatively straightforward level 1 model, the authors utilize SmartPLS 4 software for its convenience and efficacy in optimizing the data analysis process in two stages: the first stage involves evaluating the measurement model via common coefficients, while the second stage entails testing the initially established hypotheses through bootstrap methods. Prior to executing the official model testing, preparatory data screening and stringent statistical assumption evaluations were conducted to ascertain the generalizability of the results produced.

3.2 Measurement

All scales utilized in this study were inherited from prior studies to ensure dependability. After the scales were modeled, the authors constructed a preliminary questionnaire in English (the original language of the scales), then translated the questionnaire into Vietnamese and adjusted it to be easy to understand and accessible for respondents and used a 5-level Likert scale from (1) Strongly disagree to (5) Strongly agree to collect data.

3.3 Sampling

The major survey participants of the study are Vietnamese residents aged 18-35, residing in significant cities (Hanoi, Ho Chi Minh City...). This target group created an ideal atmosphere for IPB due to their high digital connectivity, preferring digital solutions over traditional face-to-face interactions (Szymkowiak et al., 2021), and their purchasing behavior primarily influenced by entertainment, the need to express themselves and the temptation from short films on social networks (YouNetECI, 2025b). After completing the questionnaire and constructing a survey on Google Form, the authors utilized the random sampling method by delivering the survey to the study participants via email and social networks that focus on young people such as Facebook, Instagram, TikTok... Through the survey, a total of 331 responses were collected, and the data would be filtered for analysis in the next phases.

The total number of observed variables employed in this study is 32, hence the minimal sample size to assure the reliability of the study is 160 (Hair et al., 2010). In addition, Hair et al. (2022) also indicated that the minimum sample size for PLS-SEM analysis should be 10 times the number of routes leading to a latent variable in the model, which in our case was 70 observations. After cleaning the data, deleting incorrect replies (not answering all questions, providing the same answer to all questions, illogical demographic attributes, etc.), 305 valid observations were included in the in-depth study. This number of valid observations ensured the minimum sample size for the study, which enhanced the generalizability and representativeness of the conclusions, while minimizing potential sampling error.

Table 1. Respondents' demographics and behaviors

Demographics	Number of Respondents	Ratio

Gender		
Female	196	64.26%
Male	106	34.75%
Others	3	0.98%
Monthly Income		
Below 5 million VND	229	75.08%
From 5 - below 10 million VND	49	16.07%
From 10 - below 15 million VND	21	6.89%
From 15 million VND	6	1.97%
Yearly spent on online shopping		
Below 2 million VND	93	30.49%
From 2 - below 5 million VND	81	26.56%
From 5 - below 10 million VND	69	22.62%
From 10 - below 15 million VND	25	8.20%
From 15 - below 20 million VND	13	4.26%
From 20 million VND	24	7.87%
Daily online time		
Below 3 hours	110	36.07%
From 3 - below 5 hours	97	31.80%
From 5 - below 7 hours	68	22.30%
From 7 - below 9 hours	23	7.54%
From 9 hours	7	2.30%
Grand Total	**305**	**100.00%**

(Source: The authors)

Table 1 illustrates a notable difference in gender ratio, with female respondents being the majority at 196 individuals, or 64.26% of the overall population. In contrast, the male replies total 106 individuals, representing 34.75%. The predominant segment of the survey participants is from the basic income category, with 229 individuals (representing 75.08%) earning less than 5 million VND. The upper income brackets represent a negligible fraction, with only 6 individuals (1.97%) earning 15 million VND or more. Regarding shopping and internet usage behavior, the survey respondents have a low annual online spending level, mainly under 2 million VND (30.49%) and between 2 and under 5 million VND (26.56%). At the same time, their daily online time was also moderate, with the majority spending less than 3 hours per day (36.07%). This data offers a summary of the background and attributes of the target demographic examined in this research.

4. RESULTS AND DISCUSSIONS

Guided by the Online Customer Experience frameworks by Klaus (2013) and research by Pandey & Chawla (2018), this part summarizes the empirical data and evaluates them in light of those viewpoints. Consistent with the two dimensions OCE:

functionality dimension (interactivity, informativeness, visual engagement, navigation/search ease) and psychological dimension (trust, convenience, enjoyment), we employ the validated measurement model as a basis for assessing the structural routes. Throughout, the discussion highlights how the balance between functional "hygiene" and psychological "motivators" helps explain the observed pattern of effects and their implications for theory and practice.

4.1 Results

4.1.1 Evaluation of the Measurement Model

Table 2 presents the results of the reliability and validity evaluation of the measurement model. The findings indicate that two observed variables, INT1 and INF4, possess external loading factors below 0.7, hence failing to meet quality standards (Hair et al., 2015; Henseler et al., 2015); they will be excluded prior to subsequent study phases. The variance inflation factor (VIF) of the remaining observed variables does not exceed 5, indicating that there is no strong multicollinearity between the independent variables, thereby ensuring the reliability of the model (Hair et al., 2019).

Table 2. Construct reliability and validity

Construct/Items		Outer loadings	α	CR	AVE	VIF
Functionality Dimensions of OCE	**Interactivity** (Gulfraz et al., 2022)		0.768	0.846	0.581	
	INT1: My needs are responded well while shopping on XYZ*	0.680				2.076
	INT2: I get purchase recommendations that match my needs while shopping on XYZ	0.723				2.118
	INT3: While shopping on XYZ, I get online advertisements and promotions customised as per my needs.	0.817				1.657
	INT4: Shopping on EYZ makes it possible to view the product recommendations of other customers.	0.708				1.481
	INT5: The XYZ e-commerce platform feels like it is talking to me personally as a customer.	0.797				1.419
	Informativeness (Gulfraz et al., 2022)		0.813	0.886	0.722	
	INF1: I get rich information on the features and quality of the products while shopping on XYZ.	0.781				1.822
	INF2: I get accurate information on the features of the products.	0.887				1.855

	INF3: I get detailed information about products while shopping on XYZ	0.874				2.127
	INF4: I get sufficient information to complete my transaction on XYZ.	0.677				1.688
	Visual engagement (Gulfraz et al., 2022)		0.793	0.865	0.682	
	VIS1: I can see the product from different angles while shopping on XYZ.	0.885				1.399
	VIS2: I find the screen design of XYZ (i.e., colors, boxes, menus, navigation tools, etc.) is harmonious.	0.777				2.130
	VIS3: The XYZ e-commerce platform is professionally designed and well presented.	0.811				2.044
	Navigation and search ease (Gulfraz et al., 2022)		0.889	0.923	0.750	
	NSE1: I get good navigation facilities of XYZ to search for the information content.	0.849				2.324
	NSE2: I find the user menus of XYZ clearly categorized and well laid out on the screen.	0.890				2.647
	NSE3: I find the organization and sequencing of XYZ understandable and easy to use.	0.879				2.624
	NSE4: The search tools of XYZ enable me to locate products easily.	0.845				2.081
Psychological Dimension of OCE	**Trust** (Gulfraz et al., 2022)		0.894	0.925	0.756	
	TRU1: Shopping on XYZ can be trusted; there are no uncertainties.	0.883				2.262
	TRU2: In general, I can rely on XYZ to keep the promises they make.	0.841				2.409
	TRU3: Shopping on XYZ is reliable.	0.856				2.584
	TRU4: Shopping on XYZ is a trustworthy experience.	0.896				2.668
	Convenience (Gulfraz et al., 2022)		0.913	0.925	0.756	
	CVN1: I find shopping on XYZ to be convenient.	0.880				3.108

	CVN2: I can shop on XYZ at any time.	0.949				3.714
	CVN3: I can do shopping on XYZ being at any place.	0.914				2.938
	CVN4: While shopping on XYZ, I can finish my shopping very quickly.	0.717				2.369
	Enjoyment (Gulfraz et al., 2022)		0.804	0.880	0.710	
	EJM1: I enjoy buying things on XYZ.	0.763				1.704
	EJM2: Shopping on XYZ is a fun way to buy.	0.878				2.017
	EJM3: I enjoy browsing on the XYZ e-commerce platform.	0.882				1.651
Impulsive buying (Verhagen & Van Dolen, 2011)			0.898	0.925	0.710	
IPB1: My purchase on XYZ was spontaneous.		0.837				2.822
IPB2: My purchase on XYZ was unplanned.		0.886				3.477
IPB3: I did not intend to do this purchase on XYZ before this shopping trip.		0.824				2.166
IPB4: Before visiting the XYZ site, I did not have the intention to do this purchase.		0.821				2.328
IPB5: I could not resist to do this purchase on the XYZ site		0.844				2.345

**XYZ is the e-commerce platform that customers shop most often*

(Source: The authors)

Cronbach's Alpha (α), Composite Reliability (CR), and Average Variance Extracted (AVE) are presented in Table 2 following the exclusion of the two observed variables INT1 and INF4. All metrics indicate that the reliability and convergence of the scales employed in the study are valid, with both Cronbach's Alpha (α) and Composite Reliability (CR) exceeding the threshold of 0.7 for acceptable reliability (Nunnally & Bernstein, 1994).. Furthermore, the AVE for all variables is above 0.5 (Hair et al., 2022).

Table 3. Discriminant validity - Fornell-Larcker criterion

	CVN	**EJM**	**INF**	**INT**	**IPB**	**NSE**	**TRU**	**VIS**
CVN	0.870							
EJM	0.487	0.843						
INF	0.405	0.489	0.850					
INT	0.467	0.557	0.628	0.762				
IPB	-0.079	0.355	0.323	0.319	0.843			
NSE	0.679	0.519	0.600	0.594	0.156	0.866		

TRU	0.333	0.522	0.616	0.566	0.417	0.506	0.869	
VIS	0.479	0.495	0.676	0.598	0.227	0.638	0.544	0.826

(Source: The authors)

The Fornell-Larcker criteria, an essential method for assessing the uniqueness of measurement scales, was utilized for the model's constructs. This strategy necessitates that the square root of a construct's Average Variance Extracted (AVE) exceeds its correlations with all other constructs. Table 3 demonstrates that this requirement was consistently satisfied across the model. For example, the AVE square root for INT (0.762) was greater than its greatest connection with any other variable, and a similar trend was seen for INF (0.850), VIS (0.826), NSE (0.866), TRU (0.869), CVN (0.870), EJM (0.843), and IPB (0.843). These findings give strong evidence that the constructs are sufficiently different from one another, hence supporting the discriminant validity of the model (Hair et al., 2022).

Table 4. Discriminant validity - Heterotrait-Monotrait ratio (HTMT) Matrix

	CVN	**EJM**	**INF**	**INT**	**IPB**	**NSE**	**TRU**	**VIS**
CVN								
EJM	0.636							
INF	0.535	0.624						
INT	0.613	0.736	0.810					
IPB	0.109	0.391	0.361	0.357				
NSE	0.784	0.639	0.722	0.735	0.174			
TRU	0.403	0.636	0.724	0.678	0.447	0.579		
VIS	0.634	0.641	0.845	0.797	0.230	0.794	0.632	

(Source: The authors)

The Heterotrait-Monotrait (HTMT) ratios were also examined as an additional metric to guarantee the measurement model's integrity. A score below 0.90 is commonly recognized as a strong sign of good discriminant validity (Hair et al., 2022; Henseler et al., 2015). As indicated in Table 4, all HTMT readings in the present investigation easily fell below this important threshold. The highest observed values, 0.845 for the INF-VIS pair and 0.810 for INF-INT, give solid evidence of the constructs' distinctness. Taken together, these data give solid support for the discriminant validity of the measurement model.

4.1.2 Evaluation of the Structural Model

Table 5. Model summary

Hypotheses	**Structure**	**β**	**T statistics**	**P-value**	**VIF**	**Result**
H1	INT → IPB	0.138	1.830	0.067	2.163	Rejected
H2	INF → IPB	0.102	1.290	0.197	2.448	Rejected
H3	VIS → IPB	-0.034	0.420	0.675	2.313	Rejected
H4	NSE → IPB	0.037	0.333	0.739	2.737	Rejected

H5	TRU → IPB	0.262	3.265	0.001	1.917	**Supported**
H6	CVN → IPB	-0.426	2.858	0.004	1.986	Rejected
H7	EJM → IPB	0.296	4.362	0.000	1.767	**Supported**

(Source: The authors)

The summary of the structural model is illustrated in Table 5. Results demonstrate that trust (TRU) have a significant positive effect on IPB (β = 0.262, p = 0.001), while enjoyment (EJM) also shows a strong positive influence (β = 0.296, p = 0.000), thereby corroborating the hypotheses H5 and H7. Unlike other factors, convenience (CVN) has a significant negative impact on IPB (β = -0. 426, p = 0.004), leading to the rejection of hypothesis H6. This suggests that a high level of website convenience can directly reduce a consumer's desire to make an unplanned purchase.

However, the analysis indicates that there is no impact on IPB from the functionality components of OCE including interactivity (INT), informativeness (INF), visual engagement (VIS), and navigation and search ease (NSE). With p-values greater than 0.05, hypotheses H1, H2, H3 H4 are all rejected. This implies that while these aspects are part of the online customer experience, they do not directly influence a consumer's choice to make an unexpected purchase in this specific situation.

5. DISCUSSION

This study aims to investigate how OCE influences impulsive buying (IPB). The model findings reveal a clear pattern: psychological components have a greater influence than functional ones in causing IPB. Trust and enjoyment are associated with increased IPB, whereas convenience is associated with decreased IPB, implying that "super-fast - super-straight" flows can shift shoppers into a goal-oriented state, reducing time spent browsing and exploring, which is a connection to IPB. However, functionality dimension of OCE has no effect on IPB in this scenario.

Gulfraz et al. (2022)'s study of the Chinese market provides an important reference point. The study surveyed 1,489 customers of two leading e-commerce platforms, Jindong and Taobao, and found a positive relationship between the surveyed elements of OCE (including both functional and psychological aspects) and customers' online impulse buying behavior. This finding is significant when considering the Chinese market context, with a high e-commerce penetration rate of 47% (Arora et al., 2022). Even in a highly developed market where consumers have high expectations, functional excellence can still be a significant source of competitive advantage and a stimulus for IPB. This suggests that at certain stages, functional improvements can still create a sense of novelty, delight, and drive impulse buying decisions.

Compare to Gulfraz et al. (2022), we agree on the importance of the psychological components - trust and enjoyment - as drivers of impulsive buying (IPB). However, while Gulfraz et al. (2022) states that both functional and psychological aspects of the OCE increase IPB, the functional components (interactivity, informativeness, visual engagement, navigation & search ease) in our study do not show any influence, and convenience is linked to lower the impact of IPB. These differences can likely be attributed to the Vietnamese context, described as an emerging market with rapid and strong growth and characterized by a mobile-first market, intense competition, frequent promotions and livestreams, flexible payment methods and concerns about risk and low-quality products. This context is influenced by intense rivalry among leading platforms, particularly the market share contest between Shopee (55%) and TikTok Shop (42%) (YouNetECI, 2025a). Fierce competition has prompted

these platforms to continually innovate to give the greatest user experience. This has pushed functional factors such as ease of navigation, search, visuals and interactivity to a "good enough" threshold, also known as "hygiene factors". Vietnamese customers have become accustomed to a smooth, fast online shopping experience, and consider these features as the basic standards that every e-commerce platform must have. Therefore, these factors are no longer the main driving force to stimulate impulse buying emotions. In this environment, trust - manifested through clear regulations, reliable reviews, and prompt assistance - becomes essential for users to engage in impulsive purchasing. At the same time, enjoyment, derived from elements like minigames and limited time offers, acts as the emotional trigger that influences decision-making.

This study found a counter-intuitive finding: convenience was associated with reduced IPB. This may seem paradoxical, given that convenience is often considered a driver of e-commerce. However, when a platform creates a "super-fast, super-straight" shopping flow, it caters to the needs of utilitarian or goal-oriented shoppers who value efficiency and simplicity. These shoppers know what they want and don't want to waste time. This straight-forward path cuts down on browsing and discovery, which are key behaviors that lead to impulsive decisions. In contrast, traditional impulse buying behavior is often rooted in hedonic browsing, which is the enjoyment of the shopping experience itself (Elgayed & Attia, 2023). Thus, hyper-convenience in Vietnam has become so effective that it inadvertently runs counter to the conditions necessary to stimulate impulsive buying behavior. The real value of convenience in this context may be its ability to build trust by reducing risk and transaction barriers.

6. CONCLUSION

6.1 Implications and contributions

6.1.1 Implications

For e-commerce platforms: The results lead platforms toward a specific mix of priorities: making trust visible at every turn - explicit laws, verified ratings, unambiguous security indicators - while creating for joy rather than mere speed. Keep the rails smooth, of course, but don't over-streamline to the point that buyers stop roaming; well-timed reminders, light gamification, or serendipitous discovery modules can keep the "linger and explore" moments that precede impulse purchase. Functional layers like interaction, informativeness, visual design, and navigation still matter, although mostly as hygiene factors that prevent drop-off. Conceptually, the study sets out a boundary condition for "convenience" (hyper-efficiency can decrease impulsivity) and sharpens a motivators-versus-hygiene architecture that product teams can reuse, coupled with a repeatable analytics pipeline. Furthermore, e-commerce platforms must enhance customer experience to foster positive emotions that promote shopping behavior. Additionally, they should address the genuine shopping needs of customers to prevent the squandering of resources, thereby establishing a sustainable shopping environment.

For online retailers: Online retailers should build trust to make customers feel safe when shopping online by showing complete, accurate product information (price, stock, specs, real photos), making shipping, returns, warranty policies clear, displaying credible reviews, offering fast customer support (live chat or hotline) and resolving problems quickly during checkout and after-sales (returns, refunds, technical help). Furthermore, online retailers can enhance the shopping experience without slowing customers down by implementing gentle "try-now" nudges, offering limited-time promotions, and providing tasteful suggestions, all while keeping the checkout process fast. Adjust strategies by category: hedonic items benefit more

from enjoyable elements, while high-risk items require stronger trust cues. Track the right metrics, such as time before adding to cart, incidental add-to-cart rate, and conversion rate.

6.1.2 Contributions

Theoretically, this study continues to examine the impact of dimensions of online customer experience based on the research model of online customer experience by Klaus (2013), Pandey & Chawla (2018) and the research by Gulfraz et al. (2022) in a new research context .

Practically, this study has proposed several recommendations to e-commerce platforms and online retailers to improve customer experience and create a sustainable shopping environment in the context of shopping in emerging markets like Vietnam.

6.2 Limitations and future research directions

Despite these contributions, this work is susceptible to significant constraints.
(i) The sample size and single-context design restrict the generalizability of the findings.
(ii) The cross-sectional, self-report character of the data enhances the likelihood of common-method bias and restricts causal inference.

(iii) Measurement options for convenience and functional aspects may not completely represent their sub-dimensions (e.g., speed, effort, guidance).

(iv) This study sample had significant differences in gender and income. The imbalance makes it difficult to generalize the results to other demographic groups.

Therefore, future research should consider:

(i) Replicating the study with bigger, more varied, and multi-context samples to increase external validity.
(ii) Incorporating behavioral data (clickstream, field purchases) to decrease technique bias and match reported attitudes with observed behavior.

(iii) Employing experimental or longitudinal approaches to more firmly verify causation.
(iv) Examining possible modifiers (product type, task orientation, trait impulsivity, self-control) and mediated routes (whether functional aspects operate indirectly via trust/ enjoyment).
(v) Decomposing “convenience” into smaller features and evaluating stage-of-journey effects (browse - checkout) to elucidate when and why convenience dampens or enhances impulsive purchase.

(vi) Focusing on adjusting the sample proportions to more accurately reflect the population structure. At the same time, conduct comparative studies on the impact of OCE factors on IPB among target groups with different demographic characteristics.

7. ACKNOWLEDGMENTS

The authors thank to School of Economics and Management, Hanoi University of Science and Technology for creating favorable conditions for their research and supporting the authors to complete this research.

8. FUNDING

This research is funded by Hanoi University of Science and Technology (HUST) under project number T2024-PC-093.

References

Arora, S., Chu, F., Melnikov, S., & Zhang, L. (2022). E-commerce is entering a new phase in Southeast Asia. Are logistics players prepared? , 11. Retrieved from https://www.mckinsey.com/industries/logistics/our-insights/e-commerce-is-entering-a-new-phase-in-southeast-asia-are-logistics-players-prepared

Ashraf, A. R., Thongpapanl, N., & Auh, S. (2014). The Application of the Technology Acceptance Model under Different Cultural Contexts: The Case of Online Shopping Adoption. *Journal of International Marketing, 22*(3), 68-93. doi:10.1509/jim.14.0065

Bleier, A., Harmeling, C. M., & Palmatier, R. W. (2018). Creating Effective Online Customer Experiences. *Journal of Marketing, 83*(2), 98-119. doi:10.1177/0022242918809930

Bressolles, G., Durrieu, F., & Giraud, M. (2007). The impact of electronic service quality's dimensions on customer satisfaction and buying impulse. *Journal of Customer Behaviour, 6*(1), 37-56.

Bressolles, G., Durrieu, F., & Senecal, S. (2014). A consumer typology based on e-service quality and e-satisfaction. *Journal of Retailing and Consumer Services, 21*(6), 889-896. doi:https://doi.org/10.1016/j.jretconser.2014.07.004

Chan, T. K. H., Cheung, C. M. K., & Lee, Z. W. Y. (2017). The state of online impulse-buying research: A literature analysis. *Information & Management, 54*(2), 204-217. doi:https://doi.org/10.1016/j.im.2016.06.001

Chen, C.-D., Ku, E. C. S., & Yeh, C. C. (2019). Increasing rates of impulsive online shopping on tourism websites. *Internet Research, 29*(4), 900-920. doi:10.1108/INTR-03-2017-0102

Chung, K. H., & Shin, J. I. (2010). The antecedents and consequents of relationship quality in internet shopping. *Asia Pacific Journal of Marketing and Logistics, 22*(4), 473-491. doi:10.1108/13555851011090510

Elgayed, G. M., & Attia, S. T. (2023). Online Impulsive Buying Behavior: The Mediating Effect of Browsing on Egyptian Consumers. *Journal of Business and Management Sciences, 11*(1), 34-45. doi:10.12691/jbms-11-1-3

Faqih, K. M. S. (2016). An empirical analysis of factors predicting the behavioral intention to adopt Internet shopping technology among non-shoppers in a developing country context: Does gender matter? *Journal of Retailing and Consumer Services, 30*, 140-164. doi:https://doi.org/10.1016/j.jretconser.2016.01.016

Gentile, C., Spiller, N., & Noci, G. (2007). How to Sustain the Customer Experience:: An Overview of Experience Components that Co-create Value With the Customer. *European Management Journal, 25*(5), 395-410. doi:https://doi.org/10.1016/j.emj.2007.08.005

Gulfraz, M. B., Sufyan, M., Mustak, M., Salminen, J., & Srivastava, D. K. (2022). Understanding the impact of online customers' shopping experience on online impulsive buying: A study on two leading E-commerce platforms. *Journal of Retailing and Consumer Services, 68*, 103000. doi:10.1016/j.jretconser.2022.103000

Ha, S., & Stoel, L. (2012). Online apparel retailing: roles of e-shopping quality and experiential e-shopping motives. *Journal of Service Management, 23*(2), 197-215. doi:10.1108/09564231211226114

Hair, J., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2022). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*.

Hair, J., Sarstedt, M., Matthews, L., & Ringle, C. (2015). Identifying and treating unobserved heterogeneity with FIMIX-PLS: part I – method. *European Business Review, 28*. doi:10.1108/EBR-09-2015-0094

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). Multivariate data analysis. In *Multivariate data analysis* (pp. 785-785).

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review, 31*(1), 2-24. doi:10.1108/EBR-11-2018-0203

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science, 43*(1), 115-135. doi:10.1007/s11747-014-0403-8

Jain, R., Aagja, J., & Bagdare, S. (2017). Customer experience – a review and research agenda. *Journal of Service Theory and Practice, 27*(3), 642-662. doi:10.1108/JSTP-03-2015-0064

Jaiswal, S., & Singh, A. (2020). Influence of the Determinants of Online Customer Experience on Online Customer Satisfaction. *Paradigm, 24*(1), 41-55. doi:10.1177/0971890720914121

Kim, H., & Niehm, L. S. (2009). The Impact of Website Quality on Information Quality, Value, and Loyalty Intentions in Apparel Retailing. *Journal of Interactive Marketing, 23*(3), 221-233. doi:10.1016/j.intmar.2009.04.009

Klaus, P. (2013). The case of Amazon.com: towards a conceptual framework of online customer service experience (OCSE) using the emerging consensus technique (ECT). *Journal of Services Marketing, 27*(6), 443-457. doi:10.1108/JSM-02-2012-0030

Klaus, P. (2014). *Measuring customer experience: How to develop and execute the most profitable customer experience strategies*: Springer.

Ku, E. C. S. (2012). Beyond price: how does trust encourage online group's buying intention? *Internet Research, 22*(5), 569-590. doi:10.1108/10662241211271554

Lemon, K. N., & Verhoef, P. C. (2016). Understanding Customer Experience Throughout the Customer Journey. *Journal of Marketing, 80*(6), 69-96. doi:10.1509/jm.15.0420

Lim, W. M., & Ting, D. H. (2012). E-shopping: An analysis of the uses and gratifications theory. *Modern Applied Science, 6*(5), 48.

Linh, V. (2024). By 2024, Global e-commerce transaction value is estimated to reach 6.3 trillion USD. *Economy & Forecast Review Online*. Retrieved from https://kinhtevadubao.vn/nam-2024-gia-tri-giao-dich-thuong-mai-dien-tu-toan-cau-uoc-dat-63-nghin-ty-usd-29766.html

Liu, Y., Li, H., & Hu, F. (2013). Website attributes in urging online impulse purchase: An empirical investigation on consumer perceptions. *Decision Support Systems, 55*(3), 829-837. doi:https://doi.org/10.1016/j.dss.2013.04.001

Mehrabian, A., & Russell, J. A. (1974). *An approach to environmental psychology*: the MIT Press.

Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric Theory*: McGraw-Hill Companies,Incorporated.

O. Pappas, I., G. Pateli, A., N. Giannakos, M., & Chrissikopoulos, V. (2014). Moderating effects of online shopping experience on customer satisfaction and repurchase intentions. *International Journal of Retail & Distribution Management, 42*(3), 187-204. doi:10.1108/IJRDM-03-2012-0034

Pandey, S., & Chawla, D. (2018). Online customer experience (OCE) in clothing e-retail: Exploring OCE dimensions and their impact on satisfaction and loyalty – Does gender matter? *International Journal of Retail & Distribution Management, 46*(3), 323-346. doi:10.1108/IJRDM-01-2017-0005

Reibstein, D. J. (2002). What attracts customers to online stores, and what keeps them coming back? *Journal of the Academy of Marketing Science, 30*(4), 465-473. doi:10.1177/009207002236918

Rose, S., Hair, N., & Clark, M. (2011). Online Customer Experience: A Review of the Business-to-Consumer Online Purchase Context. *International Journal of Management Reviews, 13*(1), 24-39. doi:https://doi.org/10.1111/j.1468-2370.2010.00280.x

Szymkowiak, A., Melović, B., Dabić, M., Jeganathan, K., & Kundi, G. S. (2021). Information technology and Gen Z: The role of teachers, the internet, and technology in the education of young people. *Technology in Society, 65*, 101565. doi:https://doi.org/10.1016/j.techsoc.2021.101565

Verhagen, T., & Van Dolen, W. (2011). The influence of online store beliefs on consumer online impulse buying: A model and empirical application. *Information & Management, 48*(8), 320-327. doi:https://doi.org/10.1016/j.im.2011.08.001

Verhoef, P. C., Lemon, K. N., Parasuraman, A., Roggeveen, A., Tsiros, M., & Schlesinger, L. A. (2009). Customer Experience Creation: Determinants, Dynamics and Management Strategies. *Journal of Retailing, 85*(1), 31-41. doi:https://doi.org/10.1016/j.jretai.2008.11.001

YouNetECI. (2025a). *Revenue Report of E-commerce Platforms H1/2025*. Retrieved from https://youneteci.com/bao-cao-doanh-thu-cac-san-tmdt-h1-2025/

YouNetECI. (2025b). *Vietnam e-Commerce Intelligence 2025 Report*. Retrieved from PRCA APAC: https://youneteci.com/white-paper-en/

Zhang, M., & Shi, G. (2022). Consumers' Impulsive Buying Behavior in Online Shopping Based on the Influence of Social Presence. *Computational Intelligence and Neuroscience, 2022*(1), 6794729. doi:https://doi.org/10.1155/2022/6794729

Zhu, L., Li, H., Wang, F.-K., He, W., & Tian, Z. (2020). How online reviews affect purchase intention: a new model based on the stimulus-organism-response (S-O-R) framework. *Aslib Journal of Information Management, 72*(4), 463-488. doi:10.1108/AJIM-11-2019-0308