Modeling Purchase Intentions of Gen Z in E-Marketplace: An Empirical Investigation in Vietnam

Ao Thu Hoai[1], Duong Quynh Nga[2], Dang Van My[3],

Abstract

This research investigates how various factors influence Generation Z's intention to make purchases on e-marketplaces in Vietnam. Based on the theory of reasoned action (TRA) and the technology acceptance model (TAM), the study proposes a conceptual model relating to the latest research in this area. The proposed model was validated through survey data gathered from 600 Generation Z individuals in Vietnam who have yet to purchase in an e-marketplace. The collected data was used to perform structural equations modeling to validate the model. The study evaluates eight proposed factors impacting Generation Z's purchase intention using SEM techniques: (1) Subjective Norms, (2) Visibility, (3) Trust, (4) Perceived Risk, (5) Enjoyment, (6) Self-Efficacy, (7) Perceived Usefulness, and (8) Perceived Ease of Use. The findings contribute to refining the online shopping scale for Generation Z in Vietnam and provide empirical support for the TRA and the TAM. Additionally, the study offers management implications to assist e-marketplace providers and marketers in developing effective strategies and enhancing their services and offerings.

Keywords: generation Z, e-marketplace, purchase intention, perceived ease of use, perceived usefulness, Vietnam

Introduction

The Leader Forum (2017) highlights that Vietnam, Thailand, and Malaysia are among the fastest-growing e-commerce markets worldwide. According to Kantar Worldpanel (2017), sales through e-marketplaces surged by 30% over the 12 months of 2017. The "Economy SEA 2019" report by Google and other firms (2019) reveals that Vietnam's e-commerce market reached $5 billion in 2020, marking an impressive growth rate of 81%. Online shopping, particularly on e-marketplaces, has rapidly become a prevalent trend, significantly outpacing traditional shopping habits.

In recent years, the online business landscape in Vietnam has undergone significant transformations. While social media platforms like Facebook and Zalo previously played a crucial role in commerce, and business websites were once the primary channels for buying and selling, the trend has shifted dramatically. Currently, e-marketplaces such as Shopee, Lazada, Tiki, and Sendo dominate the Vietnamese online shopping scene, exhibiting rapid growth and widespread popularity (Khan et al., 2019). This shift is underscored by substantial investments from numerous investors in these e-marketplaces, as businesses compete to influence consumer behavior. As a result, consumers, particularly Generation Z, are increasingly moving away from traditional retail and social media-based shopping towards engaging with e-marketplaces for the purchase of goods and services.

---

[1] Vietnam Aviation Academy, Ho Chi Minh City, Vietnam. Email: aothuhoai@ufm.edu.vn.
[2] Vietnam Aviation Academy, Ho Chi Minh City, Vietnam. Email: quynhnga.duong@gmail.com.
[3] International School of Business, University of Finance and Marketing, Ho Chi Minh City. Email: dvanmy@ufm.edu.vn.
(Corresponding Author)

In 2019, Vietnam's e-commerce market saw a notable shift, marked by the exit of major players like Adayroi and Lotte. Despite these high-profile departures, the sector's appeal remained robust. According to the Vietnam e-commerce white paper (2019), the market experienced its highest growth rate in a decade. E-commerce's significance has grown, with its share of total retail sales reaching 4.2% in 2019, a 0.6% increase from 2018. Online shopping on e-marketplaces surged, with 39.9 million people shopping online in 2019—an 11.8% increase from the previous year and nearly double the number from three years prior. The per capita spending reached $202, up 8.6%. Experts observe that Vietnam's e-commerce landscape is evolving in two key directions: first, major e-commerce giants are intensifying their competition with substantial investments to capture market share; second, a rising number of startups are emerging with innovative technologies, offering services to leading players in the industry.

According to the Top eCommerce Companies report updated by iPrice Insights in Q4 2020, Shopee Vietnam maintains its lead in website traffic with an average of 68.5 million visits per month. It is followed by Thegioididong with 31.4 million visits, Tiki with 22.3 million visits, Lazada with 20.8 million visits, Dienmayxanh with 16.3 million visits, and Sendo with 11.2 million visits per month. On the iOS mobile platform, Shopee Vietnam is the top-ranked app, followed by Lazada, Tiki, and Sendo. On the Android platform, Shopee Vietnam also holds the top spot, with Lazada in second, Sendo in third, and Tiki in fourth. Shopee's robust performance is supported by its parent company, SEA Limited, which saw a 152% increase in revenue in 2019 compared to 2018. Shopee has actively expanded its market presence with strategic initiatives including the launch of the Shopee Live feature in March 2019, a high-profile advertising campaign featuring Cristiano Ronaldo in September 2019, the organization of the Shopee Show in November 2019, and a partnership with Grab for fast delivery in December 2019. Additionally, in early 2020, Shopee Vietnam introduced the Shopee Feed feature to enhance user interaction by allowing content creation and engagement with friends, shoppers, and sellers (Mushtaq et al., 2021).

Additionally, Lazada Vietnam has integrated entertainment into its shopping experience through events like the Lazada Super Party, the Guess the Price gameshow, and the Lazada Music Festival. Although these activities are mainly conducted through mobile applications, which boost Lazada's ranking to second in app users, it still ranks fourth in website traffic. On the other hand, Tiki has adopted a more gradual approach to enhance user experience by introducing the TikiLIVE Livestream feature and investing in a warehouse and fast delivery system. This strategy has yielded positive results, elevating Tiki to third place nationwide in terms of website visits and iOS app usage, according to the iPrice report. Sendo, meanwhile, has concentrated its efforts on attracting new users. Despite its initiatives, the highly competitive e-commerce market has led to a continuous loss of market share to its rivals.

The factors influencing online shopping, mobile commerce, electronic money, and e-commerce have garnered significant attention from managers, organizations, and researchers globally and in Vietnam. Numerous studies have explored these topics across various contexts. For example, Driediger and Bhatiasevi (2019) examined online departmental shopping in Thailand, while Lestari (2019) investigated Generation Z's adaptive e-commerce behavior in Jakarta, Indonesia. Saprikis et al. (2018) focused on mobile shopping behavior in Chile. Research in this field has continued over the years, often focusing on understanding the intention to use mobile shopping apps and their impact on consumer price sensitivity. Studies such as Natarajan et al. (2017) and Belanche et al. (2012) have explored trust and personal factors within the Technology Acceptance Model (TAM) in the context of electronic public services in Spain. Javai et al. (2012)

analyzed factors affecting consumer online shopping behavior, while Gahtani (2011) applied an extended TAM to electronic transaction models in Saudi Arabia. Additionally, Crespo et al. (2009) investigated how perceived risk influences online shopping behavior.

In Vietnam, significant research has been conducted on various aspects of online shopping and e-commerce, receiving considerable recognition. Noteworthy studies include Ha and Nguyen (2019), who examined the impact of trust on online shopping by integrating the Technology Acceptance Model (TAM) and the Theory of Planned Behavior (TPB); Nguyen et al. (2017), who extended behavioral theory to explain M-Commerce usage intentions in Khanh Hoa; and Vu (2017), who reviewed and evaluated consumer electronic payment behaviors, summarizing previous studies and models. Additionally, Nguyen and Pham (2018) explored the factors influencing the intention to use mobile commerce services in An Giang province, identifying key determinants in consumers' electronic payment decisions. As Generation Z (born between 1995 and 2005) becomes a significant consumer demographic, their tech-savvy nature and influence on technology and the Internet are reshaping consumption behaviors. However, while there is extensive research on online consumer behavior in major cities and developed countries, there is a noticeable gap in studies focusing specifically on Generation Z's shopping intentions on e-marketplaces in Vietnam.

Current research in Vietnam predominantly addresses general online shopping behaviors and factors influencing consumer decisions focusing on e-marketplace shopping intentions, especially for Generation Z. Furthermore, while there is considerable international research on Generation Z, Vietnam has yet to produce specific studies on this demographic's online shopping behavior on e-marketplaces. This presents a substantial opportunity for researchers and business leaders to explore and address this emerging field.

Literature Review

Consumption Behavior of Generation Z

Purchase intention refers to a potential customer's readiness to buy a product (Elbeck et al., 2008). It represents the likelihood of a customer deciding to purchase a particular item soon and is influenced by three primary factors: subjective norms, attitude, and perceived behavioral control. Behavioral intentions, as outlined by Ajzen (2002), are shaped by these three components: attitude toward the behavior, subjective norms, and perceived behavioral control. These intentions are the precursors to actual behavior, meaning that retail sales can be seen as the probability of a customer making a purchase. To assess purchase intention, marketers employ predictive modeling techniques that leverage historical data to forecast future outcomes.

Generation Z (also known as Post-Millennials, the iGeneration, or the Homeland Generation) is the demographic cohort following Millennials. This generation is often characterized by its deep familiarity with technology from a young age. Gen Z is a crucial segment in the global economy, comparable in significance to Millennials. In Vietnam, Gen Z represents about 15.6% of the total population, translating to around 15 million individuals (Ao and Nguyen, 2020). Kim et al (2023) compared millennials' and Gen Zs' purchase behaviour during online shopping festivals in Vietnam and they found that the convenience benefit improves the affective commitment of millennials in comparison to Gen Zs. Le and Ngoc (2024) investigated the role of social media peer communication on purchase intentions among Gen Z consumers in Vietnam, and they found that social media peer communication increased online purchase intentions. They found the perceptions of brand quality and preference enhance this association, and the subjective norms

moderate the entire relationship. When the levels of subjective norms of these consumers increase, the effect of social media communication on online purchase intentions is further strengthened. Le et al. (2022) examined how ethical the consumption behavior of Gen Z consumers is and found that these consumers are influenced by family and peers to pay extra for the purchase of pro-environmental and ethical products.

Vo et al (2023) applied the theory of planned behavior online purchase intentions of Gen Z consumers and investigated the moderating role of online trust. Similarly, by extending the technology acceptance model, Nguyen Thi et al. (2022) examined the online repurchase intentions of Gen Y and Z consumers in Vietnam during the post-Covid situation.

Related theories and models

The Theory of Reasoned Action (TRA), developed by Fishbein and Ajzen (1975) in social psychology, posits that individuals make decisions based on rational thought and the systematic evaluation of available information. According to TRA, the most crucial determinant of consumer behavior is behavioral intention rather than attitude alone. Behavioral intentions are influenced by two main factors: attitudes toward the behavior and subjective norms.

The Theory of Risk Perception (TPR), introduced by Bauer (1960), focuses on how perceived risk affects consumer behavior, particularly concerning information technology products and online transactions. Perceived Risk (PR) involves consumers' concerns about potential negative outcomes of a product or service, such as functionality issues, financial loss, time consumption, and lost opportunities. In online transactions, perceived risks include concerns about confidentiality, security, and overall risk during the transaction process.

Theory of Planned Behavior (TPB) and Technology Acceptance Model (TAM): To address the limitations of the Theory of Reasoned Action (TRA), Ajzen (1991) developed the Theory of Planned Behavior (TPB). TPB builds upon TRA by adding a new component—Perceived Behavioral Control—to better predict behavioral intentions and actual behaviors. While TRA posits that attitudes and subjective norms strongly influence behavioral intentions, TPB recognizes that behavioral intentions do not always translate into actions due to factors beyond an individual's control. Perceived Behavioral Control accounts for the extent to which individuals feel they can control their behavior, thus providing a more comprehensive understanding of how intentions lead to actual behavior. The Technology Acceptance Model (TAM), introduced by Davis (1989) and further developed by Bagozzi (1992), focuses on technology adoption and usage. TAM explains how perceived ease of use and usefulness influence users' intentions to accept and use technology. This model highlights that individuals are more likely to adopt technology if they find it easy to use and believe it will enhance their performance or productivity. TAM is widely used to understand and predict technology acceptance in various contexts, including consumer behavior related to technological innovations.

Building on the Theory of Reasoned Action (TRA), the Technology Acceptance Model (TAM) provides a more detailed framework for understanding consumer behavior related to the acceptance and use of technology. TAM identifies two primary factors that influence consumers' attitudes and intentions toward technology:

Perceived Usefulness (PU): Defined as "the degree to which a person believes that using a particular system will enhance their job performance" (Davis, 1989). Essentially, PU reflects the perceived benefits or improvements technology offers to the user's effectiveness or productivity.

Perceived Ease of Use (PE): Defined as "the degree to which a person believes that using a particular system will be free of effort" (Davis, 1989). PE refers to the user's perception of how effortless it is to use the technology.

TAM also acknowledges the influence of external variables (or exogenous variables), such as training, user opinions, and system concepts, which affect PU and PE. Compared to the earlier models, TRA and TPB, TAM is particularly effective in explaining technology acceptance and usage behaviors. Its focus on the practical aspects of perceived usefulness and ease of use makes it a widely applied model for understanding how and why individuals adopt new technologies and services.

The original TAM has certain limitations in conducting consumer acceptance research for technology systems or products and services; specifically, TAM only focuses on the benefits of using technology, ignoring the necessary costs that users have to spend to make the final decision to use or not to use technology (Zeithaml, 1988). According to Van der Heijden (2004), TAM is designed as a research model of ergonomic systems that aims to benefit users, such as increasing task performance. At that time, the joy factor of the benefits of using the product or service was not considered an essential factor. Therefore, the authors extended the original TAM in their studies with the participation of other factors besides the two initial factors: PU and PE. The TAM2 model in the study by Venkatesh and Davis (2000) adds two additional factors to overcome the limitations of the original model, which are voluntary and compulsory. Moreover, Venkatesh and Bala (2008) studied and extended the TAM into the TAM3 model.

According to a study on online grocery shopping in Thailand by Driediger and Bhatiasevi (2019), authors have studied many factors affecting consumers' intention to buy online groceries in Thailand. However, the two factors of Visibility and Perception of Risk are not claimed to impact PU. In another study on measuring the E-commerce adaptive behavior of Gen Z in Jakarta, Indonesia, conducted by Lestari (2019), the study results concluded that individual creativity has a positive impact on attitude but does not affect the intention to accept e-commerce. Personal competence has a positive effect on both attitudes and intentions to use an e-marketplace. PU also has a positive impact on attitudes and intentions to use an e-marketplace. Risk perception harms both attitudes and intentions to use an e-marketplace. Attitudes motivate students to accept e-marketplace.

In a study in Chile on the mobile shopping behavior of consumers by Saprikis et al. (2018), the results show that the factors of Trust, Personal Competence, Relationship, and Enjoyment positively impact PU, thereby positively impacting the intention to shop on the mobile phone of the users. Besides, the creativity factor positively affects Perceived ease of use (PE) and thereby positively affects the intention to shop, while the factor of anxiety has a negative effect on the PU.

A comprehensive analysis of online shopping behavior by Rehman et al. (2011) shows that many factors affect the intention to buy online in Pakistan, based on the extended TAM. The results show that the trust factor positively impacts PU and PE. The personal competency factor also has a positive impact on attitude and consumer purchase intention. Besides, the element of interest also has a positive impact on consumers' purchase intention. In contrast, perceived risk harms consumers' online purchase intention in Pakistan. Belanche et al. (2012) combined trust and personal factors into the TAM in electronic public services; the authors studied many factors affecting the intended behavior of using the only public service in Spain based on the TAM. The

results show that the factors of PU, PE, and trust all positively impact attitude and have a positive impact on intent to use the online service in Spain.

Hypotheses and proposed research models

After studying the overview, the theory of factors affecting the intention to buy on the e-marketplace of Gen Z in Vietnam, the research model and hypotheses are proposed as follows:

Perceived usefulness (PU) and Perceived ease of use (PE). The relationship between PE and PU, PE can influence the PU, has been shown in many studies, including Davis (1989) and King and He (2006). Definitions imply they were initially intended to measure individuals' acceptance of technology in the work environment but have long been studied and tested in various contexts (Yousafazai et al., 2007). According to several studies in different fields, such as mobile commerce (Wu & Wang, 2005), eCommerce (Ha & Stoel, 2009), and online banking (Lai & Li, 2005), has shown PE has a positive effect on the PU to a significant extent. Some studies have shown that PE has a positive impact on purchase intention (IU) (Saadé & Bahli, 2005; Lallmahamood, 2007). The impact of PU on IU has also been positive in a study conducted in Thailand in the education sector (Bhatiasevi & Naglis, 2015). A positive relationship is also supported by research by Klopping and McKinney (2004) in E-commerce. In addition, this relationship was further confirmed in cellular research by Kim and Garrison (2009). In a study on online department store shopping in Thailand by Driediger and Bhatiasevi (2019), all three relationships were confirmed to have a positive effect. PE and PU also positively affect purchase intention

Hypothesis H1: Perceived usefulness positively influences the purchase intention on the e-marketplace of Gen Z in Vietnam

Hypothesis H2: Perceived ease of use positively influences the purchase intention on the e-marketplace of Gen Z in Vietnam

Hypothesis H3: Perceived ease of use positively Perceived usefulness in purchasing goods on the e-marketplace of Gen Z in Vietnam.

Subjective norm (SN) is derived from TRA and considered as "the opinion of those whom he considers important, think he should or should not perform the behavior in question" (Ajzen & Fishbein, 1980). In the context of this research, consumers will purchase on e-marketplace if they feel that their influencer thinks this is the right thing to do. Subjective norm has been shown to have a positive relationship with PU in TAM (Venkatesh & Davis, 2000). Kim et al. (2009) further confirmed this relationship in research regarding US consumer's readiness to adopt mobile technology in the fashion industry. In addition, a meta-study on the positive relationship between SN and PU was also performed by Schepers and Wetzels (2007). Besides, the relationship is again confirmed in a study on online department store shopping in Thailand by Driediger and Bhatiasevi (2019).

Hypothesis H4: Subjective norm positively influences perceived usefulness in purchasing goods on the e-marketplace of Gen Z in Vietnam.

Visibility (VIS). The visibility stems from Rogers' innovation theory (2010). In combination with the TAM, VIS has been investigated by Karahanna et al. (1999). Kurnia and Chien (2003) and Karjaluoto et al. (2010) confirmed VIS positively influences consumer attitudes toward the adoption of information technology over the years. However, all research used primitive TAM that included the attitude towards technology, the factor that was removed in the extended TAM

due to its weak predictive power (Venkatesh & Davis, 2000). In addition, numerous studies confirm a positive relationship between the Visibility of consumers information and PU (Miller & Khera, 2010). Driediger and Bhatiasevi (2019) didn't confirm the above relationship. The studies on the relationship of VIS and PU are still limited, and we aim to close this gap.

Hypothesis H5: Visibility positively affects Perceived usefulness in purchasing on the e-marketplace of Gen Z in Vietnam.

Perceived risk (PR). PR includes several aspects, such as financial risk, social risk, psychological risk, operational risk, rights risk, etc. (Rogers, 2010). For this study, the authors will classify risk perception as a combination of performance, timing, and privacy risk. Lu et al. (2005) have shown that perceived risk negatively affects PU when using online applications. The negative level of perceived risk to PU in online shopping behavior was also confirmed by Crespo et al. (2009). A negative relationship was also reported in research on automated banking for senior US consumers (Rose & Fogarty, 2006).

Hypothesis H6: Perceived risk decreases perceived usefulness in purchasing products on the e-marketplace of Gen Z in Vietnam.

Trust (T). Trust refers to the security of payment when shopping, the confidentiality of personal data, reliability after purchase, and full compliance with the terms and conditions of each store on the e-marketplace. Saprikis et al. (2018) show that in the field of mobile commerce, it has been found that Trust has a positive effect on PU, but with PU, it is not confirmed. Ha and Stoel (2009), also show that online shopping also gives similar results, which means that trust has a substantial impact on PU, but with PE, research still cannot be confirmed. Al-Gahtani (2011) shows that both hypotheses about the above relationship are confirmed: Trust has a positive effect on PU and Trust has a positive effect on PE.

Hypothesis H7: Trust positively affects perceived usefulness in purchasing goods on the e-marketplace of Gen Z in Vietnam.

Hypothesis H8: Trust positively influences the perception of ease of use in purchasing goods on the e-marketplace of Gen Z in Vietnam.

Enjoyment (ENJ). According to Davis et al. (1992), Enjoyment is defined as "The degree to which computer activity is perceived as enjoyable in its own right." In the context of our study, enjoyment can be understood as the extent to which users perceived purchases on the e-marketplace as enjoyable. According to a study by Venkatesh (2000), enjoyment positively impacts PE and PU. Mun and Hwang (2003), in a study on information systems, also found a positive relationship between enjoyment and PE and between enjoyment and PU. Both relationships were also confirmed in a study on teachers' intention to use technology by Teo and Noyes (2011). In Ha and Stoel's (2009) study on eCommerce acceptance in universities, the relationship between enjoyment and PU was also confirmed. In addition, in a study on online grocery shopping in Thailand by Driediger and Bhatiasevi (2019), enjoyment was also confirmed to positively impact PU and PE.

Hypothesis H9: Enjoyment has a positive effect on perceived usefulness in purchase intention on the e-marketplace of Gen Z in Vietnam

Hypothesis H10: Enjoyment has a positive effect on the perception of ease of use in purchase intention on the e-marketplace of Gen Z in Vietnam

Personal Competencies (SE). Personal competencies define an individual's beliefs about his or her ability to act in a particular way and obtain desired results (Bvura, 1977). Applying this concept in E-commerce means that customers feel competent enough to find information, make purchases online, and remain comfortable and safe throughout the process (Wu et al., 2007). In this study, personal competencies describe the extent to which customers feel that going to an e-marketplace to shop is easy for them and does not require much effort. Personal competencies in many previous studies have mainly focused on the consumer's ability to use a computer, which is the user's assessment of how comfortable they are when using the computer (Compeau and Higgins, 1995). Computer usability affects customers' computer anxiety and, in turn, impacts PU and PE. Besides, Rehman et al. (2013) also confirmed the above relationships: Personal competence positively impacts PU and PE. Therefore, the author proposes the following hypothesis:

Hypothesis H11: Personal competence positively affects PU in purchase intention in the e-marketplace of Gen Z in Vietnam.

Hypothesis H12: Personal competence positively influences PE in purchase intention in the e-marketplace of Gen Z in Vietnam.

3. Research method

First of all, based on the theoretical basis and practical problems mentioned above, several main tasks need to be performed in an objective and scientific order and logically arranged. In-depth interviews with survey subjects were carried out through qualitative research. A study with the object of Gen Z was done first to explore the study concepts and adjust and supplement the scale. A study with a group of experts (10 people are behavioral scientists and entrepreneurs in the online market) was continued to confirm and adjust the scale. The qualitative research results redefine the proposed study's conceptual components and adapt and supplement the scale. Also, the use of terminology in the questionnaire should be evaluated to adjust some questions and terms appropriately before conducting formal quantitative research. The research design and the questionnaire for the survey were approved by the university research ethics committee. The informed consent was obtained from all the participants of the research before their participation. A focused purposive sampling was applied to study Gen Z subjects by collecting data from many provinces of Vietnam.

Analysis and Findings

Research sample characteristics

Out of 600 respondents, 59.2% were men, and 40.8% were women participating in direct interviews. Most of the research participants lived in major cities of Vietnam: Ho Chi Minh City had 251 respondents (41.8%), Hanoi had 136 respondents (22.7%); Da Nang had 111 respondents, (18.5%); Can Tho had 50 respondents (8.3%) and other areas 52 respondents (8.7%). In terms of occupations, the sample was quite broad with many different occupations, of which the majority were still students, with a contribution of 43.3% of the sample, 13.7% were in tourism and hotels, 10.8% were office workers, and 10.8% were in technology. Information-Telecommunication accounted for 10.8%, Finance - Banking accounted for 8.2%, Real estate accounted for 4.7%, Freelance business accounted for 3.0%, and other industries accounted for 5.5%. In terms of income, there were 218 respondents (36.3%) without income, respondents with income but under 5 million/month were 229 (38.2%); respondents with income from 5-10 million/month were 119 respondents (19.8%).

Rating Scale

Nine factors were measured, and the Cronbach alpha coefficient was calculated through SPSS software. The findings show that the scales are reliable. All scales had a total variable correlation greater than 0.7 (> 0.3) and Cronbach alpha coefficient greater than 0.9, so all 46 items of all the constructs were satisfactory and accepted.

Using the Principal extraction method, study the Axis Factoring with promax rotation (Gerbing and Erson, 1988) with a factor loading ≥ 0.5 (Hair et al., 1998). Based on the analysis results and the Eigenvalue criterion greater than 1, nine factors were extracted. The Cumulative Eigen Value % indicates that the first nine factors explain 72.292% of the variation in the data. The results show that all scales are satisfied. The model has not changed.

Confirmatory Factor Analysis CFA

There are nine constructs in the research model from EFA. Results of CFA analysis with TLI (0.959) and CFI (0.962) values ≥ 0.9; A GFI (0.884) > 0.8 is acceptable (Bentler and Bonelt, 1980); CMIN/df (1750) ≤ 5 (Hair et al., 2010); RMSEA (0.035) ≤ 0.08 (Steiger, 1990), shows that the research model is satisfactory. In terms of testing converged value, test reliability of the scale, and discriminant value, all meet the standard criteria.

Structural Model SEM

From the analysis through the SEM model, it is confirmed that Trust, Enjoyment, and Personal competencies directly influence PE, thereby affecting Purchase Intention. Besides, it can be asserted that all factors directly influence PU, which affects Purchase intention (IU).

Summarizing the data from the above analysis, we came up with the following outcome model:

With the coefficient $R^2 = 0.569$ of PU, the explanation of the independent variables affects 56.9% of the intermediate variable PU. Similarly, with the coefficient $R^2 = 0.503$ of PE, explaining the independent variables affects 50.3% of the intermediate variable PE. Finally, $R^2 = 0.438$ of the IU variable explains the 43.8% impact from the independent variables to the dependent variable Purchase intention of gen Z in Vietnam.
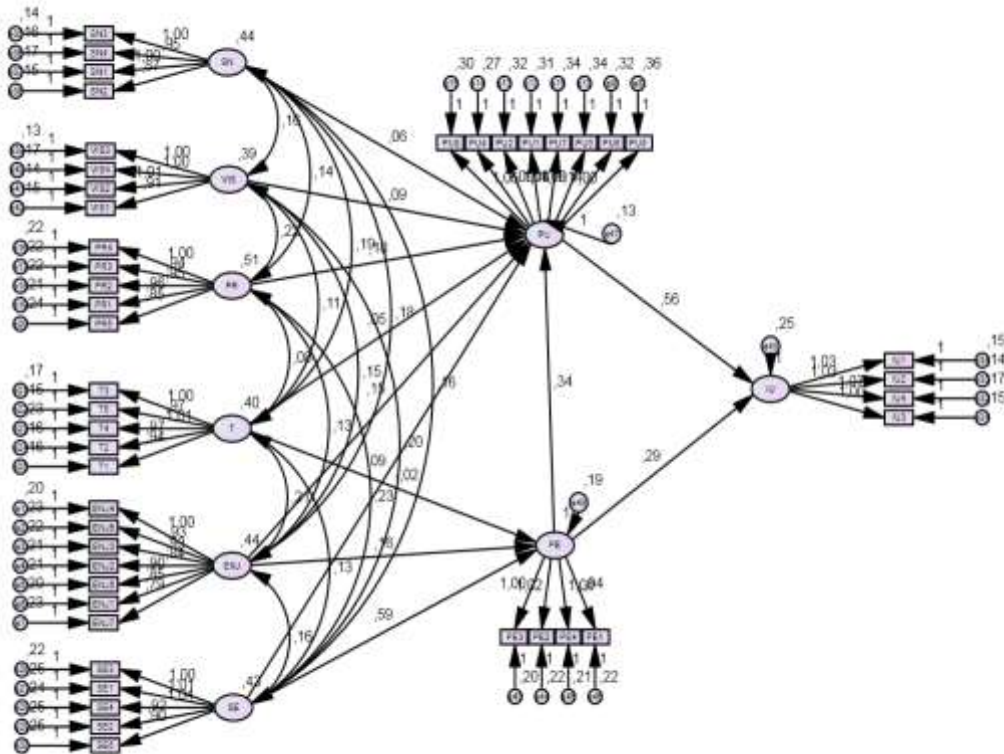
Figure 4. Analysis result of the linear structural model

Conclusions and Management Implications

The summary of the findings is presented in Table 4. The research results show that PU and PE have a positive influence on the intention to purchase an e-marketplace (IU). PE also has a positive impact on PU. Factors such as VIS, ENJ, and PR were found to have a significant effect on PU. Furthermore, factors such as ENJ and SE were found to have a significant impact on PE. Trust was not found to have any effect on PU and PE in our study. Similarly, SN did not influence PU and SE did not have an effect on PE.

Table 4. Hypothesis test results

Hypotheses	Relationship	Standardized beta	p-value	Results
H1	PU→IU	0.454	***	Accepted
H2	PE →IU	0.266	***	Accepted
H3	PE →PU	0.468	***	Accepted
H4	SN →PU	0.069	0.083	Reject

H5	VIS →PU	0.145	*	**	Accepted
H6	PR →PU	-0.146	*	**	Accepted
H7	T →PU	0.056	0.170		Reject
H8	T →PE	-0.016	0.715		Reject
H9	ENJ →PU	0.237	*	**	Accepted
H10	ENJ →PE	0.162	*	**	Accepted
H11	SE →PU	0.106	0.058		Reject
H12	SE →PE	0.632	***		Accepted

Implications

For the purchasing intention in the e-marketplace of Gen Z in Vietnam, the PE and PU are fundamental. Improve PU through enhanced visibility (VIS). Study findings show that consumers evaluate that visibility significantly impacts PU on the e-marketplace of Gen Z in Vietnam. Therefore, businesses should focus on increasing Strategies to influence the surrounding environment on Gen Z. To improve the quality of this activity, businesses need to focus on a few key points as follows: (1) businesses need to focus on increasing the visibility, the popularity of purchases on the e-marketplace in public places, and famous places that consumers can observe. The purpose is not only to increase users, but also to help Gen Z see that many consumers are buying on the e-marketplace, thereby increasing the perceived usefulness of the e-marketplace of Gen Z. in Vietnam; (2) businesses need to increase communication, focusing on consumers who have a significant influence on Gen Z: family members, friends and acquaintances, people that Gen Z feels essential, people who have much influence on the behavior of Gen Z. For example, these people can be public figures (KOLs) who influence Gen Z, or simply influencers on the social network (Influencer). These KOLs often have a powerful impact on the behavior, especially of the current Gen Z in Vietnam.

In addition, friends and relatives are also the people who have a significant influence on the behavior of Gen Z. Therefore, businesses should focus on affiliate marketing programs with referral commissions. Special offers so that those who know or have used the e-marketplace will recommend it to their friends and relatives, thereby attracting attention and enhancing the perceived usefulness of the e-marketplace of Gen Z in Vietnam. In addition, loyalty programs also help users refer friends and relatives to join the e-marketplace. Several Vietnamese e-marketplaces have been implementing perfect solutions, focusing on entertainment, diary entries, and bonus games for the users to introduce their friends and relatives to join the exchange, thereby enhancing the purchase intention on the e-marketplace of Gen Z in Vietnam. In addition, businesses need to strengthen communication strategies. The marketing process must be flexible in applying communication channels to convince the most customers; it is essential to include influencers to reach the audience effectively, as experts and experienced consultants say. In addition, businesses need to focus on marketing activities and set up events that attract many participants to enhance exchanges with loyal customers and share good experiences with the products of those who know how to participate.

Enhancing PU through reducing the PR on the e-marketplace of gen Z in Vietnam, Perceived risk is critical. Study results show that consumers assess that risk perception has a significant impact on the purchasing intention in the e-marketplace of Gen Z in Vietnam. Therefore, businesses should focus on increasing strategies to influence Gen Z's perceived risk. Managers need to focus on a few key points as follows:

(1) Managers need to focus on improving the safety of payment when buying products on the e-marketplace. Insecure payment is one of the main obstacles that make Gen Z undecided about buying products on the e-marketplace, as it can lead to loss of money or disclosure of payment information. Therefore, managers should promote banking linkages, build payment systems to improve security and safety, and at the same time communicate so that users are aware of that safety.

(2) Managers need to focus on the security of personal information when making purchases on the e-marketplace. Enterprises need to improve the appropriate security mode in transactions with customers and statistics on unusual activities and transactions arising in the system. Businesses should proactively set technical requirements for the user to use strong passwords during transactions to contribute to improving information security and preventing illegal intrusion and appropriation activities. Regulations on classification and control of internal information users are encouraged to be proactive in protecting their data, and detailed notice to the user about the reason and purpose of use when the business collects information. Instruct and warn users on how to identify suspicious behavior on the website so they can quickly respond if something goes wrong. Businesses need to set up privacy rights for customers through personal accounts to determine for themselves what information needs to be protected, what the information to allow or not to allow access and help them see the information security process to ensure that information is not leaked. It is necessary to improve the transportation system to ensure on-time delivery when buying goods on the e-marketplace because most consumers, especially Gen Z, always have the mentality of wanting to receive goods as soon as possible. Enterprises can expand their association with transport units, strengthen management and operational constraints, and develop more self-operated delivery units. One essential thing is that businesses need to focus on improving the quality of goods when buying goods on the e-marketplace. Enterprises must improve product quality and focus on customer care and after-sales to meet and retain customers, especially Gen Z in the current era of technology.

Enhance PU and PE through enhancing Enjoyment (ENJ). Study findings show that consumers assess that enjoyment significantly impacts PU and PE of the e-marketplace of Gen Z in Vietnam. Therefore, businesses should focus on increasing strategies to improve Gen Z's enjoyment. Managers need to focus on a few key points: (1) Buying goods in an e-marketplace will make Gen Z feel happy because of the benefits it brings. This benefit can come from buying goods at a cheaper price, more convenient shipping, not having to spend many shipping fees, and especially being able to choose many goods, compare and order quickly and without wasting time going out. (2) Buying goods on the e-marketplace will make Gen Z feel comfortable when buying; (3) Buying goods on the e-marketplace will make Gen Z passionate and excited. For example, businesses can launch large discount packages to help Gen Z buy goods at meager prices, utterly free shipping programs, discount codes, and coin-back programs to help US consumers feel very excited when buying on the e-marketplace.

Enhancing PE through Improving Personal Competencies (SE). For Gen Z's PE towards e-marketplace in Vietnam, personal competencies are very important. The study results show that personal competencies have a significant impact on the PE of Gen Z in the e-marketplace in Vietnam. To improve perceived ease of use, managers need to focus on a few key points: (1) guide people to acquire the necessary knowledge and skills to make purchases on e-marketplaces easily. Managers can build a more straightforward, accessible shopping interface and fastest payment so that Gen Z can buy only with essential knowledge of e-marketplace; (2) the purchase process needs to be the most streamlined, and the customer's selection and evaluation of products are also the fastest.

Limitations

Although the study has significant theoretical and practical contributions, some limitations of the study are still unavoidable. Some of the following limitations of the study are mentioned below: Firstly, the study sample was selected by the purposive sampling method which is a form of non-probability sampling. Although it is guaranteed according to the theory of sampling, the generalizability of the study is not high. Secondly, this study only considers a few essential factors; in addition to these factors, there can be many other factors affecting the consumer's purchase intention that have not been mentioned. It is expected that there will be more studies in the future to clarify the relationship in the model further. Thirdly, this study only considers the direct impact of PU and PE on purchase intentions without considering other important factors that may have on the purchase intention in the e-marketplace of Gen Z in Vietnam.

References

Ajzen, I. (1991). The theory of planned behavior. Organ. Behav. Human Decis. Process. 50, 179-211.

Ajzen, I. (2002). Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior. Journal of Applied Social Psychology, 32(4), 665–683. https://doi.org/10.1111/j.1559-1816.2002.tb00236.x

Ajzen, I., Fishbein, M. (1975). Belief, Attitude, Intention and Behavior: An Introduction to Theory and research. Addison-Wesley, Reading, MA.

Ajzen, I., Fishbein, M. (1980). Understanding Attitudes and Predicting Social Behavior, 1 ed. Prentice-Hall, Englewood Cliffs, NJ

Al-Gahtani, S.S. (2011). Modeling the electronic transaction's acceptance using an extended technology acceptance model. Applied Computing and Informatics, Volume 9, Issue 1, January 2011, Pages 47-77

Ao, H. T. & Nguyen, C. V. (2020). The Reaction of Vietnam's Generation Z to Online TV Advertising. Journal of Asian Finance, Economics and Business, 7(5), 177-184 https://doi.org/10.13106/jafeb.2020.

Bauer, R. (1960). Consumer behavior as risk-taking. In Dynamic marketing for a changing world. Hancock, R. (ed.), Chicago: American Marketing Association, pp. 389-98.

Belanche, D., Casaló, L.V., Flavián, C. (2012). Integrating Trust and personal values into the Technology Acceptance Model: The case of e-government services adoption. Cuadernos de Economía y Dirección de la Empresa Volume 15, Issue 4, October–December 2012, Pages 192-204. Https://doi.org/10.1016/j.cede.2012.04.004

Chien, A.W, Kurnia, Sherah; von Westarp, Falk, (2003). The Acceptance of Online Grocery Shopping. BLED 2003 Proceedings. 52. https://aisel.aisnet.org/bled2003/52

Compeau, D., & Higgins, C. (1995). Computer self-efficacy: Development of a measure and initial test. MIS Quarterly, 19, 189-211. doi:10.2307/249688

Crespo, Á. H., del Bosque, I. R., & de los Salmones Sánchez, M. M. G. (2009). The influence of perceived

risk on Internet shopping behavior: a multidimensional perspective. Journal of Risk Research, 12(2), 259-277

Davis, F. (1989). Perceived Usefulness, Perceived Ease of use, and User Acceptance of Information Technology. Journal of Information Systems and Technology Management, 14(1)., Management Information System Quarterly, 13(3), 319-340

Davis, F.D., Bagozzi, R.P., Warshaw, P.R., (1992). Extrinsic and intrinsic motivation to use computers in the workplace. J. Appl. Social. Psychol. 22 (14), 1111–1132.

Driediger, F., Bhatiasevi, V. (2019). Online grocery shopping in Thailand: Consumer acceptance and usage behavior. Journal of Retailing and Consumer Services. https://doi.org/10.1016/j.jretconser.2019.02.005

Google, Temasek, Bain & Company (2019). e-Conomy SEA

Ha, N. T., Nguyen, T. D. (2019). Factors affecting online shopping intention of Vietnamese consumers: An extended study on the theory of planned behavior. Journal of Economics and Business, Volume 32, Issue 4, 2016, pp. 21-28.

Ha, S., Stoel, L. (2009). Consumer e-shopping acceptance: Antecedents in a technology acceptance model. Journal of Business Research 62(5):565-571. DOI: 10.1016/j.jbusres.2008.06.016

Hair, J., Black, W., Babin, B., and Anderson, R. (2010). Multivariate data analysis (7th ed.), Prentice-Hall, Inc. Upper Saddle River, NJ, USA.

Kantar Worldpanel (2017). Vietnam's most chosen brand owners 2017. https://www.kantarworldpanel.com/vn

Karahanna et al. (1999). Information Technology Adoption Across Time: A Cross-Sectional Comparison of Pre-Adoption and Post-Adoption Beliefs. Management Information System, quarterly 23(2):183-213. DOI: 10.2307/249751

Karjaluoto, H., Koivuma ̇ki, T. and Salo, J. (2003). Individual differences in private banking: empirical evidence fromFinland. Proceedings of the 36th Hawaii International Conference on System Sciences (HICSS), Big Island, Hawaii, p. 196.

Khan, T. I., Kaewsaeng-on, R., & Saeed, I. (2019). Impact of workload on innovative performance: Moderating role of extrovert. Humanities & Social Sciences Reviews, 7(5), 123-133.

Kim, W. B., Xie, J. & Choo, H. J. Role of perceived benefits of online shopping festival in Vietnam: Differences between millennials and generation Z. J. Retail. Consum. Serv. 75, 103530. https://doi.org/10.1016/j.jretconser.2023.103530 (2023).

Klopping, I.M. and McKinney, E. (2004) Extending the Technology Acceptance Model and the Task-Technology Fit Model to Consumer E-Commerce. Information Technology Learning and Performance Journal, 22, 35-48.

Lai, V., Li, H. (2005). Technology acceptance model for internet banking: an invariance analysis. Information & Management, Volume 42, Issue 2, January 2005, Pages 373-386.

Lallmahamood, M. (2007). An Examination of Individual's Perceived Security and Privacy of the Internet in Malaysia and the Influence of This on Their Intention to Use E-Commerce: Using an Extension of the Technology Acceptance Model. Journal of Internet Banking and Commerce, 12, 1-26.

Le, T.-M.H. and Ngoc B.M. (2024). Consumption-related social media peer communication and online shopping intention among gen Z consumers: A moderated-serial mediation model Computers in Human Behavior, 153 (2024), Article 108100, 10.1016/j.chb.2023.108100

Le, T. D., Tran, H. C., & Hoang, T. Q. H. (2022). Ethically minded consumer behavior of Generation Z in Vietnam: The impact of socialisation agents and environmental concern. Cogent Business & Management, 9(1). https://doi.org/10.1080/23311975.2022.2102124

Lestari, D. (2019). Measuring eCommerce adoption behaviour among gen-Z in Jakarta, Indonesia. Economic Analysis and Policy. https://doi.org/10.1016/j.eap.2019.08.004

Lu, J., Yu, C.-S., & Liu, C. (2003). Learning style, learning patterns, and learning performance in a WebCT-based MIS course. Information & Management, 40, 497-507.

Miller, J., Khera, O. (2010). Digital Library Adoption and the Technology Acceptance Model: A Cross-Country Analysis. Electronic Journal of Information Systems in Developing Countries 40(6):1-19. DOI: 10.1002/j.1681-4835. 2010.tb00288.x

Mushtaq, R., Jabeen, R., Begum, S., Khan, A., & Khan, T. (2021). Expanded job scope model and turnover intentions: A moderated mediation model of Core-Self Evaluation and job involvement. Management Science Letters, 11(5), 1473-1480.

Natarajan, T., Balasubramanian, S.A., Kasilingam, D.L. (2017). Understanding the intention to use mobile shopping applications and its influence on price sensitivity. Journal of Retailing and Consumer Services, Volume 37, July 2017, Pages 8-22. https://doi.org/10.1016/j.jretconser.2017.02.010

Nguyen, D. Y. O., Pham, T. B. U. (2018). Attitudes towards online advertising and consumer intention to continue buying: a study in the FMCG industry. Journal of Science Open University Ho Chi Minh City, 60(3), 59-7559.

Nguyen, H. K., Le. N. H., Ho, H. T. (2017). Social motivation in online social shopping. Science & technology development journal: economics – law and management, Vol 1, No Q5 -2017

Nguyen Thi, B., Tran, T. L. A., Tran, T. T. H., Le, T. T., Tran, P. N. H., & Nguyen, M. H. (2022). Factors influencing continuance intention of online shopping of generation Y and Z during the new normal in Vietnam. Cogent Business & Management, 9(1). https://doi.org/10.1080/23311975.2022.2143016

Rose, J. D., & Fogarty, G. (2006). Determinants of perceived usefulness and perceived ease of use in the technology acceptance model: senior consumers' adoption of self-service banking technologies. Paper presented at the 2nd Biennial Conference of the Academy of World Business, Marketing & Management Development, , Paris, France, Vol 2, No 1

Saadé, R., & Bahli, B. (2005). The impact of cognitive absorption on perceived usefulness and perceived ease of use in online learning: An extension of the technology acceptance model. Information & Management, 42(2), 261-386.

Saprikis, V. et al. (2018). Mobile Shopping Consumers' Behavior: An Exploratory Study and Review. Journal of Theoretical and Applied Electronic Commerce Research 13(1):71-90. DOI: 10.4067/S0718-18762018000100105.

Schepers, J., & Wetzels, M. (2007). A meta-analysis of the technology acceptance model: Investigating Subjective norm and moderation effects. Information & Management, 44, 90-103. doi:10.1016/j.im.2006.10.007

Tirtiroglu, E., & Elbeck, M. (2008). Qualifying Purchase Intentions Using Queueing Theory. Journal of Applied Quantitative Methods, 3(2), 167–178.

Venkatesh, V., Bala, H. (2008). Technology Acceptance Model 3 and a Research Agenda on Interventions. Decision Sciences 39(2):273-315. DOI: 10.1111/j.1540-5915.2008. 00192.x

Venkatesh, V., Davis, F (2000). A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies. Management Science 46(2):186-204. DOI: 10.1287/mnsc.46.2.186.11926

Vu, V. D. (2017). Research model of factors affecting consumers' decision to use electronic payment methods. Industry and Trade magazine, 07/2017

Wu, J.H., Wang, S.C. (2005). What Drives Mobile Commerce? An Empirical Evaluation of the Revised Technology Acceptance Model. Information & Management 42(5):719-729. DOI: 10.1016/j.im.2004.07.001

Yousafzai, S.Y., Foxall, G., Pallister, J. (2007). Technology acceptance: A meta-analysis of the TAM: Part 1. Journal of Modelling in Management 2(3). DOI: 10.1108/17465660710834453.