Factors Affecting Consumers' Purchasing Decisions on Shopee in Hanoi, Vietnam

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Abstract

This study aims to determine the factors affecting the shopping decision of Shopee consumers in Hanoi. Research data was collected from 479 consumers. The method of exploratory factor analysis EFA, multiple regression analysis, and testing the difference in consumers' shopping decisions on Shopee in Hanoi are shown. The research results have shown that perceived risk, usefulness, enjoyment, trust, price expectation, ease of use, and sociability influence consumers' decision to continue purchasing on Shopee. Perceived usefulness and perceived risk have the most significant impact on online purchasing decisions. The article also proposes recommendations to improve consumers' buying decisions on Shopee.

Keywords: Purchase decision; Consumer behavior; online shopping; purchase on Shopee; Hanoi.

1. Introduction

E-commerce sells goods and services electronically to facilitate the exchange of detailed information between buyers and sellers. Online shopping has become an integral part of the business. Online shopping refers to a consumer's shopping behavior in an online store or website used to make an online purchase (Monsuwe et al. 2004).

In the era of Industrial Revolution 4.0, e-commerce has developed very rapidly in the world and Vietnam. According to the report on Vietnam E-commerce Index (VETICA, 2018), in the past few years, the online retail model in Vietnam has had a substantial growth rate and is one of the fastest-growing sectors in the world. The area with the highest e-commerce growth rate was 35% in 2018 (Vietnam's e-commerce growth rate reached 25%). In 2019, the country had 39.9 million people participating in online shopping, an increase of 11.8% compared to 2018 and nearly doubled after only three years. Online shopping value per capita reached 202 USD, up 8.6%.

2. Literature Review

Research on factors affecting online shopping behavior by Sandra Forsythe et al. (2006). The author has researched and built a scale of beneficial elements in online shopping

and proposed four factors affecting online shopping decisions: Convenience, product choice, shopping comfort, and shopping enjoyment. Based on studying the online shopping behavior of consumers in Delhi by Dipti Jain et al. (2014), the author used the TAM model to study the online shopping behavior of consumers in Delhi. In addition to the perceived usefulness and ease of use, the author has added to the TAM model factors, including Perceived risk and Perceived enjoyment. In addition, analyzing the factors affecting the online shopping behavior of consumers in Can Tho city by Nguyen Thi Bao Chau and Le Nguyen Xuan Dao (2014), the elements of trust, the variety of merchandise selection, price, site responsiveness, comfort, convenience, time risk factors, product risk, financial risk consumers' online shopping decisions. Research shows that the Comfort factor has the most crucial role in online shopping decisions. The two groups of subjects who have never shopped and have had online shopping experiences have differences in online shopping behavior, the two groups are strongly influenced by the factor of diversity in product selection, and this is the factor that distinguishes two groups of online shoppers. Research on the relationship between online service quality, online shopping trust, and intention by Vu Thi Tuong Vi (2017) analyzed the impact of factors of online service quality on customer confidence. They are measuring the influence of faith on meaning in online shopping. The study has synthesized the elements: Aesthetic interface, technology, and financial safety in online service quality affecting online shopping trust and will. They are exploring differences between customer groups regarding trust relationships with online shopping intention.

Based on the research model of Nguyen To Uyen (2016), Le Kim Dung (2020); Lee, Shyh-Hwang, and Hoang Thi Bich Ngoc (2010); Dipti Jain et al. (2014); Anders Hasslinger et al. (2007); Siriporn Thananuraksakul (2007), the author proposes a research model including seven factors affecting the purchasing decision on Shopee of consumers in Hanoi.

Hypothesis H1: Usefulness positively impacts consumers' purchasing decisions on Shopee in Hanoi.
Hypothesis H2: Ease of use positively impacts consumers' purchasing decisions on Shopee in Hanoi.
Hypothesis H3: Enjoyment positively affects consumers' purchasing decisions on Shopee in Hanoi.
Hypothesis H4: Risks have a negative impact on consumers' purchasing decisions on Shopee in Hanoi.
Hypothesis H5: Trust positively impacts consumers' shopping decisions on Shopee in Hanoi.
Hypothesis H6: Sociability influence positively impacts consumers' shopping decisions on Shopee in Hanoi.
Hypothesis H7: Price expectations positively affect consumers' shopping decisions on Shopee in Hanoi.

3. Methodology

Factors affecting consumers' purchasing decisions on Shopee; The person with a Shopee account has purchased on Shopee.

Sampling method and sample size: Through direct interview technique with sample size n = 476.

According to Nguyen Dinh Tho (2011), to use EFA, we need a large sample size. The problem of determining the right sample size is a complex one. They are usually based on experience. In EFA, the sample size is generally determined based on (1) the minimum size

and (2) the number of measurement variables included in the analysis. Hair et al. (2006) suggested that to use EFA, the sample size should be at least 50, preferably 100, and the ratio of observations/items should be 5:1. For example, 1 Measurable variable needs a minimum of 5 observations, preferably 10:1 or more. According to this formula, with 37 observed variables, the research sample of this topic should have n = 5 x 35 = 175 observations. To effectively enhance respondents' social shopping experience results, the study used an online survey to collect data and focused on Shopee users in Hanoi. Online questionnaire created on Google.

This questionnaire link is sent to the author's Shopee friends who are knowledgeable and interested in shopping through social networks to participate in the survey. A total of 500 survey participants were received, of which 06 were invalid, and 17 were not the right respondents, so they were excluded. The total number of valid responses obtained was 479 votes.

3. Results

The thesis uses SPSS 22.0 software to assist in data analysis and solve research objectives. The scales in the research model are built by assessing the scale's reliability by Cronbach's Alpha analysis, testing the scale by exploratory factor analysis EFA, multiple regression analysis, and testing the hypotheses of the research model at the 5% significance level.

3.1. Analyze the reliability of the scale using Cronbach's alpha coefficient

From Table 1, we can see that Cronbach's alpha coefficient of the components of the scale of benefits is all good (> 0.6), and the correlation coefficient of the sum of the minor factors is also greater than 0.3. Therefore, we use these 37 variables in exploratory factor analysis.

Table 1. *Results of Cronbach's Alpha analysis*

No	Variables	Code	Number of variables	Eliminated variable	Cronbach's Alpha
1	Usefulness	PU	5		0.778
2	Ease of use	PEU	5		0.776
3	Enjoyment	PE	4		0.752
4	Risks	PR	5	1	0.643
5	Trust	TR	4		0.809
6	Sociability	SN	4		0.677
7	Price expectation	PRI	5	1	0.736
8	Buying decision	BD	5		0.825

Source: *Author's calculation*

The first-time evaluation results of the scales' reliability (Table 1) show that PEU4 and PR5 have variable-total correlation coefficients less than 0.3, so these variables are excluded from the scale and conducted.

The results of the second reliability evaluation of the scales (Table 1) show that all scales have Cronbach's Alpha reliability greater than 0.6 (the smallest is Cronbach's Alpha scale of risk perception = 0.655), and the variable-total correlation coefficient is more significant than 0.3. Therefore, all 33 observed variables of the scales satisfy the conditions for exploratory factor analysis.

3.2. Factor analysis explores independent variables

The Principal Component method with Varimax rotation used according to Eigenvalue criteria greater than one and observed variables with load factor less than 0.5 will be excluded. The results of the second EFA analysis (Table 2) showed that the KMO index = 0.787 with the sig value = 0.005, proving that the research data is suitable for exploratory factor analysis. At the matter of Eigenvalue = 1,016, the extracted variance is 69.385% (greater than 50%), and we get seven groups of factors. Twenty-eight observed variables were removed into seven groups of elements; simultaneously, all observed variables extracted into aspects had standard factor loading weights more significant than 0.5, and all observed variables reached the same level.

Table 2. *Results of EFA analysis*

No	Variables	Factors						
		1	2	3	4	5	6	7
1	PU4	.736						
2	PU2	.926						
3	PU3	.802						
4	PU5	.897						
5	PU1	.842						
6	TR1		.947					
7	TR2		.939					
8	TR3		.922					
9	TR4		.914					
10	PEU1			.954				
11	PEU5			.931				
12	PEU3			.910				
13	PEU2			.893				
14	PE4				.937			
15	PE3				.917			
16	PE1				.896			
17	PE2				.799			
18	PRI3					.809		
19	PRI2					.899		
20	PRI1					.897		
21	PRI4					.827		
22	PR4						|-.837|	
23	PR1						|-.824|	
24	PR2						|-.771|	
25	PR3						-.756|	
26	SN2							.966
27	SN3							.923
28	SN4							.913
	Eligenvalues	9.042	3.764	3.242	2.017	2.725	2.620	2.344
	Extracted variance	0.910	0.950	0.867	0.853	0.841	0.723	0.798

Source: *Author's calculation*

The results of exploratory factor analysis by principal component extraction and Varimax rotation presented to show that: KMO index = 0.969 with sig value = 0.005, proving that the research data is suitable for factor analysis. At the value of Eigenvalue = 3.986, the extracted variance is 79.719% (the condition is more excellent than 50%), and we get a group of factors. 05 observed variables were pulled into a group of factors, and all observed variables extracted into the elements had standard factor loading weights more significant than 0.5. All observed variables reached the highest standard distinguish.

3.3. Multiple regression analysis

Based on the results of linear regression analysis presented in Table 4, the model, including seven independent factors, including PE, PEU, PU, PR, TR, PRI, and SN, best fits the coefficients. Adjusted R^2 reached 68.4%, and the independent factors included the model entirely, with the ability to explain the dependent aspect was 68.4%.

Table 4. *R^2 square results*

Model	R	R^2	R^2 adjust	Standard deviation of estimate error	Durbin-Watson
1	.943a	.703	.795	.65137	2.600

Source: *Author's calculation*

The results of testing the fit of the variables included in the model by ANOVA show that: The model has a test value of F = 97,649 with statistical significance (Sig = 0.000 is less than 0.05).

That is, hypothesis H0: the independent variables with no relationship with the dependent variable is rejected. Therefore, the above model fits the data.

The results of determining the regression coefficients of the independent variables are shown in Table 5, indicating that: The model reached statistical significance with the Sig value of factors PEU, PU, PR, TR, PRI, PE, and SN less than 0.05. The unnormalized regression weights of the regression model are all positive and in agreement with the expected initial hypotheses. Based on the above analysis results, we can confirm that the factors in the adjusted research model are statistically valid.

Table 5. *Regression coefficients*

Model	Unstandardized		Stand	t	Sig.	Collinearity	
	B	Std.Error	Beta			Tolerance	VIF
(Constant)	0,964	0,699	0,122	1.443	0,272	0,853	0,628
PU	0,516	0,191	0,323	5.063	0,122	0,405	0,178
PEU	0,38	0,178	0,244	3.054	0,124	0,27	0,17
PE	0,368	0,181	0,316	4.658	0,122	0,368	0,175
1 PR	-0,406	0,201	-0,141	-6.084	0,122	-0,3	0,191
TR	0,391	0,177	0,308	4.431	0,122	0,322	0,167
SN	0,291	0,179	0,239	3.188	0,124	0,273	0,169
PRI	0,277	0,18	0,26	3.393	0,123	0,291	0,172

Source: *Author's calculation*

Firstly, the hypotheses: K1, K2, K3, K4, K5, K6, and K7 proposed in the adjusted theoretical model after EFA exploratory factor analysis are accepted; At the same time, the multiple linear regression model can be calculated as

PD = 0.964 + 0.516PU + 0.380PEU + 0.368PE – 0.406PR + 0.391TR + 0.291SN + 0.277PRI

And the multiple normalized linear regression model is:
    PD = 0.323PU + 0.244PEU + 0.316PE – 0.141PR + 0.308TR + 0.239SN + 0.260PRI

- Second, the degree of influence of independent factors on purchasing decisions on Shopee is ranked in order from high to low: usefulness scale (PU): Beta = 0.323; enjoyment scale (PE): Beta = 0.316; trust scale (TR): Beta = 0.308; Price Expectation scale (PRI): Beta = 0.260; ease of use (PEU) scale: Beta = 0.244; the scale of Sociability (SN): Beta = 0.239; risk scale (PR): Beta = - 0.141.

4. Conclude

Qualitative and quantitative studies were used to adjust and supplement the scales affecting consumers' shopping decisions on Shopee, and these scales all reached the required validity and reliability. Through the reference to theories and previous studies on the online purchasing behavior of consumers, the research model of factors affecting the purchasing decision of consumers on Shopee in Hanoi. The proposed seven factors are Perceived usefulness, Perceived ease of use, Perceived enjoyment, Perceived risk, Reliability, Price expectations, Social influence, and dependent variable purchase decisions on Shopee.

The results of evaluating the scale using Cronbach's alpha reliability coefficient showed that the scales met the requirements; observed variables PEU4 and PR5 were excluded due to variable correlation - total <0.3. Seven independent scales with 30 observed variables and one dependent scale with five observed variables meet the requirements of EFA factor analysis.

The EFA exploratory factor analysis showed that the variable SN1 of the Social Perception scale had a rather weak correlation with the remaining variables. The factor loading coefficient was weak, less than 0.5, so it was excluded from the analysis process. Accumulate. The variable SN1 was excluded from the research model. The second EFA exploratory factor analysis draws 07 variables as the proposed model: Perceived usefulness, Perceived ease of use, Perceived enjoyment, Perceived risk, Reliability, and Social influence. Price expectations with important coefficients met the evaluation criteria, such as KMO > 0.5; sig value. of the Barlett test < 0.05; total variance extracted > 50%, factor loading > 0.5 and included in the regression run.

The regression model has an R2 coefficient of 0.479 and adjusted R2 = 79.5%, sig value. <0.05 proves that the model of factors affecting consumers' purchasing decisions on Shopee is suitable for the data set at 79.5%. Results of testing the difference in purchasing decisions on Shopee of consumers in Hanoi city according to the individual characteristics of consumers (gender, age, income, education, and occupation) found no difference in consumers' purchasing decisions on Shopee between subjects.

6. Discussion

6.1. Usefulness
Update information timely and accurately: Information posted on the Shopee page must be updated quickly and accurately with a total content of product information, origin, and technical characteristics.

Retailers need to diversify the portfolio of business products, complete and accurate product information for the needs of comparing and selecting products and updating the necessary knowledge of customers.

Economically for consumers: Create flash deals, free shipping, receive goods within 4 hours, and provide discount codes… to stimulate online shopping.

6.2. Enjoyment

Stores must focus on the discovery aspect of consumers' Shopee purchases, giving consumers more than they expect, such as free shipping, small giveaways with products, and some occasions or giveaways coupon for the next purchase.

6.3. Trust

Stores need to build consumers' trust in product quality and reputation, ensure their interests, and provide transparent information about the store, transaction address, legal name of the business, and business license number.

6.4. Price expectations

Stores should source from the source, without intermediaries, to make prices more competitive, creating favorable conditions for consumers to compare prices between products of the same type easily. In addition, stores should also have programs to attract members to reduce advertising costs and increase discount percentages for consumers, such as coupons, points, loyalty programs, and gifts included to attract customers.

6.5. Ease of use

A good sales website must create a sense of accessible communication at users' convenience. The search function on the website helps customers quickly find products. Improve the ordering process, and make payment fast, flexible, and suitable for all customers. Online businesses must regularly survey customer reactions and opinions to continue developing and providing appropriate products and services.

6.6. Sociability

The Shopee page needs to be friendly and approachable, with updated information and status associated with consumer sympathy. It contributes to increasing Likes and Shares so that more people know them, helping to improve members and several potential customers. Consumers on Shopee regularly review previous customer comments to make purchasing decisions. There are preferential policies for first-time buyers. At the same time, they must keep their commitment to product quality so that consumers who feel satisfied after purchasing will return to buy regularly and recommend it to others. Their acquaintance.

6.7. Risk

It is necessary to ensure the safety of consumers' payment accounts when they participate in online purchases; customer information security: consumers who buy goods online are often very concerned about security issues; retailers are not allowed to use customer information for other purposes arbitrarily; improve safety in online payment transactions; The picture and product quality are the same as advertised, good quality as described by the seller. The policies related to the product should be specified fully and in detail to avoid confusion for customers, as the publication's warranty and return policy before delivery to the customer needs to be checked. , carefully packed before delivery.

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