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Factors Affecting the Online Shopping Behavior: An Empirical Investigation in Vietnam

Ngo Tan Vu Khanh[1], Gwangyong Gim[2]
[1]Reseacher, Department of Business Administration, Soongsil University, Seoul-Korea
[2]Prof. Gwangyong Gim, Department of Business Administration, Soongsil University, Seoul-Korea

ABSTRACT
Online shopping has become new type of retail shopping. It has now been adopted all over the world including Vietnam. This shopping method is still not as well known or accepted as in many other countries, and though the knowledge of online shopping in Vietnam is now beginning to increase rapidly, to know the factors influencing online shopping behavior of Vietnam consumers there are several articles written. The main objective of this study is to analyze factors affecting on online shopping behavior of consumers that might be one of the most important issues of e-commerce and marketing field. However, there is very limited knowledge about online consumer behavior because it is a complicated socio-technical phenomenon and involves too many factors. The model was assessed based on the data collected from 238 participants using a survey questionnaire. Finally regression analysis was used on data in order to test hypothesizes of study. This study can be considered as an applied research from purpose perspective and descriptive-survey with regard to the nature and method.
Keywords - online shopping, shopping behavior, consumer attitudes, perceived risks, Vietnam.

I. INTRODUCTION

The Internet shopping as one of the types of electronic commerce has proliferated rapidly since the middle of 1990s where Web technologies have played a major role in this decade [1]. The development of Internet shopping in the world expected to be accelerated because it has a lot of incentives such as effortlessness, broader selections [2], competitive pricing, greater access to information, product quality, and time to receive product [3]. The Internet also is consulted globally by people on a daily basis. The use of this facility is embarked upon by many people for different purposes as it supports the day to day activities in different sectors of everyday life[4]. It is used specifically by some people in getting information on items. Its use as a powerful tool of communication is increasing daily at an exponential rate largely due to the abundant benefits it offers in saving time and cost [5]. However in recent decades many of researchers as well as practitioners explored to study the factors influencing on customer Internet shopping behavior. They attempt to make an assessment of the service quality of their e-commerce delivering as perceived by their customers, [6]. The potential for Internet shopping within the local environment in Viet Nam in recent years has been realized and still there are tremendous opportunities for growth, [7]. Therefore, companies that are offering their products and services online have to build consumer confidence. The first purpose of this study is to identify why

majority of people are not interested to engage in online transaction despite knowing that this channel provides greater convenience, reduction in time and wider variety of sellers, they still prefer to purchase certain items physically [8]. It is therefore a necessity that the reasons behind this issue must be discovered. The second purpose of this study is to find out the impact of The second purpose of this study is to find out the impact of perceived of economic benefits, perceived of merchandise, perceived Easy of use, perceived Risk in the Context of Online Transaction, Perceived Risk with Product/Service, Perceived payment benefits.

II. RESEARCH BACKGROUND
2.1. The Internet in Vietnam

It has been more than one decade since the Internet started to have been used in Vietnam. Vietnam connected the world in 2000, the Internet users was a small figures, just 0.3% of the population in 2000. However, the Internet is growing fast, much faster than in any other Asian countries in 2011. Over the last ten years 2000-2010, Internet usage has grown by 12.4 times in Vietnam. This is the highest level of penetration in the Asian countries. After five years from 2000, this number was up to 12.8%; and 17.9% in 2007; 24.0% in 2008; and 25.7% of Vietnam population in 2009. At the present, according to the Vietnam Internet Network Information Center, Vietnam ranks 18/20 countries with the largest number of Internet users in the world,

ranking eighth Asia and ranks third in Southeast Asia with 31,302,752 Internet users as of Dec 2013, 35.53% of the population. The number of Vietnam Internet user has increased more than 15 times compare with that of 2001. Such an advantage of Internet is very potential for development of e-commerce service.
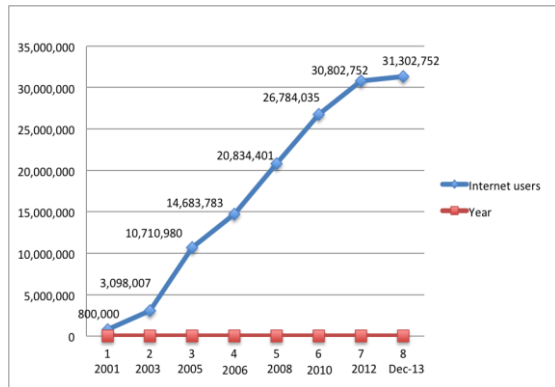

Figure 1:Vietnam Internet users *Source: Vietnam Internet Network Information center (VNNIC)*

2.2. Online Shopping in Viet Nam

According to the latest report of the Vietnam E-Commerce Association, transaction ecommerce success with 3193 (89% of small and medium scale), 42% of said they did to build e-commerce website. Percentage of businesses accept orders via the website is 29%. Estimates, the new e-commerce accounted for 0.3 to 0.5% of total retail sales in Vietnam. Online shopping in Vietnam for 2 years now (since early 2011) are positive signs, customers are more interested to see prices and online shopping, brands, supplier level as well as the shop is gradually shifting to online to search for new customers, reduce land costs, labor, management. Over 1,700 businesses surveyed in the country, up to around 1/3 of revenue due from business electronic commerce, with over 15% of total revenue. Comparison with 2005 (only 8%) are seen businesses really care about e-Commerce and know to take advantage of electronic commerce. Almost users access the e-commerce websites to look up product information, services, and goods reference price, where sold. The few that are participating in online transactions. Number of participants who had ordered and paid online is about 800,000 people (see figure 2). The amount of online transactions per capita average is 4 transactions / year. The average value per transaction in the range of 100,000vnđ to 140,000vnđ (around $7). According to estimates, in 2013 the e-commerce market will grow by about 50%, or about 3.4 million people will use their regular activities on the e-commerce websites via to strong investment of large companies at home and abroad, and the trend of online shopping startup is pretty aggressive. And proven fact appeared diverse types of e-commerce

such as type of C2C (Consumer to Consumer), B2C (Business to Consumer) or B2B (Business to Business) and recently there B2T (Business to Team) to the site of the big companies such as FPT, VTC, VNG to small and medium businesses, entrepreneurs.
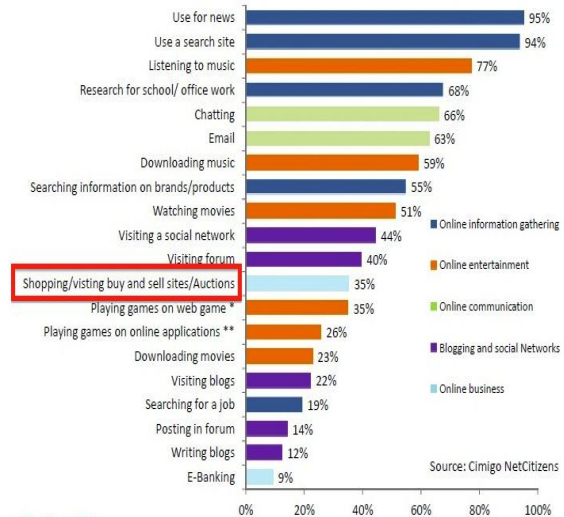

Figure 2: Online activities
Source: Vietnam Internet network information center

III. RESEARCH MODEL AND HYPOTHESIS

Many factors positively or negatively influence a consumer's decision to adopt online shopping as a purchasing means of products/services. In this section, we propose several hypotheses regarding consumers' adoption of online shopping based on each construct that was derived from the pervious literature. We propose the conceptual model for this research:
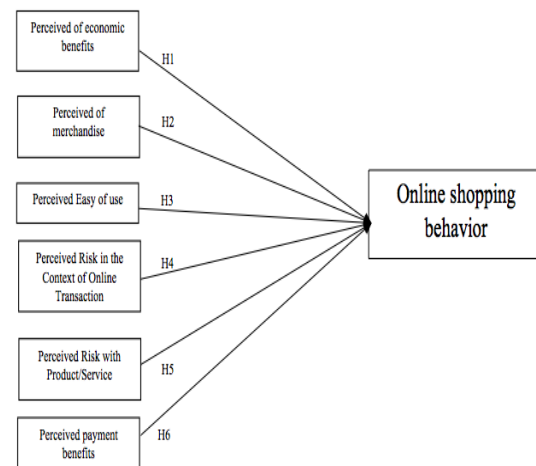

FIGURE 3: CONCEPTUAL MODEL

Several satisfaction studies have examined the role of price as an attribute of performance. Fornell at al. (1996)[9] also found that price perceptions affect customer behavior in a

macroeconomic study involving seven industry sector. When shopping on the internet, customers cannot actually see or handle the product, they feel unsure what is represented on the web is consistent with what is actually received, that why price is the first thing when online shopping. At the stage of information search and alternatives evaluation, information quality, the ambience associated with the site itself and how it functions, variety of merchandise and price all play roles in whether consumers are satisfied or dissatisfied with their online shopping experiences. It is argued that, since a primary role of an online store is to provide price-related information and product information to help reduce consumers' search cost (Bakos, 1997)[10], more extensive and higher quality information available online leads to higher levels of customer satisfaction (Peterson et al., 1997)[11]. Therefore, we hold the view that product price has a lot to do with Vietnam customers behavior. Based on the discussion above, we propose the following hypotheses:

H1: Perceived of economic benefits (PEB) affects consumer behavior in online shopping.
H2: Perceived of merchandise (PM) affects consumer behavior in online shopping.

Information systems that users perceive easier to use and less complex will increase the likelihood of its adoption and usage (Agarwal and Prasad, 1997; Teo et al., 1999)[12]. According to several researches on TAM (Davis et al., 1989; Teo et al., 1999; Venkatesh and Morris, 2000)[13], perceived ease of use (PEU) has been shown to influence behavior (i.e., IT adoption) through two causal ways: (1) a direct effect on behavior and (2) an indirect effect on behavior via perceived usefulness (PU). Therefore we propose the following hypotheses:

H3: Perceived Easy of use (PE) affects consumer behavior in online shopping.

It is important that consumers feel confidence in the online shopping process itself. As suggested in numerous studies (Bhimani, 1996; Hoffman et al., 1999; Ratnasingham et al., 1999; Tan and Teo, 2000) [14][15][16][17], a commonly recognized barrier to the diffusion and adoption of online shopping has been the lack of security and privacy over the Internet. Messages on the Internet are being passed in a shared domain, and therefore consumers are not yet comfortable with sending personal information across the Internet (Rose et al., 1999)[18]. Most online vendors allow consumers to pay through credit card, which effectively limits the number of consumers immediately. Security concerns with respect to exposure of credit card information to hackers or unknown vendors is still a major anxiety for consumers (Sindhav and Balazs, 1999; Swaminathan et al., 1999)[19]. According to the

study of Hoffman et al. (1999), 95% of Web users have declined to provide personal information to Web sites at one time or another when asked, and 40% who have provided demographic data have gone to the trouble of fabricating it. Further, Bhimani (1996) states that consumers may be afraid that online vendors can deny an agreement after the transaction. Accordingly, we propose the hypothesis with regard to the impact of perceived Risk in the Context of Online Transaction as follows:

H4: Perceived risk in the context of online transaction (PRCT) affects consumer behavior in online shopping.

Online consumers may also feel anxiety when they do transactions on the Internet due to the intangibility characteristics of the online products/services. The anxiety or uncertainty with product/service drives consumers' beliefs about the risk itself, and therefore this risk reduces the possibility that the consumers obtain from shopping on the Internet. Finally, the risk will put a damper on consumer's adoption of online shopping. At the purchase stage, privacy/security, payment mechanisms, transaction capabilities and speed of operation may affect satisfaction. Compared with the traditional economy, online consumers are more keenly aware of the need for payment mechanisms (Culnan, 1999; Friedman et al., 2000; Grewal et al., 2004)[20]. Inadequate infrastructure, lack of trust, and privacy and security concerns often lead to lost sales (Yianakos, 2002; Grabner-Kraeuter, 2002)[21]. Hence, the study designs the following hypotheses:

H5: Perceived risk with product/service transaction (PRPT) affects consumer behavior in online shopping.
H6: Perceived payment benefits (PPB) transaction affects consumer behavior in online shopping.

IV. RESEARCH METHODOLOGY

In order to assess the research model, a questionnaire was designed to collect data. The scales used in the questionnaire were largely built upon the scope and structure of previous studies. Constructs were measured based on seven-point Likers-scales ranging from strongly disagree (1) to strongly agree (7). This research services are focused on university students, they accordingly became the target group of the study. The sample was collected from residents in Ho Chi Minh city, Vietnam in Nov- 2013. A total of 238 responses were returned from 216 participants giving a response rate of 90,7%. The respondents consisted of 78 males and 138 females between 17 and 45 years old. The descriptive statistics of the sample are shown in Table 1.

Male or Female		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	138	63.9	63.9	63.9
	Male	78	36.1	36.1	100
	Total	216	100	100	
A range of age					
Valid	From 17 to 25	105	48.6	48.6	48.6
	From 26 to 35	101	46.8	46.8	95.4
	From 36 to 45	10	4.6	4.6	100
	Total	216	100	100	
Highest academic qualification					
Valid	High school	5	2.3	2.3	2.3
	Bachelor	197	91.2	91.6	94
	Master degree	11	5.1	5.1	99.1
	Associate degree	2	0.9	0.9	100
	Total	215	99.5	100	
No answer		1	0.5		
Total		216	100		

Monthly average income					
Valid	≤ 4 million VND	27	12.5	12.6	12.6
	4 – 8 million VND	97	44.9	45.3	57.9
	9 – 13 million VND	50	23.1	23.4	81.3
	14– 21 million VND	23	10.6	10.7	92.1
	22– 35 million VND	9	4.2	4.2	96.3
	≥ 36 million VND	8	3.7	3.7	100
	Total	214	99.1	100	
No answer		2	0.9		
Total		216	100		

Table 1: Distribution of respondents based on demographic characteristics

V. DISCUSSION AND FINDING

In terms of data analysis, a descriptive analysis was initially performed to provide information pertaining to the demographics of the respondents. Testing for reliability was checked first using reliability coefficients Cronbach's Alpha. Next, the factor analysis was run to show an association between a number of items and constructs. After that, an associative analysis in the form of a correlation analysis was conducted to test for existence of multi-co linearity. The study continued to test regression assumptions before using OLS method to run a regression. Hierarchical multiple linear regression was used to check whether demographic variables (gender, age, education, and income) contribute anything to the prediction produced by the block of trust antecedent variables in the next step. Subsequently, multiple regression analyses were performed to test the relationship between the whole set of predictors and the dependent variables under the current study. Lastly, hypothesis testing continued to conduct in order to determine whether hypotheses proposed based upon a review from existing literature were supported or not.

Factor	Cronbach's alpha	Item
Perceived of economic benefits (PEB)	0.685	4
Perceived of merchandise (PM)	0.675	3
Perceived Easy of use (PE)	0.841	5
Perceived Risk in the Context of Online Transaction (PRCT)	0,827	5
Perceived Risk with Product/Service (PRPT)	0.703	3
Perceived payment benefits (PPB)	0.790	4
Online shopping behavior (B)	0.799	4

Table 2: Cronbach's Alpha

The reliability of the questionnaire scale was tested using cronbach's alpha for total thirty measurement items, which divided in to 7 factors. The cronbach's alpha for scale in the model range from 0.675 to 0.842. All of these result suggest that the measurements for the scale ware reliable. The detail of reliability analysis for each factor is presented in table 3

Variable	1	2	3	4	5	6
PEB1	.791					
PEB2	.758					
PEB3	.645					
PM1		.725				
PM2		.687				
PM3		.718				
PE1			.682			
PE2			.767			
PE3			.765			
PE4			.624			
PE5			.637			
PRCT1				.678		
PRCT2				.681		
PRCT3				.779		
PRCT4				.734		
PRCT5				.641		
PRPT1					.768	
PRPT2					.654	
PRPT3					.544	
PPB1						.788
PPB2						.549
PPB3						.737
PPB4						.764

Table 3: Factor analysis

Statistically valid results about the impact of factors on online shopping:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.680(a)	.462	.438	.70827

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	67.719	7	9.674	19.285	.000(a)
	Residual	78.759	157	.502		
	Total	146.478	164			

Results of regression analysis:

B	Std. Error	Beta	B	Std. Error
1.448	.460		3.151	.002
.196	**.059**	**.231**	**3.306**	**.001**
-.026	.051	-.034	-.512	.609
.189	**.057**	**.235**	**3.305**	**.001**
.082	.076	.084	1.076	.284
-.125	.066	-.133	-1.907	.058
.001	.056	.001	.021	.984
.304	**.068**	**.328**	**4.464**	**.000**

Summary of hypothesis tests:

Hypothesis	H-test result
H1: *Perceived of economic benefits (PEB) affects consumer behavior in online shopping*	Support (P=0.001 < 0.05)
H2: *Perceived of merchandise (PM) affects consumer behavior in online shopping.*	Support (P=0.001 <0.05)
H3: *Perceived Easy of use (PE) affects consumer behavior in online shopping*	Reject (P= 0.284 > 0.05)
H4: *Perceived risk in the context of online transaction (PRCT) affects consumer behavior in online shopping.*	Reject (P= 0.058 >0.05)
H5: *Perceived risk with product/service transaction (PRPT) affects consumer behavior in online shopping.*	Reject (P= 0.984>0.05)
H6: *Perceived payment benefits (PPB) transaction affects consumer behavior in online shopping*	Support (P=0.000<0.05

VI. CONCLUSION

As presented in Figure 5, three of causal relationships between the constructs postulated by the online shopping model are well supported in the Vietnam. The results suggest that Perceived of economic benefits (PEB), Perceived of merchandise (PM), and Perceived payment benefits (PPB) have significant direct effects on consumer's behavior adoption of online shopping. That means, to promote online shopping in Vietnam is to increase the ability to recognize the benefits of trading products on the Internet, addition to that the usefulness of online payment. Note minimize risks when buying and selling transactions on internet .The results of this study also showed that the development of e-commerce in Vietnam is very difficult, the fear of risk taking when dealing on the internet on the second aspect is the product / service and the transaction.

The survey study was on conducted among the Viet Nam respondents who respondent very well to the research study and the respondents were prolific in their responses and they were very good at their answers which implies that the respondents had a good understanding of the website and how it functions but largely the respondents were mainly male and between the age group of 17-45. Many respondents got high education and have rich experience shopping online in Viet Nam. In this study, Principle Axis Factoring with Promax methods are used to validate measures help the study refine the supposed research model and increase knowledge of the four antecedents of trust predicting customer's trust response. The model of trust has both practical and theoretical value in Vietnam context. It not only provides an increased insight into the nature of trust and provides a refined understanding of the predictors, but it also provides efficient marketing tools to push up online businesses.

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