FACTORS AFFECTING ONLINE PURCHASE BEHAVIOUR IN VIETNAM

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ABSTRACT

Vietnam government is in active effort to reduce the use of cash and encourage cashless transactions in businesses. In an effort to boost digital economy growth in Vietnam, Vietnam government has encouraged and allowed banks and software vendors to use latest information technology to push the country to digital payment era. The aim of this research is to investigate the online purchasing behaviour of Vietnamese in Vietnam. A total of 243 Vietnamese in Hanoi participated in this research. Research findings indicated that all the three indicators in Theory of Planned Behaviour; perceived behavioural control, attitudes and subjective norm are significantly and positively related to online purchase behaviour. Moreover, trust of seller is also a significant and positive factor. This study gives recommendations to practitioners and researchers.

Keywords: Online Purchase, Behaviour, Theory of Planned Behaviour, Internet, Vietnam.

INTRODUCTION

Industry Revolution 4.0, e-commerce and the mature of internet infrastructure have pushed Vietnam people to use internet tremendously. Two years back in 2017, Vietnam's Deputy Prime Minister, Vuong Dinh Hue has targeted to increase the usage of e-cash transactions and urged government to improve e-payment methods by 2020 (Das, 2017). In the plan, Vietnam government would like to reduce normal cash payment by 10 percent, increase e-payment by 50% and encourage the use of credit cards in most of the business transactions. One of the key drivers of digital economy growth in Vietnam is the rise of e-commerce. The sales of business-to-consumer are increasing in Vietnam from year to year (Fintechnews Singapore, 2017). According to Quang (2015), people in Vietnam prefer to use cash payments (more than 90%). Moreover, Vietnamese prefer cash on delivery (COD) when purchase compared to online payment.

In 2014, Vietname bank approved the pilot implementation of e-wallet service. From March, 2015 onwards, Vietnamese can officially use e-wallet. Accordingly, the non-bank payment service providers (PSPs) such as M-service, Peacesoft and VTC in coordination with 37 commercial banks, would provide e-wallet product and serve payment transactions on e-commerce websites (Quang, 2015). According to the author, habits and payment behaviour of Vietnamese need to be changed so that e-wallet can be successfully implemented.

According to Das (2017), security is a main reason why people not using online banking. The author also found that internet usage is high in Vietnam. According to the author, mobile subscription have been increasing very fast in urban and rural areas. For example, in urban areas, smartphone ownership has increased from 20 percent in 2013 to 72 percent in 2016 (Das, 2017).

In this study, the general objective is to investigate the factors that are influencing Vietnamese in purchasing online. Breaking down the objective, the specific research questions of this research are as below:

1. What are the factors that influencing Vietnamese to purchase online?
2. Do Vietnamese prefer buying local or international branded products?
3. Have Vietnamese experienced being cheated when purchasing online?
4. How were Vietnamese cheated when purchasing online?
5. How do Vietnamese prefer to pay when purchasing online?

LITERATURE REVIEW

Many authors have been using Theory of Planned Behaviour (TPB) to study users' behaviour on doing something after Icek Ajzen proposed this theory in 1985. This theory allows researchers to predict intentions and behaviours of doing something such as predicting whether individual intends to purchase online. There are three variables in Theory of Planned Behaviour (TPB). The three variables are attitude, subjective norm and perceived behavioural control.

According to TPB (Ajzen, 1991), attitude is defined as

"The degree to which one person has a positive or negative evaluation or appraisal of the intention and behaviour in the question".

Subjective norms illustrate the "*perceived social pressure from significant other to perform the behaviour*". Perceived behavioural control refers to "*whether the performance of the behaviour is easy or difficult and under one's control or not*".

In 2004, Hansen et al. compared two theories in their study. The authors used theory of reasoned action (TRA) and TPB to check users' validity on researching online grocery buying intention. In conclusion, the authors found that TPB has better fit compared to TRA in determining grocery buying behaviour. In the study, the authors found that consumers' attitude was the most important predictor of online grocery behaviour intentions.

Pookulangar & Natesan (2010) used TPB to study people who migrated from brick-and-mortar stores to the Internet. The authors conducted study in United States and found that TPB is significant in predicting migration behaviour. In the same year, Lee & Ngoc (2010) used TPB to investigate online shopping intention among Vietnamese students. Besides studying the three variables in TPB, the authors added trust as new variable. According to the authors, all the three TPB variables are significant in determining online shopping intention and trust acts as a moderator between attitude and behaviour. In 2011, Alam and Sayuti used TPB to investigate consumers' behaviour on halal food purchase in Malaysia.

Ajzen (2015) used this theory to investigate attitudes and behaviours of consumers on food consumption. In the author's study, it was proven that TPB can help predict and explain consumer intentions and behaviour. Yasaki and Jusoh (2015) used TPB to investigate intention to use digital coupon among Malaysian university students. Their findings indicated that attitude has the strongest impact, followed by subjective norm and then perceived behavioural control.

In the same year, Lin et al. (2015) studied internet banking adoption in Vietnam by using TPB and extended technology acceptance. In the study, three variables of TPB were found significant in internet banking adoption. Moreover, the study also discovered that perceived credibility is also one of the factors affecting internet banking adoption.

Higuchi et al. (2017) used TPB to determine fish consumption in metropolitan Lima, Peru. Perceived behavioural control variable was not used in the study. The study indicated

that attitude and subjective norm are important factors in determining fish consumption intention.

Oanh & John (2018) studied credit card adoption in Vietnam by using TRA. The study showed that subjective norm is significantly related to credit card adoption other than all the variables from TRA except perceived financial cost. Verma & Chandra (2018) used TPB to study young Indian consumers' intention to visit green hotel. The study concluded that attitude, subjective norm and perceived behavioural control are significant factors determining their purchase intention on green products.

Yang et al. (2018) used TPB to investigate consumers' sustainable consumption intention at China's Double-11 Online shopping festival. The authors found that attitudes, subjective norm and perceived behavioural control are significant factors. Spence et al. (2018) studied consumer purchase intentions towards beef products using TPB. All the variables in TPB are significant factors in determining purchase intentions with attitude as main factor, followed by subjective norm and perceived behavioural control. In an extended TPB model they built, trust is also found a significant factor.

Carfora et al. (2019) used TPB to investigate consumer purchase behaviour for organic milk. The authors had extended the TPB framework by adding trust. The authors found that TPB is a predictive model for explaining behaviour and trust is also a significant factor contributing to organic milk purchase intention.

In 2019, Qi and Ploeger investigated the consumers' intention towards green food in Qingdao. The authors extended TPB by incorporating confidence as a new contributing factor. The authors found that TPB is useful in predicting consumers' green food purchase intention and confidence is also a significant factor.

Lim et al. (2019) used TPB to investigate green car purchase intention among Malaysians. The authors found that TPB can be used as a predictive model of consumers' intention to purchase green cars. Mohamad et. al. (2019) used TPB to investigate Malaysian parents' intention on purchasing weaning food products. The authors discovered that purchase intention was significantly influenced by attitude, subjective norm and perceived behavioural control. Judge et al. (2019) used TPB to predict intention to purchase sustainable housing in Australia. The authors found that all the three TPB variables are significant predictors in intention behaviour.

There are other authors in previous studies who found that trust is an important factor in determining intention behaviour of an individual. According to Noor (2012), trust and commitment were positive and significant in determining e-customer relationship performance. Lee et al. (2015) discovered trust is an important factor in influencing female online consumers on purchasing online.

METHODS

This research was carried out in Hanoi, Vietnam. Convenient sampling method was used in this study. Three hundred questionnaires were distributed to friends and colleagues working in Hanoi. After two months, primary data were collected. Out of three hundred questionnaires, 243 valid questionnaires were collected which indicated 81 percent of response rate.

The questionnaire has three sections. The first section contains items to request about the background and opinions of respondents on online purchase experience. The second section of the questionnaire consists of four independent variables; attitude, subjective norm, perceived behavioural control and trust of seller. Finally, the third section is about online purchase behaviour. Every independent and dependent variable has 4 items and each item is measured by five-point Likert-type scale, ranging from 1-strongly disagree to 5-strongly agree.

Items for measurement in this study were adapted from the study of Rofiq (2012). This study used the theory of planned behaviour (Ajzen, 1985; Ajzen, 1987) as a framework for predicting online purchase behaviour. This study extended this theory by adding a variable which is "*trust of seller*". Figure 1 indicates the research framework of this research.
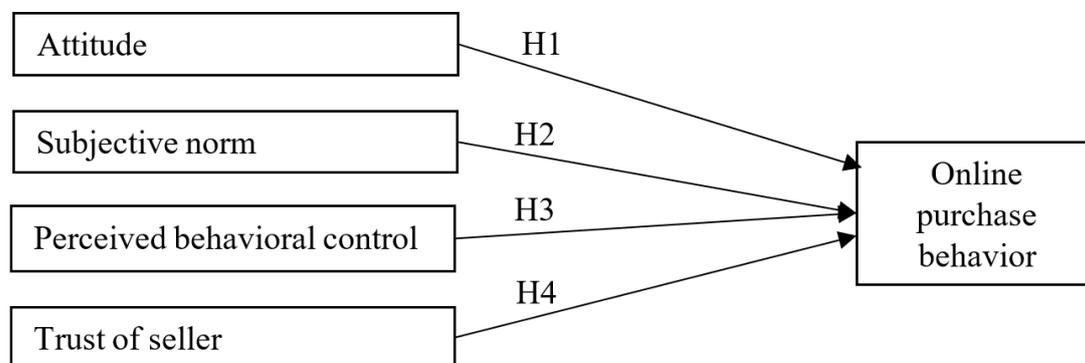

Figure 1
RESEARCH FRAMEWORK

The hypotheses for this research are as below:

H1: There is a relationship between attitude and online purchase behavior

H2: There is a relationship between subjective norm and online purchase behavior

H3: There is a relationship between perceived behavioural control and online purchase behavior

H4: There is a relationship between trust of seller and online purchase behavior

Data Findings

As shown in Table 1, one hundred and fifty-three male respondents (63%) and ninety female respondents (37%) took part in this research. Majority of respondents are at the age range of 31-40 years old (129 respondents or 53.1%). A total of 108 respondents (44.4%) have experienced buying products online in the last 12 months. The 12-month period refers to 1 May 2018 to 30 April 2019. Sixty-three respondents (25.9%) purchase online 3-6 times and thirty-nine respondents (16%) buy products 7-11 times (16%). Thirty-three respondents (13.6%) buy 1-2 times online in the past 12 months. In other words, all respondents participated in this study have experience in purchasing online.

Most of the respondents use Internet more than 8 hours per day (96 respondents or 39.5%). Sixty-six respondents (27.2%) or 54 respondents (22.2%) use internet 6-8 hours and 3-5 hours per day respectively. Twenty-seven respondents (11.1%) surf internet less than 2 hours per day. That means 88.9% or 216 respondents use the internet for more than 3 hours per day.

Table 1 RESPONDENTS' STATISTICS			
Variable	Item	Frequency	%
1. Gender	Male	153	63
	Female	90	37
2. Age	18 - 30 years	81	33.3
	31 - 40 years	129	53.1

	41 - 50 years	18	7.4
	51 - 60 years	15	6.2
3. How often buying products in the last 12 months?	1 - 2 times	33	13.6
	3 - 6 times	63	25.9
	7 - 11 times	39	16.0
	> 12 times	108	44.4
4. How many hours use internet per day?	< 2 hours	27	11.1
	3 - 5 hours	54	22.2
	6 - 8 hours	66	27.2
	> 8 hours	96	39.5

Table 2 indicates that a total of 210 respondents (86.4%) have been using the internet for more than 7 years. Eighteen respondents (7.4%) experience using the internet for 4-6 years. Products that respondents frequently buy online are cloths (213 respondents and 31.06%). It is followed by books (108 respondents and 27.27%), sports equipment (84 respondents and 21.21%), software (33 respondents and 8.33%) and DVDs (9 respondents and 2.27%). Other products purchased online are commodities, cosmetics, curtains, electronic devices, health and beauty products, home and lifestyle products which contribute to 6.06% (24 respondents). This is a multiple choice with multiple responses survey item.

The most preferred payment method when purchasing online is cash on delivery (COD) which is 58.27% (222 respondents). It is followed by credit card (90 respondents and 23.62%) and then bank transfer (bank transfer and 13.39%). PayPal payment method contributes 4.72% (18 respondents). This is a multiple choice with multiple responses survey item.

Table 2 RESPONDENTS' STATISTICS			
Variable	Item	Frequency	%
1. How long have been using internet?	< 6 months	6	2.5
	6 - 12 months	6	2.5
	1 - 3 years	3	1.2
	4 - 6 years	18	7.4
	> 7 years	210	86.4
2. What products bought in the last 12 months?	Books	108	27.27
	Music Cd	15	3.79
	Software	33	8.33
	DVDs	9	2.27
	Cloths	213	31.06
	Sports Equipment	84	21.21
	Others	24	6.06
3. Payment Method	Credit Card	90	23.62
	PayPal	18	4.72
	Bank Transfer	51	13.39
	Cash on Delivery	222	58.27

Table 3 indicates that Japan is the top country that respondents purchase products from (69 respondents and 32.86%) and second top country goes to China (51 respondents and 25.71%). Buying products from neighbouring countries like South East Asia countries covers 21.43% (45 respondents). Buying from home country contributes to 7.14% (15 respondents). This is a multiple choice with multiple responses survey item.

More than half (156 respondents or 64.2%) of respondents agreed that they were cheated in online purchase in the past 12 months. Eighty-seven respondents (35.8%) have not been cheated.

Two main cheating reasons are bad quality of item (s) received (141 respondents and 50.0%) and item(s) shown on website is different from the actual received item(s) (114 respondents and 40.43%) respectively. Payment made but item(s) not received covers 7.45% (21 respondents) while item(s) received in lesser quantity comprises of 2.13% (6 respondents). This is a multiple choice multiple responses survey item.

Two hundred twenty-five respondents (51.7%) use smart phone to purchase online while 183 (42.1%) of respondents use desktop computer to purchase online. Twenty-seven (6.2%) respondents use tablet pc to do e-commerce transactions. This is a multiple choice multiple responses survey item.

Table 3 RESPONDENTS' STATISTICS			
Variable	**Item**	**Frequency**	**%**
1. Which country or countries products bought from in the last 12 months	Vietnam	15	7.14
	Neighbouring Countries (e.g. South East Asia)	45	21.43
	China	51	25.71
	Taiwan	24	11.43
	Japan	69	32.86
	Other (Korea)	3	1.43
2. Have you been cheated when purchase online in the last 12 months?	Yes	156	64.2
	No	87	35.8
3. Reasons of being cheated.	Payment(s) made but item(s) not received.	21	7.45
	Item(s) received were of bad quality.	141	50.00
	Item(s) shown on website is different from the actual received item(s).	114	40.43
	Received item(s) in lesser order quantity.	6	2.13
4. Types of devices used to purchase online	Smart Phone	225	51.7
	Desktop Computer	183	42.1
	Tablet PC	27	6.2

Table 4 indicated that all the four independent variables and dependent variable are reliable with Cronbach's alpha more than 0.60. According to Hair et al. (2003), the value of coefficient alpha or Cronbach's alpha with the range of greater than 0.60 is considered acceptable and good.

Table 4 CRONBACH'S ALPHA		
Variable	**Cronbach's Alpha**	**Items**
Online Purchase Behaviour	0.703	4
Perceived Behavioural Control	0.786	4
Subjective Norm	0.801	4
Attitude	0.887	4
Trust of the seller	0.942	4

Table 5 shows the means and standard deviations of four independent variables and dependent variable.

Table 5 MEANS AND STD. DEV. OF VARIABLES (N = 243)		
	Mean	**Std. Dev.**
Online Purchase Behaviour	4.16	.7229
Perceived Behavioural Control	3.94	.7726
Subjective Norm	3.26	.7593
Attitude	4.11	.7279
Trust of Seller	3.95	.7324

Table 6 indicates that 69.3% of variation of online purchase behaviour can be explained by the four independent variables in this research.

Table 6 MODEL SUMMARY				
Model	R	R Square	Adj. R Square	Std. Error of the Est.
1	.627[a]	.693	.669	.5741
a. Predictors: (Constant), Subjective Norm, Attitude towards Behaviour, Perceived Behavioural Control, Trust of the Seller				

Table 7 shows that the proposed research framework is fit (F=16.61, p-value<0.05). Thus, further analysis can be conducted to find out the relationship of every independent variable towards online purchase behaviour.

Table 7 ANOVA[a]						
	Model	**Sum of Sqrs.**	**df**	**Mean Square**	**F**	**Sig.**
1	Regression	16.428	3	5.476	16.615	.000[b]
	Residual	25.377	77	.330		
	Total	41.806	80			
a. Dependent Variable: Online Purchase Behaviour						
b. Predictors: (Constant), Subjective Norm, Attitude, Perceived Behavioural Control, Trust of Seller						

Further analysis on Table 8 indicates that four independent variables have significant relationship with online purchase behaviour. Attitude has the most significant and positive relationship with online purchase behaviour (B-value=0.440, p<0.05). Subjective norm (B-value=0.248, p<0.05) is significant and positively related to online purchase behaviour. Perceived behavioural control is also significantly and positively correlated to online purchase behaviour (B-value=0.053, p-value<0.05). Trust of seller is significant and positively correlated to online purchase behaviour (B-value=0.255, p<0.05).

Table 8 COEFFICIENTS[A]							
		Unstd. Coeff.		Std. Coeff.			Collinearity Statistics	
Model		B	Std. Error	Beta	t	Sig.	Tol.	VIF
1	(Constant)	1.329	.417		3.185	.002		
	Perceived Behavioural Control	.053	.105	.257	0.508	.003	.627	1.595
	Subjective Norm	.248	.102	.260	2.428	.018	.687	1.457
	Attitude	.440	.101	.443	4.365	.000	.765	1.308
	Trust of Seller	.255	.091	.324	2.846	.006	.569	1.759
a. Dependent Variable: Online Purchase Behaviour								

Hence, Table 8 concludes that hypotheses H1, H2, H3 and H4 are substantiated.

DISCUSSION AND CONCLUSION

The findings of this study substantiate previous studied conducted by different authors in different countries and different disciplines. All three variables in TPB and trust of seller are predictors on online purchase intention.

Attitude has the strongest impact among all four predictors. This finding agreed with many previous authors who found that attitude is utmost important compared to another two variables in TPB (Hansen, 2004; Lee & Ngoc, 2015; Yasaki & Jusoh, 2015, Lin, et al., 2015, Higuchi et al., 2017; Verma & Chandra, 2018; Yang et al., 2018; Spence et al., 2018; Carfora et al., 2019; Qi & Ploeger, 2019; Lim et al., 2019; Mohamad et al., 2019; Judge et al., 2019). Perceived behavioural control and subject norm are also positively and significantly related to online purchase behaviour among Hanoi Vietnamese. This result aligns with previous authors who found that these two variables are significant predictors in identifying behaviour. This finding shows that subjective norm is significant is consistent with Oanh & John (2018) although the authors used TRA in their study.

The new variable included in this research which is "*trust of seller*" is found significant and positively correlated to online purchase behaviour. This finding agrees with (Lin et al., 2015; Spence et al., 2018; Carfora et al., 2019). In this study, Hanoi Vietnamese prefer to pay by cash on delivery and credit card. This finding agrees with Quang (2015). Majority of respondents have more than seven years of internet experience. Respondents have been buying products online especially cloths and books. Most of the products purchased are from Japan, followed by China, then South East Asia countries.

Although majority of respondents were cheated when purchasing online, the data indicates that respondents are still preferring to buy online. Two main reasons that respondents were cheated were "*poor quality of purchased products*" and "*received products are not as shown in advertisement*". Although respondents were cheated when purchasing online, most of them are still purchasing online at least 6 times in a year. Last but not least, most of the respondents are using smart phone and desktop computer to purchase online. This finding agree with Das (2017) who found that smartphone sales is increasing year after year in the urban and rural areas in Vietnam.

Implications for Practice

Although fraudulent e-commerce transactions happen in Vietnam, results indicate that respondents are still inclined to purchase online. This finding implies that business establishments in Vietnam should set up their e-commerce portal to boost up their sales. Moreover, business firms should provide convenient payment service such as cash on delivery and credit card payment service to allow easy payment. Not only that, business firms can consider delivering products to customers.

Using mobile phone to purchase online is rising in Vietnam based on this study. In another study, Lee & Chen (2014) also found that mobile commerce is getting popular among university students in Taiwan. Smart phone shops and computer shops should have good business in future because results showed that online consumers prefer purchase by using these two devices. Thus, smart phone shops and computer shops can consider selling latest model of smart phones and desktop computers. Table PC is not popular among these three gadgets.

Implications for Research

This research model shows that the four variables explains 69.3% of variation on online purchase behaviour in Vietnam. All the three variables of TPB are significant predictors and also trust of seller.

The findings of this study agree with Hansel et al. (2004) when the authors found that attitude is the most significant factor in purchase behaviour intentions. This study's findings are in consistent with Lee & Ngoc (2010), Ajzen (2015), Yasaki & Jusoh (2015), Len et al. (2015), Verma & Chandra (2018), Yang et al. (2018), Spence et al. (2018) and Higughi et. al. (2017) who found that all TPB variables are significant factors in influencing behaviour. Thus, it can be concluded that TPB can be used in predicting online purchase intention.

Furthermore, this study implies to future researchers that trust of seller has a significant and positive impact on online purchase behaviour. This finding agrees with (Noor, 2012; Lee et al., 2015; Lin et al., 2015; Spence et al., 2018; Carfora et al., 2019).

Limitations of Research

This study was conducted in Hanoi, Vietnam only. The findings may not be able to generalise to other areas in Vietnam.

Recommendations for Future Research

In future, if there are any researchers who would like to study online purchase behaviour, the researchers can consider to include factors such as user friendliness of e-commerce website, speedy delivery of purchased products, free gifts of purchased products and value-added service such as service-after-sales. All these suggested variables can be tested to investigate whether individuals intend to purchase online when these variables exist.

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