

Factors Affecting Customers' E-Commerce Adoption Behavior In Vietnam

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ABSTRACT: *The e-commerce market in Vietnam is still very large and has potentially growing prospect. However, the sustainable development needs the strong hand of authority. The purpose of this study is to explore consumer behavior in e-commerce in Vietnam. The study provides further evidence on the appropriateness of using the TPB model to measure the different dimensions of actual usage on e-Commerce. It is evident from this study that to convert Internet browsers into real buyers, Attitude toward the behavior, Subjective Norms, Perceived Behavioral Control must be enhanced and the risk reduced.*

KEYWORDS: *Customer Behavior, e-Commerce, Perceived Risk, Theory of Planned Behavior*

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I. Introduction And Literature Review

The e-commerce market in Vietnam is still very large and has potentially growing prospect. However, the sustainable development needs the strong hand of authority. Perhaps the most challenging concept in marketing is associated with capturing the reason why customers leave such actions. Such knowledge is considered key to the marketing experts when they have insight into customer behavior. This will help them understand what is important to customers and make a significant impact on the customers' decision.

E-Commerce is not very developed in Vietnam. The most popular commerce sites are online auctions and shopping websites. Online banking is still in its infancy. However, the usage of e-commerce and e-banking services has seen strong growth over the last few years.

So what the situation of the application of e-commerce in Vietnam is? Why do consumers like or dislike shopping goods online? How to develop powerful applications of e-commerce in Vietnam? Study of customer behavior is an important step to answer that question. In Vietnam, the study of consumer behavior has long seemed to have neglected. The enterprises almost exclusively interested in the production of goods and services, not interested in what consumers need in goods or services. This leads to not meet their needs and fail in their business. Therefore, the study of consumer behavior of customers in e-commerce in Vietnam is another major.

The purpose of this study is to explore consumer behavior in e-commerce in Vietnam with the main objectives: (1) to understand the factors effecting to customers' intention in e-commerce in Vietnam, (2) to understand the relationship between intention and behavior of e-commerce customer in Vietnam, (3) how to meet customers' needs with e-commerce in Vietnam in order to propose solutions helping this one improve customers' satisfaction, (4) to apply theory TPB to explain the customer behavior in e-commerce.

Introduced by Fishbein in 1967, the Theory of Reasoned Action provides clues to development of the Theory of Planned Behavior. This theory asserts that people consider the implications of behavior before action – hence, the name of the theory, the Theory of Reasoned Action. Using the Theory of Reasoned Action as a conceptual framework, Ajzen and Fishbein (1977) surmised that attitudes toward behaviors stem from underlying beliefs concerning these behaviors. The Theory of Reasoned Action assumes attitudes result from a combination of beliefs about the characteristics of particular attitude objects and evaluations of these characteristics. Intent plays a critical role in this theory, and is identified as the greatest predictor of whether or not someone will complete a specific behavior (Ajzen & Fishbein, 1977). The Theory of Reasoned Action states that the two major determinants of intention are an individual's attitude toward the behavior (AAct) and the pressures (perceived) of subjective norms (SN).

H1: Attitude toward the behavior affects to customer intention

Attitude towards behavior refers to global predisposition, for or against, developing such behavior. According to the expectations-value model proposed by Fishbein and Ajzen (1975), attitude is considered to

result from individual beliefs regarding behavior and their consequences, and the importance these beliefs are given.

Attitude toward a behavior is another predictor of behavioral intention. Attitude toward a behavior is the degree to which performance of the behavior is positively or negatively valued by an individual. When measuring attitude toward the act, Ajzen (2006) suggests starting with a relatively large set of 20 to 30 semantic differential scales based on time-tested published lists of adjective scales. A small subset of scales that show internal consistency can then be selected for the final attitude measure. In Ajzen's model, these items are summed together to represent attitude toward behavior. Its antecedent is behavioral beliefs.

H2: Subjective Norms affects to customer intention

On the other hand, *Subjective Norm* reflects how the consumer is affected by the perception of some significant referents – e.g., relatives, friends or colleagues, among others – of his/her behavior (Fishbein & Ajzen, 1973; Schofield, 1974; Warner & DeFleur, 1969). Subjective norm arises from two basic underlying factors: the normative beliefs the consumer associates with significant referents, and the motivation to behave according to these people's wishes. Finally, perceived behavioral control represents individual perception of the availability or lack of the necessary resources and opportunities to develop this behavior (Ajzen & Madden, 1986). Thus, perceived control results from both individual beliefs regarding the factors determining behavior and from control over such factors.

The Subjective Norms construct is the perceived social pressure to engage or not to engage in a behavior (Ajzen, 2006). It is assumed that subjective norm is determined by the total set of accessible normative beliefs concerning the expectations of important referents. Specifically, the strength of each normative belief is weighted by motivation to comply with the referent in question, and the products are aggregated (Ajzen, 2006).

H3: Perceived Behavioral Control affects to customer intention

Perceived behavioral control in TPB has two dimensions. The internal factor refers to the extent of confidence that a person has in his/her ability to perform a certain behavior, which is grounded in one's self-efficacy (Bandura, 1997). Bandura (1997, p. 117) states that "it is difficult to achieve much while fighting self-doubt." In other words, people's low perception of control beliefs may hamper their goal-directed behavior. The external factor refers to resource constraints –that is, facilitating conditions available to an individual, such as money, time, or technology that are required to perform a behavior (Taylor & Todd, 1995). Taylor and Todd (1995) found that both internal and external factors are positively associated with PBC in innovation adoption.

H4: Perceived Risk affects to customer intention

Perceived risk (PR) is commonly thought of as felt uncertainty regarding possible negative consequences of using a product or service. It has formally been defined as "a combination of uncertainty plus seriousness of outcome involved" (Bauer, 1967). PR has been captured with Likert scales measuring the perception of dangerous events occurring or the presence of the attribute inherent in the service. Alternately, it has been measured using an expectancy value methodology typically multiplying either probability of loss, exposure or danger (uncertainty component) by the cost or importance of that potential loss or exposure (severity component). Following these descriptions, he defined perceived risk as "the potential for loss in the pursuit of a desired outcome of using an e-service" Since Bauer (1960) first formally proposed that consumer behavior be seen as *risk* taking, valuable empirical research have attempted to identify various types of perceived risk in the context of the consumer's purchase behavior.

H5: Customer intention affects to customer behavior

Intention can be used as a proximal measure of behavior although there is not a perfect relationship between behavioral intention and actual behavior. This observation was one of the most important contributions of the TPB model in comparison with previous models of the attitude-behavior relationship. Thus, the variables in this model can be used to determine the effectiveness of implementation interventions even if there is not a readily available measure of actual behavior (Jillian J Francis etc. 2004).

II. Research Methodology

The Theory of Planned Behavior also raises the fact that perceived control has a direct effect on individuals' effective behavior. Thus, this variable can be considered to indicate individual effective capacity to undertake a certain action as far as individual beliefs represent the real limitations it has to face.

Researchers in psychology and other disciplines have widely studied the risk theory. Raymond A. Bauer (1967) introduced the notion of perceived risk to consumer behavior research. He suggested "Consumer behavior involves risk in the sense that any action of a consumer will produce consequences that he cannot anticipate with anything approximating certainty, and some of which are likely to be unpleasant".

In the context of consumers' E-commerce adoption behavior, when studying perceived risk, the focus is primarily on potentially negative outcome or potential losses or harm. Thus, in this study, perceived risk is defined as a person's perception of the possibility of having negative outcome or suffering harm or losses associated with E-commerce.

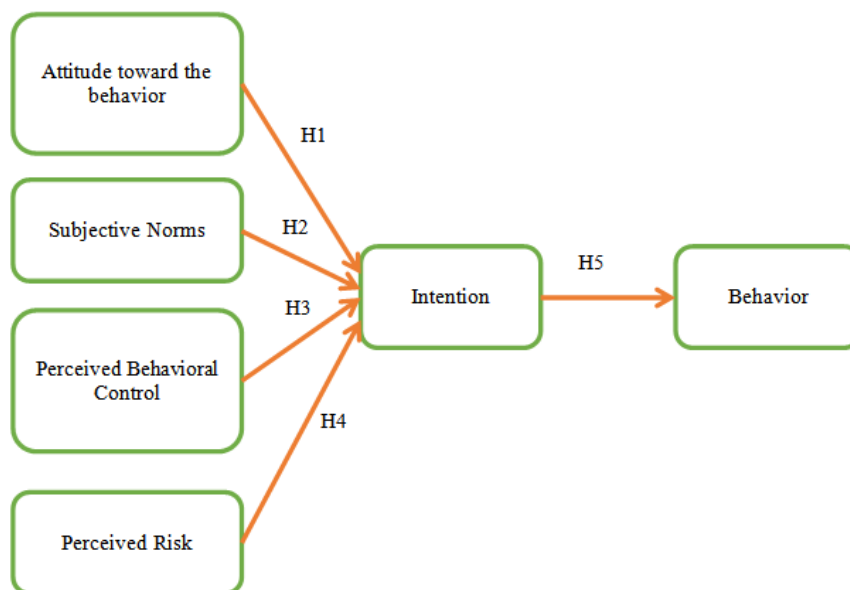


Figure 1. Theoretical model

In order to test the objectives and the hypotheses which Ire raised, information was collected using a structured survey with a set of multi-attribute scales referring to the different variables identified in the model proposed. According to the Theory of Planned Behavior (Schifter & Ajzen, 1985; Taylor & Todd, 1995) and to previous literature on the diffusion of innovation, the dimensions included in the model Ire measured through composite scales.

Data collection method: directly give question are to people and collect. Data is collected from 9th Feb to 13th Feb 2019. Send out 358 questionnaires and get back 293 questionnaires.

The questionnaire has two sections. Section 1 asks about demographic information such as name, age, gender and some information about using smart phone, internet... Section 2 measures the predictor variables and intentions.

Measurement scale: five-point Likert scale. The answer for questions in section 2 therefore set in the same way as Likert with 05 scale from "1" to "5" where "1" Strong Disagree, "2" Disagree, "3" No Comment, "4" Agree, "5" Strongly Agree.

III. Findings

The quantity of the questionnaire sent out is 358, and the return rate is 81.4%. The sexual ratio of the data sample is 32.4% of male and 61.4% of female, 6.1% do not fill in gender question.

From the results of statistical reliability in Table 1, Cronbach's Alpha of Attitude toward the behavior, Subjective Norms, Perceived Behavioral Control, Perceived Risk, Intention, and Behavior are .750, .657, .812, .524, .541 and .871.

Table 1: The correlation between variables

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	
ATTIT1	9.78	5.344	.468	.731	.750
ATTIT2	9.87	4.585	.567	.679	
ATTIT3	10.09	4.448	.618	.649	
ATTIT4	9.61	4.911	.530	.700	
SN1	8.80	4.319	.331	.668	.657
SN2	9.09	4.214	.546	.525	
SN3	8.84	4.179	.443	.585	
SN4	8.65	4.169	.454	.577	
PBC1	11.71	3.862	.683	.739	.812

PBC2	11.86	3.852	.612	.773	
PBC3	11.73	3.788	.671	.744	
PBC4	11.80	4.201	.557	.797	
PR1	11.09	8.297	.454	.378	.534
PR2	11.04	8.710	.496	.377	
PR3	10.84	9.079	.425	.421	
PR4	11.32	6.090	.180	.763	
Inten1	10.41	10.661	.558	.378	.541
Inten2	10.32	5.345	.256	.844	
Inten3	10.51	11.370	.494	.429	
Inten4	10.41	11.081	.488	.418	
BEHA1	2.35	1.399	.776	. ^a	.871
BEHA2	2.46	1.133	.776	. ^a	

When **PR4** and **Inten2** are removed, Cronbach's Alpha of Perceived Risk and Intention are higher .763 and .836 as show in Table 2.

Table 2: The correlation between variables when PR4 and Inten2 are removed

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	
ATTIT1	9.78	5.344	.468	.731	.750
ATTIT2	9.87	4.585	.567	.679	
ATTIT3	10.09	4.448	.618	.649	
ATTIT4	9.61	4.911	.530	.700	
SN1	8.80	4.319	.331	.668	.657
SN2	9.09	4.214	.546	.525	
SN3	8.84	4.179	.443	.585	
SN4	8.65	4.169	.454	.577	
PBC1	11.71	3.862	.683	.739	.812
PBC2	11.86	3.852	.612	.773	
PBC3	11.73	3.788	.671	.744	
PBC4	11.80	4.201	.557	.797	
PR1	7.66	2.773	.579	.710	.763
PR2	7.59	3.140	.611	.666	
PR3	7.40	3.174	.604	.674	
INTEN1	6.84	2.505	.676	.797	.836
INTEN3	6.95	2.670	.701	.772	
INTEN4	6.84	2.457	.721	.750	
BEHA1	2.35	1.399	.776	. ^a	.871
BEHA2	2.46	1.133	.776	. ^a	

The regression formulation as follow:

$$INTEN = 0.273 - 0.013 PR + 0.259 PBC + 0.105 SN + 0.590 ATTIT$$

Sig. value of ANOVA test in Table 3 is .000 which shows that the regression model can explain the change of INTEN. 31.4% change in INTEN are explained by the model.

Table 3. PR, PBC, SN, ATTIT and INTEN relationship

Model Summary		ANOVA ^b		Coefficients ^a			
R Square	Adjusted Square	R	Sig.	Model	Unstandardized Coefficients B	Standardized Coefficients Beta	Sig.
.314	.304		.000 ^a	(Constant)	.273		.448
				PR	-.013	-.012	.816
				PBC	.259	.177	.002
				SN	.105	.072	.211
				ATTIT	.590	.435	.000

At the confidence level of 95%, it is shown from Sig value in the coefficient table that among 4 independent variables, only PBC and ATTIT have causal relationship with INTEN and the relationship is positive (indicated by the sign of B value). It means that when PBC and ATTIT increase, INTEN also increase and the vice versa. The other two variables cannot be proved to have impact on INTEN (sig. value is higher than 0.05).

In detail, when PBC increases or decreases by one unit, INTEN increases or decreases by 0.259 units. When ATTIT increases or decreases by one unit, INTEN increases or decreases by 0.59 units.

The constant value of 0.273 indicates the impact of other factors besides these four factors on INTEN. When PR4 is removed:

Table 4: PR, PBC, SN, ATTIT and INTEN relationship when PR4 is removed

Model Summary		ANOVA ^b		Coefficients ^a			
R Square	Adjusted Square	R	Sig.	Model	Unstandardized Coefficients B	Standardized Coefficients Beta	Sig.
.307	.297		.000 ^a	(Constant)	.301		.414
				PR	-.012	-.010	.853
				PBC	.268	.183	.002
				SN	.093	.063	.269
				ATTIT	.582	.429	.000

$$\text{INTEN} = 0.301 - 0.012 \text{ PR} + 0.268 \text{ PBC} + 0.093 \text{ SN} + 0.582 \text{ ATTIT}$$

When PR4 is removed, the result is not much different but the model is less strong in explaining the change of dependent variable than the previous model.

The model is still significant and can explain 30.7% change of the dependent variable. PR and SN are not proved to have relationship with INTEN. PBC and ATTIT have positive causal relationship with INTEN with coefficient value of 0.268 and 0.582 (shown in Table 4).

*) *INTEN and BEHA relationship*

Table 5: INTEN and BEHA relationship

Model Summary		ANOVA ^b		Coefficients ^a			
R Square	Adjusted Square	R	Sig.	Model	Unstandardized Coefficients B	Standardized Coefficients Beta	Sig.
.103	.099		.000 ^a	(Constant)	1.166		.000
				INTEN	.356	0.32	.000

The regression formulation as follow:

$$\text{BEHA} = 1.166 + 0.356 \text{ INTEN}$$

From the result in Table 5, it is illustrated that the model is significant and the model can explain 10.3% the change of the dependent variable BEHA. INTEN has a positive causal relation with BEHA with coefficient value of 0.356 which shows that when INTEN increases or decreases by 1 unit BEHA will increase or decrease 0.356 units.

When Inten2 is removed:

Table 6: INTEN and BEHA relationship When Inten2 is removed

Model Summary		ANOVA ^b		Coefficients ^a			
R Square	Adjusted Square	R	Sig.	Model	Unstandardized Coefficients B	Standardized Coefficients Beta	Sig.
.106	.103		.000 ^a	(Constant)	1.144		.000
				INTEN	.362	.326	.000

The regression formulation as follow:

$$\text{BEHA} = 1.144 + 0.362 \text{ INTEN}$$

When Inten2 is removed, the model is stronger in explaining the change of independent variable as it explain 10.6% the change of BEHA. The coefficient of INTEN is 0.362 which show a positive relationship.

The model explaining the relation among Behavior, Intention and four independent variables can be summarized as in the Figure 2.

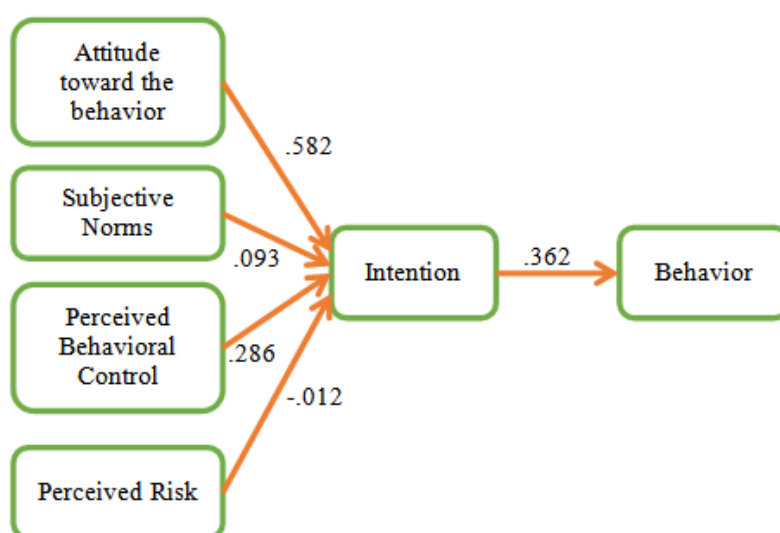


Figure 2: Relations among Behavior, Intention and four independent variables

*) Gender and INTEN, BEHA relationship

Table 7: Gender and INTEN, BEHA relationship

	D2	N	Mean	Std. Deviation	Std. Error Mean
Inten0	M	90	3.46389	.6976698	.0735409
	F	178	3.39420	.7952468	.0596063
BEHA0	M	90	2.667	.9887	.1042
	F	178	2.166	1.0275	.0770

Table 8: Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means		95% Confidence Interval of the Difference				
		F	Sig.	t	df	Sig. (2-tailed)	(2-Mean Difference)	Std. Error Difference	LoIr	Upper
Inten0	Equal variances assumed	.607	.437	.705	266	.481	.06969	.09881	-.12486	.264252
	Equal variances not assumed			.736	200.776	.462	.06969	.09466	-.11697	.256356
BEHA0	Equal variances assumed	.054	.816	3.817	266	.000	.5009	.1312	.2425	.7593
	Equal variances not assumed			3.866	184.999	.000	.5009	.1296	.2453	.7566

I test the difference between two genders in terms of intention and behavior. From the results of t-test in Table 17, it is implied that gender has no impact on intention but on behavior it does (t-test sig. value of 0.000). For female, mean score of BEHA0 is lower than male which is indicated in the group statistic table.

IV. Implication

Hence, it is more important that online vendors enable consumers to place full trust on the privacy, security, integrity and availability of vendor information. Further, online vendors should build trust with consumers by giving them complete confidence on the product/service that they provide. I believe this can be achieved when online vendors improve the following service quality factors, reliability, responsiveness, assurance, and empathy. In sum, online vendors should consider these contextual factors in order to facilitate consumer behavior.

The results obtained from research show some important implications for the management of e-commerce companies. In particular, a deeper understanding of e-commerce and especially of the effects of innovativeness can be very useful to determine those strategies and actions leading Internet users to become real online purchasers. Thus, a remarkable effort must be made to improve users' perception and their general opinion of e-commerce and online shops. Therefore, marketing strategies of online companies must aim not only at improving their own image and their volume of customers, but also at encouraging e-commerce in general, since this is the only way to guarantee future business growth. Given the effects that social influence can have on individual online purchasing behavior, marketing strategies leading to the spread of e-commerce

must not be bound exclusively to potential users of online shops but they must also reach the whole social system involving those users.

Likewise, given that individual innovativeness, in particular willingness to try new computing systems, affects individuals' initial acceptance of online purchasing, it is essential to promote a technological culture within society. Accordingly, those actions educating customers in the use of computing systems and contributing to the widespread access to basic facilities and tools prove especially important so that technology becomes a part of daily life. Also online companies should develop further strategies promoting the use of this channel as a means of shopping, such as simulated transactions or free trials in the case of electronic services and products. Thus, the more familiar individuals feel with new technology and e-commerce procedures, the more willing they are to adopt more innovative behavior.

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