

## A Research Modeling to Understand Online Shopping Intention

<sup>1</sup>Narges Delafrooz, <sup>1</sup>Laily H.J. Paim and <sup>2</sup>Ali Khatibi

<sup>1</sup>Post-doctoral Fellow, Department of Resource Management & Consumer Studies, Faculty of Human Ecology, University Putra Malaysia, Malaysia

<sup>2</sup>Professor and Dean, Faculty of Human Ecology, University Putra Malaysia

<sup>3</sup>Director of Graduate Management Center and Prof of Marketing Management and Science University, Asia Pacific Marketing

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**Abstract:** This study aims to shed light on the antecedents relating to the extent of both the attitude toward online shopping and the purchase intention. This work is done from an integrated research framework based on the Attitude Model and the Theory of Planned Behavior (TPB). A total of 370 randomly selected respondents from the states of Selangor, Malaysia answered the questionnaire and the data was analyzed using path analysis to identify the possible predictors. The results support the use of the construct “attitude toward online shopping” as a bridge to connect the Attitude Model and the Behavioral Intention Model to establish an integrated research framework and to shed light on how consumers form their attitudes toward online shopping and make purchase intention. Online retailer should provide more benefits than ever before, with the consequence that consumers will hold a more positive attitude toward online shopping that leads to their purchase intentions. In summary, online retailers need to ensure that the online shopping process through their websites should be making as easy, simple and convenient as possible for consumers to shop online. The websites should also be designed in such a way that they are not too confusing for potential new buyers, particularly among consumers, who may not be familiar with this new form of shopping. In addition, online retailers need to provide a competitive price for products in order to attract online shoppers to their websites and encourage them to make purchase decisions. This study pioneers in building an integrated research framework to understand how consumers form their attitudes toward online shopping and make purchase intention.

**Key word:** Intention, Consumer behavior, online, shopping

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### INTRODUCTION

The usage of Internet has grown rapidly over the past years and it has become a common means for delivering and trading information, services, and goods. According to the survey by A.C.Nielsen (2007), more than 627 million people in the world have done online shopping (www.acnielsen.com). A research by Forrester (2006) reported that e-commerce market would grow from \$228 billion in 2007 to \$288 billion in 2009 (www.forrester.com). Pursuant to the survey, 61 percent of the online users in the US will make their purchases via the Internet in 2010, as in comparison to merely 46 percent in 2004. As reported by Jupiter Media Matrix (2005), the online retail sales in US amounted to USD65 billion in 2004, and would likely reach USD117 billion in 2009. By 2010, e-commerce will account for \$316 billion in sales, or 13 percent of the overall retail sales (www.jupiterresearch.com). Malaysia needs to take cognizance of these trends and react fast in order to be an active participant in the emerging Internet world.

Considering that Internet shopping is at the development stage in Malaysia, little is known about consumers' behavior in adopting this new shopping channel and the factors which influence this behavior (Haque, Sadeghzadeh & Khatibi, 2006). According to Wu (2003), a consumer's shopping behavior is influenced by four major psychological factors, which are motivation, perception, belief and attitude. Online purchase intention is the strength of a consumer's intentions to perform a specified purchasing behavior via Internet. The ever-increasing use of the internet in Malaysia provides a developing prospect for E-marketers. Such marketers' awareness of the factors affecting Malaysian buyers' attitude purchasing intention can further develop their marketing strategies in converting potential customers into active ones, while maintaining their existent online customers.

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**Corresponding Author:** Laily Hj. Paim, Professor and Dean, Department of Resource Management & Consumer Studies, Faculty of Human Ecology, University Putra Malaysia, Malaysia

The current research is carried out in order to investigate and evaluating the factors influencing purchasing intention by measuring the attitude towards online shopping, particularly in Malaysia.

***Litreture Review:***

The consumers' perceived benefits are the sum of online shopping advantages or satisfactions that fulfill their needs or want. Previous studies of online shopping have established two categories of motivation: intrinsic and extrinsic. Both motivations are important in customers' selections to patronize the online stores (Liu & Arnett, 2000; Muylle, Moenaert, & Despontin, 2004; Shih, 2004). Extrinsic motivations include features such as wide selection of products, competitive pricing, easy access to information and low searching costs. Intrinsic motivations include features such as design and color (Shang, Chen, Shen, 2005). Consumers' shopping motivations may similarly impact shopping behaviors in this virtual environment.

The main opportunity provided by online shopping is that consumers can buy things, whenever they want -7 days per week, 24 hours per day, and wherever they are (McKinney, 2004; Kim & Kim, 2004). In fact, consumers can also enjoy window shopping on the internet without the pressure to purchase, unlike the traditional shopping environment (Khatibi, Haque, & Karim, 2006).

Most of the previous online shopping research has focused on identifying the motivations of online shopping that promote success (Davis, 1989; Muylle, *et al.*, 2004; Shih, 2004). The reasons why consumers shop online are time convenience (Kim & Kim, 2004; Khatibi, Haque, & Karim, 2006; McKinney, 2004), cheaper price (Chua, Khatibi & Ismail, 2006), wider selection (Chua *et al.*, 2006), fun (Parasuraman, Zeithaml, & Malhotra, 2005), homepage and better customer service (Shergil and Chen, 2005).

Despite these motivational factors, there are other transactional issues, which appear to affect the adoption of electronic commerce in Malaysia. To most consumers, the issue of security and trust over the Internet is the most overwhelming barrier that limits the adoption of electronic commerce. Widely publicized security lapses on the Internet, where hackers have access to personal financial information being sent electronically, have done little to boost consumer confidence in the Internet as a conduit for commerce (Petronas and Seri, 2001).

In the context of online shopping, self-efficacy (Lin, 2008; Wang, Lin, & Luarn, 2006), trust (Gauzente, 2004; Zhang & Tang, 2006), security (Zailani, Kheng, & Fernando, 2008), user's experiences, cost (Nysveen, Pedersen, & Thorbjørnsen, 2005), computer access and site accessibility (Cao and Mokhtarian, 2005) are all the behavioral control factors that are important in facilitating online shopping behavior.

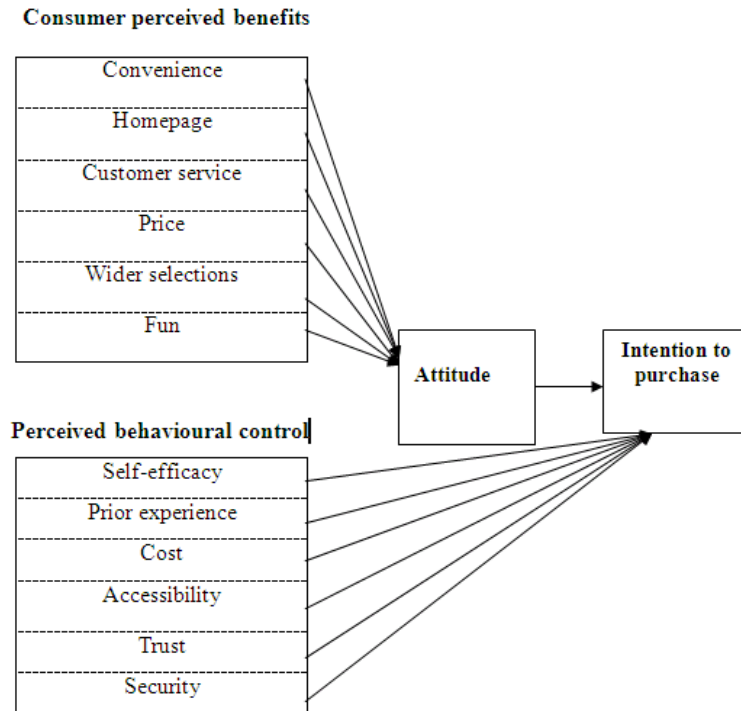
Perceived behavioral control refers to one's perception of the availability of skills, resources and opportunities that may either be inhibiting for or facilitating the behavior. It addresses both internal control (e.g. a person's skills and abilities or self-efficacy) and external constraints (e.g. opportunities and facilities) that are needed to perform the behavior. Thus, is a function of intention and perceived behavioral control (Barnett & Presley, 2004).

All in all, there is strong theoretical and empirical support for the role of behavioral control on intentions. In the context of online shopping, behavioral control would have a positive effect on intention if consumers do not have fears of opportunistic behavior of a web retailer (Pavlou, 2003).

***Conceptual Framework:***

In the social and decision-making sciences, understanding the fundamental determinants of behavior has long been treated as a paramount goal for many theorists. The underlying psychological assumption driving the linkage between intentions and behavior is that most human behavior is under volitional control (Ryan, 1970). Although a consumer's actual behavior is not always equally well predicted by consumer attitudes and even stated behavioral intentions, the behavioral intention models have received robust support in numerous behavioral domains (Ajzen, 2001) and are considered to be some of the most widely applied theories in social psychology. Behavioral intention is determined by an individual's attitude towards performing the behavior. According to Fishbein's (1963) Multi-attribute Attitude Model, a person's attitude toward an object, abstract or concrete is determined by the sum of beliefs that the person has about the consequences or attributes of the object weighted by how they are evaluated. In cognitive psychology, a person's attitude is recognized as a crucial factor that guides human perception and influences behavior. Furthermore, a person's conscious decision to perform a behavior is the best predictor of human behavior. Theory of Planned Behavior (TPB) proposed by Ajzen (1991), which is an extension of the Theory of Reasoned Action (TRA) (Fishbein and Ajzen, 1980), identifies three attitudinal antecedents of behavioral intention to explain social behaviors. The individual's perception of the motivations of the behavior and the individual's self efficacy and ability to control internal and external resources on behavior in performing the intended behavior have led to the development of the Theory of Reasoned Action (TRA) and Theory of Planned Behavior (TPB).

In recent years, it has been successfully applied to explain the aspects of consumer behaviors as well (Taylor and Todd, 1995). This study aims to build an integrated research framework to ascertain the overall attitude toward online shopping based on the two theoretical contexts mentioned (Figure 1). The construct consumer Attitudes toward Online Shopping depicted in the central part of Figure 1 links the attitude model and the behavioral intention model in this integrated research framework. The corresponding research hypotheses are described and presented below.



**Fig. 1:** Research Model.

**The Attitude Model:**

The Theory of Reasoned Action (TRA) claims that beliefs such as online shopping perceived benefits are completely mediated by attitude. Verhoef and Langerak (2001) also employed the TRA and found that beliefs had a significant influence on the intention to shop online through attitude. In addition, perceived benefits are similar to perceived consequences in TPB models. Furthermore, the empirical findings supported the premise that beliefs in online shopping attributes were positively related to attitudes towards online shopping ( Childers, Carr, Peck, & Carson, 2001; Menon & Kahn, 2002).

- H<sub>1</sub>: Consumers’ perceived benefits of online shopping will positively affect their attitude toward online shopping.
- H<sub>1a</sub>: Convenience will positively affects attitude towards online shopping.
- H<sub>1b</sub>: Homepage will positively affects attitude towards online shopping.
- H<sub>1c</sub>: Price will positively affects attitude towards online shopping.
- H<sub>1d</sub>: Wider selection will positively affects attitude towards online shopping.
- H<sub>1e</sub>: Customer service will positively affects attitude towards online shopping.
- H<sub>1f</sub>: Fun will positively affects attitude towards online shopping.

**The Behavioral Intention Model:**

The Theory of Planned Behavior (TPB) extends the Theory of Reasoned Action (TRA) by taking into account the conditions where individuals do not have complete control over their behavior. According to the Theory of Planned Behavior (TPB), a behavioral intention (e.g. purchase intention) is basically determined by two factors: the attitude that the person holds toward engaging in the behavior (i.e. purchasing attitude) and the degree of control that the person feels over performing the behavior (i.e. perceived behavioral control) (Ajzen, 1991).

It argues that perceived behavioral control (the individual's perception of his/her ability to perform the behavior) influences attitude. According to Ajzen (1991), the construct of perceived behavioral control reflects beliefs regarding the availability of skills, resources and opportunities of performing the behavior. The existence of internal/external factors that impede the behavior control is important in explaining human behavior. Moreover, the perceived behavioral control is of greater interest than actual control since it refers to people's perception of the ease or difficulty of performing the behavior interest (Verbeke & Vackier, 2005). The hypotheses related to the factors of the Theory of Planned Behavior are proposed as follows.

H<sub>2</sub>: Perceived behavioural control of online shopping will positively affect consumers' purchase intention:

H<sub>2a</sub>: Self-efficacy will positively affects purchase intention.

H<sub>2b</sub>: Trust will positively affects purchase intention.

H<sub>2c</sub>: Security will positively affects purchase intention.

H<sub>2d</sub>: Prior experience will positively affects purchase intention.

H<sub>2e</sub>: Cost will positively affects purchase intention.

H<sub>2f</sub>: Accessibility will positively affects purchase intention.

H3: Consumers' attitude towards online shopping will positively affects their intention to purchase.

**Methodology:**

There were 370 conveniently selected respondents in this study, which includes 35.5 percent males and 64.3 percent females, who were selected from a public university in the states of Selangor, Malaysia. The above state was chosen because it is generally known to have higher number of Internet users. The data collection used the questionnaire and was analyzed using SPSS Version 17.0. Path analysis was carried out to investigate and evaluate the underlying factors that influence purchasing intention and attitude towards online shopping.

Majority of the respondents (162) are between 20-25 years old, and was mostly Malays. The results showed that more than half of the total respondents (37%) earned a salary between MR1000-2000 per month (USD1=MR3.2055, <http://www.x-rates.com/calculator.html>, July 19, 2010). The findings indicated that respondents would mostly like to shop online for computer/electronics/software (36.9%) and book/DVD/CD (31.18%). Table 1 provides the demographic details of the respondents.

**Table 1:** Demographic characteristics of respondents.

Variables and category	Frequency	Percentage
Gender		
Male	132	35.7
Female	238	64.3
Age (years)		
20-25 years	162	43.8
25-30	108	29.2
30-35	61	16.5
35-40	35	9.5
More than 40 years	4	1.1
Level of education		
Master	290	78.4
Ph.D	72	19.5
Post-doctoral	8	2.2
Monthly Income		
Under RM 1000	73	19.7
RM 1001-2000	138	37.3
RM 2001-3000	36	9.7
RM 3001-4000	82	22.2
Over RM 4000	41	11.1
Ethnicity		
Malay	165	44.6
Chinese	150	40.5
Indian	49	13.2
Others	6	1.6
Online buying		
Food/beverage	29	5.35
Clothing/Accessory/Shoes	99	18.26
Toys	23	4.24
Computer/Electronics/Software	200	36.9
Book/DVD/CD	169	31.18
Others	22	4.05

**Result:**

Path analysis was carried out to investigate and evaluate the underlying factors that influence purchasing intention and attitude towards online shopping. The explained variances in the dependent variables (intention to purchase) for the integrated research framework are as follows: attitude towards online shopping (0.25), perceived benefits from online shopping (0.24), and perceived behavioral control (0.17). In general, all the explained variances in the dependent variables seem to be satisfactory except for perceived behavioral control, which is below 0.20.

Each estimate of the path parameter is then assessed to test whether each postulated hypothesis is supported or not. The results shown in Table 2 reveal that H<sub>1</sub> is partially supported since the path coefficient of the path from Homepage (H<sub>1b</sub>) and fun (H<sub>1f</sub>) to attitude towards online shopping is not statistically significant. Moreover, H<sub>2</sub> is partially supported since the path coefficient of the path from prior experience (H<sub>2d</sub>), cost (H<sub>2c</sub>) and accessibility (H<sub>2f</sub>) to purchase intention is not statistically significant. The path from attitude toward online shopping to purchase intention (H<sub>3</sub>) is significant. It can be concluded that when consumers perceive more contributions from online shopping, they will perceive more benefits such as convenience, cheaper price, wider selection and consumer service from online shopping. The results in this study prove that consumers' perception of self-efficacy, trust and security from online shopping does affect their purchase intention. Previous studies reveal that Malaysians are concerned about the outcomes and the uncertainty related to the outcomes of online shopping.

**Table 2:** Estimates of Coefficients of Path Analysis.

Research hypothesis	Path coefficients	Standardized coefficients	t-value	Conclusion
H1				
F1 →F13	.881	.482	18.211**	S
F2 →F13	-.103	-.035	-1.939	NS
F3 →F13	.951	.205	9.782**	S
F4 →F13	1.112	.238	9.768*	S
F5 →F13	.083	.043	2.251*	S
F6 →F13	0.38	.019	1.123	NS
H2				
F7 →Y	-.131	-.109	-3.403*	S
F8 →Y	-.665	-.448	-8.339**	S
F9 →Y	-.157	-.179	-3.008*	S
F10 →Y	-.023	-.020	-.589	NS
F11 →Y	-.049	-.040	-1.13	NS
F12 →Y	-.042	-.051	-1.20	NS
H3				
F13 →Y	.130	.313	73169**	S

Notes: R = 0.817; R<sup>2</sup> 0.668; Adj. R<sup>2</sup> 0.664; F (5, 364) = 146.53; F1 = Convenience, F2 = Homepage, F3 = Selection, F4 = Price, F5 = Custom service, F6 = Fun, F7 = Self-efficacy, F8 = Trust, F9 = Security, F10 = Cost, =F11 = Accessibility, F12 = Prior experience F13 = Attitude, Y = Intention to purchase; NS = No Significant, S = Significant\* p, 0.05; \*\*p. 0.001

Generally, perceived behavioral control construct such as self-efficacy, trust and security are considered to influence purchase intention negatively, while perceived benefits are assumed to influence an attitude in the positive direction. Thus, H<sub>1</sub> predicts that the path from perceived benefits to the attitude toward online shopping is positive and H<sub>2</sub> predicts that the path from self-efficacy, trust and security to the purchase intention is negative. The results show that the path from convenience, cheaper price, wider selection and consumer service to the attitude toward online shopping is significantly positive. This implies that consumers' attitudes towards online shopping are mostly influenced by their perceived benefits from online shopping, which are, perceived as a moderately severe. However, the path from self-efficacy, trust and security to the purchase intention is significantly negative, as expected. Convenience, cheaper price, wider selection and customer service are believed to be the crucial determinants for the acceptance of online shopping with the condition that consumers are convinced that online purchasing is safe and reliable.

Based on the Theory of Planned Behavior, the path from the attitude toward online shopping to the intention to purchase online is predicted to be positive as described by H<sub>3</sub>. The path is found to be significantly positive. Support for H<sub>3</sub> indicates that consumers' intention to purchase online is influenced by the attitude toward online shopping as the Theory of Planned Behavior suggests. Figure 2 illustrates the results summarized from the path analysis. When an independent variable gives out a high beta coefficient, it indicates that the variable is highly important in contributing to the prediction of the criterion variable.

**Discussion:**

A result of path analysis based on the factor scores provided highly interpretable insights concerning the common underlying dimensions of the benefits and barriers perceived as important and unimportant. All in all, the present results support the use of the construct “attitude towards online shopping” as a bridge to connect the Attitude Model and the Behavioral Intention Model in an attempt to establish an integrated research framework and also to shed a light on how consumers develop their attitudes towards online shopping and further how they form their intentions to purchase.

In the Behavior Intention Model’s part of the integrated research framework, both the attitude towards online shopping and perceived behavioral control from the self-efficacy, trust and security serve as antecedents of consumers’ intention to purchase (only H<sub>2a</sub>, H<sub>2b</sub>, H<sub>2c</sub>). The finding matched the result yielded by Lin (2007), Wang *et al.* (2006), Zhang & Tang (2006) and Zailani *et al.* (2008). The results are also similar to the consequences of Bredahl’s (2001) Purchase Intention Model.

In the Attitude Model’s part of the integrated research framework consumers’ attitude toward online shopping is only determined by perceived benefits from convenience, price, wider selection and customer service (only H<sub>1a</sub>, H<sub>1c</sub>, H<sub>1d</sub> and H<sub>1e</sub> are supported). In line with the findings yielded by several researchers including Khatibi *et al.* (2006); Kim and Kim (2004); McKinney (2004); and Chua *et al.* (2006).

**Conclusion:**

The consumers will hold a more positive attitude towards online shopping, that they will follow it up with purchase intentions. Moreover, the findings show that trust and security were the main factors that prevent Malaysians from shopping online. More specifically, consumers’ perception regarding the trust for online purchasing exhibited significant relationships with their online buying intention. If the consumers can be convinced that online purchasing is safe and reliable, the potential will be unleashed. Therefore, the government needs to establish commercial codes for the government commercial transactions between businesses and consumers through the internet. These commercial codes and practices will serve various needs of internet shopping including consumer privacy, security and resolution of dispute.

By having these commercial codes and practices the government can verify and certify online retailers that meet the requirements of the commercial codes and this will eventually help to raise trust and confidence among consumers to shop online. This will serve as a platform that will lead to the sustained confidence of consumers in online purchasing. Other practical aspects that need revising in the national ICT policy are: measure to protect online consumers from fraud (including e-commerce laws ensuring legality of online contracts and transactions); change to banking laws that will be necessary to ensure that credit card transactions and foreign currency transactions are enacted and the deregulation of the telecommunications industry.

In summary, online retailers need to ensure that online shopping process through their websites should be as easy, simple and convenient as possible for consumers to shop online. The websites should also be designed in a way such that they are not too confusing for potentially new buyers, particularly among consumers who may not be familiar with this new form of shopping. In addition, online retailers need to provide a competitive price for products in order to attract online shoppers to their websites and encourage them to make purchase decisions. However, this will lead to intense price competition which will further increase the availability of intelligent search engines and comparative shopping agents.

The availability of intelligent search engines enable online consumers to easily compare product offerings from various online retailers. Thus, in order to avoid intense price competition, online retailers need to find other ways to differentiate themselves from their competitors. Finally, to fill up the gap between the consumers’ behavioral intentions toward online shopping and their actual purchasing behaviors, future research are recommended.

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