

# Web Services and e-Shopping Decisions: A Study on Malaysian e-Consumer

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## ABSTRACT

The trend of the new world starts with online purchasing that caters today's modern business and technological world. E-consumers are increasing tremendously around the world as the ways of purchasing become more user-friendly and the need for e-shoppers becomes more intense. The study focuses on perceptive and manipulating the decision of e-shoppers to create a base for marketers and consumers involved with Malaysian e-business market. Although Malaysia has been improving its E-commerce and the IT industry, most of the citizens still maintain a certain degree of thought when it comes to online purchasing. The researchers used comprehensive survey data to collect and analyze the e-consumers' perspective of shopping decisions. A total of 230 valid feedbacks were obtained from the respondents with the study proves that there are many factors affecting online purchasing decision. As a result internet purchasing will still be a strong upcoming upon the synchronization and understanding of the issues by both e-marketers and e-consumers.

**Keywords**- e-consumers, online purchasing, e-marketing

## INTRODUCTION

In today's world e-Business is transforming the ways the delivery of products and services along with customer expectations. Virtually overnight, e-businesses have reached the point where they are attempting to move beyond the traditional view of their customers to engage in more robust – and profitable -- customer relationships (Ragins, Johnson and Greco, 2003). Indeed, across the board, an increasing number of small and medium-sized enterprises (SMEs) are adopting Internet based business solutions to improve their performance and profitability (Johnston, Wade and McClean, 2007). Generally, e-marketing is the result of information technology applied into traditional marketing; therefore, it affects the traditional way of marketing in two ways. Firstly, it increases efficiency in marketing functions and secondly, it transforms many marketing strategies. These resulted in creation of new business models that add customer value and increase company profitability. E-consumers shopping decision (also called online buying behavior and Internet shopping/buying behavior) refers to the process of purchasing products or services via the Internet. In Malaysia, due to the history of the nation itself, perhaps it is also not surprising to observe that internet is evolving as a prominent feature in the society (Floyd, 2003). On the contrary, we should accept

online purchasing as a complex process, and require basic IT knowledge and requirements (credit card, computer) for people to buy products online. However, the focus of Malaysian government is on building up the platform required to support e-business. Malaysian e-consumerism is evolving at rapid rate due to awareness and infrastructure availability that persuade consumers to involve in e-business activities.

According to a report by Malaysian Communication and Multimedia Commission, the rate of internet user's growth in Malaysia has been increasing rapidly from 3.5million users in the early years 2000 to 14.7million users in 2008, at a rate of 10.3% rise per annum. The statistics report from the commission also indicated that every household has about 2.51 average users. The key statistics indicates that out of all these users who use internet, 15.4% of people are e-consumer involved with purchasing from various entities in the web. Airline tickets were the most popular (54.7%) followed by online goods purchase (26.2%) and books (16.1%).

In Malaysia, the elements of online purchasing are quite different. Some of the countries have laws to support the people buying online. In addition, these laws certainly provide a sense of safety for the people when purchasing online. However, these laws are not available in most of the countries. Also the fact is that there are many factors that affect people from purchasing online even though is easily accessible through the web, some of the people still prefer the traditional approach to do the purchasing. The process consists of five steps similar to those associated with traditional shopping behavior (Liang and Lai 2000). In the typical e-shoppers process in Malaysia, when potential consumers recognize a need for some merchandise or service, they go to the Internet and search for need-related information. However, rather than searching actively, at times potential consumers are attracted by information about products or services associated with the felt need. They then evaluate alternatives and choose the one that best fits their criteria for meeting the felt need. Finally, a transaction is conducted and post-sales services provided. Shoppers' behavior over the net refers to consumer's psychological state in terms of making purchases on the Internet.

## LITERATURE REVIEW

Several studies have identified factors that affect online decision making and online shopping environment (Chi, Lin, and Tang, 2005; Dillon and Reif, 2006; Doolin, Dillon, and Corner, 2005; Shergill and Chen, 2005). E-consumers are massive world that involves many businesses. Online purchasing refers to process of carrying transactions in the e-business market place. The Malaysian e-market place is on growth phase and despite the softening economy it has expanded e-products and e-markets rapidly. Internet purchasing is one of the imminent trends in the technological world (Jahng, Jain and Ramamurthy, 2001) even through online purchasing is setting the trends in the world, and the acceptance of online purchasing by the people is still a limiting factor.

With its arrival in the early 90s, online purchasing behavior has spread into every corner of life, linking people to the culture of capitalism in frequent and daily ways. It lets us buy what we want, when we want, and how we want and helps us to imagine ourselves buying, owning, and having positive outcomes by the goods available out there on the web. For some, shopping has become a way of identifying oneself in today's culture by what we purchase and how we use those purchases. E-shoppers have always been middle to high-class commodity since its first arrival on the internet in society

### Generation gap

A survey by A.C. Nielsen on e-shopping habits in Malaysia reveals that approximately 30% of its internet users have ended up with purchases. In Malaysia, Internet usage has become a part of life with 87 percent of Generation X going online for various activities such as online shopping, online buying, doing research, and others. Those who are in their thirties have the highest percentage of online shoppers. Moreover, 30-44 years old made online purchases (37.1%) compared to 18-29 (24.1%), 45-59 (26.3%) and 60 years and above (12.6%). Mean that, Generation X is the most domain user for online purchasing. They are consider as a group of more upper income (RM100,000) households made on-line purchases (27.8%) compared to 16.1% of households below RM25,000. The Generation X and Y who born in the era of digital and computer literacy are more computer savvy for being e-consumer.

Past studies on e-shopping behavior has focused on predicting the type of consumers who likely to use the internet to search for and purchase products. As Bellman, Lohse and Johnson (1999) investigated several predictors for online purchase. Their study concluded that demographic variables such as income and age have a modest impact on the decision of whether to buy online. Past studies also are evidence for the most important determinant of buying on the web is behavior such as earlier online purchases and revisit decisions.

### E-security

According to Leong and Lee (2009), Malaysian consumers are more conservative and less confident about online security however it is certainly gaining popularity among the younger generation. Security is a key factor that concerns the people using internet to purchase, since most of the transactions are carried out on the web. The information about the users is transferred via unsafe environment. In addition, most of the e-business website lacks high-end security features that provide the confidence to the user that they will be able to purchase online without any fear of the security threats. The previous research indicates various authors' perspective of the internet security issues. Using ever-having-purchased-online as the

dependent measure, the significant motivational predictors were transaction-based security concerns, interactive control, conversation motives, and economic motives (Koufaris, Kambil and La Barbera, 2002).

They argued on the impact of these motives have on the amount of time spent searching for products online and the frequency of internet purchase for products such as investments, travel, and computer related products. Furthermore, as (Bhatnagar, Misra and Rao, 2000) have examined perceived risk as it influences consumer internet shopping behavior.

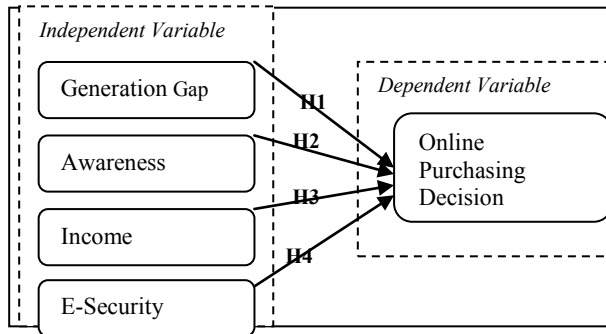
They defined two types of risk: risk and financial risk. High product risk defined as situations where the product was technologically complex, satisfied ego needs of the purchaser, was high priced, and was sold based on its feel or touch. High financial risk defined by fears about the safety of consumers' financial information online. Studies show that there is a vast increase in both types of risk generally decreased the likelihood of online purchase behavior. This is consistent with the results from Vellido, Lisboa, Meehan and Forsythe (2000), where online purchase behavior was best predicted via consumer risk perception of shopping on the internet. With reference to media habits and purchasing behavior, the internet generation understands features of advertising emotionally when they go online (Arasu and Viswanathan, 2010).

## METHODOLOGY

The primary objective of the research is to identify the factors that influence consumers' decision to purchase online and to determine the level of consumer acceptance of e-shopping. The secondary objective of the research is to identify the perspectives of e-shopping and to identify the level of online purchasing carried out in Malaysia. A quantitative research was designed to analyze the study involving e-consumers and e shopping with research methods being a causal and descriptive research. With e-consumers as the focus, the population based in Klang Valley, Malaysia was chosen for sampling. The chosen sampling population has basic understanding and experience on the internet and online purchasing respectively. They are actively involving with online transactions. The target population is analyzed with close-ended questionnaire to gather the understanding of the online purchasing behavior with a 5 point Likert scale as the base to measure the feedback, with '1'- strongly disagree to '5'- strongly agree.

Sample is selected based on convenience sampling method. This method is chosen because the people that researchers need and fits in the profile of the target respondents are easily available within the study environment of the researchers. The researchers' main reason of using survey is for its ability to investigate the research problem in realistic settings. It is also found that, using this method, large amount of data regarding the research problem was collected with relative ease from the respondents.

As shown in Figure 1, the hypotheses for the study are: (H1) Generation Gap has a significant influence on the e-consumers shopping decisions. (H2) Awareness has a critical influence on the e-consumers shopping decisions. (H3) Income of the people affects the purchasing decisions. (H4) e-Security as a significant influence on the e-consumers shopping decisions. Data gathered for the study tested corresponding to these hypotheses.



**Figure1. Research Framework**

Cronbach's alpha coefficient is the most regularly used estimate of reliability. Cronbach's alpha scores for online purchasing; awareness and attitude toward online shopping were computed to assess inter-item reliability for each of the multi-item variables. Cronbach's alpha coefficient was high in all scales, ranging from 0.7 to 0.8. These alpha scores exceed the 0.70 recommended acceptable inter-items reliability limit, indicating that the factors within each multi-item variable are inter-related.

**FINDING AND ANALYSIS**

A Total of 250 questionnaires were distributed to the respondents in Klang Valley, Malaysia with target focus being the e-consumers and e-marketer in the internet.

**A. Data Analysis Method**

As depicts in Table 1, demographic analysis of the respondents was carried out with reference to questions related to internet usage and product purchase behavior out of which 230 valid responses obtained from the target respondents for analysis. Pearson chi square and multiple regressions analyses were conducted to test the hypotheses of this study. As shown in Figure 1, the analyses enabled the researchers to examine the individual relationship between independent variables and attitude towards online purchasing. The study uses Online Purchasing Decision (OPD) as the dependent variable and awareness, income, generation gap and e-security as independent variables.

**B. Demographic of internet**

As shown in Table 1, the demographic of the research is that nearly 55 percent of respondents are male and remain are female respondents. In addition, the ages of the respondents are the key to research where most of the respondents are less than below 30 years of age (69.1%). Regarding the length of time users spent per day on surfing the internet, 56.1 percent of respondents use internet for about 5 – 6 hours. While only a minority of respondents, (6.1%) spent less than 2 hours per day on the internet. In conclusion, the results show a general pattern of internet usage of young consumers in Malaysia whereby it could be concluded that because they have their own internet connection at their reach leads them to be the active internet users who spend is an average of more than 35 hours a on the internet. With regard to users' computer experience, as presented in Table 1, 69.6 percent of respondents indicated having used the internet almost daily, indicating the strength of internet usage of the respondents and their pattern as being an e-consumer.

**Table I: internet user demographics**

Variable	Mean	Std Dev	Parameters	Percent
<b>Gender</b>	1.45	0.498	male	<b>55.2</b>
			female	<b>44.8</b>
<b>Age</b>	2.16	1.092	Below 25yrs	<b>31.3</b>
			26 to 30yrs old	<b>37.8</b>
			31 to 40yrs old	<b>19.1</b>
			41 to 50 yrs	<b>7.0</b>
			Above 51yrs	<b>4.8</b>
<b>Access internet</b>	1.60	0.996	Daily	<b>69.6</b>
			Few times	<b>6.1</b>
			Once a week	<b>20.4</b>
			Once a month	<b>2.2</b>
			rarely	<b>1.7</b>
<b>Hours of Usage</b>	3.53	0.691	Less than 1 hour	<b>.9</b>
			1 – 2 hrs	<b>6.1</b>
			3 – 4 hrs	<b>34.3</b>
			5 – 6 hrs	<b>56.1</b>
			> 6 hrs	<b>2.6</b>

**C. Hypotheses Testing**

**H<sub>1</sub>: Generation gap has a significant influence on the e-consumers shopping decisions**

As shown in Table II, the Pearson chi square test indicates that the result are significant at the 1% level (sig = 0.000) with means that the hypotheses is not rejected. The result indicated that the lower the age i.e. below 30 years of age (69.1 percent) the more they are willing to purchase from the internet (59.7 percent).

**Table II: Chi- Square- Pearson Test**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	53.622 <sup>a</sup>	12	.000
Likelihood Ratio	55.380	12	.000
Linear-by-Linear Association	47.632	1	.000
N of Valid Cases	230		

a. 2 cells (55.0%) have expected count less than 5. The minimum expected count is .00.

Smith, Morris, Goe and Kenny (2004), in the Internet adoption study found a minimal effect for age and age squared in their analysis. Past literatures on Internet adoption proven that age was a significant characteristic (Batte, 2003; Sabuhoro and Wunsch, 2003; Batte, Jones, and Schnitkey, 1990; Gloy and Akridge, 2000). However, using OLS model Ernst and Tucker (2002) found age to be an insignificant variable in their study on the level of website use.

Table III: Phi-Cramer's Test for Income

		Value	Approx. Sig.
Nominal by Nominal	Phi	.353	.004
	Cramer's V	.204	.004
Interval by Interval	Pearson's R	.070	.288 <sup>c</sup>
Ordinal by Ordinal	Spearman Correlation	.032	.632 <sup>c</sup>
N of Valid Cases		230	
a. Not assuming the null hypothesis.			
b. Using the asymptotic standard error assuming the null hypothesis.			
c. Based on normal approximation.			

**H<sub>2</sub>: Awareness has a vital influence on the e-consumers shopping**

The findings obtained based on the regression conducted as shown in Table IV, indicated that the result is significant at the 1 percent level (Sig = 0.000; F= 53.243) shows that there is a significant relationship between the variables, the beta coefficient of 0.438 and R Square value of 18.9 Percent indicates a positive moderate relationship between the awareness of the internet and the consumers. With the finding and the significant result for the variable, it can be concluded that the null hypotheses is not rejected for the research.

Table IV: Multiple Regression for Awareness of the Internet

Variable : Awareness of the web	
Parameter	Value
R	0.435
R Square	0.189
B	0.438
Beta	0.435
t	7.297
Sig	0.000
Dependent variable : E-consumer Purchasing	

Most of the previous online shopping studies have focused on identifying the attributes of online stores that promote success. However, this study confirms that there is a positive and highly significant relationship between perceived benefits of Internet shopping and both frequency of people involved with internet being aware of the features of the internet. These findings indicate consumers' shopping awareness may similarly affect shopping behaviors in the virtual environment. Moreover, awareness and knowledge could be created with the use of internet for high involvement or OPD i.e. high priced offerings, emotional or social risk. Furthermore, found that consumers become aware of and learn about a new offering via online. Therefore, online operators for instance fundsupermat dot com, lelong dot com, airasia dot com and batterYTECHSOLUTIONS dot com were chosen appropriate online marketing communication tools such as web advertising and e-mail campaigns to encourage online transaction among internet users.

**H<sub>3</sub>: Income of the people affects the purchasing decisions**

Table V: Pearson Chi-Square Test for Income

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	28.622 <sup>a</sup>	12	.004
Likelihood Ratio	26.380	12	.009
Linear-by-Linear Association	1.132	1	.287
N of Valid Cases	230		
a. 11 cells (55.0%) have expected count less than 5. The minimum expected count is .00.			

The findings as shown in Table V, indicate that the result is significant at the 1 percent level (Sig = 0.004). This clearly shows that there is a strong significant relationship between the income and OPD. Furthermore, the results indicating that due to higher the income of an individual he or she is reachable to carrying out web based purchases, as they have a strong based to perform the online transaction. Also, the results indicates that higher the income level (i.e. above RM 3000) the more likely the respondents are to purchase online (67.9 %) than the lower income level group (i.e. less than RM 2000), where only 10.5 percent of people are likely to purchase online.

**H<sub>4</sub>: e-Security has a significant influence on the e-consumers shopping decisions**

Online security is a key issue among Malaysian e-consumers. According to the results as shown in Table VI of the multivariate regression analysis, convenience indicated a regression coefficient of beta of 0.379 and a significant value of  $p = .000 < .05$ , which indicates that the result is significant at the 1% level this signifies that the null hypothesis was not rejected. This finding means clearly stated privacy policies and the use of encryption for secure transactions are resulted in trust on preferred web sites. As the study found that there is a significant and positive association between security concern over the net and OPD.

Table VI: Multivariate Regression for e-Security

Variable : e-Security	
Parameter	Value
R	0.379
R Square	0.479
B	0.279
Beta	0.241
t	4.391
Sig	0.000
Dependent variable : E-consumer Purchasing	

**RECOMMENDATIONS**

There are several limitations to this study. The first one was the availability of respondents to complete the survey. The generalization of the findings is limited since only 230 completed surveys were used in this study. In addition, the geographical location of this study is limited to Klang Valley which is one of the "golden locations" in the developed status state of Selangor. The factors like awareness, e-security, generation gap and income certainly has significant effects on online purchasing decision with that as focus, the recommendations for purchasing decision are structured around e-marketer and e-consumers. The following are some of the recommendation based on this study.

Most consumers are wary of companies simply because of the lack of ethics and morality that many companies have displayed over the past few years. Consumers have been subject to bait-and-switch fiascos, executive fraud, the cooking of books and being outright lied to from Fortune 500 companies. By connecting through the Web, consumers build bonds by rallying “against” the companies that may have caused them irritations or dissatisfaction. Blogs, newsletters, wiki’s, and chat rooms create an environment where consumers can share war stories with one another. This leads to a sense of trust when users find other consumers with similar experiences.

Awareness is the key to upcoming e-business core to attract e-consumer to perform purchasing online. In addition, to create awareness, the social and networking websites are one of the key to promote the e-business and to create a strong awareness to the people about the existence. Experience orientation relates to having fun, bargain hunting, or just surfing to find something new. When consumers are looking for experiential shopping, it makes sense that they would find this more often in brick-and-mortar stores than online. Thus e-marketers can accommodate consumers by making the browsing experience more fun, offering bargains, and updating the site regularly. This could include flash games, streaming video, coupons, online deals, daily news, etc. Furthermore, today’s e-consumers are quite sophisticated and they are attempting to understand even the simple ringgit cost of a product. They are aware of the seller’s price which includes other seemingly hidden elements whereby revealed online at the last screen of an e-shopping site. The real costs should be disclosed at the earlier sites of e-shopping sites. This is due to sometimes the net is slow, past search experiences and other technological challenges might influence the searching time and costs.

Malaysia has more mobile telephone subscribers than fixed line telephone subscribers. As a result, e-marketers should conclude how to modify existing Web site content for the smaller screens on cell phone display. They should also determine how to resolve potentially cumbersome text entry using tiny keypads and how to develop new content that consumers will want. Additionally, they should consider how to price their services, and how to develop easy, secure payment methods. Security is a core of most of the internet transactions; e-consumers have a strong impact towards the purchasing behavior due to the security cautions online. To get a better ways to make people trust the security of the internet and to increase the purchasing behavior there should a standard that should be created to indicate that the website the e-business is conducted it trust worthy. E-consumers are expected to transact online and their personal details are tracked for personalized service or supply chain management. Therefore, trust need to build in as an integral part of online marketing strategy. Those online companies’ web sites with lower brand identification should plan a secure environment. This can be indicated in terms of a logo or some sort of highly reliable symbol as to conduct the transition in a safe and comfortable way.

## CONCLUSION

the research conducted indicates that the overall structure of the online purchasing behavior of the e-consumers is affected by various factors even though these factors provide a significant impact on the purchasing behavior its certainly depends on the consumers and the marketers approach to how these factors are taken into consideration in achieving success in the e-business. Purchasing behavior over the internet has been a core towards the online purchasing and e-consumers has been the key to its evolvement, even though the research proves that there are many factors affecting it, internet purchasing will still be a strong upcoming upon the synchronization and understanding of the issues but both the e-marketers and the e-consumers.

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