ONLINE BUYING INNOVATIVENESS: EFFECTS OF PERCEIVED VALUE, PERCEIVED RISK AND PERCEIVED ENJOYMENT

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ABSTRACT

This paper proposes a model using the Structural Equation Modeling technique to identify the influence of perceived value, perceived risk and perceived enjoyment on online shoppers’ innovativeness in relation to adoption of online shopping. A self-administered questionnaire was used to gather information from 554 respondents. Results from Structural Equation Modeling reveals that perceived risk was an important indicator not to be overlooked by e-retailers to evaluate Malaysian Internet users’ innovative behaviour in online shopping with respect to their attitude toward online shopping. Consideration of perceived risk factor by e-retailers could improve the Malaysian online shoppers’ innovative behaviour and thus create added value in their decision to shop through virtual stores than traditional/physical shopping stores. When consumers enjoy positive experience in shopping for products via the Internet, they will increase the amount of online purchases. Results from this study would greatly aid online marketing managers in developing successful targeting and positioning strategies to gain better insights about the purchase behaviour of innovative online shoppers, and constitute a future research foundation area for a more scrupulous analysis by both information systems analysts and marketing researchers.

Keywords: Innovativeness; Online shopping; Attitude; SEM; Perceived value; Perceived risk; Perceived enjoyment.

1. INTRODUCTION

The Internet is considered to be the communities of people who use and develop the networks, as well as a collection of resources that can be shared at anytime from anywhere (Hoffman, Novak, and Chatterjee, 1996). Meanwhile, online shopping combines new technologies and new behavioral patterns into new way of product purchase or adoption that allows companies to provide product information and offer direct sales to their customers through an electronic channel or a new retail form: virtual stores.

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A research study by Jupiter Research (2004) reports that the online retail sales in US was USD65 billion in 2004 and is likely to reach USD117 billion in 2008. In addition, 30% of Internet users in the US are buying online in 2004 and their average online spending is estimated at USD585. As for Malaysia, total Information & Communication Technology (ICT) spending in 2004 is estimated to be USD2.5 billion (RM9.5 billion), expanding at a compound annual growth rate of 8.3%, faster than global average of 6.2%. In Malaysia, as of second quarter of 2004, Malaysia had 9.4 million Internet users, nearly 175,000 broadband subscribers and more than 12.4 million cellular subscribers. According to International Data Corporation (IDC), Malaysia’s ICT market is expected to reach a value of USD10.49 billion (nearly RM40 billion) in 2007 (Matrade, 2004). Online shopping has proved that there is remarkable growth of online users which has led to dramatic shifts in the way of conducting purchase activities and transactions. Mohd Suki (2006) conducted a study among Malaysian Internet shoppers and found that Internet shoppers who own a credit card enjoyed purchasing books/journals/magazines through the Internet, especially books at the price of less than RM100 per item.

Internet retailers need to understand online consumer purchasing behavior in order to design and support effective retail websites that match the preferences of their target market (Vijayasarathy and Jones, 2000). This paper proposes a model using the Structural Equation Modeling technique to sum up the relationship of Internet retailers’ understanding towards consumer behaviour with the perceived value, perceived risk, perceived enjoyment as well as shoppers’ innovativeness.

The paper begins with an overview of the related review of literatures to the study. The research methodology applied was elaborated in the next section. This is followed by the results of the data analysis and the discussions. In the final section, the implications of the study are examined and further research direction was suggested.

II. LITERATURE REVIEW

There are many differences between a physical store and its electronic counterpart (Lohse and Spiller, 1998; Mohd Suki, 2006) whereby customers are provided with a completely new and innovative shopping experience while shopping through the Internet. 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. In fact, consumers can also enjoy window-shopping on the Internet without the pressure to purchase, unlike the traditional shopping environment. Consumers are able to initiate and control non-linear searches, due to the interactive nature of the Internet and the hypertext environment as it allows them to browse tens of thousands of products in easy search formats, all around the world. Interestingly, consumers could also gain the ability to search for products not on display, gather in-depth information without taking up the salesperson’s time, and even purchase or pay for products for immediate or subsequent delivery, when conducting online shopping.
**Perceived Value**

The issue of convenience has been associated with the trial and adoption of non-store shopping environments (Darian, 1987; Eastlick and Lotz, 1999; Korgaonkar and Smith, 1986) for example, online shopping. Darian (1987) identifies five dimensions of convenience for in-home shoppers, including reducing the time spent on shopping, providing flexibility in the timing of shopping, saving physical effort of visiting a traditional store, reducing aggravation and providing the opportunities for impulse buying in response to advertisements received while at home.

The perceived convenience offered by Internet vendors is often presented as a significant influence on the decision to purchase online. Swaminathan, et al. (1999) and Mohd Suki (2006) stress that consumers who are primarily motivated by convenience are more likely to make purchases online. Convenience includes the time and effort saved by consumers (Ranganathan and Ganapathy, 2002; Swaminathan, et al., 1999). Swaminathan, et al. (1999) found that consumers who valued convenience tended to use the Internet to make purchases more often and to spend more money doing so. Other studies have also reported that limited discretionary time has a strong influence on a consumer's decision to purchase online (Bellman, et al., 1999; Vijayasarathy and Jones, 2000).

**Perceived Risks**

From the consumer's perspective, the perceived risk in e-Commerce is greater than purchases that can be made at brick and mortar retail stores. In e-Commerce, typically, there is a temporal separation of payment and product delivery. As a result, the consumer must provide personal information (e.g., name, address and phone number) and payment information (e.g. credit card number) before taking delivery of the product. In addition, the shopping process itself may be onerous. Many studies have indicated credit card security, buying without touching or feeling the item, being unable to return the item, and privacy (security) of personal information as still being the main concerns for Internet consumers (Bellman, et al., 1999; Bhatnagar, et al., 2000; Mohd Suki, 2006). Thus, uncertainty regarding the online purchasing process will influence the consumer's risk beliefs (Bhatnagar, et al., 2000).

Specifically, various types of risk are perceived in purchase decisions, including product risk, security risk, and privacy risk. Product risk is the risk of making a poor or inappropriate purchase decision. One aspect of product risk is the risk of a poor economic decision through an inability to compare prices, being unable to return a product, or not receiving a product paid for (Jarvenpaa and Todd, 1997; Vijayasarathy and Jones, 2000). Another aspect involves product performance and is associated with the risk that a product will not function as expected (Bhatnagar, et al., 2000; Jarvenpaa and Todd, 1997; Vijayasarathy and Jones, 2000). Bhatnagar, et al. (2000) suggested that the likelihood of purchasing on the Internet decreases with increases in product risk.

Other dimensions of perceived risk concern the medium of the Internet itself, rather than the consequences of purchasing a particular product. They are related to consumers' perceptions
and beliefs about the Internet as a trustworthy shopping medium (Bhatnagar, et al., 2000; Lim, 2003). For example, a common perception among consumers is that communicating credit card information over the Internet is inherently risky due to the possibility of credit card fraud (Bhatnagar, et al., 2000; Liebermann and Stashevsky, 2002). In a survey of US online shoppers, Ranganathan and Ganapathy (2002) elucidated that security was a major factor in discriminating between high and low intentions to purchase online. However, Swaminathan, et al. (1999) commented that consumers in their study seemed less concerned about the security of online transactions.

Online shoppers were found to have less perceived risk in online shopping than non-shoppers, as expected. As noted earlier, online shoppers seek more convenience and innovation and are likely to be less risk averse than non-shoppers (Donthu and Garcia, 1999). These innovators seemingly make purchases over the Internet owing to these foregoing characteristics. Compared to non-shoppers, online shoppers are apparently aware of the risk inherent in online purchasing to be offset by the ease of making purchases through e-Commerce. Thus, they are willing to 'take a chance' with this innovative marketing channel. In other word, as consumers become more knowledgeable about Internet purchasing and as their Internet experience increases, their perception of risk decreases and they purchase more frequently (Bhatnagar, et al., 2000).

Perceived Enjoyment

Consistent with the earlier study of Jarvenpaa and Todd (1997), Vijayasarthi and Jones (2000) asserted that online shopping experience was significantly associated with attitudes to online shopping and intentions to shop online. Both studies measured shopping experience across items related to enjoyment, convenience, and compatibility with consumer lifestyles. In addition, Koivumaki (2001) established that there exists a positive relationship between the online shopping experience and the amount of purchases made. Lee, et al. (2003) found that shopping enjoyment and purchasing convenience were positively associated with online customer satisfaction.

The usability of an e-retailer's site has a major impact on shopping behaviour (Nielsen and Norman, 2000). Since switching costs are low, consumers who encounter a poorly designed site are very likely to switch (Nielsen and Norman, 2000). Moreover, improvements in the usability of a site can lead to dramatic improvements in the sales of the firm (Nielsen and Norman, 2000). Chen and Wells (1999) also reported that organisation of information on a Web site affects consumer attitudes.

To summarise from the aforementioned literatures, the following hypotheses were developed in the form of null hypotheses as the rejection of the null hypotheses connote that attitude toward online shopping has significant influence on perceived value, perceived risk, perceived enjoyment toward online shopping and consumer innovativeness (refer Figure 1).
H1: Attitude toward online shopping has no significant influence on perceived value toward online shopping
H2: Attitude toward online shopping has no significant influence on perceived risk toward online shopping
H3: Attitude toward online shopping has no significant influence on perceived enjoyment toward online shopping
H4: Attitude toward online shopping has no significant influence on Consumer Innovativeness

III. METHODOLOGY

Following the literature review, questionnaires were developed to determine the factors affecting online shopper innovativeness when purchasing products and services through the Internet focusing on perceived value, perceived risk and perceived enjoyment variables. The unit of analysis in this study was the individual consumer who had experience with purchasing products at online stores. 554 responses to the structured questionnaire were analysed using Structural Equation Modeling with AMOS 5.0 program: a technique that allows separate relationships for each set of dependent variables. It aims to find the most optimal model or combination of the variables that fits well with the data on which it is built and serves as a purposeful representation of the reality from which the data has been extracted, and provides a parsimonious explanation of the data (Kline, 1998). In this study, the Structural Equation Modeling technique was used with the purpose to identify the influence of perceived value, perceived risk and perceived enjoyment on online shoppers’ innovativeness in relation to adoption of online shopping. Majority of the respondents were mostly male, educated and already has established online shopping activities in the past one year.
Measurements of Variables

The Innovativeness Scale was developed as a reliable and valid self-report scale for measuring the degree to which an individual is relatively earlier in adopting an innovation in relation to others in the social system (Hurt, Joseph and Cook, 1977). It is composed of 12 positively and 8 negatively worded items presented in a seven-point Likert response format from “strongly disagree” to strongly agree”. Scores for the Innovativeness Scale are determined by summing items on the scale.

The construct of perceived value involves evaluating the benefits received and the costs incurred to make the purchase over the Internet as against buying the product from a traditional retail store. To measure this construct, the items were generated from the inventory of economic and convenience benefits and costs that were reported in the literature pertaining to online shopping (Alba, et al., 1997; Bakos, 1997; Hoffman and Novak, 1996; Jarvenpaa and Todd, 1997; Peterson, 1997; Phillips, et al., 1997; Sheth and Sisodia, 1997; Szymanski and Hise, 2000). Perceived value was measured by asking the respondents to compare the benefits received and the total costs incurred from the Internet shopping experience to shopping in a retail store. All questions were measured using 7-point Likert scale.

The perceived risk scales proposed in this study which influence consumer innovative behaviour toward online shopping are adapted from the Jarvenpaa and Todd’s (1997) study. They found that risks tend to have a significant effect on consumers’ perception toward shopping via the Internet. The items were measured using a 7-point Likert scale anchored by strongly agree and strongly disagree.

The items of perceived enjoyment were gleaned from related literatures and six questions, (i.e. I would find it fun, exciting, and enjoyable to use the Internet for shopping; Interacting with the Internet to shop would trigger my need recognition; Entertaining features enhance my online shopping experience; and Playful features at the online shopping websites help me to learn how to use the websites), were designed using a 7-point Likert scale anchored by strongly agree and strongly disagree.

Model Fit

The three-factor model of the attitude construct was evaluated using a covariance matrix of the three indicators: perceived value, perceived risk and perceived enjoyment. The measurement model test of the attitude model did not fit well: $\chi^2$/df = 16 ($\chi^2$ = 32, df = 2); GFI = 0.975; RMSEA = 0.165; CFI = 0.887; NFI = 0.882. In an effort to improve the model and also to identify a possible misfit, the modification indices (MI) were evaluated. Based on MI values and logical/theoretical support, the following a covariance of measurement error was allowed to be correlated i.e. between e2 and e3 and the pair was added to the model one at a time. Once a parameter was added to the model, the model fit and MIs were re-examined. After allowing these pair of measurement error to be correlated, the fit of the model improved. For models with good fit, it is suggested that $\chi^2$/df should not exceed 5 (Bentler, 1990) and GFI, AGFI, NFI, and CFI should exceed 0.90 (Chau, 1997; Segars and Grover, 1993).
In the revised model, the discrepancy over degrees of freedom ratio is 1.740, which compares much favourably to the value of 45.297 of the independence model (Table 1). The values of fit indices with the more standardised metrics also indicate a preference for the default multiple group model. For example, the GFI for the default model is 0.998, whereas that of the baseline model is only 0.792. The other values of NFI, TLI, and CFI are also at the acceptance levels 0.994, 0.983, and 0.997 respectively. The overall fit of the final revised model is superior to the independence model. All indices exceeded their respective common acceptance levels, suggesting that the research model provided a reasonably good fit to the data.

<table>
<thead>
<tr>
<th>Fit Measure</th>
<th>Default Model</th>
<th>Independence Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discrepancy</td>
<td>1.740</td>
<td>271.782</td>
</tr>
<tr>
<td>Degrees of Freedom</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>P</td>
<td>0.187</td>
<td>0.000</td>
</tr>
<tr>
<td>Discrepancy / df</td>
<td>1.740</td>
<td>45.297</td>
</tr>
<tr>
<td>GFI</td>
<td>0.998</td>
<td>0.792</td>
</tr>
<tr>
<td>Adjusted GFI</td>
<td>0.984</td>
<td>0.654</td>
</tr>
<tr>
<td>Normed Fit Index</td>
<td>0.994</td>
<td>0.000</td>
</tr>
<tr>
<td>Tucker-Lewis Index</td>
<td>0.983</td>
<td>0.000</td>
</tr>
<tr>
<td>Comparative Fit Index</td>
<td>0.997</td>
<td>0.000</td>
</tr>
<tr>
<td>RMSEA</td>
<td>0.037</td>
<td>0.283</td>
</tr>
</tbody>
</table>

The validity coefficients between the factors suggest that there are discriminant validity of indicators, making it acceptably sound. Furthermore, the evidence is also supportive of the convergent validity as all indicators for attitude model exceeds the criterion limit of 0.50 and is within acceptable range.

IV. FINDINGS AND DISCUSSIONS

Correlations among construct measures was shown in Table 2. All four research constructs were positively correlated with each other (α = 0.05). The results from the correlation analysis do not indicate any serious problem of multicollinearity. Thus, the correlation values among each factor indicate support for the presence of convergent validity. In addition, the squared multiple correlations of four indicators in the measurement model were higher than 0.50, which revealed that the latent construct accounted for more than half of the explained variance in each indicator. Thus, the squared multiple correlations of indicators also showed that the measurement model was reliable and valid to conduct subsequent structural equation model analysis and to test the proposed hypotheses.
Table 2: Correlations among Construct

<table>
<thead>
<tr>
<th>Construct</th>
<th>PE</th>
<th>PR</th>
<th>PV</th>
<th>Innovativeness</th>
</tr>
</thead>
<tbody>
<tr>
<td>PE</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PR</td>
<td>.113</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PV</td>
<td>.481</td>
<td>.264</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>Innovativeness</td>
<td>.317</td>
<td>.240</td>
<td>.229</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Table 3 displays the final model with structural path coefficients, standard errors, and critical ratios as well as p-values for each relationship. The results indicated support for all proposed hypotheses.

Table 3: Standardised Regression Weights of the Structural Model

<table>
<thead>
<tr>
<th>Structural Path</th>
<th>Standardised Path Coefficient</th>
<th>S.E.</th>
<th>C.R.</th>
<th>P</th>
<th>Hypothesis Testing</th>
</tr>
</thead>
<tbody>
<tr>
<td>PV</td>
<td>&lt;--- A</td>
<td>.452</td>
<td>1.000</td>
<td></td>
<td>Supported</td>
</tr>
<tr>
<td>PR</td>
<td>&lt;--- A</td>
<td>.610</td>
<td>.900</td>
<td>5.050</td>
<td>.000</td>
</tr>
<tr>
<td>PE</td>
<td>&lt;--- A</td>
<td>.266</td>
<td>1.620</td>
<td>6.178</td>
<td>.000</td>
</tr>
<tr>
<td>INNOVATI</td>
<td>&lt;--- A</td>
<td>.771</td>
<td>.760</td>
<td>8.083</td>
<td>.000</td>
</tr>
</tbody>
</table>

Antecedents of attitude to shop online from Malaysian Internet users’ perspective consists of three factors: perceived value; perceived risk; and perceived enjoyment. The present study provides evidence of the effect of perceived value, perceived risk and perceived enjoyment on online shoppers’ innovativeness in relation to adoption behaviour of online shopping since the structural loadings of majority of the path coefficients are very high and reveal positive and significant relationships on consumer attitude to shop online. As expected, the results exhibited that consumer’s attitude toward online shopping innovativeness positively influenced by perceived value, perceived risk and perceived enjoyment. The comparison of the effect as illustrated in Table 3 evinced that perceived risk (loading=0.610, p=0.000) had positive and significant relationships on consumer attitude to shop online and was the most important indicator of Malaysian consumer attitude on online shopping that indirectly influence their innovativeness and decision to purchase products and services through an online retail outlet. Thus, hypothesis 1 of attitude toward online shopping has no significant influence on perceived value toward online shopping was not supported. Consumers’ perceived risk associated with online shopping have a critical effect on their decision making. Some early research suggested that risk perception may play a minor role in the adoption of online shopping (Jarvenpaa and Todd, 1997). However, results from prior study have identified that consumers’ risk perceptions is a primary obstacle to the future growth of online commerce (Mohd Suki, 2003).
Malaysian Internet users’ risk perceptions and concerns regarding online shopping are mainly related to aspects involving the privacy and security of personal information, the security of online transaction systems and the uncertainty of product quality. While shopping over the Internet, Malaysian Internet users’ concerns that their Internet activities could be monitored without their knowledge or permission and their credit card number information might be stolen or misused. Less trust towards e-retailers services were perceived by Malaysian Internet users’ where they might lose money by making a poor purchase decision while shopping on the Internet and a product that they might purchase online may not work the way they thought it would. Moreover, they were very concerns that e-retailers should never share personal information with other companies unless it has been authorised by the individuals who provided the information.

Further investigation of the findings revealed that perceived value (loading=0.452, \( p=0.000 \)) was the next prominent factor that effect consumer attitude while shopping for products through the Internet (refer Table 3). Table 3 depicted that perceived value had positive and significant relationships on consumer attitude to shop online at the \( \alpha = 0.05 \). Thus, hypothesis 2 was rejected and it can be concluded that consumer develop positive attitude in their online shopping activities when they sense perceived value with the transactions in terms of the services given, price offered, and a variety of products offered. Compared to shopping at a physical retail store, Malaysian Internet users’ expand positive attitude and later get pleasure from shopping for products through the virtual stores because of encouraging factors such as they found searching for the merchandise through the Internet requires less effort and comparing product prices and other attributes through the Internet is convenient. Indeed, they found examining a product while shopping on the Internet is easy. Malaysian Internet users’ also possess positive attitude in online shopping transactions due to additional factor such as have the knack to negotiate prices or other terms through the Internet easily. They also found paying for the product through the Internet is convenient as compared to shopping at a physical retail stores.

The current findings that perceived value effect consumer attitude while shopping for products through the Internet support preceding studies. Purchasing via online allows maximum convenience and flexibility. This can be the result of minimal shopping effort and/or personal hassle, after sales quality service and easy return policy, or possibly minimal cost and time when purchasing (Keeney, 1999). Further, time saving, greater variety of products and services, and absence of sales personnel pressure are also key rationales for using the Internet (McQuitty and Peterson, 2000; Szymanski and Hise, 2000). With online shopping, consumers can purchase products that are not sold in their local retail stores and no longer need to worry about parking, crowds, transportation or weather conditions (Burke, 1997).

From the results presented in Table 3, it is evident that perceived enjoyment (loading=0.266, \( p=0.000 \)) was the final crucial indicator that impacted the innovativeness of Malaysian online shopper attitude in purchasing products and services via the Internet (refer Table 3). As can be seen in the same table, the null hypothesis 3 of attitude toward online shopping has no significant influence on perceived enjoyment toward online shopping was rejected at the \( \alpha = \)
Online consumers will raise the amount of online purchases when they take pleasure in positive experience in shopping for products online. The findings in this study with respect to perceived enjoyment supports prior research study of Koivumaki (2001) who reported that there exists a positive relationship between the online shopping experience and the amount of purchases made. Also, Lee, et al. (2003) found that shopping enjoyment and purchasing convenience were positively associated with online customer satisfaction. Further, Childers, et al. (2001) found enjoyment to be a consistent and strong predictor of attitude toward online shopping. If consumers enjoy their online shopping experience, they have a more positive attitude toward online shopping, and are more likely to adopt the Internet as a shopping medium. Enjoyment of the online shopping experience is an important determinant of retaining online shoppers (Rice, 1997). Many online purchasers said that they would not shop on a particular website next time if they had an unpleasant experience with it. On the web, shopping enjoyment is positively and significantly related to both to attitudes and intentions toward shopping on the web (Eighmey, 1997).

In sum, the present study provides evidence of the effect of perceived value, perceived risk and perceived enjoyment on online shoppers’ attitude in relation to adoption behaviour of online shopping. The findings revealed that overall attitude factor had positive significant causal relationships on online shopper innovativeness, and also was the prominent indicator of online shopper innovativeness (loading=0.771) from Malaysian Internet user’s perspective.

V. CONCLUSIONS AND FUTURE RESEARCH DIRECTIONS

Results from Structural Equation Modeling reveals that perceived risk was the prominent indicator not to be unobserved by e-retailers to assess Malaysian Internet users’ attitude behaviour in online shopping. Malaysian Internet users’ risk perceptions and concerns regarding online shopping are mainly related to aspects involving the privacy and security of personal information, the security of online transaction systems and the uncertainty of product quality. When e-retailers looking at these issues seriously, it could perk up the Malaysian online shoppers’ innovative behaviour during online shopping transactions. Once consumers have the benefit of positive experience in their online shopping transactions, they will augment the amount of online purchases and there is high likelihood for repeat purchases via virtual stores than brick and mortar stores.

Findings derived from this study would extensively help online marketing managers, marketing researchers and information systems analysts in developing successful targeting and positioning strategies and producing a more thorough analysis to gain better insights about the purchase behaviour of innovative online shoppers particularly attracting and targeting towards their attitude behaviour. Thereafter, e-marketers can convert their potential customers into real ones and retain them. E-marketers and e-retailers should be steadfast in their online activities that offered to the Internet users by adhering to the company terms and
conditions in order to develop and later retain Internet users’ trusts. The small sample size used in this study has provided an opportunity for future study to employ more respondents in order to have wider, generalisable and global perspective of findings which represent the whole population of Malaysia. Future study are encouraged to use Structural Equation Modeling technique (SEM) due to the benefit that it offers than other statistical techniques as it allows simultaneous relationship among endogenous and exogenous variables and serves as a purposeful representation of the reality from which the data has been extracted, and provides a parsimonious explanation of the data. More variables should be added in the current model by future researchers to strengthen the model conceptually.

REFERENCES


