Role of Trust in Mediating the Predictors of Internet Shopping Behavior among University Students

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Received: January 2, 2016
Accepted: February 29, 2016

ABSTRACT

Online shopping has grown into the main shopping channel in Malaysia. It has become a platform for retailers all over the world to effectively reach their customers. The purpose of this research is to gauge customer’s purchase behavior in electronic shopping among students of higher learning institution in Malaysia. Several predictors such as product features, website usefulness, time saving, customer benefits and trust are postulated to influence customer purchase behavior in electronic shopping among public university students. Respondents are chosen from students who are studying in public higher learning institution in Terengganu, Malaysia. In this paper, the sample is chosen from the list of public university students in Terengganu which include Universiti Sultan Zainal Abidin (UNiSZA), Universiti Malaysia Terengganu (UMT) and Universiti Teknologi MARA (UiTM) Terengganu. The researchers used a purposive quota sampling techniques in order to obtain as many respondents as possible to participate in the survey. A correlation and Multiple Regression Analysis was conducted to determine the nature of the relationship between variables and to measure the role of trust in mediating the relationship between the independent and dependent variables. In conclusion, the use of the Internet technology has opened new doors and opportunities that has enabled the public a more convenient shopping style. Shoppers can also purchase goods that are unavailable at their location, and are able to bypass restrictive import policies, as the Internet allows shoppers to make purchases from vendors in other locations around the world.

KEYWORDS: Online Purchases, E-Retail, Internet Marketing, Electronic Shopping, Customer Purchases Behavior.

INTRODUCTION

Presently, the internet is not only a networking medium, but also as a way of during trade in both local and international markets. Internet usage has been rapidly growing over the previous years and it has gotten to be regular assets for services and products and conveying with trading information [1]. In addition, more than 627 million people in this planet have shopped online [2] thus Internet shopping has the potential to become a dominant retailer in the future [3]. Moreover, the most required aspect required by the e-retail is a direct interactive channel while directly covers the aspect of time, place and people. Online shopping has become a popular alternative for customers since it is more convenient than conventional shopping which is frequently attributed with anxiety, limited time, traffic jam and crowded parking space. Internet shopping is fast becoming a trend in buy a wide variety of goods and services that are available all over the world [4]. In addition, through computer-mediated environment, online retailers have attracted customers by offering lower prices for goods and service and provide important information on the details of product and services [5-6].

Presently, due to the large number of internet entrepreneurs trying to sell items online, we posited that there are many factors that may affect online customers. Besides that, in the e-commerce shopping, the series of choices made by a consumer prior to making a purchase that begins once the consumer has established a willingness to buy. The consumer must then decide where making the purchase, what brand, model or size to purchase, when to make the purchase, how much to spend and what payment method will be used [7].

LITERATURE REVIEW

Internet Shopping

In modern retailing, users can make choices to buy their goods. Thus, leading companies such as eBay and amazon.com has introduced many features that in increase the value of helping customers to buy more easily and decide what to buy. In addition, when consumers buy goods online, the consumer can make a comparison of...
prices, product images, and user reviews. Therefore, consumers can shop more easily and wisely without going to the shops. Thus, in this way the user can save time and can purchase desired products more easily. All users have to do are just browsing for the goods they want in a website and within a few mouse clicks they are stopped. However, the simplicity of shopping online is convenient and appealing to consumers to shop online. Therefore, electronic shopping and online shopping has a bright future to replace the traditional shopping in the store [8].

According to [9], young customers for instance students are playing an important task in online shopping. Today, the rate of growth of Internet usage has grown rapidly in the younger generation have provided new prospects for the younger generation in Malaysia to be more active and offer a better opportunity for online retailers. Therefore, online retailers have been studying the factors that influence the buying behavior of the young generation in Malaysia, the relationship between these factors and the type of buyers shopping online. Consequently, the online retailer will be more likely to develop their marketing strategies for more better and find potential customers such as university students and youths in Malaysia.

Product Features

The online business world is a complex field. In this paper, the researchers attempt to evaluate the characteristics of products sold online and favored by the consumer [10]. There are certain categories of products that consumers preferred when sold online because it easy for consumers to buy and better than other products sold in traditional store [11-13]. However, in [14] argues that travel and financial services such as banking and airline ticketing service are products that has dominated the business online as it is easy for the consumers to make the decision to purchase. In the field of retailing, these products have been standardized or may be considered homogeneous as videos, books and music, and has advantages over heterogeneous products or products that have different nature [10]. Therefore, there are many ways to classify products through differentiability, tangibility and homogeneity. However, the search for a product that has less direct examination and less complexity such as computer software, books and other products are easily purchased by online consumers since this product is less risky than a product that are more complex that requires extra warranty, maintenance and construction [10, 12, 15]. In addition, shoppers who bought branded items such as gold, leather goods and imported goods have the highest number of dissatisfied users than consumers who buy other products [16-18].

Websites Usefulness

"Usefulness" is defined as the individual's perception of the use of new technologies that will enhance or improve the quality of performance [19]. In addition, this definition applies to our research. "usefulness" is seen as a new technology in online shopping and have a great influence on the internet and can improve individual performance for online shopping of shopping experience. However, the term "usefulness" also refers to the perception of consumers using the Internet as the main medium for online shopping and it also can improve the shopping experience for their results through the website. Therefore, the user perception will influence the attitudes of consumers towards online shopping as well as their desire for online shopping on the internet. In addition, the Technology Acceptance Model (TAM) model showed a weak correlation between "usefulness" and "attitude" and a strong relationship between "usefulness" and "intention" [20]. This can be explained from a user who intends to use the technology to shop despite not having a positive impact on consumption. Apart from this, the "usefulness" is also associated with "ease of use" to determine the attitudes of consumers towards online shopping with more systematic and efficient. According to TAM model, "usefulness" can be influenced by the "ease of use" since technology help consumers to shop more conveniently and can help users to shop regardless of time and space [21]. Excellent service is to operate as an ideal, a standard of reasoning that eventually form a service and a good system [22]. We proposed that if the online shopping experience is able to meet the expectation of consumers and they are able to perform the buying tasks more conveniently, consumers will evaluate the performance of shopping with a better and positive manner [23]. Therefore, in will lead to a positive website usefulness in online shopping.

Time Saving

Time savings are a factor that affects the majority of consumers shopping online. Browse or search an online catalog can save time online users and cultivate patience. In addition, people can save time with more effective with good shopping and can reduce effort by online shopping. According to [24], online shopping can save time to go traditional stores and can purchase goods more easily. Additionally, from the view of the other side, some users thought that the time savings also involves the time taken for delivery of goods and services acquired through online shopping. Therefore, the time savings are one of the positive motivation for consumers to shop online because it takes into account the transmission and reception of goods and services to consumers [25].
Customer Benefits

Customer benefits are defined as the values or benefits a purchaser seeks in a specific category compared to the total number of purchases made by the purchaser in that category [26]. Maximizing customer benefits and the long term value of customer purchases is the most important goal of online retailing [27]. It is considered difficult to gain customer retention on the internet [28] and service quality were usually used for explaining customer retention, but the relationships among them are complex and researchers have not reached consensus on this. Most marketing studies also seem to accept the theoretical framework in which quality leads to satisfaction which in turn influences purchasing behavior [29]. Satisfaction is the most relevant in the study of customer retention and benefits [30]. In the online environment, researchers have found that the overall satisfaction experienced by online customers reduces the perceived benefits of switching service provider, and thus yield strong repurchase intentions in the case of online e-retailing [31]. In other words, a customer who is dissatisfied is more likely to search for information from other alternatives and is more likely to switch to competitors than a satisfied customer [32]. Therefore, customer retention is one of the major drivers of success in e-commerce [33]. Developing and creating customer benefits can be a major source of sustained growth and profit because loyal customers are price insensitive, they refer other customers to the business and they can make suggestions that help in improving service provision [34].

Trust in Product, Usefulness, Time Saving and Customer Retention

A study by [35] has shown that "attitude towards online shopping and intention to shopping online is not only influenced by trust but also by exogenous factors like ease of use, usefulness, enjoyment, consumer traits, situational factors, product characteristics, previous experiences shopping online and time saving. However, according to [36] who focuses on a study of the behavior of e-consumers have associated images (in terms of product selection, performance, usefulness of websites, customer service, customer retention and saving time), emotional states, social factors and attitudes and intentions to shopping in online. Therefore, emphasis is given to the trust in e-commerce for online shopping since it is a very important predictor influencing online purchases.

Conceptual Framework

Based on the literature review, we postulate that student high learning institution’s preference to practice E-shopping is influenced by product features, website usefulness, customer retention and the time saved by shopping. Figure 1 shows the conceptual frameworks that interpret the relationship between variables which are dependent, independent variables and mediating variables.

![Conceptual Framework Diagram]

**Figure 1: Conceptual frameworks between the independent, dependent variables and mediating variables**

**METHODOLOGY**

The next phase of the research activity involved the processing of data by statistically analyzing it through inferential statistic in generating research evidence, which ultimately provide information for drawing conclusion. As the approach taken for conducting this study is descriptive in nature, the investigation of all data collected will be explored and tested in terms of its relationship between the selected constructs and the dependent variables. The data will be further tested in term of identifying which determinants that have a more significant impact the customer purchase behavior of the students of public universities.
Several initiatives were considered in ensuring that the process of selecting a sufficient number of the right elements from the population. The study of a sample and an understanding of its properties or characteristics make it possible for us to generalize such properties or characteristics of the population elements. Besides that, sampling design addressed the question from which the researcher needs to obtain the information. In other words, the sampling design is a process of choosing or selecting appropriate respondents to enable the researcher gather all the information that is needed and relevant to this study. Besides that, the sampling design that researcher use is descriptive research and non-probability technique. The researchers decided to select the respondents using the quota sampling method. A sample size of the preliminary study is based on 40 students selected as the respondents. To ensure that is an adequate generalization established, the use of quota sampling is assumed to be a more suitable technique in getting the efficient representation of the population. However, at this stage of the research process, the finding may only be used as part of assessing reliability of the questionnaire. On top of that, it will furnish the possibility of whether the selected independent variables are very relevant in predicting the customer purchases behavior outcome. The sample size of students represents to meet the minimum requirement of analysis.

In order to obtain a large number of respondents in a relatively short time, we personally administered the questionnaires to the respondents and also engage the assistance of numerators selected by our representatives. Furthermore, using this method, we are able to clarify any issues and misunderstanding the respondents has regarding the construct of the questionnaire. The questionnaire was written in English and Malay. It was divided into seven sections: Section A (Demographic Information), Section B (Product Features), Section C (Websites Usefulness), Section D (Time Saving), Section E (Customer Benefits), Section F (Trust) and Section G (Customer Purchases Behavior).

**DATA ANALYSIS AND FINDINGS**

A total of 200 questionnaires was distributed to the selected respondent and collected for analysis. The measurement was done by calculating the Cronbach’s Alpha attempts to indicate how well the items in a set are positively correlated with one another. The items in the questionnaire were further refined in order to obtain a favorable Cronbach’s Alpha value. The result of the reliability test is shown in Table 1.

<table>
<thead>
<tr>
<th>Section</th>
<th>Before Adjustment</th>
<th>After Adjustment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Items</td>
<td>Alpha</td>
</tr>
<tr>
<td>A: Demographic Profile</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>B: Product Features</td>
<td>9</td>
<td>0.555</td>
</tr>
<tr>
<td>C: Websites Usefulness</td>
<td>10</td>
<td>0.683</td>
</tr>
<tr>
<td>D: Time Saving</td>
<td>8</td>
<td>0.588</td>
</tr>
<tr>
<td>E: Customer Benefits</td>
<td>13</td>
<td>0.755</td>
</tr>
<tr>
<td>F: Trust</td>
<td>10</td>
<td>0.731</td>
</tr>
<tr>
<td>G: Customer Purchases Behavior</td>
<td>12</td>
<td>0.734</td>
</tr>
</tbody>
</table>

There were initially 9 items that were adopted to measure the perception of the respondents pertaining to the product features offered through the Internet. The result of the analysis revealed a Cronbach alpha value of 0.555. However, there were 2 items found to have a multi-colinearity effect. Thus, only 7 items were used to measure the perception of product features. Similarly, with the websites usefulness determinants initially it consists of 10 items to measure the construct and having an alpha value of 0.683. From that, there is only 3 items that have multi-colinearity. Therefore, we decided to use 7 items to measure the variable. For relationship time saving determinants, there were 8 items which initially use in order to measure the variable. The result of the analysis indicated the alpha of 0.588. There were, however 2 items were removed as these items showed a multi-colinearity effect. For the customer benefits variable, 13 items were initially used in the survey. However, 1 item was dropped from the final questionnaire in order to increase the reliability score of the variable. In addition, 2 items were removed from the items used for the predictor, trust and the final 8 items used for the predictor resulted of 0.766. Finally, 12 items were used to measure the customer purchase behavior variable. However, 1 item was found to have a multi-colinearity effect. The result of the final reliability analysis indicated a Cronbach Alpha score of 0.734. Based on the results tabulated in Table 1, all the values of the variables were found to be reliable and can be utilized for the study.

**Correlation Analysis between Variables**

In order to determine the strength and the direction of the association between the variables chosen in this paper, the Pearson correlation analysis was performed. The outliers found in raw data was further excluded to ensure the highest possible association between the variables. All results can be observed in Table 2.
Table 2: Pearson Correlation of all variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>CPB</th>
<th>TRS</th>
<th>CB</th>
<th>TS</th>
<th>WU</th>
<th>PF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Purchases Behavior (CPB)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trust (TRS)</td>
<td>0.230**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer Benefits (CB)</td>
<td>0.255**</td>
<td>0.279**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time Savings (TS)</td>
<td>0.200*</td>
<td>0.045</td>
<td>0.028</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Website Use Fullness (WU)</td>
<td>0.118</td>
<td>0.230**</td>
<td>0.352**</td>
<td>-0.002</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Product Features (PF)</td>
<td>0.203*</td>
<td>0.082</td>
<td>0.295**</td>
<td>-0.005</td>
<td>0.261**</td>
<td>1</td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level (2-tailed)
*Correlation is significant at the 0.05 level (2-tailed)
No. of respondents = 140

Based on the figure displayed in Table 2, the result indicates the relationship between product features and customer purchase behavior is in the category of the moderate (0.419). Observing on the websites usefulness and time saving towards the customer purchase behavior, the result indicates that the value of the strength also moderate whereas 0.512 and 0.413. Further analysis on the customer relation and trust towards the customer purchase behavior, the result shows the level of strength highly moderate and poor relationship which indicates are 0.608 and 0.192. The researcher further explored the relationship between products features, website’s usefulness, time saving and customer relation on the dependent variable customer purchase behavior by using a multiple regression analysis. Based on the correlation analysis, the researcher assumed that there is a linear relationship between these variable.

The authors also conducted multiple regression analysis in 3 steps as suggested by [37]. This purpose of this analysis is to determine whether the variable, trust mediates the relationship between the independent and dependent variables. All results are shown in the following sections.

**Step 1:**

The dependent variable is regressed on the independent variable. In other words, the authors are determining whether the independent variable is a significant predictor of the dependent variable. All results can be observed in the following equation.

Independent Variable $\rightarrow$ Dependent Variable

$$Y = 4.291 + 0.204 X_1 + 0.195X_2 + 0.452$$  
$Y = \text{Customer Purchase Behavior}$

$X_1 = \text{Customer Benefits}, X_2 = \text{Time Saving}$

Both $X_1$ and $X_2$ are significant with $R^2$ value of 0.121

This indicates that 12.1% of the changes in the customer’s purchase behavior is explained by customer benefits and time saving. The result produced in the coefficient analysis of the first Regression also showed that the customer benefits have a stronger influence on customer’s purchase as shown by the higher beta ($\beta$) value of 0.204 as compared to the $\beta$ value of perception of time saving value of 0.195. Furthermore, the tolerance value is greater than 0.20 and the Variance Inflation Factor (VIF) is smaller than 10 indicating the absence of “Multicollinearity”.

**Step 2:**

In the second step, the mediator (trust) is regressed on the independent variable. If the mediator is not associated with the independent variable, then it could not possibly mediate anything. All results are shown in the equations below. Furthermore, the perception of Customer Benefits has a low influence on the mediating variable, trust as shown by the $\beta$ value of 0.231. Again, in this second step the tolerance value is greater than 0.20 and the VIF is smaller than 10 indicating the lack of “Multicollinearity”.

Independent Variable $\rightarrow$ Mediator

$$Me_1 = 3.251 + 0.231X_1 + 0.998$$  
$Me_1 = \text{Trust}$

$X_1 = \text{Customer Benefits}$

The equation is significant with $R^2$ value of 0.100 for $Me_1$ (Trust)
Step 3:

The final step demonstrates that when the mediator and the independent variable are used simultaneously to predict the dependent variable, the previously significant path between the independent and dependent variable (Step #1) is now greatly reduced, if not totally insignificant. In other words, if the mediator were to be removed from the relationship, the relationship between the independent and dependent variables would be noticeably reduced. Furthermore, the tolerance value is greater than 0.20 and the VIF is smaller than 10 indicating the lack of “Multicollinearity”. The equations are shown in the next page.

Independent Variable + Mediator → Dependent Variable

\[ Y = 4.043 + 0.167Me + 0.189 X_2 + 0.464 \]

\[ Y = \text{Customer Purchase Behavior}, \quad X_1 = \text{Time Saving} \]

Me (Mediating Variable) = Trust

Both β values for \( X_1 \) and \( X_2 \) are significant with R Square (\( R^2 \)) value of 0.146

The authors also discovered that in the third Regression, the β value of the mediating variable; the Trust is significant and the β value for the independent variable, time saving (\( X_1 \)) is lower (0.189) compared to the β value for the variable (0.231) in step number 1. These results confirm that there is partial mediation for time saving indicating that the mediating variable accounts for some, but not all, of the relationship between the independent variable and dependent variable. The second independent variable Customer Benefits are no longer significant in the third equation indicating a total mediation effect of the variable in the present of Trusts. In addition, the R square (\( R^2 \)) value in Step no 3 is higher (0.146) that the R square (0.121) value in step # 1, highlighting the mediating effect of Trust in the relationship between the independent variables (time saving and customer benefits) on customer purchase behavior.

CONCLUSION AND DISCUSSION

Online shopping is a new phenomenon that was developed with the birth of the internet technology and is well accepted by the society, especially the young generation. Moreover, we proposed that the online shopping activities may contribute to the wealth of the country in terms of increased economic growth, advances in information technology (IT), creating a high-minded and knowledgeable society, expand the retail industry in the country and creating young entrepreneurs in the retail business and developing the country's retail economy. We posited that having access to online shopping has revolutionized and influence the Malaysian society in their behavior of shopping for goods and services. The use of the internet technology has opened new doors and opportunities that enable for a more convenient purchasing and selling activities. Furthermore, the Internet operates 24 hours a week, seven days a week, and can be accessed anywhere in the connected world, shoppers can expect to browse and purchase goods on the Internet regardless of place and time, unlike conventional retailing that have fixed operating hours and physical stores. Shoppers can also purchase goods that are unavailable at their location and are able to bypass restrictive import policies, as the Internet allows shoppers to make purchases from vendors in other locations around the world. In addition, the assortment of product, the benefits of online shopping and trust on the security and delivery system were three significant ways in which online shopping influenced people from all over the world. Furthermore, we propose that the online business sector can further expedite the retailing economy of the nation, motivates young and creative entrepreneurs to venture into the internet business world, creating a knowledgeable society and expanding the local retail industry in the world market through the World Wide Web.

In this paper, the researchers have identified three types of variables namely the independent, mediating and the dependent variable. The Multiple Regression Analysis revealed that the variable, time saving is partially mediated by the trust and the variable time saving is totally mediated by trust indicating the influence of trust in explaining the online purchase behavior of students at public universities in Terengganu. This result is similar to the findings of the study conducted by [38] who suggested that trust is a cognitive process and is built among consumers when positive results are expected from online transaction and the opposite is true. Trust was proven as an important determinant of the student’s online purchase behavior. This element is paramount and critical not only in online retailing but also in any business transactions between seller and buyer in order to establish a long term sustainable advantage [39]. In addition, with high trust, online retailers would face little resistance in turning ordinary customers into loyal customers.
REFERENCES