An Evaluation of Online Shopping and Its Effect on Customers' Satisfaction and Behaviour in Malaysia

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Abstract: As there is an increased number of personal computers, laptops and a wide use of Internet**,** nowadays, many people prefer and enjoy online shopping. People have many reasons to do online shopping instead of going to the stores and malls. User-friendly interfaces, ease of comparing products' prices, convenience of shipping and delivery to the home are the most important reasons behind shopping online. There is no need to drive to the stores, be worried about getting a parking spot, and confront any crowds. Everyone can shop round-the-clock and there is no store working hours. Time and money to travel back and forth for purchasing a product will be saved. This paper investigates the most important influencing factors such as website design, information quality, and delivery on customer satisfaction through online shopping among the MBA students of Multimedia University, Malaysia. A widely applied analytical tool, Multiple regressions, is used to identify the most effective factors in online shopping. [Farid H, Sadeghi Z, Rana S. **An Evaluation of Online Shopping and Its Effect on Customers' Satisfaction and Behaviour in Malaysia.** *J Am Sci* 2012; 8(7):704-707]. (ISSN: 1545-1003). http://www.americanscience.org. 104

1. Introduction

The popularity of Internet makes many companies to interact and trade through the World Wide Web (WWW) at a rapid pace. As the popularity of the Internet is in the rising mode at a dynamic pace, a significant number of online companies that seek to have online interaction and communication with potential customers is enhancing their activities to exist in the market for a long term. The main feature in online shopping does not necessarily mean to have good looking website; rather building relationships with the customers, company and its brand is an essential task to implement. Beyond the support to the brand and the adoption of a new way to shop, there might have an enormous loss for the companies in settling down in the customers' mind and acquiring their utmost satisfaction. These customers have a variety of purposes, expectations, needs, and satisfaction levels that they eagerly look for (Hume & Mort, 2010).

The characteristics of online shopping allow customers to have plenty of options and choose the product or service based on information which is provided through the website (Dholakia et al., 2010; Juga et al., 2010; Gujarati, 2003). Besides the performance of the company to attract individuals to purchase online, other factors such as information quality, a convenient and effective website design and quality of delivery process do influence the customers' satisfaction. It can lead to repeated shopping and thus, the profit is boosted up from the sale of the items (Dholakia & Zhao, 2010).

2. Materials and Methods

In this research, the target population was MBA students of Multimedia University who started their education in 2010; the total number of students was 251 in which 205 were full time and 46 were part time students. The performance of this research is quantitative and a self-designed questionnaire has been considered to collect the data. The researcher has prepared the questionnaire and its validity has been measured and guaranteed by specialists. The questionnaires were distributed among the 251 students; however, only 237 questionnaires were returned back from the students after giving their answers. The rest of the 11 questionnaires had missing data and were not considered in the sample. The reliability of the questionnaires was checked by using the popular Cronbach's alpha test (Ary et al., 2006). In addition, the questionnaire has been checked and validated by MBA experts in the (FOM)

Faculty of Management in Multimedia University. To be sure of the validity of the questionnaire, a pilot test was utilized in University Putra Malaysia (UPM) and the reliability has been calculated. MBA and DBA students from the Graduate School of Management (GSM) in UPM University had cooperated and filled out 25 questionnaires to measure the pilot test.

In this study, Cronbach's alpha was conducted for every single item in the questionnaire. 0.75, 0.85, 0.76, 0.86, and 0.82 were the outcomes of the questionnaire reliability coefficients, for both independent and dependent variables; it should be mentioned that the Cronbach's alpha for all of them was 0.92. There are different sections in the questionnaire based on online shopping, customer satisfaction, information quality, website design and delivery and have been answered by GSM student at Universiti Putra Malaysia. The results indicated that the different constructs had stability, reliability, and validity and all the coefficients were more than 0.70.

3. Results

In section A. of this questionnaire, the descriptive measure showed that 65.4% of the respondents were female while 34.6% were male. Females showed more average innovation in this research. Although gender is one item in the questionnaire but it might not be a significant factor. According to the age classification, the most innovative participants are in the age group of 26 to 30 years old and there is a noticeable increase in the age range from 21 to 25 years old. It can be concluded that young people dare to take risks. The frequency for job title was 80.6% participants who were master students and managers, engineers, staff and translators were 6.8%, 5.5%, 4.6%, and 2.5%, respectively. Education level was classified to 3 groups: bachelor, master and PhD students and all of the participants were bachelor holders. Income was the last part of the data on demography. The mean for income was equal to RM 2200; frequency of income between RM 1001 to 1999 was 79.7% and for RM 2000 to 2999 was 20.3%.

In section B. of this questionnaire, it can be seen that the mean for the duration of personal using computer equals to 2.14% while the frequency for users with experience of 1 to 5 years was 85.2% and for 6 to10 years was 14.8%. Another item in section B., is using internet and the average was 3.88% and the frequency for participants who used the internet 6 to10 times a week was 11.8% and for more than 10 times a week was 88.2%. Hours of sleeping time in websites was separated into 2 sub-categories; 11 to 20 hours with a percentage of 89.5%, and more than

21 hours with a percentage of 10.5% and the mean was equal to 3.10 %.

Multiple linear regressions were utilized to investigate objectives of this research. These objectives attempted to investigate the relationship between the dependent variable and the independent variables. The multiple linear regressions were computed for data which had been collected through the questionnaires which were filled out by MBA students of Multimedia University (MMU), intake of 2010. This data encompassed information about online shopping as the independent variable and the level of customer satisfaction as the dependent variable. The variables are illustrated below in Table 1.

Table 1. Variables Entered/Removed[b]

Variables Entered	Variables Removed	Method
Delivery, Web Design, Online Shopping, Information Quality[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: Customer Satisfaction

Table 1 indicates the Variables Entered/Removed that shows the dependent variable and the independent variables which are used in the multiple linear regression model:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$$

Where, Y is the customer satisfaction; X_1 is the online shopping; X_2 is the Information quality; X_3 is the Web design; X_4 is the Delivery and e is a random error component.

Table 2. Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.995[a]	0.990	0.990	0.07919

a. Predictors: (Constant), Delivery, Web Design, Online Shopping, Information Quality

Table 2 shows the multiple linear regression performance of output model summary. To state how strongly the independent variables of multiple

regressions are related to the dependent variables, it is measured by the relation R. In the simple bivariate case which is used in this analysis R = | r | (multiple correlation indicates the precise value of the bivariate correlation). Table 2 consists of the criteria of a good model for description of the relation between the dependent and predictor variables. This table shows that R=.995, which presents a reasonable positive correlation. The usefulness of R square assists to determine coefficient measurement of the output of variability to be accounted for by the predictors. $R^2 =$ 990 means that the independent variables account for 99% of the level of customer satisfaction adoption. In other words, about 99% (R Square) of variance in Y (Customer Satisfaction) is explained by Online Shopping, Information Quality, Website Design, and Delivery.

Table 3 depicts the Analysis of Variance (ANOVA) of the multiple linear regression model. Here, we would like to test that the overall regression coefficients are significant, i.e,

$H_0 : \beta_1 = \beta_2 = \beta_3 = \beta_4 = 0$

$H_1 : \beta_j \neq 0$ for at least one j (j = 1, 2, 3, 4)

Table 3. ANOVA

Sources of Variation	Sum of Squares	df	Mean Square	F-value	p-value
Regression	148.124	4	37.031	5904.804	0.000
Residual	1.455	232	.006		
Total	149.579	236			

Predictors: (Constant), Delivery, Web Design, Online Shopping, Information Quality

Dependent Variable: Customer Satisfaction

The value of F-statistics, F (4,236) = 5904.804, is very large in Table 3, and the corresponding p-value = 0.000 < 0.05 indicates highly significant, so, H_0 is rejected. The estimated linear regression model line is not equal to zero in this slope. It verifies that the data suggests multiple linear regression predictors.

In this article, the main interest is to identify the most effective variable(s) which is related to Customer Satisfaction. For this reason, the individual multiple regression coefficients test was performed. Table 4 shows the multiple regression model summary for estimated regression coefficients.

Table 4. Multiple Regression Model Summery for Estimated Regression Coefficients

Predictors	Coefficients	Std. Error	t-value	Sig.	VIF
(Constant)	0.054	0.031	1.764	0.079	
Online Shopping (X_1)	-0.007	0.009	-0.845	0.399	1.477
Information Quality (X_2)	0.015	0.011	1.354	0.177	2.576
Web Design (X_3)	0.986	0.008	128.017	0.000	1.448
Delivery (X_4)	-0.009	0.010	-0.928	0.354	2.524

Dependent Variable: Customer Satisfaction

The estimated model based on the coefficients as shown in Table 4 is given by:

$$\hat{Y} = 0.054 - 0.007 X_1 + 0.015 X_2 + 0.986 X_3 - 0.009 X_4$$

Among the coefficients of the variables namely Online Shopping (X_1), Information Quality (X_2), Web Design (X_3) and Delivery (X_4), it is seen that the single and largest beta coefficient belongs to website design which is equal to .998 and the highest t-statistic is 128.017 and p-value is 0.000. According to the results, this variable shows the strongest contribution to express the Customer Satisfaction as the dependent variable while the specified variance was under control in the model by all other prediction variables. It indicates that one standard deviation increase in Website Design is followed by .9998 standard deviation increase in Customer Satisfaction (Y).

In this fitted multiple regression model, we see that the value of R^2 is large and overall regression coefficient is significant as shown in tables 2 and 3, respectively; but the individual regression coefficients are not significant except the coefficient of Web Design (X_3). This may arise when the data suffers from the multicollinearity problem (Gujrati, 2003). The multicollinearity is checked by using Variance Inflation Factor (VIF), presented in Table 4; we see that none of the VIF value is greater than 5 which tell us that there is no multicollinearity problem in this data. In this case, this model can be used for a predictive purpose (Gujrati, 2003). Hence, the estimated model has been described and estimated based on the coefficients as shown in Table 4.

4. Discussions

To investigate and measure the effect of online shopping, multiple linear regression is utilized in this paper. The discussion below reviews the relationship between factors and outcomes. In this

section, the perspective of MBA students of MMU University who started their education in 2010 about independent variable and its effect on customer satisfaction has been examined. Test of significant interprets the issue of customer satisfaction and online shopping. Estimation of parameter for the model was evaluated at significance level of 5%. The results show that the most effective variable on customer satisfaction is website design as reported by empirical and theoretical studies.

Chiou et al. (2011) had proved this result and confirmed this effectiveness. They believed that website design and its relation can transfer the existing value proposition and cause customers to purchase again. Other different items like speed of downloading, animation, colors, graphics, and content of website attract and retain the customer. In online shopping, the only way of communication between company and customer is the website (Aral and Walker, 2011). Outcomes showed that the relationship between the website design and customer satisfaction is high and participants believed that the website design influences customer satisfaction.

Empirical studies indicated the outcomes of many studies which have been done before. The consequence of this research indicates the level of dependent variables lead to the direction of justification as given above.

5. Conclusion

In this article, an attempt has been made to select the most effective factor(s) which has a great impact on customer satisfaction in online shopping. Based on the data collection results, the most effective factor in this research is website design. This variable has a strong effect on customer satisfaction. It shows that improvements by policy makers, companies, and customers are essential to have a high level of customer satisfaction. In a competitive market place, to have the best level of customer satisfaction, the assistance of business owners is needed. They should provide appropriate guidelines for companies and employees to have more concentration on customers' needs and wants and persuade and satisfy them to purchase products

or services through their websites. The stability and strength of relationship between website design and customer satisfaction showed that appropriate changes in the nature of websites using technologies can develop the level of reliability and validity from the customers' perspective.

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