"Determinants of behavioural attitude to accept E-shopping among the students in Malaysia''

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Abstract: This paper is concerned with an empirical investigation of the factors that could predict customer's attitude toward online shopping through applications of Innovation Diffusion Theory (IDT). The research model consists of four independent variables: relative advantage, compatibility complexity, trust and one dependent variable: attitude toward online shopping. After accurate data screening process such as outliers, normality, reliability and validity, 375 data is ready for structural equation modeling (SEM) analysis. Confirmatory Factor Analysis (CFA) was performed to examine the composite reliability, convergent validity and goodness of fit of individual construct and measurement models. This study found that there are three factors for explaining attitude towards online shopping, which are relative advantage, compatibility and trust; there is no significant in consumers' attitude towards online shopping based on complexity. In other words, students will evaluate online shopping based on such perceptions as whether the purchase through online will bring additional advantages, and, at the same time, be compatible with their current life style. Customers shop online to save time and effort.

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Key Words: Online shopping, trust, relative advantage, compatibility, complexity, attitudes.

1. Introduction

Over the past two decades Internet emerged as a selling and distribution channel that can be ignored by neither consumers nor the distributors and retail chains. There is great deal of research focused on various aspects of online consumer behaviour and consumer's attitudes towards buying various products online. Unfortunately, considerably less attention draw the researchers specifically to online shopping. However, amongst the developing countries like Malaysia, it is found that the adoption of e-shopping is still very low due to issues such as infrastructure, awareness and support (Kamarulzaman, 2011).

Being short of trust is one of the most regularly cited reasons for consumers not shopping on the internet (Metehan & Yasemin, 2011). The topic of trust seems to be one of the reasons why Malaysians are not rested in online shopping as most Malaysian consumers don't trust online transactions (Hassan & Kasiran, 2008). Moreover students are potentially competent of utilizing internet services and are believed to be the most frequent and active internet users (Zendehdel, Paim, Bojei, & Osman, 2011). Thus, it is significant for retailers and consumers' behavior researcher to recognize Malaysian students' population attitude toward online shopping due to student's role in online marketing in Malaysia. Therefore, the study investigate the factors that influence adoption and usage of online shopping in Malaysia in the light of the Rogers' diffusion of innovations theory DOI (Rogers, 2003).

Innovation is connected to online shopping because shopping online can be treated as an innovative behaviour (Zhou & Zhang, 2007). A number of studies indicated user perceptions of the innovation influencing their adoption decisions towards online shopping (Papies & Clement, 2008; Tan & Thoen 2000). The innovation diffusion theory provides a set of innovation attributes that may affect adoption decisions.

Theory of innovation diffusion, one of the most influential innovation adoption frameworks, identified certain key characteristics of innovation. A meta analysis of innovation characteristics and innovation adoption found relative advantage, complexity and compatibility to be more consistently related to adoption behavior compared to other characteristics of innovation proposed by Rogers' theory (Dutta, 2012). Accordingly, in this study we suggest that relative advantage, complexity and compatibility aspects of online content are likely to influence the attitude of online shopping.

Relative advantage is positively related to adoption as compared to other perceived adoption characteristics. It represents the degree to which an innovation is being perceived as better than the idea it supersedes (Rogers, 1995). The relative advantages appear to be significant to the diffusion of online shopping innovation. Complexity, defined by Rogers

(1995), is the degree in which an innovation is perceived as relatively difficult to understand and use. If the degree of difficulty is high, then adoption will be low. Most of the user agreed that no additional skills were required for executing internet shopping, as it was not complicated at all. For them, basic computer knowledge should be sufficient for shopping. However, for the first- time user, familiarity with browsing and searching on the internet is important. In general, the respondents agreed that the degree of difficulty in e-shopping is low. Compatibility, which is positively related to adoption, refers to the degree to which an innovation is perceived as consistent with the existing values, past experiences, and needs of potential adopters (Rogers, 1995). Many users faced no problems in adapting to the new way of shopping, either with regard to their culture or social life. It is very compatible with their beliefs, values and practice.

Roger's DOI (1983) has been adopted and widely studied in mobile setting. For instance, Wu and Wang (2005) point out that perceived relative advantage and compatibility influence favourable attitude towards M-commerce. Previous study by Borg and Persson (2010) supported the relevancy of all five perceived characteristics of innovation in Roger's DOI in forming favourable attitude towards mobile transaction in South Africa. Lau (2002), utilized the DOI's attributes to predict the adoption of online trading by broker's in Hong Kong. The study found that perceived usefulness, perceived ease of use or complexity, relative advantage, compatibility, were significantly related with the attitude of using the system.

Beside trust is an important factor in many social activities, involving uncertainty and dependency (Pavlou & Fygenson, 2006). Also, it is central to any economic activity, whether conducted in a retail outlet in the actual offline world or in excess of the internet, and is still more important in an online situation (Gefen, Karahanna, & Straub, 2003; Gefen & Straub, 2004). One main reason for the importance of trust in e-commerce activities is the fact that in a virtual setting the degree of uncertainty of economic transactions is higher than in traditional settings.

Trust in e-shopping is affected by the trustworthiness of the internet vendor and relevant external environmental factors impacting on e-shopping transactions(Cheung & Lee, 2000) .The consumer wants the vendor to be prepared and capable to act in the customer's interests, to be honest in transactions, and to be competent of consistently delivering a product or service as promised (McKnight & Chervany, 2001). Additionally, the existing view of consumer trust in the e-commerce literature contends that trust has a direct positive effect on attitudes and behavior (Pavlou, 2003; Teo & Liu 2007).

RESEARCH FRAMEWORK

The point of this study is to test empirically the influence of trust, together with some of the attributes of the theory of diffusion of innovation (IDT) on online shopping. Internet will be used as the targeted technology in this study. With the exception of observability. Observability was excluded in this study mainly due to the nature of the targeted technology chosen Internet shopping. We feel individuals typically do shopping transactions privately. The acts are not observable and visible to others (Tan & Thoen 2000). Besides maintaining three of the DOI variables, one more variables were added. Trust. This is so because several past studies have found that the perceived trust have found significant relationship with diffusion of any innovation. In this study, we hypothesized that trust, relative advantage, compatibility, complexity; affect an individual's attitude toward online shopping. The research model for this study is shown in Figure 1.

There are four hypotheses in this study.

H1: There is a positive relationship between relative advantage and attitude toward online shopping.

H2: There is a positive relationship between compatibility and attitude toward online shopping

H3: There is a negative relationship between complexity and attitude toward online shopping.

H4: there is a positive relationship between trust and attitude toward online shopping.

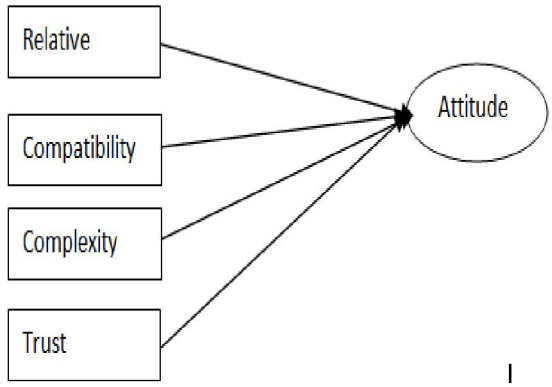

Figure 1. (Ajzen, 1991)

Based on TRA, attitude is the first antecedent of individual intention to perform (Fishbein & Ajzen, 1975). Attitude toward behaviour reflects the estimation of positive or negative feeling to certain behaviour. Hence, this construct depends on whether it is positively or negatively estimated (Ajzen &

Fishbein, 1980). Moreover, attitude toward a behaviour is treated to be a function of one's salient beliefs that represent the perceived consequences of the behaviour and a person's favorable attitude toward a specific behaviour strengthens his/her desire to do the behaviour (Ajzen, 1991).

Materials and Methods

The research model includes four constructs and each construct was measured with items. All items were measured with a seven-Likert scale. Items of trust were adapted from McKnight and Kacmar (2002). Attribute of innovation were adapted from Parthasarathy and Bhattacherjee (1998) and Moore and Benbasat (1991) Survey approach was chosen to gather information directly from students in universities located in the Klang valley. students are potentially able of utilizing internet services and are believed to be the most frequent and active internet users (Delafrooz, Paim, & Khatibi, 2010). Thus, it is significant for retailers and consumers' behavior researcher to recognize Malaysian students' population attitude toward online shopping due to student's role in online marketing in Malaysia (Sabri et al., 2008). Thus selecting students as our sample was appropriate. Cluster sampling method was used. Among 400 questionnaires that were dispersed, about 380 were returned, but only 375 completely answered. Frequency distribution profile of respondents showed that 60 percent of the respondents were female while 40 percent were male. The majority of the respondents (55.2 %) fall in the

age range between 20 to 25 years of age. Respondents having a monthly income ranging from less than RM 2400 were the majority income group (72.3 %). From the ethnic point of view, Malays comprised 52.4%, followed by Chinese and Indians that composed 32.8% and 14. 4% of the study sample respectively.

3. RESULTS

Structural equation modeling (SEM) was adopted for the purpose of analyzing data in this study using Amos software. SEM estimates a series of separate, but interdependent, multiple regression equations simultaneously by specifying the structural model (Hair , Black , Babin, Anderson , & Tatham 2006). Hypotheses are simultaneously assessed in the context of the entire model rather than through independent regression analyses of each distinctive hypothesis. A variety of fit diagnostic statistics are generated by the Amos software to assess how well the model actually defines the data. The coefficient alphas for each construct were above the acceptable threshold of 0.70 set by Nunnally (1978). The measurement model fit the data well.

Confirmatory factor analysis was conducted on each individual construct and measurement models (see Table 1). All CFAs of constructs produced a relatively good fit indicated by the goodness of fit indices such as CMIN/df ratio (<2); p-value (>0.05) Goodness of Fit Index (GFI) of >.95; and root mean square error of approximation (RMSEA) values of less than .08 (<.08) (Bagozzi & Yi, 1988; Hair et al., 2006).

Table 1: Overall Fits of the Research Model

Fit index	Recommended Value	Source of Recommended Value	Observed Value
Chi-square/ degrees of freedom	≤0.3	Hair, Anderson, Tatham and Black (1998)	1.67
Comparative Fit Index (CFI)	≥ 0.90	Kelloway (1998)	0.90
Goodness-of-fit Index (GFI)	≥ 0.90	Kelloway (1998)	0.095
Root Mean Squared Error of Approximation (RMSEA)	≤ 0.08	Browne and Cudek(1993)	0.054

Table 2 .Summarizes the Results of Hypotheses Testing of this Study

Hypothesis	IV	DV	Coefficient	(P-value)	Remark
H1	Relative advantage	Attiude	.221	.017	Supported
H2	Compatibility	Attitude	.111	.045	Supported
H3	Complexity	Attitude	-.020	.706	Not supported
H4	Trust	Attitude	.172	.035	Supported

4. Discussion

This study is concerned with empirical investigation predictors of attitude toward online shopping that could affect successful predictors of attitude toward using of Internet in Malaysia through Applications of Innovation Diffusion

Theory IDT. As hypothesized (H1), Relative advantage was found to have a significant positive effect on attitude toward online shopping (ß=.221; CR=2.10; p=.017. The Second hypothesis suggests a positive relationship between compatibility and attitude (ß=.111; CR=2.041; p=.045). The finding shows that compatibility is another success factor that has significant effect on attitude toward online

Shopping. The findings of previous studies indicate that these variables (relative advantage, compatibility) are significant factors in predicting the adoption of innovations (Rogers, 1995). In other words, students will evaluate online shopping based on such perceptions as whether the purchase through online will bring additional advantages, and, at the same time, be compatible with their current life style. Customers shop online to save time and effort.

The results show that complexity it's not significant contribution to the prediction of attitude towards online shopping (β = -.020, C.R= -1.684, P >.05). Therefore, H3 was not supported by the data in this study. Eastlick (1993) and Lin (1998) found no significant relationship between complexity and adoption. As long as an individual's technology apprehension is outweighed by the perceived advantage of innovations, complexity is not a serious concern for consumers (Lin, 1998). Moreover Perceived trust was found to have significant effect on attitude (ß=.172; CR=2.069; p=.035). This finding confirms that the online shopping customers in Malaysia were trusting in Internet shopping but the marketer needs to develop strategies that could improve the customers trust in the underlying technology. The result is consistent with previous findings that a positive relationship exists between attitude and trust (Jarvenpaa, Tractinsky, & Saarinen, 1999; Teo & Liu 2007).

Implication

This paper declare unless an innovation can provide better content, superior technical benefits, and cost efficiency to consumers, an innovation can hardly displace the traditional technologies. In this paper the predicted factors are all relevant and can help marketers and advertisers to develop more capable ways to attract consumers to shop on the Internet. Further online store should organize website contents compatible with the way people manage their needs, in the traditional way, including language and consistency in terms of the users past experiences and beliefs. Above all this experience should be seen as more useful compared with the traditional ways. Findings expand the research on trust in online retail by representing that the relationship between trust in online shopping and attitude is significant, even when other factors are taken into consideration. Researchers must therefore take these other factors into consideration and not look at trust in isolation in online shopping adoption studies. This research also contributes to the literature on innovation adoption by confirming the importance of potential adopters' perceptions of the characteristics of an innovation is significantly related to attitude of that innovation. In addition, this research makes contributions to practice. Designers of online consumer marketer sites can use the results to help evaluate potential changes in the site design.Understanding the importance of trust in online shopping, relative advantage, complexity and compatibility helps marketer build sites and practices that are more likely to lead to the use of online shopping by consumers.

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References

1. Ajzen I. The theory of planned behaviour. Organizational Behaviour and Human Decision Processes 1991; 50(1): 179-211.
2. Ajzen I, Fishbein M. Understanding attitudes and predicting social behavior. Prentice-Hall Engelwood Cliffs, NJ: 1980.
3. Bagozzi R P, Yi Y. On the Evaluation of Structure Equation Models. Journal of the Academy of Marketing science 1988; 16(1): 70-83.
4. Borg F, Persson M. Assessing Factors Influencing the Diffusion of Mobile Banking in South Africa-A case study on the company Wizzit. Goteborg University, South Africa: 2010.
5. Browne M W, Cudek (Eds.). Robustness of Normal Theory Methods in the Analysis of Linear Latent Variant Models", in Testing Structural Equation Models Newbury Park, CA: Sage Publications: 1993.
6. Cheung, Christy ,Lee, Matthew KO. Trust in Internet Shopping: A Proposed Model and Measurement Instrument. AMCIS 2000 Proceedings:2000
7. Delafrooz N, Paim L H, Khatibi A. Students' on line shopping behavior: Anempirical study. Journal of American Science 2010; 6(1): 137-147.
8. Dutta S. Analizing Consumer Intention to Pay for Online Content: A Systematic Approach Journal of Theoretical and Applied Information Technology 2012; 38(1): 89-102.
9. Eastlick M A. Predictors of videotex adoption. Journal of Direct Marketing 1993; 7(3): 66-74.
10. Fishbein M, Ajzen I. Belief, attitude, intention and behaviour: An introduction to theory and research: Addison-Wesley:1975.

11. Gefen D, Karahanna E , Straub D W. Trust and TAM in online shopping: An integrated model. Mis Quarterly 2003;27(1): 51-90.
12. Gefen D, Straub D W. Consumer trust in B2C e-Commerce and the importance of social presence: experiments in e-Products and e-Services. Omega2004; 32(6): 407-424.
13. Hair F C, Black W C, Babin B J, Anderson R E, Tatham R L. Multivariate data analysis (sixth ed.). United State of Amreica: Pearson prentice Hall: 2006.
14. Hair J F J, Anderson R E, Tatham R L, Black W C. Multivariate Data Analysis: Upper; Saddle River: 1998.
15. Hassan S, Kasiran M K. Compliance of X. 509 Certification Standard in the Implementation of Third Party Certification in Malaysian E-Commerce Websites. Communications of the IBIMA 2008; 5: 42-49.
16. Jarvenpaa SL, Tractinsky N, Saarinen L. Consumer Trust in an Internet Store: A Cross Cultural Validation. Journal of Computer Mediated Communication1999; 5(2): 45-71.
17. KamarulzamanY A focus group study of consumer motivations for e-shopping: UK versus Malaysia. African Journal of Business Management 2011; 5(16): 6778-6784.
18. KellowayE K. Using Lisrel for structural equation modeling: A researcher's guide. Thousand Oaks, CA: Sage Publications1998.
19. LauS M. Strategies to motivate brokers adopting on-line trading in Hong Kong financial market. Review of Pacific Basin Financial Markets and Policies2002; 5(4):471-489.
20. Lin C A. Exploring personal computer adoption dynamics. Journal of Broadcasting & Electronic Media1998; 42(1): 95-112.
21. McKnight D H, ChervanyN L. What trust means in e-commerce customer relationships: an interdisciplinary conceptual typology. International Journal of electronic commerce 2001; 6(2):35-59.
22. McKnight D H, Choudhury V, Kacmar C. Developing and validating trust measures for e-commerce: An integrative typology. Information systems research 2002; 13(3): 334-359.
23. MetehanT, Yasemin Z A. The Effect of Web Vendor Trust on Turkish Online Shoppers Buying Behaviour. Australian Journal of Business and Management Research 2011; 1(6):87-96.
24. Moore G C, Benbasat I. Development of an instrument to measure the perceptions of adopting an information technology innovation. Information systems research 1991; 2(3): 192-222.
25. Nunnally J C. Psychometric theory: New York: McGraw-Hill:1978.
26. Papies D, Clement M. Adoption of new movie distribution services on the Internet. Journal of Media Economics 2008; 21(3): 131-157.
27. Parthasarathy M, Bhattacherjee A. Understanding post-adoption behavior in the context of online services. Information systems research 1998; 9(4): 362-379.
28. Pavlou P A. Consumer acceptance of electronic commerce: Integrating trust and risk with the technology acceptance model. International Journal of electronic commerce 2003; 7(3):101-134.
29. Pavlou P A, Fygenson M. Understanding and predicting electronic commerce adoption: An extension of the theory of planned behavior. Management Information Systems Quarterly2006; 30(1):115-141.
30. Rogers E M. Diffusion of Innovations. New York1:983.
31. Rogers M. Diffusion of innovations. New York: Free Press: 1995.
32. Rogers E M. Diffusion of innovations. London: Free Press: 2003.
33. Sabri M F, MacDonald M, Masud J, Paim L, Hira T K, Othman M A. Financial Behavior and Problems
34. among College Students in Malaysia: Research and Education Implication. Consumer Interests Annual 2008; 54(3):166-170.
35. Tan Y H, Thoen W. Toward a generic model of trust for electronic commerce. International Journal of electronic commerce 2000; 5(2):61-74.
36. Teo T SH, Liu J. Consumer trust in e-commerce in the United States, Singapore and China. Omega 2007; 35(1):22-38.
37. Wu J H, WangS C. What drives mobile commerce? An empirical evaluation of the revised technology acceptance model. Information & Management 2005; 42(5): 719-729.
38. Zendehdel M, Paim LBH, Bojei J B, Osman S B. The Effects of Trust on Online Malaysian Students Buying Behavior. Australian Journal of Basic and Applied Sciences 2011; 5(12): 1125-1132.
39. Zhou L, Zhang D. Online Shopping Acceptance Model a Critical Survey of Consumer Factors in Online Shopping Journal of Electronic Commerce Research 2007; 8(1): 41-62.

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