Intention to Shop Online: The Mediating Role of Perceived Ease of Use

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Abstract: This research deals with two distinct perspectives on the intention to engage in e-shopping, which are 1) the online customer service and 2) the interaction between the potential e-shopper and the technological system (perceived ease of use). The sample is gathered thorough convenience sampling of 150 staffs in a public institution of Malaysia. The results through a 4-step intervening analyses indicate that perceived ease of use is a full mediator between online customer service and intention for one to engage in e-shopping. Consistent with the Theory of Reasoned Action and Technology Acceptance Model, the findings suggest that the impact on online customer service on intention to shop online hinges largely on the interface with the e-purchasing system.

Key words: Online customer service · Perceived ease of use · Intention · Shop online · Malaysia

INTRODUCTION

The Internet penetration data suggests that there is a decreasing trend in Internet penetration among Malaysians from year 2000 - 2002 [1]. Internet users are heavily clustered in the area of West-Peninsular Malaysia, with the total number of Internet users approximating 3.5 million, a figure which is even lesser than Singapore in terms of users/population ratio (http://www.internetworldstats.com /stats3.htm). The main governmental effort to eradicate internet illiteracy is through the Knowledge Master Plan. Follow suit is the "one computer to one family" policy where amendments to the Employee Provident Fund Act allowed withdrawals for the purchase of personal computers. More importantly, Malaysia's plan is to convert all its primary and secondary schools to smart school status by the year 2010 through one of the flagships championed by the Multimedia Super Corridor. Additionally, efforts such as Computer Crimes Bill 1997; Digital Signature Bill 1997; Copyright Bill 1997; Communication and Multimedia Bill 1998 [2] are among the few that had been in place to curb online purchasing fraud. With regards to online purchasing security, credit card companies such as American Express® do not hold their customers liable for any unauthorized transaction. In the aspect of infrastructure, Malaysia boasts to have the world's fastest Internet backbone infrastructure developed by Cisco Systems Technology [3].

However, there are no significant improvements in the Internet adoption rate (let alone Internet shopping) – despite the favorable policies and infrastructures. The gloomy trend, hence, is surmised to be the result of attitudinal factors rather than the lack in technological infrastructure. Ultimately, fixed inputs (infrastructure) will remain as failed facilitators in the absence of positive attitudinal factors that drive potential e-shoppers' actions and intentions. Perceived tradeoffs associated with online shopping should be accorded greater credence in assessing potential e-shoppers' paradigm.

Literature Review: The contention to engage in online purchasing or conventional purchasing is based on a series of tradeoffs between the perceived benefits from the outcomes of the user's actions and the effort to carry out the actions. This sort of "dissonance" within the online shopper could be reasonably explained by Theory of Reasoned Action (TRA) which allots importance to the psychological determinants of behavior [4]. Following TRA, the immediate determinant of the Internet shopper's behavior is his/her intention in performing its potential behavior. Subsequently, the decision to engage in online shopping would be "good or bad" (i.e. attitude) and the peer pressure surrounding his/her environment (i.e. subjective norm) would influence the behavioral intention of the Internet shopper.

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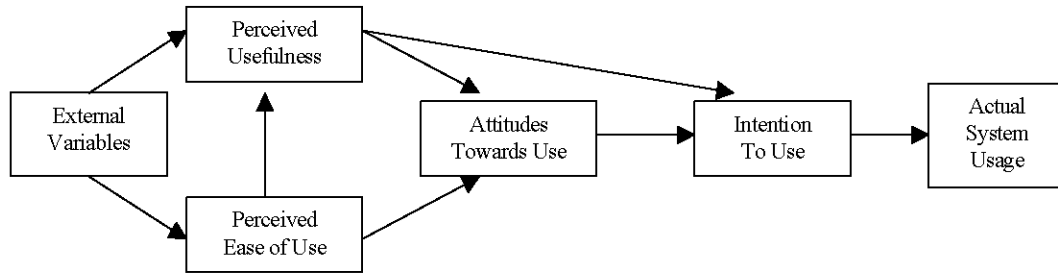
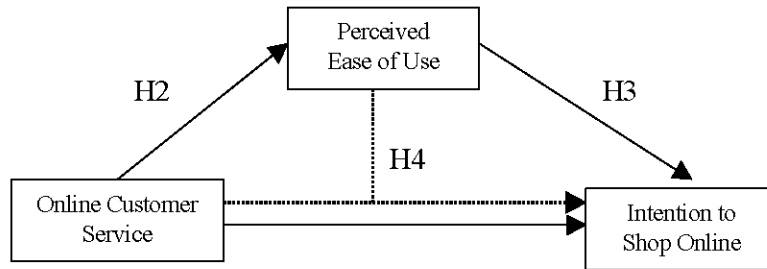Fig. 1: Technology Acceptance Model (TAM) [5]

Fig. 2: Research Model

With regards to the technological system perspective, Davis's [5] Technology Acceptance Model (TAM) further complemented the TRA. Nonetheless, it deferred in two respects. Firstly, TAM suggested the inclusion of two constructs to predict an individual's attitude towards the use of a system (in this case, engaging in Internet shopping), which are as follows:

- Perceived usefulness (PU), i.e. the belief that using the application would increase one's performance; and
- Perceived ease of use (PEU), i.e. the belief that one's use of the application would be free of effort.

Secondly, subjective norm was excluded from the TAM as it is believed that technological systems are accepted more so out of a necessity rather than peer pressure.

Research Model: The augmented TAM in this study seeks to merge the human and technology perspective (Figure 2). The three variables under investigation are online customer service (independent variable), perceived ease of use (mediating variable) and intention to shop online (dependent variable). The rationale behind the exclusion of the actual usage is due to the infancy of the Malaysian e-shopping

milieu. Perceived usefulness is debarred due to the study's preliminary investigation that concurs with the notion of perceived ease of use is more important in a voluntary setting, e.g. e-shopping.

Customer service as an external agent plays an important role in the perception of the Internet user. Despite the self-explanatory material on the web page, there is a need for the human touch. The prospective customer (i.e. Internet shopper) would still fancy his/her queries to be treated with the similar urgency of face-to-face purchase. The fine line between purchasing on-line and otherwise might be contributed by the lack of support for the prospective customer in question. Therefore, to accrue online shoppers, businesses must be effective in managing customer service relationship [6-8] with all web browsers being perceived as potential online shoppers [9]. Therefore, it is anticipated that:

H1: There would be a positive influence of online customer service on intention to shop online.

Hence, good customer service builds around effective B2C e-services and e-commerce infrastructure that allows customer service to be rendered with utmost professionalism. This assumes that effectiveness in the following: 1) pipeline of product selection, 2) negotiation of terms, 3) placement of orders, 4) payment authorization and 5) receipt of product and after sales support-an easy

task with just a few points-and-clicks. In other words, an efficient customer service structure allows a full support of the business dealings of an Internet shopper. It guides them through each step on the net without painstaking efforts on the part of the consumer. Hence, we posit that:

H2: Online customer service would positively influence the perceived ease of use of online shopping.

Internet users might still develop an unfavorable perception on e-shopping, assuming that barriers to Internet shopping outweigh the associated benefits. For example, Internet users might be prompted to key in much information and the products' pictures take a considerable amount of time to be downloaded are examples of factors that act as barriers in Internet shopping. In other words, these barriers reduces the perception on the ease of use of Internet shopping, therein, allowing Internet user's to develop a negative attitude. In turn, this leads to Internet shopper's unwillingness to engage in Internet shopping [6, 10]. Similarly, this study anticipates that:

H3: There is a positive relationship between perceived ease of use and intention to shop online.

H4: The influence of online customer service on intention to shop online will be mediated by perceived ease of use.

RESEARCH METHODOLOGY

This research involves part of a larger field study that examined the relationship between customer service and intention to engage in online shopping with perceived ease of use as the mediator. This study's research instrument consists of a 4-part questionnaire that was modified from various sources in order to gather information regarding demographics, online customer service, perceived ease of use and intention towards use. Sample of the measures and the variables are shown in Table 1.

POPULATION AND SAMPLE

The sample consisted of 150 staff of a public institution of higher learning that was selected through convenience sampling. Generally, the respondents have been exposed to the WWW as well as having been exposed to the concept of Internet shopping. It can be noted that 40.7% of the respondents are female whereas 59.3% of them are male. As for ethnic composition, 49.3% of the respondents are Malays, 36.7% are Chinese, followed by 7.3% and 6.7% of Indian and others respectively. Majority of the respondents are from the 31-40 years age group (33%) and possess a PhD (47.4%), indicating that the sample consists of predominantly lecturers.

ANALYSES AND RESULTS

The results indicate that online customer service do have positive impact on intention to shop online (0.56, $p < 0.01$) and perceived ease of use (0.67, $p < 0.01$) supporting H1 and H2 of this study. Baron and Kenny [13] have discussed four steps in establishing mediation:

Step 1: Show that the initial variable is correlated with the outcome. Use Y as the criterion variable in a regression equation and X as a predictor (estimate and test path c). This step establishes that there is an effect that may be mediated.

Step 2: Show that the initial variable is correlated with the mediator. Use M as the criterion variable in the regression equation and X as a predictor (estimate and test path a). This step essentially involves treating the mediator as if it were an outcome variable.

Step 3: Show that the mediator affects the outcome variable. Use Y as the criterion variable in a regression equation and X and M as predictors (estimate and test path b). It is not sufficient just to correlate the mediator with the outcome; the mediator and the outcome may be correlated because they are both caused by the initial variable X. Thus, the initial variable must be controlled in establishing the effect of the mediator on the outcome.
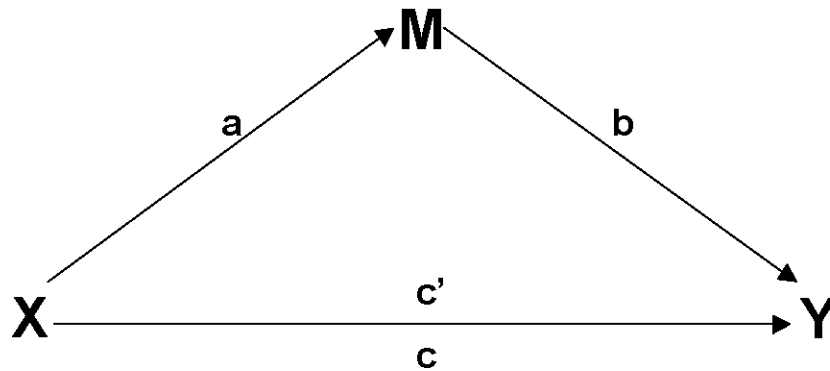
Table 1: Questionnaire Sources

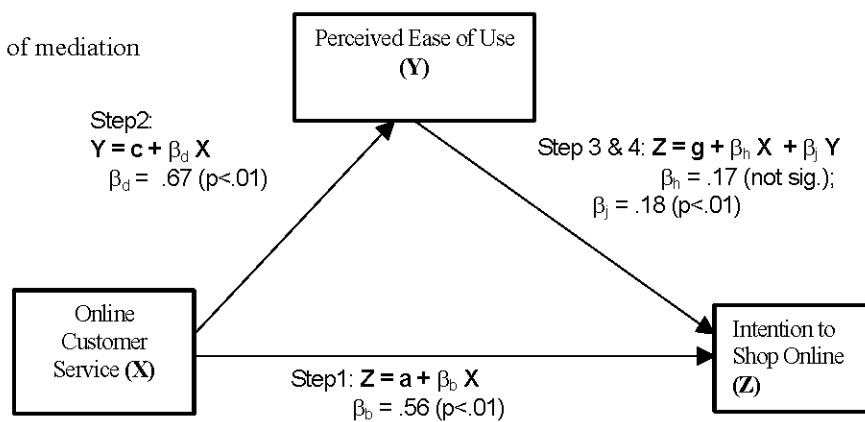| Section	Sample Questions	Source
PEU	Overall, online shopping or transaction would be easy for me.	Adapted based on [11] and [5]
Online Customer Service	Merchants can be counted on to deliver their promises	Adapted based on [12]
Intention towards use	I could see myself using the World Wide Web to buy a product.	Adapted from [4]

Fig. 3: The process of mediation

Fig. 4: The results of the mediation test

Step 4: To establish that M completely mediates the X-Y relationship, the effect of X on Y controlling for M (path c') should be zero. The effects in both Steps 3 and 4 are estimated in the same equation.

Perceived ease of use was proven to be a full mediator between online customer service and intention to shop online. This conclusion was derived based on Figure 4. When online customer service is regressed to intention (β = 0.56, p< 0.01) the result is significant fulfilling Step 1, then when online customer service is regressed to perceived ease of use (β = 0.67, p< 0.01) the result is also significant fulfilling Step 2, when online customer service and perceived ease of use is regressed together on intention, perceived ease of use (β = 0.18, p< 0.01) is significant (supporting H3) thus fulfilling Step 3 while online customer service (β = 0.17, p> 0.05) is not significant (supporting H4) thus Step 4 is fulfilled. Also we can see that in Step 1, online customer service is significant whereas in Step 4 it is not significant, this is consistent with a full mediation process. For more detailed explanation see Ramayah *et al.* [14].

CONCLUSION

Research in the West had begun to delve into topics that seek to explain e-loyalty among Internet shoppers. Nonetheless, e-shopping still remains skeptical among Internet users in developing countries such as in the South East Asian region. In its infancy, this research could only confine itself to a preliminary investigation of understanding the intention to shop online. The focus on perceived ease of use as a mediating variable is warranted due to it being the fundamental element of consumer usage of web technologies. All activities that generate from the online customer service should identify itself with the process of providing the browser/potential e-shopper with an enjoyable navigating/e-purchasing experience. Dabholkar [15] and argued that ease of use is the determinant of service quality as it enhances the efficiency of using the service. The ease of use takes into account the technological system, while online customer service are more concerned with the responsiveness and assurance of post-browsing actions. Queries and feedback should be timely and decisive in meeting the

potential e-shopper's needs. It should be noted that e-retailers not only have to compete within their domain, but also with high-street retailers. Therefore, the potential e-shopper still subliminally expects the same treatment and service as that of physical retailing. As a concluding remark for e-retailing entrepreneurs, technological systems should be built around simplicity, including less downloading speed, translation into multiple languages and understandable navigational bars.

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