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Cellular phone users' experiences towards online shopping

Norazah Mohd Suki
Labuan School of International Business & Finance, Universiti Malaysia Sabah
Labuan International Campus, Sabah, Malaysia
azahuki@yahoo.com

Abstract: This study aims to examine cellular phone users' motivating factors towards online shopping. 100 university students located in Klang Valley, Malaysia were involved as the respondents. They were required to complete a set of questionnaire and had to own a cellular phone in order to be selected as sample in this study. Three from five proposed hypotheses were supported: purchasing information, shopping utilities and service quality. As a result, marketers and retailers should concentrate more on the less important factors in order to encourage and create willingness of the consumers to purchase online. Recommendation for future research is also presented.

Keywords: *Online shopping, Motivation, Purchasing, Convenience, Transactions*

1. Introduction

Online shopping is becoming increasingly popular. Shopping on the mobile Web, i.e. m-commerce will reach US$119 billion in 2015 predicts ABI Research (2010), that is about 8 percent of the total e-commerce market. Mobile Web shopping in Japan exceeded US$10 billion in 2009, making the US$1.2 billion bought in the US by mobile. Long-term growth in m-commerce will come from developing nations where mobile is virtually the only way to access the Internet. The statistics released by Internet World Stats (2010) reveals that there was a 14 percent increase of Internet users worldwide in 2010; with 825.1 million users in Asia, 475.1 million in Europe, and 266.2 million users in North America. Asia accounted for 42.0 percent of Internet users, Europe for 24.2 percent, and North America for 13.5%. The China Internet Network Information Center (CINIC, 2010) reports that as of July 2010, there are 277 million mobile Web users in China, up 43 million in six months. This amounts to 65.9 percent of total web users in China 420 million, the majority of these also access the Web via PC or laptop, but 11.7 percent of Web users exclusively use mobile to access the Web. In many developing nations, the majority of mobile Web users are mobile-only, i.e. they do not, or very rarely also use a desktop, laptop or tablet to access the Web, according to On Device Research (2010), highest include Egypt at 70 percent and India at 59 percent. They tend to be under 25. According to Gartner (2010), by 2011, over 85 percent of handsets shipped globally will include some form of browser.

In Malaysia as of June 2009, there were 16,902,600 Internet users with 64.6% penetration and 1,331,800 broadband subscribers as of March 2008 (Internet World Stats, 2010). The penetration of Malaysian shopping online (those who bought or ordered goods and services online) in 2000 was 1% of the total adult population in Malaysia (Taylor Nelson Sofres, 2001). This corresponded 4% of Internet users in the country. Specifically, 24% of the total adult population in Malaysia is Internet users in 2001 and they are mainly males (28%) while 21% were females. The proportion of adult population that used Internet in the last 4 weeks was the highest amongst 15 to 20 years old (50%) followed by the 20 to 29 years olds (39%). The study also found that 14% of Malaysian Internet users plan to buy or order goods or services online by the end of 2001. There is high demand among Malaysians Internet users conducting online shopping due to online shopping. The aim of this study is to examine cellular phone users' motivating factors towards online shopping.

2. Literature Review

Shopping convenience is acknowledged the primary motivating factor in consumer decisions to buy at home (Norazah, 2001). It includes the time, space, and effort saved by a consumer and it includes aspects such as an ease of placing and canceling orders, returns and refunds, timely delivery of orders (Gehrt, Yale and Lawson, 1996). Another factor that motivates the online shoppers is privacy. They are able to shop without other disturbance. Moreover, they would not to face the traffic jams and long queue.

Consumers can 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 (Norazah, 2001). It is also important to address the consumers' perceptions of risks and benefits involved in Internet shopping because "perceptions of risks and benefits have an effect on privacy concerns" (Lee, Joshi & McIvor, 2007, p. 266). Therefore, Hypothesis 1 was proposed:

H1: Cellular phone users' willingness to shop online is significantly affected by convenience and privacy.

Perceptions of informativeness are generally based on the quantity and quality of information that can be distributed, as well as the opportunity to compare alternatives (Alba, Lynch, Janiszewski, Lutz, Sawyer & Wood, 1997). The quantity of information reflects the sheer amount of information a channel provides, whereas the quality of information refers to the depth (or specificity) of information. The characteristics for good quality information are accessibility, accuracy, updated content, consistency, sufficiency, and customization (Zhao & Gutiérrez, 2001). For example, quality information must be updated, and this is one reason for users to re-visit a website. Updated content, regardless whether it is of interest, of use, or simply for entertainment, can attract users back to the site (Bissonnette, 2001). To keep a site attractive to customers, a site should indicate that it is active and alive by having a last updated time and date, or similar information, e.g. reference to current events (Cotlier, 2001). Thus, Hypothesis 2 suggests that:

H2*:* Cellular phone users' willingness to shop online is significantly affected by purchasing information.

Online shopping is a different experience from shopping in a physical retail store. One major point of difference deals with store atmospherics or utilities (Engel, Blackwell & Miniard, 1990). This term describes the physical aspects of a store; such as colours, music type, music volume and tempo and layout of products. Store atmospherics have a direct effect on customer mood and behavior (East, 1997). Consumers also evaluate their Internet shopping experiences in terms of perceptions regarding product information, form of payment, delivery terms, service offered, risk involved, privacy, security, personalization, visual appeal, navigation, entertainment and enjoyment (Burke, 2002; Mathwick, Malhotra & Rigdon, 2002). Thus, Hypothesis 3 was proposed:

H3: Cellular phone users' willingness to shop online is significantly affected by shopping utility.

One of the most important and pressing concerns for businesses on to the Internet deals with the level of security in transactions. Consumer 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 (Shergill & Chen, 2005). Widely publicized security lapses on the Internet, where hackers have accessed personal financial information being sent electronically, have done little to boost consumer confidence in the Internet as a conduit for commerce (Goodwin, 1991). Perceived security protection and perceived reputation are the important predictors of Iranian consumer trust in Internet shopping (Dolatabadi & Ebrahimi, 2010). Therefore, Hypothesis 4 suggests that:

H4: Cellular phone users' willingness to shop online is significantly affected by transaction protection.

Service excellence is the consumer's appreciation of delivered promises and performed functions. Service excellence operates as an ideal, a standard against which judgments are ultimately formed (Holbrook, 1994). If online shopping meets this ideal by enabling the consumer to accomplish the shopping task he or she has set out to perform, then consumers will judge the Internet shopping performance positively (Mathwick et al., 2002). This leads to positive perceptions regarding the usefulness of online shopping. Ho and Wu (1999) found that homepage presentation is a major antecedent of customer satisfaction. The other antecedents, such as logical support, technological characteristics, information characteristics and product characteristics; are also predictive factors to satisfaction. The most popular online activities of mobile Internet users are similar to those of other Internet users: using search engines, reading news and sports information, downloading music and videos, purchasing and sending/receiving email and instant messages (IDC, 2010). Therefore, Hypothesis 5 was proposed:

H5: Cellular phone users' willingness to shop online is significantly affected by service and quality.

From the above said literatures, theoretical framework as presented in Figure 1 was constructed in a conceptual research effort based on the theory of planned behavior by Ajzen (2002) on cellular phone technologies, motivating factors in online purchasing and theoretical reasoning with the objective of purchasing willingness.

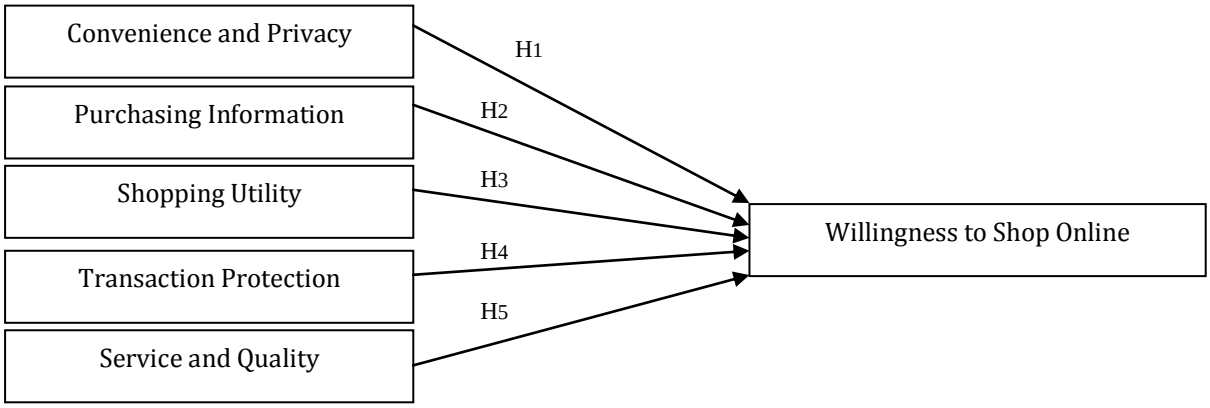


Figure 1: Theoretical Framework

3. Research Methodology

Total 100 completed and usable questionnaires were received from the respondents with 100% response rate. The population is selected equally from five universities located in Klang Valley. To be selected as a respondent in this study, they are required to have cellular phone as the subject of this study. The questionnaires were divided into two sections: Section A were related to the respondent's demographic data such as gender, age, marital status, race and the respondent's level of education and Section B presents questions that discuss about consumers motivating factors towards online shopping which consisted of 29 items. In this paper, measures used in the work of Norazah (2001) were adapted: convenience and privacy, purchasing information, shopping utility, transaction protection, and service and quality. After which, some measures were modified and added to make them appropriate for the current context. The questionnaires used five-point Likert scales. Descriptive statistic via Statistical Package for Social Sciences (SPSS) compute program version 16 was used to check the frequency distribution and percentage for demographic profile of the respondents and as well their purchasing willingness of a product through the Internet. Meanwhile, regression analysis was used to identify relationship between cellular phone users' shopping motivating factors and purchasing willingness.

4. Results and Discussion

Table 1 demonstrates the frequency analysis of demographic profile of cellular phone users'. Majority of the questionnaires were answered by female respondents (61%) compared to the male respondents (39%). Age of respondents varied: from below than 20 years old with 17%, 26-30 years old, (23%) and over than 30 years old, (11%). A big number of cellular phone users' came from encirclement age of 21-25 years old, which is 49%. 78% answered the questionnaire was single and the rest were married (22%). Majority of the respondents participated in the study was Malays with 62%, followed by the Indians (20%) and minority of the respondents was the Chinese with 18%. The study focused on five highest educational levels, which consist of foundation, diploma, bachelor/degree, master and PhD. Students with bachelor/degree represent the largest number of respondents with 52%, followed by cellular phone users' with diploma (28%), master/PhD (15%) and finally cellular phone users' with foundation represent 5% of the respondents.

Experiences towards Online Shopping

The respondents' frequency on purchasing willingness is presented in Table 2. 34% of cellular phone users' often use Internet everyday and 3-6 days a week. Followed by 26% chose to use Internet at least once a week and finally 6% spent at least once a month surfing the Internet. Interestingly, 68% have made online purchases through cellular phone in the past 1 year. The balance 32% have not made any

online purchases through cellular phone in the past 1 year. Among 68 online purchasers, 27% of them subscribed songs/images and 21% chose to pay bills through online. Movie ticket reservation was the third popular type of product purchased online with 18% purchasers. There were 32% respondents have yet to experience in conducting online purchasing through cellular phone.

Table 1: Demographic Profile of Respondents

	Frequency	Percentage (%)
Gender		
Male	39	39
Female	61	61
Age (years old)		
Below 20	17	17
21-25	49	49
26-30	23	23
Over 30	11	11
Marital Status		
Single	78	78
Married	22	22
Races		
Malay	62	62
Chinese	18	18
Indian	20	20
Level of Education		
Foundation	5	5
Diploma	28	28
Bachelor/Degree	52	52
Master/PhD	15	15

There were four reasons encouraged cellular phone users' to make online purchases through cellular phone. Majority of the respondents (35%) chose saving time as the main factor that encourage them to purchase online while 27% of the respondents agreed with convenience factor. 21 respondents chose that attractive stuffs persuade them to buy product via online. Finally, 17% agreed that special offer attracted them to purchase product online. 93% respondents hold a positive plan to make purchases in the near future, while 7% respondents chose not to make any purchase in the future (see Table 2).

Table 2: Frequency on Purchasing Willingness

	Frequency	Percentage (%)
How often do you use Internet?		
Everyday	34	34
3-6 days a week	34	34
At least once a week	26	26
At least once a month	6	6
Have you made any online purchases through cellular phone for the past 1 year?		
Yes	68	68
No	32	32
If yes, what kind of purchase you have made?		
Movie ticket reservation	18	18
Paying bills	21	21
Subscribes songs/images	27	27
Others	2	2
Not relevant	32	32
What encourage you to purchase online?		
Attractive stuffs	21	21
Special offer	17	17
Convenience	27	27
Saving time	35	35
Do you plan to make any purchase in the future?		
Yes	93	93
No	7	7

Reliability Analysis

Cronbach α is the average of all possible split-half coefficient resulting from different ways of splitting the scale items. This coefficient varies from 0 to 1 and the value of 0.70 or less indicates unsatisfactory internal consistency reliability (Malhotra, 2007). An important property of coefficient α is that its value tends to increase with an increase in the number of scale items. Therefore, Cronbach α may be artificially and inappropriately, inflated by including several redundant scale items. As enumerated in Table 3, the reliability analysis on motivating factors towards online shopping, it indicates that Cronbach α value for all variables is satisfactory and reliable as its values are more than 0.70.

Table 3: Reliability Analysis on Motivating Factors towards Online Shopping

Variables	Number of Items	Cronbach α
Convenience and Privacy	5	0.767
Purchasing Information	3	0.843
Shopping Utilities	3	0.774
Transaction Protection	3	0.835
Service and Quality	4	0.752

Correlation Analysis among Variables

Table 4 describes correlation analysis among variables and it was found that all variables in the correlation matrix provides evidence for both discriminant and convergence validity.

Table 4: Correlation Analysis among Variables

	1	2	3	4	5
(1) Convenience & Privacy	1				
(2) Purchasing Information	.403(**)	1			
(3) Shopping Utilities	.539(**)	.533(**)	1		
(4) Transaction Protection	.550(**)	.481(**)	.525(**)	1	
(5') Service & Quality	.477(**)	.586(**)	.547(**)	.493(**)	1

** Correlation is significant at the 0.01 level (2-tailed).

The r-value for the predictors' variable is 0.326 while R Square value is 0.106. After the r square has been adjusted, the new value is 0.059 (refer Table 5). This suggests that the additional of another independent variables (Service Quality, Convenience and Privacy, Purchasing Information, Transaction Protection and Shopping and Utilities factors) related to online purchasing, make a contribution in explaining 5.9% of the variation in Purchasing Willingness towards online shopping. The additional standardized beta coefficients give a measure of the contribution of each variable to the model. A large value indicates that a unit change in this predictors' variable has a large effect on the criterion variable.

From Table 5, the significant value for convenience and privacy factor is 0.155, which is far greater than 0.05 at 95% significant level. Hence, Hypothesis 1 of cellular phone users' willingness to shop online is significantly affected by convenience and privacy is not supported with ß value -0.181. 84% of the respondents agreed that through convenience and privacy factor, they able to avoid traffic jam and parking headaches when shopping for products via the Internet. Interestingly, when shopping for products via the Internet, consumers also experience disturbance free shopping. Thus, shopping convenience is acknowledged the primary motivating factor in consumer decisions to buy at home. The finding supported Gillett (1976); Norazah (2001)'s study.

Further, as exemplified in Table 5, the significant value for purchasing information is 0.043 which is smaller than 0.05 at 95% significant level. It clearly showed that Hypothesis 2 (cellular phone users' willingness to shop online is significantly affected by purchasing information) is supported (ß= -0.264, ß < 0.05). Encouragingly, 64% of the respondents have strongly agreed that online retailer's website provide them with rich and up to date product information. Furthermore, 64% of the respondents agreed with availability of rare products difficult to find in online stores. It was suggested that to keep a site

attractive to customers, a site should indicate that it is active and alive by having a last updated time and date, or similar information, e.g. reference to current events (Cotlier, 2001).

Table 5: Regression Analysis

	Standardized Beta Coefficients	t-value	Sig.	Result
Convenience & Privacy	-.181	-1.433	.155	Not supported
Purchasing Information	-.264	-2.048	.043	Supported
Shopping Utilities	.227	1.707	.091	Supported
Transaction Protection	-.081	-.628	.532	Not supported
Service & Quality	.306	2.315	.023	Supported

$R = .326$, $R^2 = .106$, Adjusted $R^2 = .059$

Hypothesis 3 proposed that cellular phone users' willingness to shop online is significantly affected by shopping utility. Table 5 deduced that the significant value for shopping utilities is 0.091 with ß value 0.227. The value is smaller than 0.10 at 90% significant level. Thus, Hypothesis 3 is supported. Shopping utilities factor has a great influence in motivating consumers to purchase product via the Internet. 67% of the respondents agreed that shopping utilities could reduce product information search in term of time, cost and effort. The finding in accordance with East (1997)'s study that store atmospherics such as colors, music type, music volume and tempo and layout of products have a direct effect on customer mood and behavior. 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 attitudes and intentions toward shopping on the web (Eighmey, 1997). Users valued the benefits of the mobile ticketing service in situations where they were in a hurry, where other ticketing alternatives were not available, when the need for a ticket was unexpected, or where there were queues at points of sale (Mallat, Rossi, Tuunainen & O¨o¨rni, 2009).

The next hypothesis, Hypothesis 4 put forward that cellular phone users' willingness to shop online is significantly affected by transaction protection. Table 5 enumerated that transaction protection factor has greater significant value than 0.05 at 95% significant level, which is 0.532. It can be concluded that Hypothesis 4 is not supported by the ß value -0.081. As a consequence, cellular phone users' willingness to shop online is not affected by transaction protection factor. In terms of descriptive statistics, 78% of respondents agreed that online shopping makes their shopping process simple. However, consumers continuously concerns with the level of security of online transaction systems and the uncertainty of product quality (Dolatabadi & Ebrahimi, 2010; Shergill & Chen, 2005). Mallat et al. (2009) noted that as the mobile channel is used in parallel with others, the mobile adoption decision is no longer a one-time choice to replace an older technology but a continuously ongoing process of comparing alternative options under different situations.

Further investigation of the results on Hypothesis 5 revealed that the significant value for service and quality is 0.023, which is smaller than 0.05 at 95% significant level. Therefore, Hypothesis 5 is supported with ß value -0.306. This inferred that cellular phone users' willingness to shop online is significantly affected by Service and quality factor. The factor offered consumers versatile multimedia interface. This is proved by 80% of the respondents hold a positive opinion towards that statement. In fact, Ho and Wu (1999) found that homepage presentation is a major antecedent of customer satisfaction. Thus, if online shopping meets this ideal by enabling the consumer to accomplish the shopping task he or she has set out to perform, then consumers will judge the Internet shopping performance positively (Mathwick et al., 2002). Mallat et al. (2009) implied that consumers resented dramatic changes brought into their daily lives by new technologies.

5. Conclusions and Recommendations

The mobile phone system is currently a new communication channel, which is becoming increasingly personalized and is recognized as an excellent interactive marketing tool. The study aims to investigate the relationship between cellular phone users' motivations and willingness in online shopping. Through regression analysis, three hypotheses were supported: Hypothesis 2, 3 and 5. It is surmised that cellular phone users' positive experience in conducting online shopping is influenced significantly by factors: purchasing information (availability of rare products difficult to find in online stores), shopping utilities

(save time, cost and effort), and service and quality (versatile multimedia interface). Hence, growth in online shopping has been motivated by convenience (free of any salesperson pressure and shopping within a comfortable home setting), ease of information search/information gathering, ability to compare prices, wider selection of products and services, time-saving, original services, and personal motivation among other factors (Horrigan, 2008; Zhou, Dai & Zhang, 2008). Marketers should come out with new strategies and solution to attract consumer to purchase online other than the five motivating factors proposed. It is highly recommended for marketers to provide greater focus on the least important factor found in this study i.e. shopping utilities. Indeed, marketers should aggressively emphasize more on attractive promotion strategies such as endow with discounts via the web for online purchasers. Future researchers are recommended to add additional variables in the research framework to produce more in depth results. In order to ensure this research more accurate and reliable, future research should expand or increase the involvement of respondents. The more geographic area of research included, the result will be more representative.

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