EVALUATING THE INFLUENCE OF RELIABILITY, USABILITY, USEFULNESS AND WEBSITE DESIGN ON THE SATISFACTION OF ONLINE CONSUMERS

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ABSTRACT
Currently, online shopping is increasingly adopted worldwide. Thus, it is a significant for consumers to be aware in order to know how to gain benefits and avoid risks. The aim of this research is to identify and explore the key factors that affect customer intention through online shopping in Bahrain. Four key factors of consumer intention of online shopping have been identified. The results revealed that Usability, Usefulness, Reliability, and Website features are correlated with people attitude to do online shopping. The analytical results of the collected data through a survey showed that there is a highly significant relationship between the above selected key factors and the satisfaction of online shopping.

JEL CLASSIFICATION & KEYWORDS
- M15 ■ M16 ■ Online Shopping ■ Website Design ■ Reliability ■ Usability ■ Usfulness

INTRODUCTION
Due to a wide spreading and application of Internet and exponential increase in the number of Internet users, online shopping has growingly acquired attentions from social and non social communities as a novel method of consumption mode, (Kuhlmeier & Knight, 2005). Studies revealed that even though internet shopping presented a small portion of retail sales in underdeveloped countries, it will increase drastically in the future (Hawkins et al., 2001).

Since the internet become available for almost all people around the world, it becomes an increasingly effective marketing tool for retail businesses as well as other businesses. The internet deemed to be a prevalent method for information searches and product purchases in our current society. Online retail sales estimated to grow up to 329 billion US dollars by the year 2010 (Zhou et al., 2007). Growth in 2011 would also be 18 percent, they predicted, with total online sales estimated at 69 billion pounds (James Davey, 2011).

The fundamental concept behind Electronic commerce (e-commerce), constitutes the use of Information Communication Technology (ICT) to exchange of products and services between businesses, groups and individuals while facilitating and maintaining their external activities and relationships. This view has been supported in the work of Davies, 2004), and (Louis et. al, 2005).

Online shopping (also known as online retail or e-tail) which extends from e-commerce can be summarized in the act of buying or selling goods, items, products or services through the Internet while using many different media forms. Online shopping has indeed evolved mutually with technology. Thus, Marketing Charts on Nielsen Research (2008) and Celent Report Figures published by Celent.net (2006) have both shown that it has become so popular that more than 85% of the world’s online population has used the internet to make a purchase according to the latest Nielsen Global Online Survey on internet shopping habits. “When The Nielsen Company conducted its first global survey into internet shopping trends in 2007, approximately 10% of the world’s population (627 million) had shopped online,” said Bruce Paul, VP, Customized Research, Nielsen US. “Within two years, this number has increased by approximately 40% (to 875 million).”

The increasing number of sale in volume and profit urge marketers to understand consumer choices and perceptions in order to more effectively in sales (Phau and Poon, 2000).

Searching for related information, buying or selling products using online shopping have been turned into well-liked activities (Farag et al., 2007).

On the other hand, the accessibility and usability of various web sites marketing various product options, measuring up choice to others and choosing the most preferred option can become a daunting task for consumers (Wan, Menon & RamaPrasad, 2007).

Studies reported that the factors the influence consumer online shopping include convenience, various selection, low price, original services, personal attention, and usability to information, (Richards, 2005; Kerner et al., 2004). While other studies stated that it is important to study the consumer online shopping behavior toward retail business in different context as the influences that factors consumers vary related to consumer attitude and other demographic factors (Athiyaman, 2002; Limayem et al., 2003).

Whether studying factors that influence online retail business sales or investigating factors that lead to avoidance of online shopping of retail business, literatures and studies agreed that online shopping has been proven to be beneficial to sellers and buyers alike (Kau et al., 2003).

Buyers obtain the benefits from having global market under one roof, where larger product catalogs from a wider and varied range of sellers existed (Butler and Peppard, 1998).

Eric Schonfeld (2010) indicated that e-commerce sales in the U.S. will keep growing at a 10 percent compound annual growth rate and 11 percent in Europe through to 2014. There is a lot of room for improvement in tempting consumers to cross over between e-tail and retail.

Bahrain online shoppers are insignificant performed related to the developed countries in the world.

A lot of businesses in Bahrain adopt a Western style retailing, hence, try to imitate and copy those market trends in the US and EU. Still most business owners, retailers and even customers remain on brick-and-mortar approach when it comes to shopping. Despite that with the growth we see from the western market towards online retails, it is still safe to say that e-business is bound to materialize eventually in Bahrain.
There are many challenges facing the adoption of online shopping in Bahrain. E-businesses are not very fond and comfortable with adaptation of the available payment systems provided from financial institutions and banks in Bahrain. Yet, the government has taken the initiative to impose it and use it publicly. People in Bahrain are aware of transaction facilities offered by available credit cards. But they remain a bit dubious with using credit cards comfortably for online payment systems. Hence, different payment options are made available. Perhaps cash on delivery and online banking can give a lot of assurances. From that perspective we tend to see many people using international online financial services such as PayPal which can also be adapted as a form of payment in a localized e-tail shop.

The researcher will attempt to prove this by showing the influential factors of online shoppers in the Hypothesis in section 3. From the results we can perhaps deduce that there is no shrink and retraction of e-buyers currently shopping online from international e-business sites in Bahrain.

The study thus underpins the factors that influence consumer online retail behavior in Bahrain. From online business retailer perspective, comprehending these factors can thus boost the sale of online retail business. The lack of such understanding may cause a wide confusion regarding what are really happening, how much potential there is, and what retail business. This research will compromise the following section as presented in the following figure 1.

Figure 1: Research structure

Source: Author

Research structure

As illustrated in figure 1. Introduction presented in section 1. Section 2 will review the literatures on online purchasing. The research model and hypothesis are explained in section 3. The research methodology of this study will present in section 4. Research analysis and discussion are discussed in Section 5. Finally, section 6 is for conclusion.

Literature review

For an extensive review and a deeper understanding of the subject under study - Online shopping - various literatures have been reviewed.

Swinyard & S.Smith (2003) agree that academic literature for Internet shopping has not reached mature development. Most of the literature reviewed had no focus on Bahrain online shoppers which may indicates that Bahrain market has no major global significance towards online shopping trends.

The most comprehensive related researches found were conducted for US, EU and some Southeast Asian nations due to the fact that the greatest percentages of online shoppers seem to come from such nations. Nielsen found that among internet users, the highest percentage shopping online is in South Korea, where 99% of those with internet access have used it to shop, followed by the UK (97%), Germany (97%), Japan (97%); the US is eighth, at 94%. In South Korea, 79% of these internet users have shopped in the past month, followed by the UK (76%) and Switzerland (67%); the US is at 57% (Marketing Charts on Nielsen Research, 2008).

On 2007, a research published by Organization for Economic Co-operation and Development (OECD) illustrates that the online sales between 2003 and 2006 was unexceptional in Europe, apart from a few states for instance Denmark (10%), Norway (8%), Portugal (7%) and Spain (5%). The research also indicate that in Australia, the value of Internet income increased from 0.8% of total income to 2.2% between 2001-02 and 2004-05 and in Canada, Internet sales as a proportion of total business operating revenue increased from 0.3% to 1.3% in the period 2001-05. In the USA there was a steady growth in retail online sales, with a twofold increase registered between the last quarter of 2002 and the last quarter of 2006. Various studies indicated that the suitability of online retailing to people varied by the type of products, due to either the exclusivity of the product itself, the nature of the Internet, or the newness of the distribution channel (Hui and Chau, 2002). Furthermore, studies explain that to be fast-selling products on the Internet are clothes, books, computer products, travel, health and beauty products, in which marketer have sufficient information about their products (Reda, 2001; Schaeffer, 2000). Furthermore, in his study, Schaeffer (2000) explained that the recent integration of apparel manufacturers into direct Web selling, as well as the continuing invasion of traditional retailers into the online channel, has fueled the clothing surge. Simeon (1999) suggested that the objective of website is to attract a number of interested parties to visit the company's online presence. However, Thelwall (2000) indicated that because of the great role that website play to enhance business image and activities, its paramount important that webmasters should be aware of Internet technologies and be able to better design a good quality website and in the meantime they should try to provide an effective quality.

Kim et al., (2003) also explained the effectiveness of the websites and thus effort to enhance the quality of websites should been made. He suggested that the quality of websites depends on three principle; presentation quality, content and function adequacy and navigability. He also explained that the performance principle consists of reliability of the website and the response time. Finally, they explained that development elements include flexibility, page coupling code readability, and modifiability.

Oppenheim and Ward, (2006) suggested that used the requisite time, the error rate of the website and users prejudiced satisfaction are the basic measure of usability. However, they indicate that this type of measure for usability may not efficient to give solutions but assists the retailer to recognize problems and some hints for improvements.

Other literatures have recommended that environments influence consumer behavior (Bitner, 1992; Turley and Milliman, 2000). Online environments are different from offline environments in term of virtual vs. real small vs. large and sensory representation (Coyle and Thorson, 2001).

Athisyaman, (2002) indicated that attitude is an individual evaluation about the consequences of performing a behavior. Consistent with the findings of most IT adoption studies, Attitude reported to be is a significant antecedent of intention to online shopping (e.g., Chen et al., 2002; George 2002).

Vellido, et. al., (2000), and Zhang, (2002) revealed that there are positive relationships between online shopping attitude and five categories of factors, these factors are: E-stores...
logistical support, Product characteristics and specification, Web page technological characteristics, information availability and characteristics, and Homepage presentation.

Number of researches has shown that online shoppers value derived from online shopping can be explained by consumer characteristics (Lee et al., 2009; Zhou, Dai & Zhang, 2007).

Johnson et al. (2004) indicated that online shopper's characteristic has a significant impact in handling information search dynamics. For instance, high dedicated online shoppers may tend to search across numerous related sites. Cowart and Goldsmith (2007) showed considerable positive inspiration of quality perception, brand perception, fashion perception, self-indulgent shopping, impetuousity and brand loyalty and a negative influence of price concern on the extent of online apparel shopping.

Klassen et al. (2009) revealed a substantial impact of deal-proneness on the extent of online shopping spending. This indicates that the decision styles of online shopper are real indicators of online shopping behaviors. Park and Gretzel (2006) indicated that usefulness, ease of use and reliability are the main keys for determinants of travel meta-search engine adoption. Usefulness has been found to be always the strongest forecaster to approve a technology (Lee, Kozar & Larson, 2003).

Childers et al., (2001), and Heijden et al., (2001) also assured that perceived usefulness affects individual attitude toward online shopping. In the same way, literatures found perceived usefulness to be a considerable factor affecting intention to shop online (Chen et al., 2002; Gefen and Straub, 2000; Heijden et al., 2001; and Pavlou, 2001).

A better price, delivery performance and produce variety are the main credibility of the usefulness (Bhatnagar & Ghose, 2004; Ahn et al. 2004, and Lee & Joshi, (2007).

Ease of use factor has received massive attention in the various literatures; these literatures found that ease of use stimulus attitudes toward online shopping (e.g. Chen et al., 2002; Heijden et al., 2001). Those literatures revealed that ease of use factor is an individual perception that shopping on the internet will involve a minimum of effort.

The concept of reliability is highest important factor in the context of online shopping and consumer behavior (Pavlou and Chai 2002). Conversely, the lacking of trust is one of the most regularly cited reasons for consumers not shopping on the Internet (Lee and Turban, 2001).

The store size and reputation can really influence the reliability of online shoppers in the store, risk, attitudes, and readiness to deal with the particular store (e.g. Jarvenpaa, et al., 2000). Ho and Wu (1999) indicated that website design and reliability are the most significant factors that have most prominent effect on online consumer.

The current section presented literatures and various studies to better enhance our understanding to online shopping from various retailing business. Thus, and based on previous literatures we are utilizing four independent variables for measuring the satisfaction of consumer online shopping, i.e. usefulness, reliability, usability, and website design.

Research Model and Hypotheses

Based on the review of literature that is related to the indicators affecting online shopping perspectives, a research model was developed. This model will be empirically tested to measure the factors that affecting online shopping satisfaction.

Figure 2: The Schematic Diagram of the Research Model

Source: Author

The research model presented in Figure 2 shows that the dependant variable, online shopping satisfaction, is influenced by set of independent variables: usefulness (better price, delivery performance and produce variety), reliability, usability and website features. The independent variables are believed to be the variables that have association with the dependent variable (online shopping satisfaction) in a positive manner.

Hypotheses

The following are the four hypotheses which were developed from the above proposed research model:

Hypothesis 1: There is a significant positive relationship between usefulness and online shopping satisfaction.

Hypothesis 2: There is a significant positive relationship between reliability and online shopping satisfaction.

Hypothesis 3: There is a significant positive relationship between usability and online shopping satisfaction.

Hypothesis 4: There is a significant positive relationship between website and online shopping satisfaction.

Research Methods

Survey Instrument

The questionnaire we prepared for this exercise was divided into 2 sections. The first section concentrates on the general profile of the respondent including his/her age group, education level and profession and income group.

In the second section we were interested in finding the factors affecting the customer intention to use of online shopping in Bahrain. The respondents were provided with a list of 10 questions; 2 questions on the perceived usefulness, 2 questions on the perceived usability, 2 questions on the perceived reliability, 2 questions on online satisfaction and finally 2 questions on the website design.

The participants were asked to indicate their perception on a likert scales (1- 5) with response ranging from “strongly disagree” to “strongly agree”. The collected data were analyzed based on correlation and regression analyses using the statistical package for social sciences (SPSS) version 17 computer program.

Sample and Data Collection

To assess the factors influencing the online shopping satisfaction in Bahrain, a survey was conducted during the last quarter of year 2010 by primary data collection method through consumer survey which was designed and distributed to different people of different age group and of different educational level working at different organization. However, the common denominator of these is the desire of possessing a purchase through the Internet. The chosen
respondents should have purchased at least one item through online shopping. A total of 150 questionnaires were distributed but we had only 130 usable answers. The greater part of the respondents were female (51.2%), the age was (57.1%) for those who are between 20 and 45 years old. Reliability To find out whether the questionnaire is reliable or not we measured the internal reliability, which is the most popular methods of estimating reliability. Cronbach’s alpha test will be used (Nunnae and Bernstein, 1994). She suggested that a minimum alpha of 0.6 sufficed for early stage of research. The Cronbach alpha estimated for usefulness and the results was 0.814, website design result was 0.881, reliability was 0.796, usability was 0.784, and shopping satisfaction was 0.792. As the Cronbach's alpha in this study were all much higher than 0.6, the constructs were therefore deemed to have adequate reliability. Results and Discussion Correlation analysis Table 1 present the results of correlation analysis which used to describe the strength and direction of the linear relationship between the four independents variables and the dependent variable. The result of the study shows that all four independent variables (usefulness, reliability, usability, and website design) variables are correlated to the dependent variable (online shopping satisfaction) in a positive manner. 

<table>
<thead>
<tr>
<th>Variables</th>
<th>Reliability</th>
<th>Usefulness</th>
<th>Usability</th>
<th>Website design</th>
<th>Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reliability</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Usefulness</td>
<td>-0.042</td>
<td>0.491</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Usability</td>
<td>0.410**</td>
<td>0.162**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Website design</td>
<td>0.272**</td>
<td>0.05</td>
<td>0.057</td>
<td>0.46</td>
<td>1</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>0.428**</td>
<td>0.157**</td>
<td>0.212**</td>
<td>0.429**</td>
<td>1</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01.
*. Correlation is significant at the 0.05.

Table 1: Results of correlation analysis

Source: Author The result of correlation reveals that reliability (r=0.428, p < 0.01), Usefulness (r=0.157, p < 0.05) and Usability (r=0.212, p < 0.01) and Website feature (r=0.429, p < 0.01) are all correlated with online shopping satisfaction. Regression analysis Linear regression results are presented in table 2. The results of the regression exposed that Usefulness (β=0.129, p < 0.05), and Reliability (β=0.248, p < 0.01) found to be affects consumers satisfaction to do online shopping. This result corresponds with the view of Childers et al., (2001), and Heijden et al., (2001) who clarify that perceived usefulness affects consumers regarding online shopping. Furthermore, Usability (β=0.212, p < 0.01) is seriously affects the satisfaction of online shopping. This finding also corresponds with the view of other literatures such as Chen et al., 2002; Childers et al., 2001; Heijden et al., 2001.

Table 2: Regression (Coefficients)

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig</th>
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<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>Reliability</td>
<td>0.313</td>
<td>0.101</td>
<td>0.224</td>
<td>2.977</td>
</tr>
<tr>
<td>Usefulness</td>
<td>0.177</td>
<td>0.069</td>
<td>0.129</td>
<td>2.605</td>
</tr>
<tr>
<td>Usability</td>
<td>0.299</td>
<td>0.082</td>
<td>0.212</td>
<td>3.692</td>
</tr>
<tr>
<td>Website design</td>
<td>0.469</td>
<td>0.094</td>
<td>0.211</td>
<td>4.122</td>
</tr>
</tbody>
</table>

Source: Author The results of the regression exposed that Usefulness (β=0.129, p < 0.05), and Reliability (β=0.248, p < 0.01) found to be affects consumers satisfaction to do online shopping. This result corresponds with the view of Childers et al., (2001), and Heijden et al., (2001) who clarify that perceived usefulness affects consumers regarding online shopping. Furthermore, Usability (β=0.212, p < 0.01) is seriously affects the satisfaction of online shopping. This finding also corresponds with the view of other literatures such as Chen et al., 2002; Childers et al., 2001; Heijden et al., 2001.

CONCLUSION The purpose of this paper was to explore the factors that influence online shopping satisfaction in Bahrain. This research used three different methods: the first was exploratory, which detect the main factors that affect online shopping satisfaction, the second was descriptive research method which was used to describe the sample profile, and finally explanatory (empirical) research to examine the relationship between dependant and independent variables. However, because of the special feature of this research, the major research method was explanatory research, that uses quantitative research design to examine four research hypotheses. Quantitative research used survey as the main instrument to collect data. The analytical results of our collected data demonstrate significant relationships between the independent variables: usefulness, usability, reliability and website design, and the dependant variable: significant of online shopping. This research approved that understanding these factors are important to enhance the process of online shopping. This result is in conformity with previous studies done by other researchers (Childers et al. 2001; and Heijden et al. 2001). However, despite the fact that Bahrain did not have...
the highest online shopping, the results reflect a clear picture in the awareness and understanding among the Bahrainis regarding the true effects of the usefulness, usability, reliability and website design, on the significant of online shopping.

The results thus recommended that consumers should emphasize on the website design when they do online shopping. Usefulness and usability are very momentous when shopping through the internet. Respondents also exposed that reliability found to be significant in their importance to online shopping.

REFERENCES


