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A Model of Internet Consumer Satisfaction: Focusing on the Web-site design

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Abstract

Since the trend of doing business on line has become more and more common among different sizes of companies and industries, measuring the antecedents of web site design is important to both practitioners and researchers. Achieving customer satisfaction is the ultimate goal of electronic commerce so to guarantee on line purchases. Based on the research models and factors proposed by previous studies on customer satisfaction and Web interface design, a new model is developed in this paper. This model shows how various antecedent factors affect consumer satisfaction towards Internet shopping through the intermediate construct of a successful Web-site design.

Introduction

Electronic Commerce is getting more and more popular nowadays. Some researchers claimed that it has become the most important trend for doing business in the 21st century. It used to be that only large size companies are interested in creating web site for online shopping. However small companies are also following this trend because of the various advantages of online shopping. Internet offers opportunity to create one-to-one direct marketing relationship with consumer. In addition, distribution costs are low, except technology costs; thus the millions of consumers reached cost the same as one. Besides, the web site can be accessed on demand 24 hours a day, 365 days a year, and costs are the same regardless of audience location.

In 1996 there was about US\$1.3 billion of goods purchased online. At this worldwide market of Electronic Commerce, 16 million buyers were from U.S., 6 million were from Western Europe, and 5.7 million were other (e.g. Asia). Total web users were about 27.8 million people, and 58% of these users were from U.S., 21.6% were from Western Europe, and 20.4% were other. Statistic predicts that by the time it reach 2001, there will be a total of US\$176 billion goods sold online. U.S. buyers will increase to 94.5 million, Western Europe buyers will be around 32 million, and other will be 48 million. (International Data Corporation, 1997)

Electronic Commerce generally classified into two types: (1) business to business and (2) business to customers. To a large extend, whether or not the business

can persuade their prospective customers into real customers and retain them, depends on the goods and services they offer and the satisfaction customers perceive. Customer satisfaction is a critical issue in any types of business.

When the customer is shopping online, the business' web-site is like the sales representative at a traditional retail store. An effective and successful web-page design may lead to a higher level of customer satisfaction. This paper is intended to explore the antecedents of successful business' web-site design and its relationships to customer satisfaction. We will use survey research method in attempting to test our model, which is developed based on previous studies. The literature on electronic commerce and customer satisfaction is reviewed. In addition, the research methodology, the model and hypotheses will be outlined in this paper. Finally, we will discuss the limitations and implications of this study.

Successful Web-site Design

Gehrke and Turban (1999) had conducted a study to identify the major determinants of commercial web site design. First of all, they reviewed publications in trade journals written by experts on electronic commerce, as well as few practitioners' surveys. From mid-1997 to April 1998, they have reviewed 46 publications and over 40 web-sites yielded over 100 issues related to web-site design. They found out there are five major categories that should be considered in designing a web site for a business: (1) page loading; (2) business content; (3) navigation efficiency; (4) security and (5) marketing/consumer focus.

Second of all, they conducted a survey among 130 electronic commerce customers and potential customers in Long Beach, California, during summer 1998. The customers were asked to identify the relative importance of each of the above categories. The result was that page loading was ranked as the most important factor in web-site design. Then follow by navigation efficiency as the second important factor, business content the third, marketing/consumer focus the fourth and security the fifth important factor.

Customer Satisfaction

The concept of customer satisfaction has been a key focus in marketing research and practice. Satisfaction is important to both individual customer and business. Individuals consume goods and services so to fulfill their needs, and business' objective is to fulfill customers' needs. Churchill and Surprenant (1982) suggested that disconfirmation as an intervening variable affecting satisfaction. From their experiments, the effect of disconfirmation can be adequately captured by both customers' expectation and perceived performance.

From the perspective of antecedents (expectations and disconfirmation) and consequences (e.g., intention to purchase) of satisfaction, Oliver (1980) proposed a model that expressed customer satisfaction as a function of expectation and expectancy disconfirmation. The research findings have confirmed this concept. In addition, the authors found out that satisfaction significantly affected customers' attitudes and their intention to purchase. Dissatisfaction was due to "disconfirmed expectation" of customers. Disconfirmed expectation was defined as the discrepancy between what is expected and what was actually being experienced. Satisfaction levels drop as expectations are disconfirmed.

Research Method and Hypotheses

Based on the research model formalized by Ho and Wu (1998) and the major factors of designing commercial web site observed by Gehrke and Turban (1999), we developed a new model so to examine in detailed these antecedents that will finally contributed to customer satisfaction. Homepage presentation is one of the factors proposed by Ho and Wu (1998) that leads to customer satisfaction. It contained providing ease to use interface and detail information of goods and/or services. Gehrke and Turban (1999) suggested that there are five important determinants of successful web site design: (1) page loading; (2) business content; (3) navigation efficiency; (4) security and (5) marketing/consumer focus. Figure 1 present a research model that has combined these theories.

Page Loading

According to a survey conducted by Hamilton (1997), page-loading speed was listed as the number one complaint of web users. Most potential electronic commerce customers do not want to wait for a seemingly endless page to load. However, in some cases page-loading speed is out of the control of the web site builder. Thus, the first hypothesis is as follows:

H1: Faster page loading of a web page is associated with a more successful web site design as perceived by the consumer.

Business Content

Business content is an important web site issue because the quality of presentation and usefulness of the content determine whether a potential customer will be drawn to, or driven away, from the site. (Crow and Nelson, 1998) Thus, hypothesis 2 is as follows:

H2: Better business content is associated with a more successful web site design as perceived by the consumer.

Navigation Efficiency

The ease of navigating the web is also a major factor in designing a web site. For example, is the search engine user-friendly? Should the business use long pages with links instead of subsequent pages? (Berst, 1998) Thus, the hypothesis is as follows:

H3: Better web site navigation is associated with a more successful web site design as perceived by the consumer.

Security

Security is extremely important for both the storefront owner and the consumer. Business will have to consider issues such as privacy acts and copyrights on the Internet, as well as credit check on customers. (Tadger, 1998) Thus, our hypothesis 4 is:

H4: Better web site security is associated with a more successful web site design as perceived by the consumer.

Marketing/Consumer Focus

A web site should be evaluated as to how well it markets its products and services, and also as to how well it keeps the customer in focus. Does the site offer what the customers want? Does the web site provide contact person for answering customers' questions? Thus, the hypothesis is:

H5: Better marketing/consumer focus is associated with a more successful web site design as perceived by the consumer

Web site Design

Since an Internet consumer's shopping experience arises largely from his/her interaction with the Web-site of the online shop, we suggest the follow hypothesis:

H6: A more successful Web-site design is associated with a higher level of customer satisfaction

Research Methodology

The sample will be selected from the database from a local ISP in Hong Kong. We will put the questionnaire on the web. We will use multiple items to measure each antecedent of the web-site design. A five-point Likert scale questionnaire will be used, ranking from (1) much better than expected to (5) much worse than expected. We will conduct a pilot study if necessary before a full-scale survey on the web. The model will be tested using regression analysis.

Conclusion

We are still at the stage of validating our proposed research model. Web site design as an antecedent of customer satisfaction is new and important for online shopping on the Internet. We believe that web site design is as important as a sales representative in a traditional retail store is. An effective web site design will lead to positive customer perception and satisfaction of the business. The intention to purchase and repeat purchase may be strengthened.

Future research may be conducted on finding other factors on successful web-site design. Researchers can explore the expectation and disconfirmation theories of customer satisfaction on web-site design, etc.

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