

Association for Information Systems AIS Electronic Library (AISeL)

AMCIS 1998 Proceedings

Americas Conference on Information Systems
(AMCIS)

December 1998

Assessing Consumers' Involvement in Internet Purchasing

Lei-Da Chen
University of Memphis

Nichaya Sukpanich
University of Memphis

Follow this and additional works at: <http://aisel.aisnet.org/amcis1998>

Recommended Citation

Chen, Lei-Da and Sukpanich, Nichaya, "Assessing Consumers' Involvement in Internet Purchasing" (1998). *AMCIS 1998 Proceedings*. 97.
<http://aisel.aisnet.org/amcis1998/97>

This material is brought to you by the Americas Conference on Information Systems (AMCIS) at AIS Electronic Library (AISeL). It has been accepted for inclusion in AMCIS 1998 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.

Assessing Consumers' Involvement in Internet Purchasing

Lei-da Chen

Nichaya Sukpanich

Fogelman College of Business

University of Memphis

Introduction

It is well acknowledged that the Internet is currently being used as 1) a source of information; 2) a communication tool; 3) a social system; and 4) a marketplace (Maignan and Lucas, 1997). Despite of its rapid growth, the sales volume on the Internet still remains relatively low compared with alternative retailing forms. Only 8 percent of Internet users have ever made purchases through this medium, while only 18 percent of them have spent over \$50 (1995). Although the reasons for this low volume of transactions is still not totally clear, some obvious obstacles for shopping electronically are security and privacy concerns (Rose, 1997; Greene, 1997), accessibility to the medium (Maignan and Lucas, 1997), and credibility of the information on the Internet (Celarier, 1996). The question that intrigues millions of businesses all over the world is what needs to be done to let the Internet catch up with other retailing forms in sales. To answer this question, a systematic study of consumers' purchasing activities on the Internet must be conducted to find out what encourages and discourages these activities.

Distinguishing categories of purchasing decisions automatically strikes a discussion on the concept of product involvement. Krugman's (1965) proposals that involvement can be spanned on a continuum from high to low. Many people are not greatly involved with the products they buy and that can be regarded as low involvement. The FCB model (Vaughan, 1980) integrates Krugman's theory of involvement together with the psychological/neurological theory on right and left side of the brain. A four-quadrant grid in the FCB model depicts the different consumer responses to different purchase situations. This model takes into account the recognition of the emotional/feel factor in advertising rather than the purely rational approach articulated by the classical models.

In the context of purchasing over the Internet requires new perspectives. Hoffman and Novak (1996) proposed that involvement as the antecedents of process of optimal experience when consumers are navigating on the WWW are determined by extrinsic motivation (goal-directed) and intrinsic motivation (experiential). This notion was greatly justified in their paper; hence, the author will not repeat here. Nevertheless, the concept of extrinsic motivation and intrinsic motivation explained in their prompts the authors to propose that an involvement in the WWW context could be regarded by examining the following five issues: security, trust, preference, role of purchase, and accessibility to the Internet when engaging in the electronic purchase (See Figure 1).

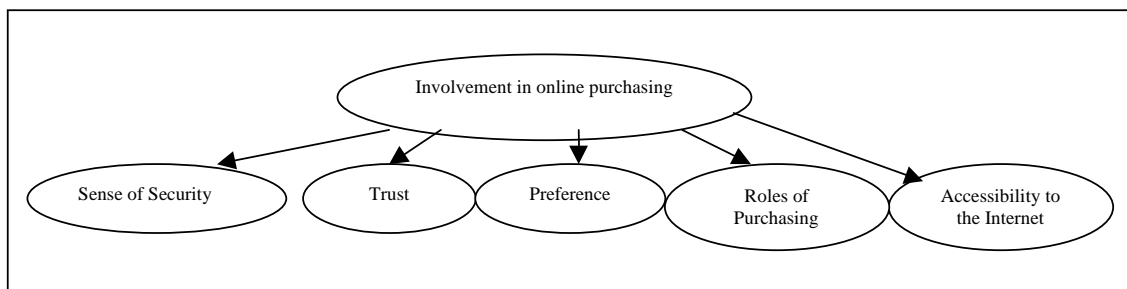


Figure 1. Proposed Measurement Model for Assessing the Involvement in Online Purchasing

Sense of Security
Information sent over the Internet travels through many unsecured computer systems, and it is at the risk of interception and misuse. Most customers are still leery of transmitting

large sums of money and are hesitant to reveal private financial information over an open electronic network (Rose, 1997). However, consumers may be willing to provide information about themselves in return for a cost (Peterson, et al., 1997). It is presumed by the authors that a certain level of sense of security must be present in order for the consumers to be willing to send the information through the Internet. As consumers may perceive their personal information and financial information to have different level of sensitivity, in the questionnaire, questions regarding consumers' security concern about these two types of information are included to predict their sense of security.

Trust

In order to calm the security concerns of the customers to encourage them to engage in shopping on the Internet, companies should 1) implement security technologies such as encryption, secure protocol, and public/private key protocol (Seldon, 1997). They must keep improving security measures and emphasize these safety features when advertising on the Internet; 2) develop a proactive strategy to respond to these concerns (Kakalik and Wright, 1996). By doing this, a mutual trust can be achieved

between the company and its consumers, and the trust is expected to lead to increasing purchasing activities on the Internet. A study revealed that purchases via the Internet could receive a \$ 6 billion boost by the year 2000 if consumers believed their privacy wasn't at stake during such transactions (Greene, 1997). Therefore, the authors intended to measure consumers' trust in companies that are conducting business on the Internet.

Preference

According to a survey of 220 consumers from Austin, Texas, by Jarvenpaa and Todd (1997), the results show that convenience was the single most salient benefit of Internet shopping. With six focus group in the eastern, midwestern, and western regions of the United States, Burke (1998) also found that convenience was the most frequently cited reason for wanting to shop electronically. Alba, et al. (1997) compared different retail formats (e.g. supermarket, catalog, and interactive home shopping) in their research in terms of entertainment, social interaction, and personal security. Shopping on the Internet scores high on personal security, medium on entertainment, and low on social interaction. The superiority of a retail format cannot be easily demonstrated due to the complexity of the construct. For instance, low social interaction may be an advantage and a disadvantage depending on the consumer's personality. Therefore, the preference of a certain retail format must be measured on an individual basis. The major categories of retail formats are in-store, catalog, and electronic marketplaces. The authors included questions which ask respondents to compare alternative retail formats to measure their relative preference.

Accessibility to the Internet

One of the major concerns associated with the Internet is the accessibility to the Internet (Maignan and Lukas, 1997). Access to the Internet is required to shop online. The accessibility to the Internet can be assessed in two dimensions: 1. the availability of the computer equipment ; 2. the time available for Internet activities. The two dimensions decide if the consumer will be able to shop on the Internet and how much time he or she will spend on surfing. The authors believe that a consumer's accessibility to the Internet affects his or her frequency of Internet related activities including online purchasing; therefore, questions concerned with the accessibility to the Internet are included in the questionnaire.

Role in Purchasing

In the Internet context, individuals who place an order on the WWW may or maybe not the ones who use the products themselves. Therefore, it is tempting to explore what influences them to get involved or engage in online shopping. One way to investigate this issue is to determine the respondent's role in purchasing products over the WWW. Literature has argued that purchasing decisions are often subject to multiple buying influences (Bunn 1993, DeCormier and Jobber 1993). These buying influences are categorized into six roles: 1) users, 2) purchasers, 3) deciders, 4) influencers, 5) gatekeepers, and 6) initiators. In general, users are those who actually use the purchased product. Purchasers are referred to those who implement the purchase. Deciders are defined as those who make the buying decision. Influencers are considered as those who have input into decisions. Gatekeepers are those who control information and/or access to decision makers. Finally, initiators are referred to those who recognize the need for a product or service.

Research Methodology

A literature review in the discipline of marketing and MIS was conducted to ensure the comprehensiveness of the list of the items used in measuring the five constructs. Based on the review and the researchers' interpretation of them in the Internet context, 13 items were generated. To ensure the content validity, a pretest was performed. The list of items was incorporated into a preliminary questionnaire, which was distributed to a number of academics and practitioners in the field for review. The respondents were asked to rate the relevance of the items to the measured constructs. Comments were obtained on the writing and suitability of the items, as well as the need to add, delete, or modify items. The questionnaire was refined and finalized based on the results from the pretest.

The questionnaires were administered to undergraduate students registered in fundamental Management Information Systems courses. The criterion for choosing the sample was that the student had prior experiences using the Internet. Each student was asked to complete the questionnaire. Among all returned questionnaires, 84 were found to be complete and useable.

Analysis and Results

Confirmatory Factor Analysis was used to examine the validity of 10 items and the 5 underlying dimensions of the involvement of online purchasing. To perform a confirmatory analysis to evaluate the scale of the involvement of online purchasing, a tentative test model was adopted to delineate an involvement of online purchasing model. It had 5 dimensions: sense of security (2 items), trust (2 items), preference (2 items), role in purchase (2 items), and accessibility to the Internet (2 items). These scales were subjected to a confirmatory factor analysis. Table 1 summarizes the correlation matrix of the 10 research items.

Table 1. Correlation Matrix

	A1	A2	B1	B2	C1	C2	D1	D2	E1	E2
A1	1.00									
A2	0.74	1.00								
B1	0.69	0.68	1.00							
B2	0.59	0.65	0.86	1.00						
C1	0.37	0.42	0.43	0.31	1.00					
C2	0.33	0.42	0.44	0.45	0.69	1.00				
D1	0.07	0.08	0.06	-0.01	0.10	0.06	1.00			
D2	0.01	-0.01	0.06	0.08	-0.01	0.18	0.45	1.00		
E1	-0.04	0.00	0.11	0.12	0.10	0.24	0.13	0.15	1.00	
E2	0.01	0.04	0.09	0.08	0.08	0.11	0.15	0.18	0.35	1.00

Using a correlation matrix as input, the test of the measurement model produced strong measures of fit between the data and the proposed measurement model (Chi-square = 28.02, df = 25, p = 0.31). In addition, Goodness of Fit Index (GFI) and Normed Fit Index (NFI) indicate a high fit score (GFI = 0.94, NFI = 0.93). The results indicated that 94% of the variance of the involvement construct was explained by the proposed measurement model (Bagozzi and Yi, 1988). Also, most of the Lamda-X results showed high loadings on the constructs, and the Modification Indices for Theta-Delta were all relatively low. These evidences indicated that there is little room for improvement of the proposed measurement model. In other words, it was not necessary to discard any of the research items.

Convergent validity was also examined from the measurement model by finding whether a measure correlates highly with other measures designed to measure the same construct (Cronin and Taylor, 1992). In general, the statistics suggested the presence of convergent validity. It has been proposed that discriminant validity involves the lack of correlation between unrelated measures. The correlation matrix indicated that most of the items have low correlation with items of other constructs. On the whole, the scale of the involvement of online purchasing demonstrated satisfactory discriminant validity.

Practical and Theoretical Application of the Instrument

The major contribution of this article is the 10-item instrument measuring the five constructs of the involvement of online purchasing – sense of security, trust, preference, role of purchase, and accessibility to the Internet. The instrument has both practical and theoretical implications.

Although there has been a rapid increase in the number of business transactions over the Internet, its sales volume in dollar amount represents only a small portion of the overall consumer purchase. In order to stimulate consumers' involvement in online purchasing, business managers must understand the underlying issues which influence consumers' choice of retailing channel. The proposed instrument can be used to evaluate consumers' potential involvement in online purchasing, and the result can be employed to assess the success of companies' Internet marketing efforts. The instrument also suggests some potential areas that companies can exploit to achieve their business objectives.

For researchers who are interested in the WWW phenomena, this scale can be used as a helpful resource to test hypotheses and generate future research questions. One of the dimensions that have not been taken into account is the business to business transactions over the Internet. The Internet is an extremely efficient and effective vehicle for information exchange. The business competitiveness will soon depend on its ability to utilize this electronic medium. A potential research question would be what motivates businesses to engage in Internet based activities among each other, such as Web-based EDI.

Conclusion and Limitation

This article developed an instrument for measuring the involvement of online purchasing. Confirmatory factor analysis was conducted to validate the measurement for the five constructs of the involvement of online purchasing – sense of security, trust, preference, roles of purchase, and accessibility to the Internet. The results suggested a 10-item instrument. The instrument appears to have adequate reliability and validity, and it is applicable for both practical and research purposes. One shortcoming of this study is the use of college students as samples. Further study should utilize a more generalizable sample that better mimics the demographic characteristics of the Internet users.

References

References available upon request from (first) author (ldchen@cc.memphis.edu).