

National Textile Center

Year 11 Project Proposal

Project No.

I02-A23

Competency: Integrated Enterprise Systems

Modeling Consumer Adoption Behavior in Online Environments

Project Team:

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Objective:

The objective of this project is to develop and apply a model to explain and predict consumers' adoption of online search and purchase behaviors based on a utility maximization framework and consumer adoption theory that considers both the motivations and costs associated with online search and purchase for textile and apparel products. The resulting model will expand our fundamental knowledge of consumer behavior in online environments, and can benefit U.S. firms trying to enhance the effectiveness of the Internet as a strategic tool in communicating apparel products/brand value. Specific objectives are:

1. To develop a valid and reliable measure of motivations and costs associated with online information search and purchase behavior;
 2. To test the ability of the measure to identify the impact that specific motivations and costs have on apparel search and purchase decisions among Internet shoppers worldwide; and
 3. To evaluate the potential of the Internet as an efficient and effective medium to disseminate information to enhance brand/product awareness, evaluations, and purchase intentions in the global marketplace.
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Progress Statement:

The first objective, to develop valid and reliable scales (that have robust psychometric properties) to identify and measure motivations and costs associated with searching and purchasing online has been completed as scheduled (See the 2002 NTC Annual Report for the revised scale). The extensive scale development and preliminary testing procedures completed this year are described in the NTC Annual Report (October, 2002). The initial scale was developed and tested with a nationwide sample of Internet shoppers (objective 2). The findings show a positive and highly significant relationship between perceived benefits of Internet shopping and both frequency of shopping online and amount spent online. Also, there was a highly significant negative relationship between perceived risk and both frequency of shopping and amount spent online. Further, initial results show that perception of risk has stronger impact on Internet purchase behavior than does perception of benefits. With respect to motivations for shopping online, convenience had the strongest relationship with purchase behavior followed by product selection, ease of shopping and enjoyment, whereas product risk had the strongest (negative) relationship with Internet shopping behavior (Figure 1). Similar results emerged with respect to the relationship between perceived benefit and risk and amount spent online, providing initial support for construct validity of the measures (given that findings were consistent with theoretically predicted Internet behaviors). As illustrated in Figure1, these findings provide insight on the relative impact of both perceived benefits and risks associated with shopping online and also on how each benefit and risk dimension individually impacts shopping behaviors. These preliminary findings help us to better understand consumer behavior in online environments and inform strategic Internet marketing decisions; however further testing for validity is critical to determine whether the model had sufficient validity for large scale use in industry. In addition, cross-national validation is necessary before using the measure with global markets. The research team has just completed a second round to scale testing with college student

samples and is currently working collaboratively with macys.com to complete the additional testing of the model (for scale reliability and validity) with new samples of online purchasers and visitors. The first round of testing (with students) has been completed and data analysis is currently underway. The research team, including 3 Ph.D. students, is now preparing to collect data with macys.com customers and site visitors to further test the model.

Next Year's Goals:

Further test the proposed model to identify and measure the motivations (and costs) associated with purchasing online (objective 2). We will:

- test measures with additional samples of consumers to assess validity
- test measures with multi national samples of Internet users to cross validate measure

Test the ability of the developed measures to identify the impact that specific motivations and costs have on apparel search and purchase decisions among Internet shoppers nationwide (objective 2). We will:

- collect data from a second nationwide data set
- use structural equation modeling to examine the relative impact of specific motivations (and costs) on consumers' Internet search and purchase behaviors for various apparel product categories.

Further examine consumers' adoption and use of the Internet as a shopping medium for textile and apparel products to identify additional factors that may impact Internet adoption behaviors and further test the validity of the model. We will:

- segment shoppers by their Internet shopping patterns and intention to continue shopping the Internet;
 - examine consumers' perceptions of (a) Internet shopping and (b) retailer characteristics and test the effect of these perceptions on their adoption of the Internet as a shopping medium.
 - examine the effect of consumers' Internet self-efficacy on adoption of the Internet as a shopping medium.
 - examine the moderating effect of product category on adoption of the Internet as a shopping medium.
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Approach:

This research uses both survey and experimental research methodologies to develop and test the model. The measures, developed and tested in year one, will be refined and used (in year 2) to better understand motivations and costs associated with online search and purchase activities among various Internet consumer markets. We have already begun this effort (objective 2) using structural equation modeling to determine the relative impact of specific motivations and costs on purchase decisions among Internet markets worldwide (Figure 1). These results provide a better understanding of consumers' adoption and use of the Internet as a shopping medium from both empirical and theoretical perspectives (see NTC Annual Report SO2 – AC23 for the theoretical discussion).

In year three we will examine the effectiveness of the Internet in enhancing product awareness, evaluations and purchase intentions (objective 3) by examining the relationship between participants' responses to experimental web sites (where search and purchase antecedents have been manipulated) and their perceptions of motivations and costs associated with online search. The relationship between product evaluations and purchase intentions (resulting from exposure to experimental web sites) and respondents' perceived motivations and costs of online search will demonstrate the potential of site characteristics to favorably impact product search and purchase behaviors. We will then replicate the experimental design with selected international consumer markets to determine the effectiveness of the model in explaining and predicting Internet adoption behaviors in various cultures. Collectively, these findings will provide support for the proposed model (overall objective) and an empirically tested basis for developing more effective strategies to build awareness and foster positive evaluations of apparel brands/products in the global marketplace. The international and interdisciplinary composition of our research team will be a valuable asset in addressing these potential barriers.

Outreach to Industry:

The research team is currently working with an industry partner (macys.com) and has received both financial and technical support for this research. We will further test the model in a commercial online environment with macys.com customers and site visitors. Recommendations for developing more effective online strategies to build brand/product awareness, image, and sales will be proposed.

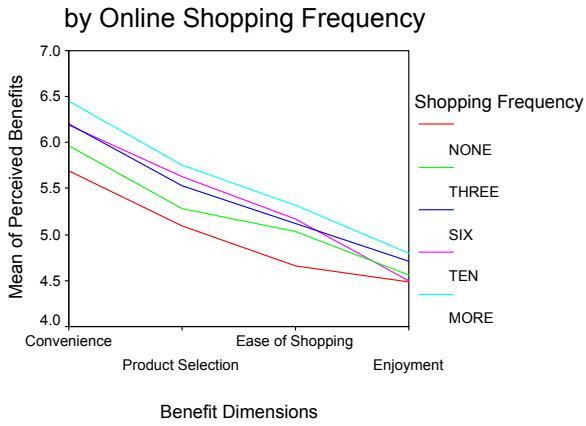
New Resources Required:

None

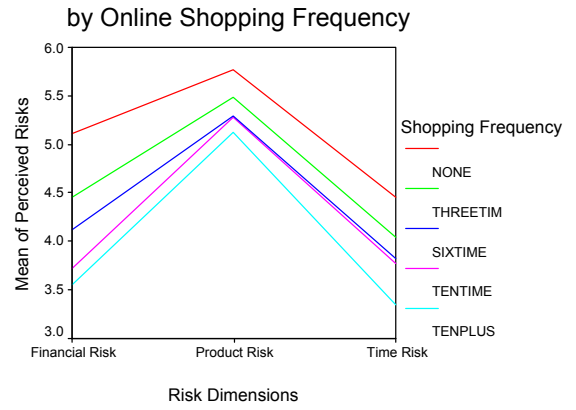
References available upon request.

Figure 1. Profile Analysis of Benefit and Risk Perceptions by Frequency of Online Shopping and Amount Spent Online

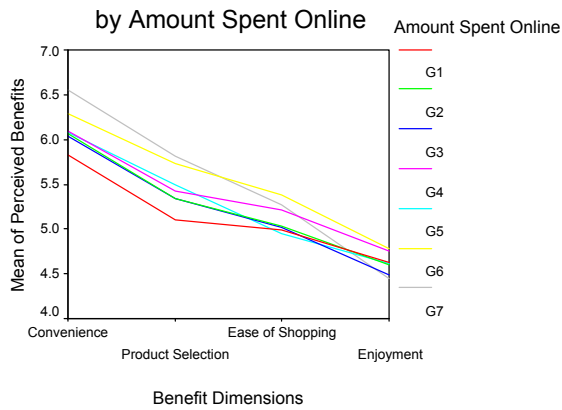
Shoppers' Perception of Benefit Dimensions



Shoppers' Perception of Risk Dimensions



Shoppers' Perception of Benefit Dimensions



Shoppers' Perception of Risk Dimensions

