Modeling Consumer Behavior in On-line Environments
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Success of Internet technology in marketing consumer products depends on aggregate adoption and continued usage of the Internet as a medium for product search and purchase. In this research we are examining consumer adoption of the Internet as a shopping medium from two integrated conceptual perspectives (utility maximization and innovation adoption theory) to provide a comprehensive framework for predicting adoption of the Internet for shopping. Our specific objectives were to develop and apply a model to explain and predict adoption of online consumer search and purchase behaviors based on a synthesis of utility maximization theory and consumer adoption theory. The resulting framework is intended to enhance our understanding of consumers’ adoption of the Internet for shopping [see Schematic above].

First, we had to develop valid and reliable scales (that have robust psychometric properties) to identify and measure motivations associated with online search and purchase. We developed a valid and reliable measure of motivations associated with purchasing (or not purchasing) apparel products online, using psychometric techniques to verify reliability and validity [see Schematic below]. In this research we

- conceptualized the construct and specified the domains of perceived benefits and perceived risk associated with online shopping;
- generated a comprehensive list of scale items that capture each domain specified;
- conducted item refinement and further assessed content validity using a mailed survey administered to a national NFO sample of 960 Internet shoppers.

We identified the perceived benefits of on-line shopping to be shopping convenience, product selection, ease and comfort of shopping, and the perceived risks to be financial, product and time/convenience. All scales demonstrated good reliability with coefficient alphas of .70 or greater. The relationship between on-line purchasing frequency and both perceived benefits and risks was highly significant demonstrating that the measures behaved as predicted and supported the construct validity of both measures.

Results from a second national sample also supported our proposed measures of perceived benefits and risks associated with online shopping in terms of construct, nomological and predictive validity. Our findings show a positive and highly significant relationship between the perceived benefits of Internet shopping and the frequency of shopping on-line, frequency of purchasing, dollar amount spent and amount of time spent shopping online. Furthermore, we determined that perceived benefits were a

Adoption of On-line Product Evaluation and Purchase Behaviors

Perceptions of Internet Shopping
- Relative Advantage
- Capability
- Ease of Use

Current Online Shopping Behaviors
- Visiting (search)
- Purchasing
- Multi-channel

Future Intention to
- Search
- Purchase

Online Shopping Perceptions and Behaviors

Perceived Benefits
- Functional
- Non Functional

Perceived Risks
- Financial
- Product
- Time

Qualitative Inquiry
- Conceptualization of Constructs (Step 1)
  - Domain specification
  - Operational definition

Item Generation (Step 2)
- Exhaustive search of literature
- Interviews with consumer groups
- Expert
- Surveys of consumer groups

Scale Refinement and Purification
- First National Sample of Internet Users (n=960)
- Scale Purification (Step 3,4)
  - Item analysis
  - Internal consistency
  - Exploratory factor analysis
  - Confirmatory analysis

Scale Validation
- First National Sample of Internet Shoppers (n=598)
- Scale Stability (Step 5)
  - Two groups confirmatory factor analysis (first and second sample)

- Scale Validity (Step 6-10)
  - Unidimensionality
  - Convergent validity
  - Discriminant validity
  - Nomological validity
  - Predictive validity

Practical Utility (Step 11)
- Shopper segments

Scale Development and Validation Process
positive predictor of future intentions to visit and purchase online, while risks related negatively to future intentions to purchase online.

Finally, a practical assessment of these scales revealed that individuals who purchase online (as opposed to visitors), perceived significantly greater benefit and less risk, and that heavy shoppers (compared to light shoppers) perceived significantly greater benefit in terms of convenience and product selection. The online shopping motivation scales developed here capture a wide variety of reasons why people go shopping online or choose not to purchase online. Clearly, shopping motivations explain consumer’s adoption of the Internet as a shopping medium, and consequently contribute to innovation adoption research.

Collectively, these findings provide further support for our proposed model and are an empirically tested measure for examining and predicting consumers’ online shopping behaviors that can be used as a basis for developing effective marketing strategies.

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Sandra Forsythe, Wrangler Professor of Consumer Affairs at Auburn, joined the faculty in 1991 after five years at Miami Univ. of Ohio and four years at Univ. of Georgia. She earned an M.S. from Virginia Tech in 1976 and a Ph.D. in textiles and clothing, marketing and consumer economics in 1981 from Univ. of Tennessee. She was editor of Clothing and Textiles Research Jour. 1996-2000 and currently serves as President of the American Collegiate Retailing Association. Sandra’s research interests include consumer behavior, focusing on Internet retailing, commercial website usability and brand image and perception formation.

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