Effects of Website Interactivity on Online Retail Shopping Behavior

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Abstract. Motivations to engage in retail online shopping can include both utilitarian and hedonic shopping dimensions. To cater to these consumers, online retailers can create a cognitively and esthetically rich shopping environment, through sophisticated levels of interactive web utilities and features, offering not only utilitarian benefits and attributes but also providing hedonic benefits of enjoyment. Since the effect of interactive websites has proven to stimulate online consumer's perceptions, this study presumes that websites with multimedia rich interactive utilities and features can influence online consumers' shopping motivations and entice them to modify or even transform their original shopping predispositions by providing them with attractive and enhanced interactive features and controls, thus generating a positive attitude towards products and services offered by the retailer. This study seeks to explore the effects of Web interactivity on online consumer behavior through an attitudinal model of technology acceptance.

Keywords: Web Interactivity, Technology Acceptance Model, Online Consumer Behavior, E-commerce, User experience.

1 Introduction

The explosive expansion of e-commerce has centered the focus of the retail industry on online sales growth and consumers' acceptance of online shopping. With the enormous potentiality still untapped and huge global scope of online retail shopping it becomes increasingly important for marketers and online retailers to focus on Internet user's attitudes, their shopping motivations and cater to their needs in order to induce Internet users to adopt the Web for retail usage. Online marketers can influence the decision making process of online customers not only by engaging in traditional and physical marketing tools but also by creating and delivering the proper online experience, the Web experience: a combination of online functionality, interactivity, information, emotions, cues, stimuli, and products/services. This study seeks to explore the effects of website interactivity on online consumer behavior through an attitudinal model of technology acceptance.

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2 Online Consumer Behavior and Website Interactivity

Researchers have been continually seeking richer understanding of consumer attitudes and behavior over the last couple of decades. Clearly many motivations exist as shopping goals, but most typologies consider utilitarian (goal oriented) and hedonic (experiential) motivations as fundamental to understanding consumer shopping behavior because they maintain a basic underlying presence across consumption phenomena (Babin, Darden and Griffin, 1994; Childers, Carr, Peck and Carson, 2001). Ultimately, the degree to which online shopping fulfills utilitarian and/or hedonic consumers needs will affect the amount of shopping dollars that consumers choose to spend online (Wolfinbarger and Gilly, 2001). As more consumers turn to e-commerce, online retailers are striving to provide a stimulated online shopping experience using cutting edge interactive utilities and features through their respective websites.

Interactivity of a website is not only seen as offering utilitarian benefits due to saving time/effort, reducing risk, and increasing likelihood of finding a superior alternative; but it is also credited with providing hedonic benefit of enjoyment (Fiore, Jin and Kim, 2005; Koufaris, 2001). Some examples of website interactivity features which can cater to the needs of a hedonic online consumer can be real time image manipulation, product zoom in/out, 3D virtual tours, rotating 3D images, electronic dressing rooms, product customization (color, size, design etc.), real time image manipulation, recommendation agents, virtual models, virtual shopping assistances, intuitive search engines, interactive shopping carts, etc. On the other hand interactive features such as product search and review options, clear site navigation and layout, product comparison (from a single or multiple online stores), user ratings and reviews, single click checkout options, product tracking options, organized and intuitive shopping process, effective search engines, etc. can cater to the needs of a utilitarian online consumer. The above list of interactive features is not an exhaustive one but is relevant to our context. It is based on literature (Fiore et al., 2005; Haubl and Trifts, 2000; Kim and Kim, 2004) and guided research on various online content providers offering such interactive elements for numerous commercial online sites.

Exploratory research in marketing (Daugherty, Li and Biocca; Li, Daugherty and Biocca, 2001) has already suggested that such interactive utilities has the potential to improve consumer product knowledge and attitudes toward brands, while enhancing consumer purchase intentions (Jiang and Benbasat, 2004). The interactive nature of websites has also been credited with enhancing attitude toward the online store, desire to browse or return to the website, and online purchasing (Fiore et al., 2005; Li et al., 2001). However, in order to enjoy and experience the online shopping environments successfully one has to also be competent and skilled in browsing such interactive and media rich websites. The physical shopping environment is replaced by an electronic shopping environment or, in other words, by an Information Systems (IS) (Heijden, Verhagen and Creemers, 2003). Therefore, to understand consumer's online purchase intentions, we need to look at the interaction with the website both as a store and as a system (Koufaris, 2002). In this regard the present study plans to use a the classic framework of Technology Acceptance Model (TAM) to better understand the behavioral aspects of consumers' acceptance of such multimedia rich interactive retail websites.

3 The Tam Framework for Internet Usage

The TAM (developed in 1986) continues to be the most widely applied theoretical model of user acceptance and usage in the IS field (Venkatesh, 1999). TAM posits that technology adoption decisions (i.e., individual intentions to use the technology) are driven by an individual's affective response (attitude) toward the use of the innovation. Attitude, in turn, is premised to be determined by two salient beliefs about the innovation or technology: Perceived Usefulness (PU), the degree of which a person believes that using a particular system would enhance his or her job performance; and Perceived Ease Of Use (PEOU), the degree of which a person believes that using a particular system would be free of effort (Davis, 1989). Davis et al.(1992) introduced Perceived Enjoyment (PE) as a type of intrinsic motivation to the TAM, which is defined as the extent to which the activity of using the computer is perceived to be enjoyable in its own right, apart from any performance consequences that may be anticipated. The validity, reliability and replicability of TAM have been done over numerous studies and contexts in the last decade.

Studies using TAM to predict broad Web/Internet usage contexts, online purchasing behavior, virtual store acceptance etc (Childers et al., 2001; Heijden et al., 2003; Moon and Kim, 2001); (Chen and Tan, 2004; Lee, Fiore and Kim, 2006; O'Cass and Fenech, 2003) have been conducted only in the past few years, and these studies by and large confirm the relevance and appropriateness of PEOU and PU in an online context, and find substantial evidence for the effects of intrinsic enjoyment (PE) on consumers surfing the Web (Heijden et al., 2003; Moon and Kim, 2001; Teo, Lim and Lai, 1999). Based on prior research findings and importance of the enjoyment construct influencing attitude and intention, the TAM framework has been extended to include the PE construct as shown in figure 1 (in the following page).

There is also evidence that online consumers not only care for the instrumental value of the technology, but also the more immersive, hedonic value (Childers et al., 2001; Heijden and Verhagen, 2004). PU and PEOU are seen as instrumental in achieving valued outcomes, while PE is regarded as having no apparent reinforcement other than the activity itself. These represent utilitarian and hedonic aspects of consumer experience, respectively (Lee et al., 2006). While some consumers may be shopping primarily for instrumental purposes, others may be primarily enjoying these interactive media, and thus both factors can ultimately affect their attitude toward using interactive forms of online shopping. The TAM model for its viability and robustness for examining consumer acceptance in various online contexts comes into our research framework to predict consumer's acceptance and usage of multimedia rich interactive online retail website.

Our present study concentrates on an extended TAM framework which was initially proposed by (Monsuwé, Dellaert and Ruyter, 2004) but was never conceptualized, analyzed or investigated in details. We have modified and amended the initial model, established the grounds for the logic and relationships of the antecedents based on theory and relevant literature and focused on the context of online purchase intentions, thus proposing a detailed TAM framework and using it to explain interactivity usage and resulting effects on consumer responses towards the online retailer.

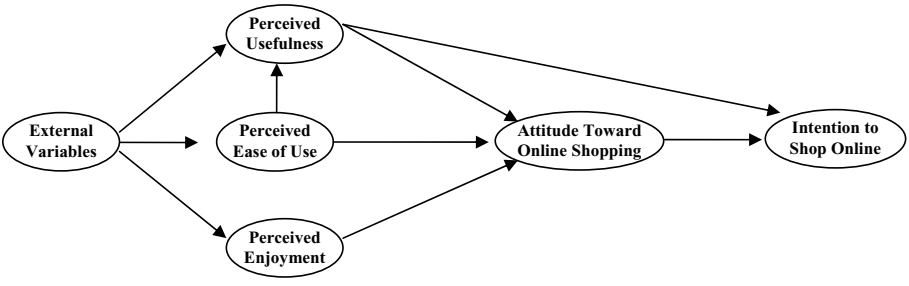

Fig. 1. Modified TAM for Online Shopping Context

4 Research Framework Discussion

We focus on the possible antecedents of the major constructs of TAM in order to understand what underlying factors can determine the constructs themselves and therefore define more specific drivers of consumer acceptance of intention to shop online. Due to space constraints we will briefly define the antecedents solely based on our research context. All of the antecedents and their relationships are well grounded in theory and prior literature and the references are provided for review.

4.1 Perceived Usefulness (PU)

In our research context PU refers to consumers perceptions that using the Internet as a rich interactive shopping medium enhance the outcome of their shopping experience. PU has also proven to significantly influence attitude toward an online retailer and have a significant impact on intentions to use the online retailer (Chen, Gillenson and Sherrell, 2002; Heijden, 2004; Koufaris, 2002; Lee et al., 2006; Monsuwé et al., 2004; O'Cass and Fenech, 2003; Sanchez-Franco and Roldan, 2005).

Determinants: We have identified two determinants of PU; Consumer Return on Investment (CROI) and Service Excellence (Mathwick, Malhotra and Rigdon, 2001; Mathwick, Malhotra and Rigdon, 2002). The perceived return on cognitive, behavioral, or financial investments made by the consumer is an extrinsic source of active value, termed CROI which can be measured in terms of economic utility (the perception of affordable quality) and utility derived from the efficiency of a retail experience. Hence time, effort and ease with which a product can be purchased is likely to be the prominent psychological dimensions of concern for a utilitarian shopper (Mathwick et al., 2002). Service Excellence is the consumers' appreciation of delivered promises and performed functions which can reflect the generalized consumer appreciation of a service provider to deliver on its promises through demonstrated expertise and task-related performance (Mathwick et al., 2001). Such services may include online feedback & support, prompt customer service, real time chat with customer support, refund/return policy clearly stated, online dispute resolution submission, follow up and update of product/service status, feedback emails, etc. which can provide positive shopping outcomes.

4.2 Perceived Enjoyment (PE)

PE results from the enjoyment, entertainment and playfulness of the online shopping experience, rather than the shopping task completion. Prior research on Internet shopping has found PE to have positive effects on consumer attitude towards online shopping and the online retailer (Childers et al., 2001; Heijden and Verhagen, 2004; Koufaris, 2002; Lee et al., 2006; Mathwick, 2002; Monsuwé et al., 2004).

Determinants: Based on prior research, we have identified three determinants of PE; Pleasure, Arousal and Escapism (Mathwick et al., 2002; Mathwick and Rigdon, 2004; Menon and Kahn, 2002; Monsuwé et al., 2004). If consumers are exposed initially to pleasing and arousing stimuli during their Internet shopping experience, they are then more likely to engage in subsequent shopping behavior; they will browse more, engage in more unplanned purchasing, and seek out more stimulating products and categories (Monsuwé et al., 2004). Online retailers can also create attractive, multimedia rich, interactive websites (i.e. hedonic online shopping environment) to entice consumers and provide them a compelling online shopping experience in such a manner that it may raise the state of psychological immersion in a person to keep them completely engaged in their focal activity in the online store. This refers to the escapism behavior of potential online consumers (Mathwick et al., 2001; Mathwick and Rigdon, 2004).

4.3 Perceived Ease of Use (PEOU)

In our research context, PEOU is considered as the consumer's perception that shopping on the Internet will involve a minimum of effort. Researchers suggest that customer's assessment of websites will likely be influenced not only by how effective the sites are, but also by how easy the sites are to use in helping customers accomplish their tasks (Zeithaml, Parasuraman and Malhotra, 2002).

Determinants: Based on prior research by Venkatesh (2000), three constructs have been identified as possible determinants for PEOU for our research context. They are defined as Control (conceptualized as computer self efficacy & facilitating conditions), Intrinsic Motivation (conceptualized as computer playfulness) and Emotion (conceptualized as computer anxiety). In our research context, internal control or self-efficacy can relate to an individual's perception of the availability of knowledge, resources and opportunities required to perform a specific behavior for online shopping. On the other hand, external control reflects the availability of resources needed to engage in an online shopping behavior, such as online user support, real time chat, graphical navigation tools, FAQ, step by step guide, online feedback, email support, virtual assistants etc. Computer playfulness describes an individual's tendency to interact spontaneously, intensively, openly, creatively, and imaginatively with computers (Serenko and Turel, 2005). In our research context, using rich interactive features, websites can be constructed to create a fun and appealing environment for such intrinsic playful consumers. Computer anxiety is a negative affective reaction toward computer use (Simonson, Maurer, Montag-Torardi and Whitaker, 1987). We do acknowledge that an overly complex website, too many step by step guides, surplus of findings, too many options to choose from, excess

product comparisons, failure in controlling high interactivity controls and options, excess of multimedia and pop ups diverting attentions, added suggestions, etc. can cause anxiety among the usual browsers. Higher levels of computer anxiety towards using the Internet as a shopping medium are assumed to cause low perceptions regarding PEOU of the online environment.

4.4 Attitude and Intention

Research has repeatedly shown that attitude toward the website positively influences behavioral intentions. These behavioral intentions can include intention to buy or purchase intention, intention to return to the online store, and intention to recommend online products (Jarvenpaa and Todd, 1997; Yoh, Damhorst, Sapp and Lazniak, 2003). Moreover, research has found that interactive features of the website are important factors in improving consumer attitude toward an online retailer, the desire to browse the website, and online purchase intention (Fiore and Jin, 2003; Li et al., 2001; Wu, 1999).

4.5 Trust as a Moderator

Prior research has suggested several possible moderating factors (demographic and personality characteristics, experience, trust, situational factors, product characteristics, technology factors, organizational factors etc.) that can influence the TAM constructs and their relationships, our research scope is limited to the trust moderator as it has proven to be a major influencing construct for online purchase intentions based on

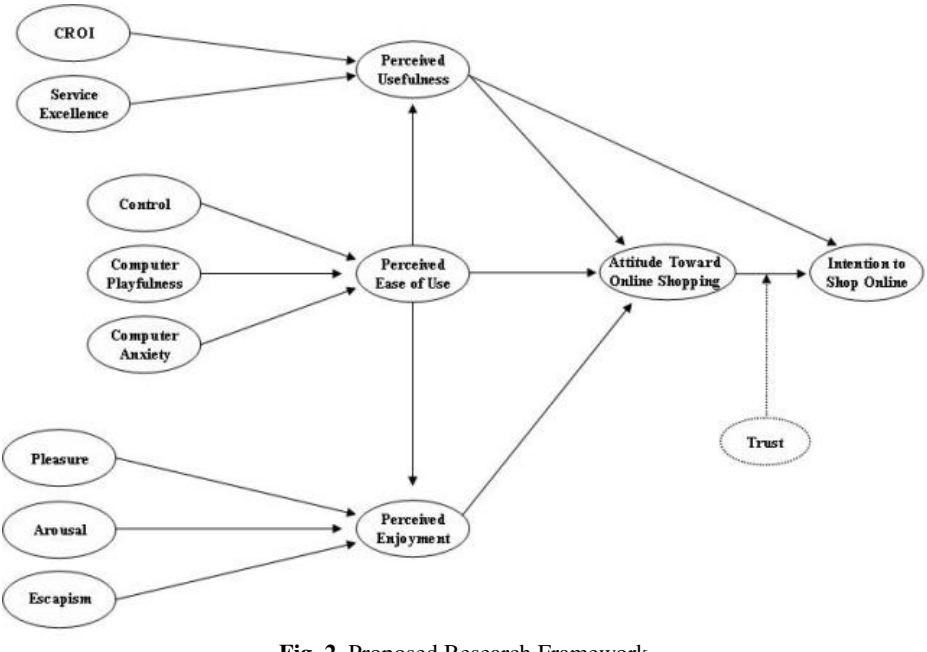

Fig. 2. Proposed Research Framework

prior research (Jarvenpaa, Tractinsky and Vitale, 2000; Monsuwé et al., 2004; Pavlou, 2003); (Everard and Galletta, 2006; Gefen, Karahanna and Straub, 2003). We assume that when it comes to the final stage of creating a positive intention based on the consumer's attitude, trust in the website becomes the major focal point of importance for the consumer to decide if he/she wants to go ahead with some possible transaction (or not) with the online retailer over the online medium.

4.6 Proposed Research Framework

Summarizing the above discussion we are basically proposing an extended TAM framework with possible behavioral antecedents of its major constructs, trust as a moderator between attitude and purchase intention, and applying it to the online shopping context. The proposed framework is shown in Figure 2.

5 Hypothesis Propositions

Consumers can shop for either hedonic or utilitarian motivations, and online shopping can also offer both hedonic and utilitarian environments (Babin et al., 1994; Childers et al., 2001; Hoffman and Novak, 1996; Huang, 2005; Jarvenpaa and Todd, 1997). Hedonic shoppers engage in browsing or non-purposive exploration of products, enjoy the stimulation offered by product novelty and the process of exploring new and interesting shops and environments, enjoys the shopping experience for its own sake, consider shopping as leisure, prone to browse stores for information and many times lack purchase intentions, but tend to purchase impulsively (Babin et al., 1994; Lee et al., 2006). In contrast, utilitarian shoppers try to minimize time and effort when shopping, seeks convenience and thoughtfully considers and evaluates product-related information prior to purchase (Babin et al., 1994). Rich, interactive websites can not only provide hedonic aspects of pleasure or enjoyment (Fiore and Jin, 2003; Li et al., 2001) but also utilitarian aspects of saving time and/or effort, reducing risk, and increasing likelihood of finding a preferable alternative, convenience and rich information (Klein, 2003; Lee et al., 2006; Li et al., 2001). A well planned website with high-quality multimedia rich interactive options can portray both utilitarian and hedonic environments and thus not only can cater to online consumers original shopping dimensions but also may be able to influence them to enhance or traverse their motivations with the available interactive stimuli and utilities. Because such websites can evoke both affective and cognitive reactions, they are likely to be valued by both utilitarian and hedonic or experiential shoppers (Demangeot and Broderick, 2006). Since interactivity tends to have an effect on consumers' perceptions we are presuming that such multimedia rich interactive websites can influence consumers' original predisposition about their utilitarian or hedonic shopping motives. Based on the above discussion we propose:

Proposition1: Online consumers predisposed with utilitarian shopping motivations are predicted to be more influenced by the multimedia rich interactive online retail environment to perform behavior more predictive of consumers with hedonic shopping motivations.

Proposition2: Online consumers predisposed with hedonic shopping motivations are predicted to generate more positive purchase intentions and utilitarian benefits in a multimedia rich interactive online retail environment since the environment would be better suited to their normal shopping behavior pattern.

Prior research has already shown that PU of the interactive media can be thought of as reflecting the more instrumental aspects of shopping, while PE embodies the hedonic aspect of shopping (Childers et al., 2001; Lee et al., 2006; Monsuwé et al., 2004; Teo et al., 1999). Although PEOU have been always associated with PU to portray more of a utilitarian viewpoint, studies (Heijden, 2004; Teo, 2001) have also shown PEOU to reflect intrinsic and hedonic characteristics. Our research plans to explore PEOU from both the perspectives, as prior research has shown it's determinants (Computer Playfulness as intrinsic motivation and Control as an extrinsic motivation) to cater to either dimensions (utilitarian or hedonic) and thus likely to impact attitude / intention to shop online through PU and/or PE (Koufaris, 2002; Moon and Kim, 2001; Venkatesh, 2000). In short, we expect PU and PE of the websites to play the stronger role in predicting intentions to shop online in utilitarian and hedonic web environments. Based on the above discussion we propose:

Proposition3: Perceived Usefulness of the multimedia rich interactive online retail environment will be a stronger predictor (than Perceived Enjoyment) of Attitude towards online shopping in a utilitarian shopping environment.

Proposition4: Perceived Enjoyment of the multimedia rich interactive online retail environment will be a stronger predictor (than Perceived Usefulness) of Attitude towards online shopping in a hedonic shopping environment.

The results of various TAM studies demonstrate that PU is the primary and "strongest" determinant of behavioral intention to use a technology, with PEOU and PE acting as secondary and "comparatively weaker" determinants (Davis, Bagozzi and Warshaw, 1992; Heijden, 2004; Venkatesh and Davis, 2000). Recent research (Heijden, 2004) has found that PE and PEOU as individual constructs have proved to be a stronger predictor of behavioral intention to use hedonic systems than PU. Websites can be constructed (and are already available) which can symbolize both utilitarian and hedonic environments through various levels of interactivity, navigation, enjoyment and convenience. Consumers with utilitarian motivations not only can converge on their instrumental motives and objectives, but also might enjoy the surrounding Web environment facilitating their original objective goals along with positive emotional arousals through pleasing and appealing interactive options. On the other hand, consumers with hedonic motivations not only can experience the enjoyment and playfulness aspects of the online website, but also can be motivated to achieve a probable purchase or a purchase intention with the various levels of instrumental facilities provided under the disguise of the various levels of playful and guided interactivity features. In this aspect we assume the later dimension of consumers will most probably have a stronger effect on purchase intentions. In other words, we assume that the combined effects of PE and PEOU will be a stronger predictor of intentions to shop online than the combined effects of PU and PEOU. Based on the above discussion we propose:

Proposition5: Perceived Enjoyment along with Perceived Ease of Use will be a stronger predictor of Intention to shop online than Perceived Usefulness along with Perceived Ease of use, in a multimedia rich interactive online retail environment offering both utilitarian and hedonic dimensions.

6 Research Methodology

To investigate online consumers' browsing patterns and purchase intentions in websites with variable levels of interactivity necessitates an experimental design. A 2 × 2 between-subject research design will be used, varying the level of interactivity of a website (low or high interactivity; controlled by us) and the predisposed shopping dimensions (utilitarian; hedonic) of the subjects. A pre-experiment survey will be conducted among the potential samples to ascertain their shopping dimensions and samples will be allocated specific website conditions for the actual experiment. They will be instructed to carry out an online shopping process (up to check out). Upon completion a post-experiment survey will be conducted to assess their perceptions and intentions towards the websites features. The constructs and scales used in our proposed framework are based on existing research.

7 Implications for Researchers and Practitioners

The proposed research framework attempts to address theoretical concepts which were deemed as essential future research directions by prominent researchers, such as exploring the effects of interactivity on online consumers purchase intentions (Stevenson, Bruner and Kumar, 2000; Teo, Oh, Liu and Wei, 2003); impact of the design characteristics of interactive shopping sites on online purchase behavior and usage indicators (PU and PEOU) (Childers et al., 2001); role of TAM and its antecedents in explaining interactivity usage and resulting effects on consumer responses towards the online retailer (Lee et al., 2006); investigating the antecedents of the TAM constructs in order to provide design-oriented advice (Benbasat and Barki, 2007).

The importance of interactivity in inducing experiential counters suggests that companies can reap greater benefits from Web technology by making better use of interaction attributes in website design. Keeping in mind for the future, with the advancement of Internet2 and Web2.0, rich interactive multimedia will reign in supreme in the online environment. If websites can be effectively designed to cater to both utilitarian and hedonic online shoppers, then online retailers can have a greater effect on people's attitude and purchase intentions through their websites.

8 Conclusion

Understanding the theoretical determinants of consumer purchase intentions based on their utilitarian and hedonic dimensions is an important step, and understanding the antecedents of the key constructs in TAM to help shed come predictive guidelines on

the behavioral facets of the two dimensions is crucial in assisting in the design and development of online stores with a high level of consumer acceptance to facilitate e-commerce.

References

Babin, B.J., Darden, W.R., Griffin, M.: Work and/or Fun: Measuring Hedonic and Utilitarian Shopping Value. Journal of Consumer Research 20(4), 644–656 (1994)

Benbasat, I., Barki, H.: Quo vadis TAM? Journal of the Association for Information Systems 8(4) (2007)

Chen, L.D., Gillenson, M.L., Sherrell, D.L.: Enticing online consumers: an extended technology acceptance perspective. Information & Management 39(8), 705 (2002)

Chen, L.D., Tan, J.: Technology Adaptation in E-commerce: Key Determinants of Virtual Stores Acceptance. European Management Journal 22(1), 74–86 (2004)

Childers, T.L., Carr, C.L., Peck, J., Carson, S.: Hedonic and utilitarian motivations for online retail shopping behavior. Journal of Retailing 77(4), 511–535 (2001)

Daugherty, T., Li, H., Biocca, F.: Experiential ecommerce: A summary of research investigating the impact of virtual experience on consumer learning. In: Haugtvedt, C., Machleit, K., Yalch, R. (eds.) Online Consumer Psychology: Understanding and Influencing Consumer Behavior in the Virtual World. Lawrence Erlbaum, Mahwah (2005) (forthcoming)

Davis, F.D.: Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. MIS Quarterly 13(3), 318–340 (1989)

Davis, F.D., Bagozzi, R.P., Warshaw, P.R.: Extrinsic and intrinsic motivation to use computers in the workplace. Journal of Applied Social Psychology 22(14), 1111–1132 (1992)

Demangeot, C., Broderick, A.J.: Exploring the experiential intensity of online shopping environments. Qualitative Market Research: An International Journal 9(4), 325–351 (2006)

Everard, A., Galletta, D.F.: How Presentation Flaws Affect Perceived Site Quality, Trust, and Intention to Purchase from an Online Store. Journal of Management Information Systems 22(3), 56–95 (2006)

Fiore, A.M., Jin, H., Kim, J.: For Fun and Profit: Hedonic Value from Image Interactivity and Responses Toward an Online Store. Psychology and Marketing 22(8), 669 (2005)

Fiore, A.M., Jin, H.J.: Influence of Image Interactivity on Approach Responses towards an Online Retailer. Internet Research 13(1), 38–48 (2003)

Gefen, D., Karahanna, E., Straub, D.W.: Trust and TAM in Online Shopping: An Integrated Model. MIS Quarterly 27(1), 51–90 (2003)

Haubl, G., Trifts, V.: Consumer Decision Making in Online Shopping Environments: The Effects of Interactive Decision Aids. Marketing Science 19(1), 4 (2000)

Heijden, V.d.H.: User acceptance of hedonic information systems. MIS Quarterly 28(4), 695–704 (2004)

Heijden, V.d.H., Verhagen, T.: Online store image: conceptual foundations and empirical measurement. Information & Management 41(5), 609–617 (2004)

Heijden, V.d.H., Verhagen, T., Creemers, M.: Understanding Online Purchase Intentions: Contributions From Technology And Trust Perspectives. Contact 12(1), 41–48 (2003)

Hoffman, D.L., Novak, T.P.: Marketing in hypermedia computer-mediated environments: Conceptual foundations. Journal of Marketing 60(3), 50 (1996)

Huang, M.H.: Web performance scale. Information & Management 42(6), 841–852 (2005)

Jarvenpaa, S.L., Todd, P.A.: Consumer Reactions to Electronic Shopping on the World Wide Web. International Journal of Electronic Commerce 1(2), 58–88 (1997)

Jarvenpaa, S.L., Tractinsky, N., Vitale, M.: Consumer trust in an Internet store. Information Technology and Management 1(1), 45–71 (2000)

Jiang, Z., Benbasat, I.: Virtual Product Experience: Effects of Visual and Functional Control of Products on Perceived Diagnosticity and Flow in Electronic Shopping. Journal of Management Information Systems 21(3), 111–147 (2004)

Kim, E.Y., Kim, Y.K.: Predicting online purchase intentions for clothing products. European Journal of Marketing 38(7), 883–897 (2004)

Klein, L.R.: Creating virtual product experiences: the role of telepresence. Journal of Interactive Marketing 17(1), 41–55 (2003)

Koufaris, M.: Consumer Behavior in Web-Based Commerce: An Empirical Study. International Journal of Electronic Commerce 6(2), 115–138 (2001)

Koufaris, M.: Applying the Technology Acceptance Model and Flow Theory to Online Consumer Behavior. Information Systems Research 13(2), 205–223 (2002)

Lee, H.H., Fiore, A., Kim, J.: The role of the technology acceptance model in explaining effects of image interactivity technology on consumer responses. International Journal of Retail & Distribution Management 34(8), 621–644 (2006)

Li, H., Daugherty, T., Biocca, F.: Characteristics of virtual experience in electronic commerce: A protocol analysis. Journal of Interactive Marketing 15(3), 13–30 (2001)

Mathwick, C.: Understanding the online consumer: A typology of online relational norms and behavior. Journal of Interactive Marketing 16(1), 40–55 (2002)

Mathwick, C., Malhotra, N., Rigdon, E.: Experiential value: conceptualization, measurement and application in the catalog and Internet shopping environment. Journal of Retailing 77(1), 39–56 (2001)

Mathwick, C., Malhotra, N.K., Rigdon, E.: The effect of dynamic retail experiences on experiential perceptions of value: an internet and catalog comparison. Journal of Retailing 78(1), 51–60 (2002)

Mathwick, C., Rigdon, E.: Play, Flow, and the Online Search Experience. Journal of Consumer Research 31(2), 324–332 (2004)

Menon, S., Kahn, B.: Cross-category effects of induced arousal and pleasure on the Internet shopping experience. Journal of Retailing 78(1), 31–40 (2002)

Monsuwé, T.P., Dellaert, B.G., Ruyter, K.d.: What drives consumers to shop online? A literature review International Journal of Service Industry Management 15(1), 102–121 (2004)

Moon, J.-W., Kim, Y.-G.: Extending the TAM for a World-Wide-Web context. Information & Management 38(4), 217–230 (2001)

O'Cass, A., Fenech, T.: Web retailing adoption: exploring the nature of internet users Web retailing behaviour. Journal of Retailing and Consumer Services 10(2), 81–94 (2003)

Pavlou, P.A.: Consumer Acceptance of Electronic Commerce: Integrating Trust and Risk with the Technology Acceptance Model. International Journal of Electronic Commerce 7(3), 101–134 (2003)

Sanchez-Franco, M.J., Roldan, J.L.: Web Acceptance and Usage Model. Internet Research 15(1) (2005)

Serenko, A., Turel, O.: Temporal Structural Stability Of MIS Research Instruments: Reconsideration Of The Computer Playfulness Scale. Paper presented at the Administrative Sciences Association of Canada Conference (2005)

Simonson, M.R., Maurer, M., Montag-Torardi, M., Whitaker, M.: Development of a standardized test of computer literacy and a computer anxiety index. Journal of Education Computational Research 3(2), 231–247 (1987)

Stevenson, J.S., Bruner, G.C., Kumar, A.: Webpage background and viewer attitudes. Journal of Advertising Research 40, 29–34 (2000)

Teo, H.H., Oh, L.B., Liu, C., Wei, K.K.: An empirical study of the effects of interactivity on web user attitude. International Journal of Human-Computer Studies 58(3), 281–305 (2003)

Teo, T.S.H.: Demographic and motivation variables associated with Internet usage activities. Internet Research: Electronic Networking Applications and Policy 11(2), 125–137 (2001)

Teo, T.S.H., Lim, V.K.G., Lai, R.Y.C.: Intrinsic and extrinsic motivation in Internet usage. Omega 27(1), 25–37 (1999)
Venkatesh, V.: Creation of Favorable User Perceptions: Exploring the Role of Intrinsic Motivation. MIS Quarterly 23(2), 239–260 (1999)
Venkatesh, V.: Determinants of Perceived Ease of Use: Integrating Control, Intrinsic Motivation, and Emotion into the Technology Acceptance Model. Information Systems Research 11(4), 342–365 (2000)
Venkatesh, V., Davis, F.D.: A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies. Management Science 46(2), 186 (2000)
Wolfinbarger, M., Gilly, M.C.: Shopping online for freedom, control, and fun. California Management Review 43(2), 34–55 (2001)
Wu, G.: Perceived interactivity and attitude towards Web sites. In: Proceedings of the Annual Conference of American Academy of Advertising Albuquerque, NM (1999)
Yoh, E., Damhorst, M.L., Sapp, S., Lazniak, R.: Consumer adoption of the internet: the case of apparel shopping. Psychology & Marketing 20, 1095–1118 (2003)
Zeithaml, V.A., Parasuraman, A., Malhotra, A.: Service Quality Delivery Through Web Sites: A Critical Review of Extant Knowledge. Journal of the Academy of Marketing Science 30(4), 362–375 (2002)