



EJM
39,1/2

150

Received September 2003
Revised January 2004;
June 2004

Customer intention to return online: price perception, attribute-level performance, and satisfaction unfolding over time

Pingjun Jiang

Department of Marketing, School of Business Administration, La Salle University, Philadelphia, Pennsylvania, USA, and

Bert Rosenbloom

LeBow College of Business, Drexel University, Philadelphia, Pennsylvania, USA

Abstract

Purpose – Compared with the emphasis that service quality research has received in online marketing, much less work has been done on the role of price perception, service attribute-level performance and satisfaction that unfolds over time, and their effects on customer retention. This paper seeks to fill this gap in the literature.

Design/methodology/approach – This paper builds propositions about the role of price and customer satisfaction at different stages on customers' intention to return. Research hypotheses are developed based on theory from the combined literatures of services, product pricing, and behavioral decision theory. Data from the e-retailing industry related to two specific periods of shopping experience (at checkout and after delivery) are used in the empirical tests. Structural equation modeling is employed to test the hypothesized relationships.

Findings – The findings of this study indicate that after-delivery satisfaction has a much stronger influence on both overall customer satisfaction and intention to return than at-checkout satisfaction, and that price perception, when measured on a comparative basis, has a direct and positive effect on customer overall satisfaction and intention to return.

Research limitations/implications – The data are only available from surveying customers who have made purchases. Future study can investigate how satisfaction with shopping convenience has impacted customer acquisition. Measures of actual return behavior, as opposed to behavioral intentions, will also enhance the validity of the study.

Practical implications – This paper concludes that excellence pre-sales service is not necessarily an advantage that allows e-tailers to develop customer retention. In fact, e-tailers might command higher customer retention through providing good performance in after-delivery service and continuously generating favorable price perceptions among customers because both have a strong and positive influence on return intention.

Originality/value – This research conceptualizes and explores different aspects of satisfaction that unfold over time, regarding customers' whole shopping experience with a particular e-retailer. It is a pioneer work that empirically investigates the relative contribution of at-checkout and after-delivery satisfaction in generating intention to return to an e-tailer.

Keywords Consumer behaviour, Internet, Customer retention, Prices, Perception, Customer satisfaction

Paper type Research paper

Introduction

Both academics and practitioners recognize the importance of loyal customers, because such customers usually spend more, buy more frequently, have more



motivation to search for information, are more resistant to competitors' promotions, and are more likely to spread positive word-of-mouth (Dick and Basu, 1994; Bolton, 1998; Rust *et al.*, 1995). Research has shown that increases in customer retention result in increased profitability for firms that compete in mature and highly competitive markets, especially service industries such as banking, telecommunications, hotels and airlines (e.g. Fornell and Wernerfelt, 1987; Reichheld and Sasser, 1990). Reichheld and Schefter (2000) found, for example, that increasing customer retention rates by 5 percent increased profits by 25-95 percent. Customer loyalty is even more important in online channels, because acquiring customers on the internet can be very expensive. For example, Boston Consulting Group estimates it costs internet-only retailers \$82 to acquire a new customer, compared with \$38 for store-based retailers and \$11 for catalog-based retailers (see www.retailers.com/retailers/00jun/mr0600ecommerce.html).

Recently, both academics (e.g. Slater, 1997; Woodruff, 1997) and consultants (Gale, 1994, 1997; Laitamaki and Kordupleski, 1997) have recommended that firms orient their strategies for customer retention toward superior customer value delivery, because customer value is a key antecedent of customer retention. Customer value is usually operationalized as a trade-off between quality (benefit) and cost (price) (Bolton and Drew, 1991). As Monroe (1990) notes, value is "the trade-off between the quality or benefits [consumers] perceive in a product relative to the sacrifice they perceive by paying the price" (p. 46). Considering that price and quality are two component drivers of value perceptions, the quality of service performance is a key marketing component that helps create customer satisfaction, and has been recognized as such for some time (Perrault and Frederick, 1974). Instant price comparisons on the web, made possible by powerful search engines, make non-price competitive advantages, such as service quality, ever more critical in retaining and attracting customers (Jarvenpaa and Todd, 1997; Liu and Arnett, 2000). What brings online customers back, primarily, is a sense of loyalty that comes from an internet company offering better service than the competition (Hoff *et al.*, 1998).

Probably the two most important long-term trends in the business world are the shifting of the economy from goods to services and the rapid expansion of the information economy and electronic networks. These two trends converge in the concept of e-service, which is the provision of service over electronic networks, such as the internet (Rust, 2001). Consequently, e-service excellence has become a powerful source of competitive differentiation. Dell Computer Corporation is perhaps the most often cited example of how important e-service excellence has become in building market share online.

Despite the phenomenal growth in online retailing, little research has been done on the role of service management in this context. But fortunately, and contrary to earlier hype, it is now generally agreed that the internet has not changed the fundamental principles of marketing management (Barwise *et al.*, 2002). Consequently, much of the knowledge gained from offline retailing service research is still highly relevant in the online context. However, some service management issues may be unique to the internet environment. For instance, issues such as on-time delivery and ease of navigation have surfaced as critical elements of e-service quality, and the online environment lacks most of the interactional human elements so vital to the traditional retailing service experience (Yang and Jun, 2002). Further, research has hardly begun

to examine how consumer behavior online differs from consumer behavior offline (notable exceptions include Alba *et al.*, 1997; Burke *et al.*, 1992; Degeratu *et al.*, 2001) (e.g. Chang, 2000; Rust and Kannan, 2002; Rust and Lemon, 2001). Important questions, both empirical and theoretical, about the role of price perception, service attribute-performance and satisfaction unfolding over time and their effects on overall customer satisfaction and loyalty in an e-retailing environment have just begun to be addressed. It is increasingly evident that online service quality involves issues that are unique to the internet environment. Therefore, the main objectives of this research are to address how these managerial actionable factors impact customer retention, and to investigate the nature of their impact in the context of online retailing.

Conceptualization of subsystem satisfaction in online shopping

In-process satisfaction

Several conceptualizations of customer satisfaction have evolved over the past decade (Johnson, 2001). Transaction-specific satisfaction is conceptualized as a customer's evaluation of his or her experience with, and reactions to, a particular product transaction episode or service encounter. This approach dominated the marketing and consumer behavior literature through the early 1990s (Oliver, 1997; Yi, 1991). Cumulative satisfaction is defined as a customer's overall evaluation of a product or service provider to date (Johnson *et al.*, 1995; Johnson and Fornell, 1991). Bitner and Hubbert (1994) reveal that consumers view these two conceptualizations of satisfaction differently. According to them, when asked about transaction-specific satisfaction, consumers are likely to comment on particular events of a service transaction (e.g. specific employee actions). Conversely, consumers are likely to comment on global impressions and general experiences with the firm (e.g. honesty of the firm) when asked about overall satisfaction. Transaction satisfaction captures the complex psychological reactions that customers have to a product's or service provider's performance for a given time period (Oliver, 1997).

According to the prevailing paradigm in the satisfaction literature (Mano and Oliver, 1993; Oliver, 1993; Richins, 1997), consumption emotions are the affective responses to one's perception of the series of attributes that comprise a product or service performance. The consumer satisfaction literature assumes implicitly that people can remember the numerous and varied experiences encountered through the entire duration of a product or service consumption and somehow combine these to form retrospective reports of the emotions (Oliver, 1993). Judgments of overall hedonic value of extended experiences are strongly influenced by peak and final moments of that episode (Fredrickson and Kahneman, 1993; Varey and Kahneman, 1992).

Drawing on a multi-component perspective of emotions, this research conceptualizes how customers' in-process satisfaction (i.e. their satisfaction during the sequence of episodes composing the transaction) determines overall satisfaction and behavioral intention. At the in-process level, the experience of distinct emotions at a certain stage of the service may influence the consumer's overall perceptions of the provider's performance, and/or the subsequent behavior of the consumer. In-process satisfaction is the intensity of various emotions tied to specific episodes that unfold along the service process. Adapting from Oliver (1997), this study conceptualizes in-process satisfaction with a sub-system as the cumulative effect of a set of discrete service encounters during the transaction process with the e-retailing service provider

over a period of time. Overall satisfaction is the general attitude toward the e-retailing service provider after the transaction is complete. Although these two types of satisfaction are related, it is important to recognize them as distinct constructs because some of the factors influencing them may be different. For example, satisfaction with the sub-system is more likely to depend upon performance on specific attributes of the service encounter (e.g. ease of use, product information, etc.).

Online shopping process: a perspective of the consumption system

There is reason to believe that the summation of all the service encounters during the transaction is evaluated by the customer. Marketers, however, have tended not to conceptualize satisfaction as a cognitively based evaluation of attributes found in other literatures (e.g. Parasuraman *et al.*, 1985, 1988) but as an emotional response to product or service use (Oliver, 1981). Competition today essentially takes place at the product-augmentation level. Product augmentation leads the marketer to look at the user's total consumption system: the way the user performs the tasks of getting and using products and related services (Boyd and Levy, 1963; Blois, 1991). Thus, new competition is not between what companies produce in their factories, but between what they add to their factory output in the form of packaging, services, advertising, customer advice, financing, delivery arrangements, warehousing, and other things that people value (Levitt, 1969; Band, 1986).

It has been suggested that there may be distinct "objects" in the service system that may be evaluated along unique attribute dimensions (Singh, 1992). However, studies of the service delivery process in the whole transaction itself have been lacking. The critical issue of how satisfaction judgments evolve during the process has also received very little attention (Mattsson, 1994). Armstrong (1992) modeled the delivery process as a system and analyzed underlying service quality perceptions but used aggregate case data in retrospect. Boulding *et al.* (1993) studied customers' overall satisfaction. Their findings show that overall satisfaction is an aggregation of all previous transaction-specific evaluations and is updated after each specific transaction, much like expectations of overall service quality are updated after each transaction. Investigating the service process in a laboratory experiment, they did not, however, obtain objective measures of the actual dimensions of the service encounter for each individual. Furthermore, measures were collected only at one point in time.

This study attempts to fill this apparent hole in the e-retailing service literature by modeling an actual online purchase process in two sub-systems: shopping convenience subsystem and fulfillment subsystem. The focus is on how underlying quality factors are related to different sub-systems and how the satisfaction level with each sub-system impacts on one another, on overall satisfaction, and especially on customer retention. Profitability and long-term success in e-retailing depend on customers' perceptions of the shopping experience and the e-tailer follow-up actions. Because of the spatial and temporal separation between buyers and sellers in online markets, exchanges between money and goods are not simultaneous and customers may not fully trust e-tailers' online offerings and related purchasing process. For instance, the delivery risk is of particular concern to consumers (Smith *et al.*, 2000).

It is evident that an e-tailer's service delivery process can be broken down into distinct episodes that comprise the main parts of the entire transaction process. Some of these may be an interaction with the provider through customer interface (such as

ease of navigation, product representation), while others may not (such as the delivery). The notion of the process and its outcome actually refers to sub-processes and their satisfaction outcomes. So process-specific attributes should be the focus of quality improvement work in e-retailing.

An e-tailer's e-commerce sales process generally comprises pre-sales service (mode of information, product development and offer comparison), transactions (commerce and financial), physical order fulfillment, and after-sales service (Pan *et al.*, 2001). The sales process focuses on physical and virtual activities and the challenges to fulfill customer expectations at each stage of shopping process.

A consumption system of online shopping consists of a bundle of information, services, and goods that are consumed over time in multiple episodes. Conceptually, there are three elements in such a consumption system:

- (1) attribute-level evaluations;
- (2) in-process satisfaction; and
- (3) behavioral intentions (Reidenbach and Oliva, 1981).

This consumption system can be examined to gain a structural view of consumer shopping experiences with an e-tailer. Thus, this study examines attribute weights, compares the pre-sales, transaction, and after-sale service subsystems, and shows how these elements are linked together to affect the whole online shopping consumption experience and behavioral intentions. Specifically, this research investigates online shopping as a consumption system to gain a process view of such a system. For example, examining how customer satisfaction of shopping convenience (pre-sales service and transaction) measured at checkout and satisfaction of fulfillment reliability (order fulfillment and after-sales service) measured after delivery can translate into intention to return. Each type of examination affords a different perspective on a consumer's online shopping experience

A subsystem level analysis is consistent with consumers' representations of consumption experiences in memory (Mittal *et al.*, 1999). Therefore it provides higher specificity and diagnostic usefulness in terms of asking specific questions about online shopping convenience and fulfillment reliability that are particular to an online context. For example, is overall satisfaction more sensitive to disconfirmation on certain attributes than to other attributes? Thus, this research extends previous models of customer satisfaction to the subsystem level to increase specificity and actionability.

Research questions

Acknowledging that online shopping occurs as two sets of separate encounters between shopping/placing an order through the shopping convenience encounter and obtaining the purchased product, the e-retailing industry is dependent upon customers' satisfaction at checkout and satisfaction after delivery (Srinivasan *et al.*, 2002). Researchers (e.g. Pan *et al.*, 2002) distinguish between these two and their effects on the overall shopping experience. However, most research has examined the satisfaction-intention link on a cumulative basis (Anderson and Sullivan, 1993). Cumulative satisfaction recognizes that customers rely on their entire experience when forming intentions and making repurchase decisions. Research relating encounter-specific satisfaction to behavioral intentions over time is sparse. The

relative contribution of at-checkout and after-delivery satisfaction in reciprocally generating intention to return to the e-tailer is not known.

Furthermore, few studies have simultaneously investigated multiple direct links between service quality, price perceptions, in-process satisfaction, and behavioral intentions (Ostrom and Iacobucci, 1995). Yet, if research in this area is to find application in the e-retailing industry, such a blending is necessary, because firms want to manage the demand generation (through pre-sales service and transaction) and demand fulfillment (through order fulfillment and after-sales service) product and service aspects of their offerings simultaneously.

This paper address the following research questions:

- (1) How are in-process satisfaction (at-checkout and after-delivery), price perceptions, and overall satisfaction interrelated, and how do any or all of these variables directly influence customer intention to return when the effects of all four are simultaneously considered?
- (2) Are the relationships between at-checkout satisfaction and the two marketing outcomes (overall satisfaction and intention to return) stronger or weaker compared to the relationships between after-delivery satisfaction and the two outcomes?
- (3) Are the relationships between at-checkout satisfaction and the two marketing outcomes stronger or weaker compared to the relationships between price perceptions and the two outcomes?

In subsequent sections, research hypotheses are developed based on theory from the combined literatures of services, product pricing, and behavioral decision theory. The methods used in addressing these research questions, data analyses and findings, along with managerial implications and areas for future research, are also presented.

Proposed model and research hypotheses

The model shown in Figure 1 is proposed to test empirically the key conceptual ideas embedded in the consumption system perspective. Major interest is in understanding the key linkages between customer price perceptions, customer satisfaction of the two sub-systems and marketing outcomes. Data from the e-retailing industry related to two specific periods of shopping experience (at-checkout and after-delivery) were used in the empirical tests.

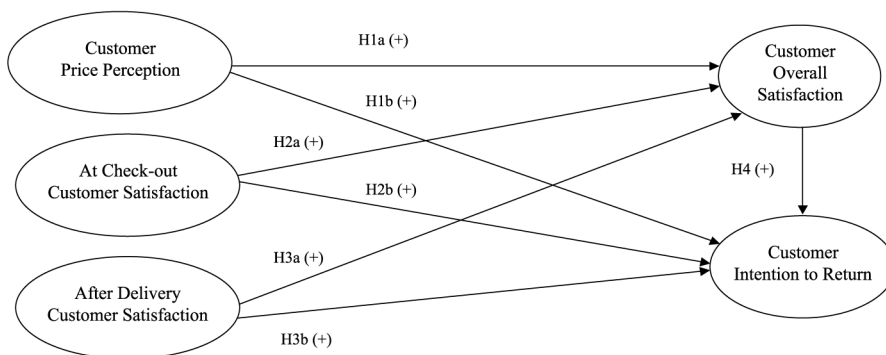


Figure 1. Proposed model explaining customer intention to repurchase over the internet

Price perceptions

Several satisfaction studies have examined the role of price as an attribute of performance. Voss *et al.* (1998) found that price perceptions do affect satisfaction in an experimental setting involving a hotel check-in scenario. Fornell *et al.* (1996) also found that price perceptions affect customer satisfaction in a macroeconomic study involving seven industry sectors. When shopping on the internet, consumers cannot actually see or handle the product: they are unsure that what is represented on the web is consistent with what is actually received. In conditions characterized by such performance uncertainty, price perceptions likely play an increased role in determining both post-purchase satisfaction and intention to return (Jarvenpaa and Todd, 1997; Liu and Arnett, 2000). This is especially true for e-retailing because the product is not available for examination by the customer before purchase. So, consumers are forced to depend on price cues. In such cases, the fairness of the price might be the dominant determinant of satisfaction and subsequent intention to return.

The effect of price perceptions on customer satisfaction is tested using a comparative measure of price perceptions vis-à-vis competition. Such a measure of comparative price perceptions is a special case of Bolton and Lemon's (1999) measure of price disconfirmation (deviation from normative payment standards) in that the normative standard is established by prices charged by the competition. Given the importance of customer price perception as a driver of overall customer satisfaction, the following relationship is proposed:

H1a. Favorable price perceptions have a positive effect on overall customer satisfaction.

Keaveney (1995) reported finding that more than half the customers she surveyed had switched among services because of poor price perceptions. Her qualitative study suggests that unfavorable price perceptions may have a direct effect on customer intention to switch. Mittal *et al.* (1998) provide the theoretical basis for this argument in concluding that "negatively valenced information is more perceptually salient than positively valenced information, is given more weight than positive information, and elicits a stronger psychological response than positive information" (p. 35). According to them, switching could be posited to be an immediate psychological response to negatively valenced information such as high price.

Bolton and Lemon (1999) examine the impact of price perceptions on depth of usage of cellular phone and entertainment services. Surprisingly, except for their study, no other empirical studies are known that investigate the impact of price perceptions on traditional behavioral-intention measures such as customer intention to switch, likelihood to recommend, and likelihood of doing more business with the firm (Zeithaml *et al.*, 1996). Accordingly:

H1b. Favorable price perceptions have a direct and positive effect on customer intention to return.

At-checkout satisfaction

Pan *et al.* (2002) specified reliability in fulfillment, shopping convenience, and pricing policy as the factors reflecting an e-tailers' characteristics. "At-checkout satisfaction" is

conceptualized as customer ratings on the sub-system of e-retailing services on the shopping convenience dimension.

The type of shopping convenience and experience are likely to have an impact in online markets (Novak *et al.*, 2000). According to Smith *et al.* (2000), among the e-tailer characteristics, web site performance, product information, product selection, ease of ordering, and shipping/handling have a positive influence on customer perceptions of shopping convenience at the e-tailer. For instance, product selection provision, as an aspect of shopping experience, is significantly related to pre-sales satisfaction. These effects are generally positive. One possible reason is economies of scope. E-tailers with economies of scope tend to be the ones investing in wide product selection on the web, and they are also able to generate demand (Smith *et al.*, 2000).

Rating variation in product information is expected to be part of at-checkout satisfaction. Depth of product information on a web site was found to influence customers' perception of shopping convenience (Shankar *et al.*, 2001). E-tailers with deep product information may enjoy more positive response to shopping convenience, and such an effect is higher than those with shallow product information.

The options and charges for shipping and handling can be another tool used by e-tailers to attract patronage by matching consumers' delivery needs. Specifying shipping and handling as a factor reflecting on the shopping convenience dimension is consistent with the two-factor (convenience and reliability) solution of e-tailer characteristics by Pan *et al.* (2002). For example, some consumers may seek quick delivery of products, whereas others may prefer to wait if they can pay lower shipping and handling charges. It is worth mentioning that it may also help to build retail store image. For example, Outpost.com offers free overnight delivery for any purchase. Such economy and flexibility of shipping and handling can have a significant and positive effect on customer response.

Brynjolfsson and Smith (2000) found some of the e-tailers' superior services to be negatively correlated with price. For example, some e-tailers with better return policies have lower prices. Nonetheless, variation in shipping and handling may be an important driver of price perception. Whether consumers are willing to return based on superior shipping services, however, is an empirical question that is unclear. Therefore, the relationship between an e-tailer's pre-sales and transaction services and customers' intentions to return needs a more detailed investigation.

Overall, variation in satisfaction of shopping convenience influences customers' perceptions on the whole shopping experience with the store. Ease of finding and evaluating products through better search tools, navigation and faster checkout could reduce consumer search and switching costs. Therefore, e-tailers who offer a high level of convenience may be able to produce higher overall customer satisfaction and intentions to return. Consequently:

H2a. Customers' overall satisfaction with e-tailers is positively related to their "at-checkout satisfaction" with shopping convenience.

H2b. Customers' intention to return to the e-tailer is positively related to their "at-checkout satisfaction" with shopping convenience.

Anderson and Sullivan (1993) use prospect theory to explain why negative disconfirmation (loss) has a stronger influence on customer satisfaction than positive disconfirmation (gain). According to prospect theory, "losses loom larger than

gains” for consumers (Einhorn and Hogarth, 1981; Kahneman and Tversky, 1979). That is, consumers exhibit loss aversion. So if considering that price is a monetary sacrifice (or loss) incurred for service, the tenets of prospect theory would indicate that the price paid would be salient in consumers’ evaluation of services (Bolton and Lemon, 1999).

Furthermore, price and perceived quality are thought of as cues for inferring value (e.g. Parasuraman *et al.*, 1988). According to them, in comparison with quality, an intrinsic cue that the service literature has shown to be multidimensional and correspondingly more difficult to evaluate, price would be considered an extrinsic cue that is readily observable and comparable. In addition, research has shown that negatively valenced information is more readily accessible from memory than positively valenced information, and elicits a stronger consumer response (Taylor, 1982; Mittal *et al.*, 1998). Customers on average state that and behave as if price is the most important factor in drawing them to and retaining them at a site. While shopping convenience factors such as ease of ordering, web site performance, and product information are easy to search and perhaps dampen the potential impact of price, customers do tend to use price as their primary factor in their search engines, and follow that up by buying on price (Shankar *et al.*, 2001). This would indicate that price cues are more readily accessible from memory, and more strongly related to overall customer satisfaction and behavioral intention. Accordingly, based on the salience and accessibility of price information, the following is proposed:

H2c. Price perceptions will have a stronger influence on overall customer satisfaction than “at-checkout satisfaction”.

H2d. Price perceptions will have a stronger influence on customer intention to return than “at-checkout satisfaction”.

After-delivery satisfaction

“After-delivery satisfaction” is conceptualized as customer ratings on the sub-system of e-retailing services on the fulfillment reliability dimension.

The reliability of e-tailers in fulfilling transactions and delivering products is an important factor that consumers consider when shopping online (Smith *et al.*, 2000). Because of the spatial and temporal separation between buyers and sellers in online markets, exchanges between money and goods are not simultaneous, so the delivery risk is of particular concern to consumers (Smith *et al.*, 2000). Reliability is associated with aspects such as delivery time, whether the product was delivered as promised, and the consistency of customer service (order tracking, on-time delivery, customer support and product met expectation). Differences in perceived reliability among e-tailers may influence customers’ perception of their overall shopping experience with an e-store. A more reliable e-tailer may command more positive customer responses than a less reliable retailer. Thus, more reliable e-tailers should have the power to generate higher overall customer satisfaction and their intentions to return to the store. Thus:

H3a. Customers’ overall satisfaction with the e-tailer is positively related to their “after-delivery satisfaction” with the store’s fulfillment reliability.

H3b. Customers' intention to return to the e-tailer is positively related to their "after-delivery satisfaction" with the store's fulfillment reliability.

An attribute's contribution to the overall evaluation may depend not only on its salience, but also on its temporal distance from the final overall evaluation (Mittal *et al.*, 1999). Thus, attributes that are experienced closer to the final evaluation may contribute more than those with a larger temporal distance. Conversely, attributes that are experienced early in a consumption experience may act as key reference points against which subsequent performances are judged. These ideas can be explored systematically to better understand why retrospective evaluations of consumption experiences do not always correspond with "in process" evaluations. Ariely and Carmon (2000) contend that a crucial part of the purchasing experience occurs at the end of the purchase process, when critical factors influence one's likelihood of returning to the same site. This argument contends that the fulfillment aspects of the purchase process might play a greater role than the level of shopping convenience that is available to the consumer. Accordingly:

H3c. "After-delivery satisfaction" will have a stronger influence on overall customer satisfaction than "at-checkout satisfaction".

H3d. "After-delivery satisfaction" will have a stronger influence on customer intention to return than "at-checkout satisfaction."

Overall satisfaction

According to Jones and Sasser (1995), a high level of satisfaction will lead to high customer loyalty. However, they also pointed out that merely satisfying customers who are free to make choices can not guarantee their loyalty. In fact, the only truly loyal customers are totally satisfied customers. As Jones and Sasser note, "customer-satisfaction information can be a critical barometer of how well a company is serving its customer. This information also can show a company what it needs to do to increase its customers' satisfaction level by level until the majority of its customers are totally satisfied" (p. 95).

Moreover, overall satisfaction should explain some variation in intention to return (Johnson *et al.*, 1995). Customers' overall satisfaction is an indication of how well customers like their experience at the site, and it is probably the best indication of their willingness to return to the site again if they are to make another purchase in the category. It is easy to imagine that if customers are very dissatisfied with their experiences, they are highly unlikely to return to the site for future purchases. So:

H4. Customers' intention to return to the e-tailer is positively related to their overall satisfaction with the whole transaction process.

Methodology

A piecemeal approach to testing can result in incorrect conclusions because of the misspecification that results when variables that affect a dependent variable (besides

the variable of interest) are excluded (Farris *et al.*, 1992; Rust and Donthu, 1995). Hence, structural equation modeling is employed to test hypothesis about “at-checkout satisfaction”, price perceptions, and “after-delivery satisfaction” within an integrated model of the overall customer satisfaction and behavioral intentions so that the effects hypothesized in *H1*, *H2*, *H3*, and *H4* are tested simultaneously (see Figure 1).

Data and measurement

With regard to how e-tailers can quantify the service value they create for customers during an online purchase, the process developed at BizRate.com to measure customers' perceptions of the value created for them by e-retailing services provides a useful paradigm. The BizRate.com data comes from survey respondents who have purchased from an online retail site and, upon purchase, received a banner ad requesting them to complete a survey of the site prepared by BizRate.com. Respondents are asked to rate the performance of the site on a set of attributes, answer a series of questions about their likelihood of returning to the same site for their next purchase, and answer a number of demographic and other questions. The set of attributes used for the store ratings was selected from a series of tests aimed at finding the most important/descriptive attributes with regard to repurchase intent. The testing was done using online buyers through focus groups, panel surveys, and point of sale and fulfillment surveys. According to Bizrate.com, each test used a significantly relevant sample size and there were many of them. Bizrate.com is constantly monitoring data collected to make sure the attributes do not become outdated. The process is conducted totally on a self-selection basis. All purchasers are invited to participate. However, only a relatively small percentage (8.4 percent) actually completes the survey.

The survey results are published on BizRate's web site and are available to the public. Aspects of e-tailers' services are evaluated using a ten-point scale and an overall measure of satisfaction was asked for at the conclusion of the survey. The Bizrate.com ratings of e-tailers are widely used in online markets. For example, shopper.com, shopping.com, and price.com, all cite BizRate.com's ratings. In addition, many e-tailers who are BizRate.com's certified sellers also indicate this on their own web sites (e.g. CircuitCity.com, Mercata.com, Motorola, CD Universe, Euclid Computers), which reflects the acceptance of BizRate.com's model. Product, price and deal information for a larger number of e-tailers are also searched and updated daily by BizRate.com. Reibstein (1999) conducted comparisons of Bizrate.com with other third-party data sources of the e-commerce customer on demographics. The median age of Bizrate.com survey respondents is 35-49, and their median income is \$60,000-74,000. Among all the respondents, 63 percent are reported as male, 63 percent are married, and 57 percent have a college degree. According to Reibstein, the Bizrate.com database appeared to be in the same general vicinity of customer demographics as that of other databases (E-STATS and E&Y). Thus, data from BizRate.com has high external validity.

This study uses the data made available from BizRate.com in June 2002 to examine the hypotheses. The study includes 416 e-tailers with over a quarter of a million individual consumer respondents. The number of respondents differs for each e-tailer. Ratings on each measure are aggregated across individual respondents to get the average score on that measure for each of the 416 rated e-tailers. These aggregated ratings are used to test the proposed model. Thus, the sample size for the model

estimation is 416. The major categories represented in this study are: apparel, computer goods, entertainment, food and wine, gifts, and home and gardening. Bizrate.com only uses data from the latest 90 days when performing the calculations to arrive at a rating. So, the information on BizRate is never more than three months old.

The measures used to operationalize the constructs are shown in Table I. A look at Table I reveals that in the Bizrate.com data set, price perception, overall customer satisfaction, and intention to return are measured by single questions, and the “at-checkout satisfaction” and “after-delivery satisfaction” constructs are measured by the use of multiple items. The price perceptions at BizRate.com were measured relative to other competing online retailers. Given work in the pricing literature on how price perceptions are formed, the results in the BizRate.com data are favored, as the pricing literature suggests that price perceptions are formed in relation to internal reference prices, the theoretical justification for which can be found in prospect theory (Kahneman and Tversky, 1979).

Six pre-ordering attributes are collected at the point-of-sale or “checkout” on the receipt page of every merchant transaction. Post-fulfillment (after-delivery) satisfaction is collected via a follow-up survey that is e-mailed to those completing the “checkout” survey. The timing of the follow-up survey is triggered by a question on the “checkout” survey asking when each customer expects his/her product to be delivered. This “after-delivery” follow up survey asks a series of “fulfillment” questions and reactions to the product, include two attributes (“order tracking” and “on-time delivery”) that take place before or at the point of delivery. “Would shop here again” is a key indicator determining the likelihood of a customer returning to the merchant after his/her purchase experience. This item is measured on a ten-point scale and collected at “after-delivery” follow-up survey. Explanations of each of the measurement items are found in Table I.

Analysis and results

Delineating the patterns of relationships among constructs (as seen in Figure 1) was the primary focus of the empirical testing. Structural equation modeling was employed to test the hypothesized relationships. First the measurement model was developed, consisting of three exogenous and two endogenous constructs, by conducting confirmatory factor analysis on multi-item scales (i.e. “at-checkout satisfaction” and “after-delivery satisfaction”). Following recommendations by Jöreskog and Sörbom (1993), conservative error variances were established for the three single-item scales (i.e. price perception, overall customer satisfaction, and intention to return).

Measurement model results

Table II presents the results of the measurement model, including the standardized factor loadings, standard errors, construct reliabilities, and proportions of variance extracted for each construct. Factor loadings of the indicators for each construct were statistically significant and sufficiently high to demonstrate that the indicators and their underlying constructs were acceptable. The reliabilities and variance extracted for each latent variable revealed that the measurement model was reliable and valid. Computed using indicators standardized factor loadings and measurement errors (Hair *et al.*, 1995), the construct reliability for “at-checkout satisfaction” is 0.783, and the

Table I.
Explanation of measures
of e-tailers' features by
BizRate.com

Source	Rating	Explanation	Construct in Figure 1
At checkout	Price	Prices relative to similar stores	Price perception
At checkout	Ease of ordering	Convenience and speed of ordering	At-checkout satisfaction (e-tailer's sub-system implementing shopping convenience)
At checkout	Product information	Information quantity, quality and relevance	
At checkout	Web site performance	Layout, links, pictures, images and speed	After-delivery satisfaction (e-tailer's sub-system providing fulfillment reliability)
At checkout	Product selection	Breadth/depth of products offered	
At checkout	Shipping and handling	Charges and options	Overall customer satisfaction Intention to return
After delivery	Customer support	Status updates and complaint/question handling	
After delivery	Order tracking	Ability to effectively track orders	Intention to return
After delivery	Product met expectations	Product description/depiction versus what you received	
After delivery	On-time delivery	Expected versus actual delivery date	Overall customer satisfaction Intention to return
After delivery	Overall rating	Overall experience with store	
After delivery	Would shop here again	Likelihood to return to this store	

Construct/indicator	Standardized factor loading	SE	<i>T</i>	Construct reliability	Proportion of extracted variance (percent)
ξ_1 (“at-checkout satisfaction”)				0.783	43.89
X_1 (ease of ordering)	0.892 ^a	–	–		
X_2 (product information)	0.559	0.068	12.486		
X_3 (web site performance)	0.946	0.042	27.487		
X_4 (product selection)	0.624	0.059	14.456		
X_5 (shipping and handling)	0.427	0.131	9.023		
ξ_2 (“after-delivery satisfaction”)				0.833	55.61
X_6 (product met expectations)	0.801 ^a	–	–		
X_7 (on-time delivery)	0.858	0.068	20.932		
X_8 (customer support)	0.885	0.082	21.904		
X_9 (order tracking)	0.777	0.075	18.199		

Note: ^aFirst λ path was set to 1; therefore, no SEs or *t* values are given

Table II. Measurement model results for constructs measured by multiple items

extracted variance is 43.89 percent. The construct reliability for “after-delivery satisfaction” is 0.833, and the extracted variance for this construct is 55.61 percent.

Causal equation model results

The hypothesized relationships were tested using maximum likelihood simultaneous estimation procedures (EQS, Bentler, 1992). Results of structural equation modeling obtained for the proposed model revealed a chi square of 382.608 (*df* = 48, *p* ≤ 0.001), NFI of 0.91, NNFI of 0.90, CFI of 0.92, RMSEA of 0.05, and chi square/*df* of 7.97. The ratio (chi square/*df*) of 7.97 indicated good model fit. All relationships proposed by the model were significant except for the paths (*p* ≥ 0.05) from “at-checkout satisfaction” to customer overall satisfaction and from overall satisfaction to customer intention to return. Figure 2 presents the model and structural path coefficients for each relationship. These results indicate support for all proposed hypotheses but three.

H1a, predicting a positive relationship between customer price perception and overall customer satisfaction, was supported. Results revealed that the path between these two constructs was indeed positive (standardized regression coefficient = 0.089) and significant (*t* = 4.200). The proposed positive relationship between price perception and intention to return (*H1b*) was also supported (standardized regression coefficient = 0.193; *t* = 6.223).

The two hypotheses predicting a positive relationship between “at-checkout satisfaction” and customer overall satisfaction (*H2a*) and between “at-checkout satisfaction” and intention to return (*H2b*) were not supported. Because the path between “at-checkout satisfaction” and customer overall satisfaction was not significant, it was removed from the final structural model. The relationship between “at-checkout satisfaction” and intention to return is marginally significant (standardized regression coefficient = -0.081; *t* = -2.202) but with a negative sign, which is contrary to the hypothesis. Obviously, the relationship between overall customer satisfaction and price perception is stronger than with “at checkout satisfaction”, therefore supporting *H2c*. The relationship between intention to return

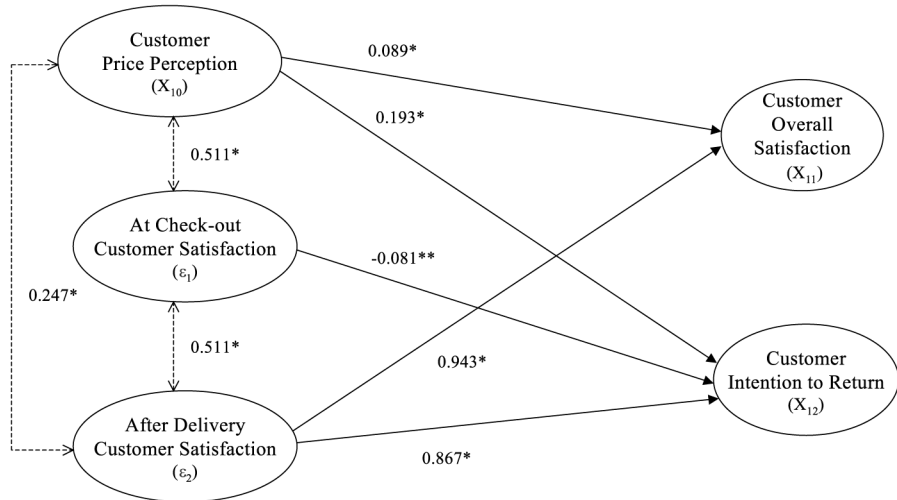


Figure 2. Final model explaining customer intention to repurchase over the internet

Note: The dotted line is from the post-hoc test, the numbers reported are standardized correlation coefficients. The numbers reported on the solid lines are standardized regression coefficients. *: the path is significant at 0.05. **: the path is significant at 0.10

and price perception is positive and stronger than with “at-checkout satisfaction”, therefore supporting *H2d*.

Significant path coefficients were observed between “after-delivery satisfaction” and customer overall satisfaction (standardized regression coefficient = 0.943; $t = 24.107$), between “after delivery satisfaction” and intention to return (standardized regression coefficient = 0.867; $t = 20.064$). Therefore, *H3a* and *H3b* are strongly supported. On the other hand, the relationship between “after-delivery satisfaction” and overall satisfaction is much stronger than “at-checkout satisfaction” with overall satisfaction, therefore supporting *H3c*. Furthermore, the relationship between “after-delivery satisfaction” and intention to return is positive and also much stronger than “at-checkout satisfaction” with intention to return, therefore supporting *H3d*. Considering the total effects of all constructs, “after-delivery satisfaction” exhibited the strongest direct and positive impact on both customer overall satisfaction and intention to return. However, the results did not lend support to the role of “at-checkout satisfaction”. No significant direct relationships were found between overall satisfaction and intention to return, and therefore *H4* was not supported.

As shown by the dotted lines of Figure 2, the data also indicate a significant and positive relationship between customer price perception and “at-checkout satisfaction” (standardized correlation coefficient = 0.511), between price perception and “after-delivery satisfaction” (standardized correlation coefficient = 0.247), and between “at-checkout satisfaction” and “after-delivery satisfaction” (standardized correlation coefficient = 0.511). (Note: the dotted lines in the Figure 2 represent new paths that were not anticipated earlier and are therefore *post hoc*.) New positive relationships emerged between the two in-process satisfaction constructs that were not

previously discussed, which indicates an assimilation effect (Oliver, 1997). This means that if actual performance on the shopping convenience sub-system is close to expectations, assimilation will occur and subsequent judgments (i.e. satisfaction with fulfillment) will be influenced positively by those expectations. Put differently, exceptionally good services at the shopping convenience sub-system level may cause a customer to have a positive view of fulfillment.

Discussion

Conclusions

This study of different aspects of satisfaction that unfold over time, regarding customers' whole shopping experience with a particular e-retailer, showed that satisfaction with fulfillment reliability appears to have a much larger effect on customer retention than "at-checkout satisfaction". Collectively, these results indicate that, in the e-retailing industry, the effect of satisfaction at different shopping stages on return intentions toward the e-store is asymmetric. That is, during the initial shopping stage, satisfaction with shopping convenience has a large positive correlation with price perception. Using this result as a basis, this study concludes that the satisfaction-intention link decays rapidly. This finding is consistent with the results of Mittal *et al.* (1999). But, how satisfaction with shopping convenience impacts customer acquisition could not be investigated here, because data was only available from surveying customers who had made purchases. No comparisons were made between purely web surfers (non-purchasers) and purchasers in examining their "at-checkout satisfaction" levels. But, theoretically, such satisfaction should be the most critical factor influencing customers' decisions on placing their orders, i.e. only satisfied customers (with shopping convenience dimension) are motivated to make a purchase.

In a surprisingly short time, a substantial literature has emerged on consumer decision-making in the digital environment. Dholakia and Bagozzi (2001) did an excellent job of summarizing much of what has been written about how consumers make their purchasing decisions in the new digital environment. Similarly, Haubl and Trifts (2000) discussed consumer decision-making and the impact of decision aids in the process. One perspective is that the internet will allow customers to become more efficient in their buying process (Bakos, 1997). With shopping being exceedingly convenient, the resulting outcome will be that consumers opt to purchase at the e-store. Thus, they will be able to make better decisions with less required effort.

If price perception and "after-delivery satisfaction" are equal, consumers with high "at-checkout satisfaction" are found less likely to return than those with low satisfaction with shopping convenience. Such a counter-intuitive finding may result from consumers having elevated their expectations of the e-store too much at the first stage of shopping.

Customers have more positive price perceptions about e-tailers who are more reliable in fulfillment. Therefore, with regard to reliability, e-tailers may need to price their product categories differently. Although further research on this issue is needed, e-tailers with superior reliability of service may actually charge either higher or lower prices. While consumers may be willing to pay more for greater reliability, it is also possible that e-tailers offering superior reliability are more efficient and have lower costs, leading them to price lower than less reliable competitors in anticipation of high volume. Shopping convenience was found to have significant and strong correlation

with price perception and the correlation between the two is positive. This correlation is stronger than the one between price perception and customers' satisfaction with fulfillment. In general, customers have more positive price perceptions about e-tailers who provide greater shopping convenience. This finding suggests that consumers are more willing to pay for convenience for buying at these e-stores. The unique role of price perception may be an important new avenue for study suggested by this finding. Given the predicted growth in e-retailing, strategies helping to generate positive price perception are important for stimulating specialized e-retailing services.

One reason for the relationship between overall satisfaction and intention to return could be that satisfaction and return intentions are qualitatively different constructs (Ostrom and Iacobucci, 1995). Whereas return intentions have a behavioral component, satisfaction may be merely a judgment with cognitive and affective dimensions. Based on the consumer's goals (e.g. Mittal *et al.*, 1993), performance on a certain attribute instead of satisfaction may become crucial for repurchase intentions. For example, consider the case of a customer who is satisfied with all aspects of the service provided by Amazon.com, except that the customer has now relocated to Washington State from New York. When it comes time to buy books and choose an e-tailer, the customer might indicate high overall satisfaction with Amazon but still might choose another e-tailer, because s/he doesn't want to pay online tax (performance on a critical attribute, i.e. tax, has changed for this customer at Amazon.com).

Collectively, these results indicate that consumer experiences should be examined as a system involving a shopping process and fulfillment subsystem. Both notions have implications for academic research and marketing practice. This result is consistent with the observation by Ariely and Carmon (2000), who noted that the part of the shopping experience the customer faces at the end of the purchase process has the greatest influence on the likelihood to repeat purchase. More generally, research should determine factors that explain the shifting importance of each subsystem.

Managerial implications

Because customers have more choices today and the targeted customers are most valuable to the company, customer service must receive a high priority within the e-retailing company. In a general sense, any contact or "touch points" that a customer has with an e-tailer is a customer service encounter has the potential to gain repeat business and help customer relationship management or have the opposite effect. Programs designed to enhance customer service can be of three types.

Services to provide shopping convenience. E-tailers, during the pre-sale phase, in addition to offering online customers information on the service offerings, can also provide customers with the opportunity to design or customize their products. Since the web site functions as an information system, customers have high expectations for rich and credible content. Valuable online information and interactive communication are important for encouraging online consumers to revisit the web site. E-tailers can meet high customer expectations by offering continuously updated information on the company, its products/services, answers to frequently asked questions (FAQs), special offers, etc. Furthermore, the e-tailer may inform its online customers about inventory status, delivery options, timeframe, and payment conditions. Since accessing help from other consumers is very important in the sense that consumers tend to acquire knowledge from each other, e-tailers should use multiple information sources to

increase their credibility. Providing both traditional and online communication channels is a necessity. For instance, e-tailers can post customer testimonials online, establish virtual online communities, or use testimonials of independent third-parties officials like “Bizrate.com certified online merchants”. E-tailers can share customer information and cross-sell products through affiliating with other vendors.

Besides offering the above information, e-tailers can also leverage the internet to design proactively an offer based on customers’ preferences and buying patterns. By doing so, e-tailers can segment the market and establish a one-to-one relationship with customers, reduce customers’ web site navigation time to search for appealing offers, and decrease the risk of losing online customers. According to Rice (1997), for internet-based shopping to achieve mass-market penetration, it must be made substantially easier for consumers to navigate and locate information or content. The organization and structure of the web site should be easy to follow and navigate, since the shopper’s primary motivation to purchase online is convenience (98 percent) and time saving (84 percent) (Tracy, 1998). An online product catalogue or search engine can facilitate the customer’s search of product information. Also, 73 percent of an e-tailer’s online customers state that they leave an internet homepage if it takes more than two or three clicks. Most importantly, the contents of the web site should be concise and easy to understand. All terms and conditions concerned with products and services should be easy to read and comprehend.

Services to improve fulfillment reliability. To impress customers with physical order fulfillment requires e-tailers to offer online a simple and risk-free transaction and fulfill it quickly, reliably and rewardingly.

Customers expect to be billed and charged correctly, E-tailers can use multiple transaction mechanisms to meet this expectation. As some customers may need help during the sales process, e-tailers should provide hotlines and online help services. After receiving the order, they need to confirm it (e.g. through e-mail) and inform the customer of the shipment time. The order should be processed in real time and tracked without human intervention.

On-time delivery is of equal importance and constitutes a competitive priority in e-commerce. Companies need to perform the promised services accurately and in a timely manner. The quality of delivery should include promptness and ensure that both correct and intact products and services are delivered in ordered quantities, at times convenient to customers. Fulfilling the digital promise often demonstrates that the firm possesses basic integrity and credibility in relation to its customers.

Accurate, available data, forecasting, supply-chain speed and inventory planning are the foundations needed to successfully fulfill orders. E-tailers need to manage a wide variety of package shapes and sizes instead of shipping uniform pallets of goods. Because most companies lack strong internal and external collaboration, 70 percent of retailers lose valuable time since they are not technologically advanced enough to automatically integrate internet purchases with their fulfillment and distribution system (Spiegel, 2000). E-tailers need to integrate the logistics process (the back-end) with the online ordering system (the front-end) to provide uniform and seamless service. Depending on their e-commerce strategy, e-tailers can avoid shipping products to single customers. For example, if an e-tailer has an offline presence at a particular area, it can obtain real-time inventory data, check availability of the ordered good at

the closest outlet to the customer's address, and instead of shipping the good to the customer, notify him/her to pick up the product from the retailer's offline location.

E-tailers can build competitive advantages through a tight integration of the web site with customer service operations and communications among different functional departments. In the future, e-tailers need to manage integrated value networks in which they include their customers, suppliers and order fulfillment partners. One obvious way to do so is through establishing strategic alliances, as well as outsourcing fulfillment implementation system to intermediaries with fulfillment experts (e.g. Wal-Mart employs Fingerhut for its online store delivery service). In addition, E-tailers need to manage reverse logistics replicating efficiently the sales process in reverse order with the speed, accuracy and convenience that customers expect, since easy return constitutes an important factor for customers' online purchasing decision (see http://opsandfulfillment.com/ar/fulfillment_unhappy_returns).

Many e-retailing experts (e.g. Jeff Bezos, founder of Amazon.com) say that a company's money would be better spent on improving delivery performance than on advertising. They argue that superior service performance is a more effective differentiator than image expenditures. Furthermore, it is harder for a competitor to duplicate a superior distribution system than to copy a competitor's advertising campaign. An e-tailer can differentiate itself by designing a better and faster delivery system. There are three levels of differentiation. The first is reliability: some e-tailers are more reliable in their on-time delivery, order completeness, and order-cycle time. The second is resilience: some e-tailers are better at handling emergencies, product recalls, and answering inquiries. The third is innovativeness: some e-tailers create better information systems, introduce bar coding and mixed pallets, and in other ways help the customer.

Services to strengthen customer support. Providing online and offline after-sales service constitutes a new activity in the e-tailer's value chain to gain customer loyalty. Unlike manufacturers who might enjoy strong know-how of their products, e-tailers have much more knowledge of customers. Hence, e-tailers are well positioned to sell a combination of products and services that minimize the customer's overall costs associated with owning and using the product while maximizing its utility. E-tailers need to employ and train customer service staff to carry out many downstream activities, such as offering financing and maintenance on- and offline. A message area in which consumers may ask questions and post comments is also a necessity. By managing all forms of interaction, such as bulletin boards, user groups and virtual communities in a single framework, e-tailers can also help customers to solve customer problems online, reducing the e-tailer's time and effort while strengthening the e-tailer's virtual community.

The information generated by members of an e-tailer's virtual community provides valuable feedback on the quality of existing fulfillment and after-sales services. E-tailers can react to their consumer's opinion and enrich their offer by developing services or forging partnerships. Hence, virtual communities form a live test-field where e-tailers can get in touch with their customers, continue to satisfy them, and encourage them to stay with the e-tailer in the future. Certain techniques such as a "rules engine" that can drive personalization based on information from the database are critical to satisfy individual customers. Additional retention strategy includes the possibility of carrying out online and

offline product simulation and testing, the availability of after-sales service and advice, the handling of returned goods as well as possible financing schemes. By doing so, customer relationships, as well as the e-tailer image, can be strengthened and revenues increased.

Another managerial implication of this study is that managers desirous of managing the price perceptions of their customers can do so by actively making quality improvements. By managing the comparative price perceptions of their customers, managers could simultaneously influence overall customer satisfaction because of comparative price perception's direct and positive effect on overall satisfaction. For instance, marketing managers, in coordination with their firms' e-marketers, can focus on developing services that improve efficiency of these two e-retailing service dimensions: service reliability and shopping convenience. This kind of thinking enables e-tailer services to be seen as a differential competitive weapon that not only can improve efficiencies by reducing costs but can also improve marketing effectiveness by fostering to obtain positive price perception that generates greater revenue for supplier firms.

Limitations

As is the case with any research, the study presented here has some limitations. First, the research model is not designed to include all possible influences on consumer decision-making in online purchases. The scope is limited to the identified variables simply because the focus of the investigation is on the composite set of links between consumers' in-process satisfaction, price perceptions, and intention to return.

Several concerns should be raised about the secondary data used. The Bizrate survey is not administered at all sites on the web, only those that cooperate with BizRate.com. The respondents are those who have elected to go to a site and buy from it. Those who did not choose to go to a particular site or who went to the site and then left for whatever reason are not part of the sample. Hence, the sample consists of buyers, not surfers, browsers, or information seekers. As a result, the ratings of the particular stores tend to be on the positive side. If the consumers were not very content with the site, they most likely would have left without completing a purchase. While the number of responses has been very impressive, there has been an even larger number of non-respondents. The overall response rate has hovered around 8.4 percent for quite some time. Of course, one should always be concerned with any potential non-response bias. The fact that not everyone has answered the survey is normal. For a non-response bias to be present, the respondents would have to answer the questions differently from those who did not bother to respond. BizRate.com has on numerous occasions conducted validity checks on its non-respondents. This has entailed e-mail follow-up to non-respondents to see whether the answers by the non-respondents were any different from those who had responded earlier. BizRate.com has reported no noted non-response bias.

Finally, measures of actual return behavior, as opposed to behavioral intentions, could also enhance the validity of the study. Unfortunately, such data are often difficult and costly to gather.

References

- Alba, J., Lynch, J., Weitz, B., Janiszewski, C., Lutz, R., Sawyer, A. and Wood, S. (1997), "Interactive home shopping: consumer, retailer, and manufacturer incentives to participate in electronic marketplaces", *Journal of Marketing*, Vol. 61, July, pp. 38-53.
- Anderson, E.W. and Sullivan, M.W. (1993), "The antecedents and consequences of customer satisfaction for firms", *Marketing Science*, Vol. 12 No. 2, pp. 125-43.
- Ariely, D. and Carmon, Z. (2000), "Gestalt characteristics of experiences: the defining features of summarized events", *Journal of Behavioral Decision Making*, Vol. 13 No. 2, pp. 191-201.
- Armstrong, P.K. (1992), "Analyzing quality in the service delivery process", paper presented at the Service Productivity and Quality Challenge Conference, Philadelphia, PA, October, pp. 23-4.
- Bakos, Y. (1997), "Reducing buyer search costs: implications for electronic marketplaces", *Management Science*, Vol. 43 No. 12, pp. 1676-92.
- Band, W. (1986), "How to develop customer retention strategies", *Sales & Marketing Management in Canada*, Vol. 27 No. 9, pp. 30-2.
- Barwise, P., Elberse, A. and Hammond, K. (2002), "Marketing and the internet: a research review", in Weitz, B. and Wensley, R. (Eds), *Handbook of Marketing*, Russell Sage, New York, NY, pp. 3-7.
- Bentler, P.M. (1992), *EQS: Structural Equations Program Manual*, BMDP Statistical Software Inc., Los Angeles, CA.
- Bitner, M.J. and Hubbert, A.R. (1994), "Encounter satisfaction versus overall satisfaction versus quality: the customer's voice", in Rust, R.T. and Oliver, R.L. (Eds), *Service Quality: New Directions in Theory and Practice*, Sage Publications, London.
- Blois, K.J. (1991), "Product augmentation and competitive advantage", *Journal of General Management*, Vol. 16 No. 3, pp. 29-38.
- Bolton, R.N. (1998), "A dynamic model of the duration of the customer's relationships with a continuous service provider: the role of satisfaction", *Marketing Science*, Vol. 17 No. 1, pp. 45-65.
- Bolton, R.N. and Drew, J.H. (1991), "A multistage model of customers' assessments of service quality and value", *Journal of Consumer Research*, Vol. 17, pp. 375-84.
- Bolton, R.N. and Lemon, K.N. (1999), "A dynamic model of customers' usage of services: usage as an antecedent and consequence of satisfaction", *Journal of Marketing Research*, Vol. 36, pp. 171-86.
- Boulding, W., Kalra, A., Staelin, R. and Zeithaml, V.A. (1993), "A dynamic process model of service quality: from expectations to intentions", *Journal of Marketing Research*, Vol. 30, February, pp. 7-27.
- Boyd, H.W. Jr and Levy, S. (1963), "New dimensions in consumer analysis", *Harvard Business Review*, November-December, pp. 129-40.
- Brynjolfsson, E. and Smith, M. (2000), "Frictionless commerce? A comparison of internet and conventional retailers", *Management Science*, Vol. 46 No. 4, pp. 563-85.
- Burke, R.R., Harlam, B.A., Kahn, B.E. and Lodish, L.M. (1992), "Comparing dynamic consumer choice in real and computer-simulated environments", *Journal of Consumer Research*, Vol. 19, pp. 71-82.
- Chang, T.Z. (2000), "Online shoppers' perceptions of the quality of internet shopping experience", in Gundlach, G.T. and Murphy, P.E. (Eds), *Proceedings of the AMA Summer Educators Conference*, Vol. 11, American Marketing Association, Chicago, IL, pp. 254-5.

-
- Cronin, J.J. Jr and Taylor, S.A. (1992), "Measuring service quality: a reexamination and extension", *Journal of Marketing*, Vol. 56, July, pp. 55-68.
- Degeratu, A.M., Rangaswamy, A. and Wu, J. (2001), "Consumer choice behavior in online and traditional supermarkets: the effects of brand name, price, and other search attributes", *International Journal of Research in Marketing*, Vol. 17 No. 1, pp. 55-78.
- Dholakia, V. and Bagozzi, R.P. (2001), "Consumer behavior in digital environments", in Wind, J. and Mohajan, V.J. (Eds), *Digital Marketing*, Wiley, New York, NY, pp. 163-200.
- Dick, A. and Basu, K. (1994), "Customer loyalty: an integrated conceptual framework", *Journal of Academy of Marketing Science*, Vol. 22, Spring, pp. 99-113.
- Einhorn, H.J. and Hogarth, R.M. (1981), "Behavioral decision theory: processes of judgment and choice", *Annual Review of Psychology*, Vol. 32, pp. 53-88.
- Farris, P.W., Parry, M.E. and Ailawadi, K.L. (1992), "Structural analysis of models with composite dependent variables", *Marketing Science*, Vol. 1 No. 1, pp. 76-95.
- Fornell, C. and Wernerfelt, B. (1987), "Defensive marketing strategy by customer complaint management", *Journal of Marketing Research*, Vol. 24, November, pp. 337-46.
- Fornell, C., Johnson, M.D., Anderson, E.W., Cha, J. and Bryant, B. (1996), "The American customer satisfaction index: nature, purpose, and findings", *Journal of Marketing*, Vol. 60, October, pp. 7-18.
- Fredrickson, B.L. and Kahneman, D. (1993), "Duration neglect in retrospective evaluations of affective episodes", *Journal of Personality and Social Psychology*, pp. 45-55.
- Gale, B.T. (1994), *Managing Customer Value*, Free Press, New York, NY.
- Gale, B.T. (1997), "Satisfaction is not enough", *Marketing News*, October 27, p. 18.
- Gardial, S.F., Clemons, D.S., Woodruff, R.B., Schumann, D.W. and Burns, M.J. (1994), "Comparing consumers' recall of prepurchase and postpurchase product evaluation experiences", *Journal of Consumer Research*, Vol. 20, March, pp. 548-60.
- Hair, J.F. Jr, Anderson, R.E., Tatham, R.L. and Black, W.C. (1995), *Multivariate Data Analysis*, Prentice-Hall, Englewood Cliffs, NJ.
- Haubl, G. and Trifts, V. (2000), "Consumer decision making in online shopping environments: the effects of interactive aids", *Marketing Science*, Vol. 19 No. 1, pp. 4-21.
- Hoff, R.C., McWilliams, G. and Saveri, G. (1998), "The 'click here' economy", *Business Week*, June 22.
- Jarvenpaa, S.L. and Todd, P.A. (1997), "Is there a future for retailing on the internet?", in Peterson, R.A. (Ed.), *Electronic Marketing and the Consumer*, Sage Publications, Thousand Oaks, CA.
- Johnson, M. (2001), "Customer satisfaction", in Smelser, N.J. and Baltes, P.B. (Eds), *International Encyclopedia of the Social & Behavioral Sciences*, Elsevier, Amsterdam, pp. 3198-202.
- Johnson, M.D. and Fornell, C. (1991), "A framework for comparing customer satisfaction across individuals and product categories", *Journal of Economic Psychology*, Vol. 12 No. 2, pp. 267-86.
- Johnson, M.D., Anderson, E.W. and Fornell, C. (1995), "Rational and adaptive performance expectations in a customer satisfaction framework", *Journal of Consumer Research*, Vol. 21, March, pp. 128-40.
- Jones, T.O. and Sasser, E.W. Jr (1995), "Why satisfied customers defect", *Harvard Business Review*, November-December, pp. 88-99.
- Jöreskog, K.G. and Sörbom, D. (1993), *LISREL 8: User's Reference Guide*, Scientific Software International, Chicago, IL.

- Kahneman, D. and Tversky, A. (1979), "Prospect theory: an analysis of decision under risk", *Econometrica*, Vol. 47 No. 2, pp. 263-91.
- Keaveney, S.M. (1995), "Customer behavior in services industries: an exploratory study", *Journal of Marketing*, Vol. 59 No. 2, pp. 71-82.
- Laitamaki, J. and Kordupleski, R.E. (1997), "Building and deploying profitable growth strategies based on the waterfall of customer value added", *European Management Journal*, Vol. 15 No. 2, pp. 158-66.
- Levitt, T. (1969), *The Marketing Mode*, McGraw-Hill, New York, NY.
- Liu, C. and Arnett, K.P. (2000), "Exploring the factors associated with web site success in the context of electronic commerce", *Information and Management*, Vol. 38, October, p. 2334.
- Mano, H. and Oliver, R. (1993), "Assessing the dimensionality and structure of the consumption experience: evaluation, feeling, and satisfaction", *Journal of Consumer Research*, Vol. 20, pp. 451-66.
- Mattsson, J. (1994), "Improving service quality in person-to-person encounters: integrating findings from a multidisciplinary review", *The Service Industries Journal*, Vol. 14 No. 1, pp. 45-61.
- Mittal, V., Kumar, P. and Tsiros, M. (1999), "Attribute-level performance, satisfaction, and behavioral intentions over time: a consumption-system approach", *Journal of Marketing*, Vol. 63, April, pp. 88-101.
- Mittal, V., Ross, W.T. Jr and Baldasare, P.M. (1998), "The asymmetric impact of negative and positive attribute-level performance on overall satisfaction and repurchase intentions", *Journal of Marketing*, Vol. 62 No. 1, pp. 33-50.
- Mittal, V., Katrichis, J.M., Forkin, F. and Konkel, M. (1993), "Does satisfaction with multi-attribute products vary over time? A performance based approach", in Allen, C.T. and Roedder John, D. (Eds), *Advances in Consumer Research*, Vol. 21, Association for Consumer Research, Provo, UT, pp. 412-17.
- Monroe, K.B. (1990), *Pricing: Making Profitable Decisions*, 2nd ed., McGraw-Hill, New York, NY.
- Novak, T.P., Hoffman, D.L. and Yung, Y. (2000), "Measuring the flow construct in online environments: a structural modeling approach", *Marketing Science*, Vol. 19 No. 1, pp. 22-44.
- Oliver, R.L. (1993), "Cognitive, affective, and attribute bases of the satisfaction response", *Journal of Consumer Research*, Vol. 20, December, pp. 418-30.
- Oliver, R.L. (1997), *Satisfaction: A Behavioral Perspective on the Consumer*, McGraw-Hill, New York, NY.
- Oliver, R. (1981), "Measurement and evaluation of satisfaction processes in retail settings", *Journal of Retailing*, Vol. 57, Fall, pp. 25-48.
- Ostrom, A. and Iacobucci, D. (1995), "Consumer trade-offs and the evaluation of services", *Journal of Marketing*, Vol. 59, January, pp. 17-28.
- Pan, X., Ratchford, B.T. and Shankar, V. (2001), "Why aren't the prices of the same item the same at Me.com and You.com? Drivers of price dispersion among e-tailers", working paper, University of Maryland, College Park, MD.
- Pan, X., Ratchford, B.T. and Shankar, V. (2002), "Can price dispersion in online markets be explained by differences in e-tailer service quality?", *Journal of the Academy of Marketing Science*, Vol. 30 No. 4, pp. 433-45.
- Parasuraman, A., Zeithaml, V.A. and Berry, L.L. (1985), "Customer loyalty in e-commerce: an exploration of its antecedents and consequences", *Journal of Retailing*, Vol. 78 No. 1, pp. 41-50.

-
- Parasuraman, A., Zeithaml, V. and Berry, L.L. (1988), "SERVQUAL: a multiple item scale for measuring customer perceptions of service quality", *Journal of Retailing*, Vol. 64, Spring, pp. 12-40.
- Perrault, W.D. and Frederick, R. (1974), "Physical distribution service: a neglected aspect of marketing management", *MSU Business Topics*, Vol. 22, Summer, pp. 37-45.
- Reibstein, D.J. (1999), "The internet buyer", in Wind, J. and Mahajan, V.J. (Eds), *Digital Marketing*, Wiley, New York, NY, pp. 201-25.
- Reichheld, F.F. and Sasser, E.W. (1990), "Zero defections: quality comes to services", *Harvard Business Review*, Vol. 14, March, pp. 495-507.
- Reichheld, F.F. and Scheffer, P. (2000), "E-loyalty: your secret weapon on the web", *Harvard Business Review*, Vol. 78 No. 4, pp. 105-13.
- Reidenbach, E.R. and Oliva, T.A. (1981), "General living systems theory and marketing: a framework for analysis", *Journal of Marketing*, Vol. 45, Fall, pp. 30-7.
- Rice, M. (1997), "What makes users revisit a web site?", *Marketing News*, Vol. 31 No. 6, pp. 12-13.
- Richins, M. (1997), "Measuring emotions in the consumption experience", *Journal of Consumer Research*, Vol. 24 No. 2, pp. 127-46.
- Roos, I. (1999), "Switching processes in customer relationships", *Journal of Service Research*, Vol. 2, August, pp. 68-85.
- Rust, R. (2001), "The rise of e-service", *Journal of Service Research*, Vol. 3 No. 4, pp. 283-5.
- Rust, R.T. and Donthu, N. (1995), "Capturing geographically localized misspecification error in retail store choice models", *Journal of Marketing Research*, Vol. 32 No. 1, pp. 103-11.
- Rust, R.T. and Kannan, P.K. (2002), "The era of e-service", in Rust, R.T. and Kannan, P.K. (Eds), *e-Service: New Directions in Theory and Practice*, M.E. Sharpe, New York, NY, pp. 3-21.
- Rust, R.T. and Lemon, K. (2001), "E-service and the consumer", *International Journal of Electronic Commerce*, Vol. 5 No. 3, pp. 85-101.
- Rust, R.T., Zahorik, A.J. and Keiningham, T.L. (1995), "Making service quality financially accountable", *Journal of Marketing*, Vol. 59, April, pp. 58-70.
- Shankar, V., Rangaswamy, A. and Pusateri, M. (2001), "The online medium and customer price sensitivity", working paper, University of Maryland, College Park, MD.
- Singh, J. (1992), "Understanding the structure of consumers' satisfaction evaluations of service delivery", *Journal of the Academy of Marketing Science*, Vol. 20 No. 1, pp. 223-44.
- Slater, S.F. (1997), "Developing a customer value-based theory of the firm", *Journal of the Academy of Marketing Science*, Vol. 25, pp. 162-7.
- Smith, M., Bailey, J. and Brynjolfsson, E. (2000), "Understanding digital markets: review and assessment", in Brynjolfsson, E. and Kahin, B. (Eds), *Understanding the Digital Economy*, MIT Press, Cambridge, MA.
- Spiegel, R. (2000), "Report: 70 percent of retailers lack e-commerce strategy", *E-Commerce Times*, 26 January, available at: www.ecommercetimes.com/printer
- Spreng, R.A. and Mackoy, R.D. (1996), "An empirical examination of a model of perceived service quality and satisfaction", *Journal of Retailing*, Vol. 72 No. 2, pp. 201-14.
- Srinivasan, S.S., Anderson, R. and Ponnnavolu, K. (2002), "Customer loyalty in e-commerce: an exploration of its antecedents and consequences", *Journal of Retailing*, Vol. 78 No. 1, pp. 41-50.
- Stauss, B. and Weinlich, B. (1997), "Process-oriented measurement of service quality: applying a sequential incident method", *European Journal of Marketing*, Vol. 31 No. 1, pp. 33-55.

- Taylor, S. (1982), "The availability bias in social perception", in Kahneman, D., Slovic, P. and Tversky, A. (Eds), *Judgment under Uncertainty: Heuristics and Biases*, Cambridge University Press, Cambridge, pp. 190-200.
- Tracy, B. (1998), "E-tailing: what web customers really want", *Advertising Age's Business Marketing*, Vol. 83, pp. 39-42.
- Varey, C. and Kahneman, D. (1992), "Experience extended across time: evaluation of moments and episodes", *Journal of Behavioral Decision Making*, Vol. 5, pp. 169-85.
- Voss, G.B., Parasuraman, A. and Grewal, D. (1998), "The roles of price, performance, and expectations in determining satisfaction in service exchanges", *Journal of Marketing*, Vol. 62, October, pp. 46-61.
- Woodruff, R.B. (1997), "Customer value: the next source for competitive advantage", *Journal of the Academy of Marketing Science*, Vol. 25, Spring, pp. 139-53.
- Yang, Z. and Jun, M. (2002), "Consumer perception of e-service quality: from internet purchaser and non-purchaser perspectives", *Journal of Business Strategies*, Vol. 19 No. 1, pp. 19-41.
- Yi, Y. (1991), "A critical review of customer satisfaction", in Zeithaml, V. (Ed.), *Review of Marketing*, Vol. 5, American Marketing Association, Chicago, IL, pp. 68-123.
- Zeithaml, V.A., Berry, L.L. and Parasuraman, A. (1996), "The behavioral consequences of service quality", *Journal of Marketing*, Vol. 60, April, pp. 31-46.

Full Length Research Paper

Factors affecting students' attitude toward online shopping

Narges Delafrooz¹, Laily H. Paim^{1*}, Sharifah Azizah Haron¹, Samsinar M. Sidin² and Ali Khatibi³

¹Faculty of Resource Management and Consumer Studies, University Putra Malaysia.

²Faculty of Management, University Putra Malaysia.

³Faculty of Management, Management and Science University, Shah Alam, Selangor, Malaysia.

Accepted 1 April, 2009

To ensure the success of online business, it is important for the retailers to understand their targeted customers. The aim of this study examines the significance of attitude toward online shopping. The objectives of the study are two fold. The first section seeks to determine relationship between attitude towards online shopping with shopping orientations and perceived benefits scales. The second section investigates factors that influence peoples' attitudes towards online shopping. A five-level Likert scale was used to determine students' attitudes towards online shopping. A self-administered questionnaire, based on prior literature, was developed and a total of 370 post graduate students were selected by random sampling. The regression analysis demonstrated the determinants of consumers' attitudes towards online shopping. Additionally, utilitarian orientations, convenience, price, wider selection influenced consumers' attitudes towards online shopping.

Key words: Electronic commerce, internet, shopping, consumer attitude.

INTRODUCTION

Today Internet is not only a networking media, but also as a means of transaction for consumers at global market. Internet usage has grown rapidly over the past years and it has become common means for delivering and trading information, services and goods (Albarq, 2006). According to ACNielsen, more than 627 million people in the world have shopped online (ACNielsen, 2007). Forrester (2006) research estimates e-commerce market will reach \$228 billion in 2007, \$258 billion in 2008 and \$288 billion in 2009. By 2010 e-commerce will have accounted for \$316 billion in sales, or 13% of overall retail sales.

A study by International Data Corporation (IDC) Asia Pacific indicates that the future forecast for online shopping in Malaysia looks bright and promising (Louis and Leon, 1999). Malaysia moved towards advanced information, communications based on the growing trend of Internet users in the last three years and multimedia services. Moreover, due to a rapid rise in the number of PCs in Malaysia, as well as growth in the proportion of PCs hooked up to the Internet each year, provides greater op-

portunities for Malaysians to conduct both business and shop online (Legard, 1998).

A mid-2005 survey by the Malaysian Communication and Multimedia Corporation (MCMC), only 9.3% of Internet users had purchased products or services through the Internet during the preceding three months. Taylor Nelson Sofres (2001) found that the penetration of Malaysians shopping online, that is, people who bought or ordered goods and services online in 2000 was 1% of the total younger population in Malaysia. Malaysia internet shoppers are relatively young, highly educated, having higher social status, and command a more favorable financial position.

Mohd Suki et al. (2006) conducted a study among Malaysian students and found that they enjoyed purchasing books/journals/magazines through the internet. ACNielsen also reported that, across the globe, the most popular items purchased on the internet are books 34%, followed by videos/DVDs/games 22%, airline tickets/reservations 21% and clothing/accessories/shoes 20% (ACNielsen, 2005).

Considering that Internet shopping, is still at the early stage of development, little is known about consumers' attitudes towards adopting this new shopping channel

*Corresponding author. E-mail: Laily@putra.upm.edu.my.

and factors that influence their attitude toward (Haque et al., 2006). The consumers' attitude towards online shopping is known as the main factor that affects e-shopping potential (Michieal, 1998). Attitudinal issues are also thought to play a significant role in e-commerce adoption. That means that, through motivation and perception, attitudes are formed and consumers make decisions. Thus, attitudes directly influence decision making (Haque et al., 2006).

Attitudes serve as the bridge between consumers' background characteristics and the consumption that satisfies their needs (Armstrong and Kotler, 2000; Shwu-Ing, 2003). Because attitudes are difficult to change, to understand consumers' attitudes toward online shopping, can help marketing managers predict the online shopping intention and evaluate the future growth of online commerce.

The proliferation of online shopping has stimulated widespread research aimed at attracting and retaining consumers from either a consumer or a technology-oriented view. The two views do not contradict but rather reinforce each other. Because the success of an electronic market largely depends on consumers' willingness to accept it. Due to this, we adopted the consumer-oriented view of online shopping in this study.

The consumer-oriented view focuses on consumers' attitude about online shopping. For example, online consumer behavior has been examined from the perspectives of perceptions of benefits toward online shopping (Bhatnagar and Ghose, 2004a, b; Garbarino and Strabilevitz, 2004; Huang et al., 2004; Liao and Cheung, 2001; Pavlou, 2003). The potential benefits of online shopping for consumers include convenience, various selection, low price, original services, personal attention and easy access to information, among others.

Moreover, shopping orientation (Korgaonkar and Wolin, 1999; Li et al., 1999; Safavi, 2007; Swaminathan et al., 1999). Therefore, it is thus important to recognize that numerous factors precede attitude formation and change. In addition, understanding consumer attitude toward online shopping helps marketing managers to predict the online shopping rate and evaluate the future growth of online commerce (Shwu-Ing, 2003).

The rest of the paper is organized as follows: first examines the relationship between consumer factors and attitude toward online shopping and second, analyzes consumer factors that influence attitude toward online shopping.

Literature review

Factors influencing peoples' online shopping attitude have been researched and documented in the context of traditional consumer literature. A review of empirical studies in this area shows that the theories of Reasoned Action (Fishbein and Ajzen, 1975) and Acceptance Model (Davis, 1989) are among the most popular theories used to explain online shopping behavior (Limayem et al., 2003). Therefore, the theoretical framework of this study

is based on this theories.

Online shopping orientations

Consumers have different personalities, which may influence their perception and how they perceive their online shopping behaviors (Wolfenbarger and Gilly, 2001). Consumers' personalities that lead to different shopping behaviors can be classified in two main orientations, that is, utilitarian and hedonic. According to previous studies, consumers' characteristics and goals have been found to influence their behaviors such as purchasing, revisiting intentions and attitudes toward a website (Shwu-Ing, 2003; Wolfenbarger and Gilly, 2001).

Utilitarian shopping orientations

Consumers who are utilitarian have goal-oriented shopping behaviors. Utilitarian shoppers shop online based on rational necessity which is related to a specific goal (Kim and Shim, 2002). They look for task-oriented, efficient, rational, deliberate online shopping rather than an entertaining experience (Wolfenbarger and Gilly, 2001). Their most important anxiety in online shopping is to purchases in an efficient and timely way to achieve their goals with least amount irritation (Monsuwe et al., 2004).

Convenience orientation mentioned the utilitarian value of shopping, as a task-related, rational, deliberate and efficient activity (Babin et al., 1994). Therefore, shoppers with convenience orientations try to minimize their search cost as much as possible to save time or energy for activities other than shopping. In terms of the effect of utilitarian shopping orientation, Shim et al. (2001) posited that consumers who highly evaluate the utilitarian aspect of shopping will more likely use the Internet for an information source.

Furthermore, Moe (2003) argued that consumers' underlying objectives of visiting a web site will have an effect on their attitude of purchase on the web site. Results from her study also indicated a positive effect of a utilitarian orientation mode on purchase attitude. Based on these arguments, we present the following general hypothesis H1. There is positive relationship between utilitarian orientation and Attitude.

Hedonic shopping orientations

Consumers who are hedonist have experiential shopping behavior. Hedonists not only gather information to shop online but also seek fun, excitement, arousal, joy, festive, escapism, fantasy, adventure, etc. (Monsuwe et al., 2004). These experiential shoppers want to be immersed in the experience rather than to achieve their goals by shopping online (Wolfenbarger and Gilly, 2001) and their perceived experiences also depend on the medium characteristics that induce enjoyable experiences (Soruce et al., 2005).

Hedonic (or experiential) shoppers were found to exist

in the online environment for information gathering purposes such as ongoing hobby-type searches, involvement with a product category, positive sociality and surprise and bargain hunting (Wolfenbarger and Gilly, 2001). They were more attracted to well-designed online shopping sites that were easy-to-navigate and visually appealing. Such Web sites offer great relationship building tools to establish a sense of community for consumers.

The degree of interactivity that a Web site offers is a strong factor in support of establishing this relationship, because experiential shoppers usually find more enjoyment in interactive environments than in pure text environments (Childers et al., 2001). For hedonic shoppers, a retailer can inform and influence their choices, because they do not have a specific goal in mind when visiting an online shopping site.

Generally, when hedonists are satisfied, the possibility of impulse purchases and frequency of visiting the website will increase (Wolfenbarger and Gilly, 2001). Therefore, the design of a website to attract experiential shoppers merits special attention to insure the conversion of shoppers' product navigation into purchases.

Childers et al. (2001) have confirmed that hedonic orientations for online shopping are important predictors of attitudes toward online shopping.

Some research findings have shown hedonic motivations to have powerful influences on shopping behavior in both traditional and online shopping environments (Memon and Kahn, 2002). Thus, for systems that are hedonic in nature, researcher can expect hedonic orientations provide to be significant with attitudes toward online shopping. Based on these arguments, we present the following general hypothesis H2. There is positive relationship between hedonic orientation and attitude.

Online shopping perceived benefit

Perceived benefits are advantageous results derived from attributes. The benefits can be physiological, psychological, sociological or material in nature (Gutman, 1982). Within the online shopping context, the consumers' perceived benefits are the sum of online shopping advantages or satisfactions that meet their needs or wants (Shwu-Ing, 2003).

There are many differences between a physical store and its electronic counterpart (Lohse et al., 2000; Mohd Suki et al., 2006). Most of the previous online shopping research has focused on identifying the attributes of online stores that promote success (Davis, 1989; Liu and Arnett, 2000; Muylle et al., 2004; Shih, 2004). Previous study found that internet shopping benefits was significantly associated with attitude toward online shopping and intentions to shop online (Jarvenpaa and Todd, 1997; Vijayasathy and Jones, 2000).

In addition, Koivumaki (2001) reported a positive relationship between the online shopping benefits and the frequency of purchases made. Findings by Forsythe et al.

(2002) showed a positive and highly significant relationship between perceived benefits of Internet shopping and both frequency of shopping and amount spent online. Previous studies of online shopping have established two categories of benefits; intrinsic and extrinsic. Both are important in customers' selections to patronize the online stores (Liu and Arnett, 2000; Muylle et al., 2004; Shih, 2004).

Extrinsic benefits include features such as wide selection of products, competitive pricing, easy access to information and low search costs. Intrinsic benefits include features such as design and color (Shang et al., 2005). Consumers' shopping benefits may similarly impact shopping behaviors in the virtual environment. Moreover, Shwu-Ing (2003) found consumers' benefits perception comprised convenience, selections freedom, information abundance, homepage design and company name familiarity has a significant relationship with attitude toward online shopping.

Consumers' shop on the Internet because they find benefits over the Internet. Consumers usually compare the perceived benefits between shopping channels. The main motivation to shop online is that it is more convenient than to shop in-store. Convenience is the most prominent factor that motivates consumers to shop through the internet (Figure 1). Besides that, ease of search, good price/deal, good selection/availability, fun, impulse, customer service, and wider selection of retailers are additional reasons why people shop online (Delhagen, 1997; Khatibi et al., 2006). Based on these arguments, we present the following general hypothesis H3. There is positive relationship between the perceived benefits and the attitude.

Attitude toward online shopping

Attitude towards a behavior refer to "the degree to which a person has favorable or unfavorable evaluation of the behavior of the question" (Grandom and Mykytyn, 2004). Attitudes toward online shopping are defined as a consumer's positive or negative feelings related to accomplishing the purchasing behavior on the internet (Chiu et al., 2005; Schlosser, 2003a, b). Buying trends and internet adoption indications have been seen as the overall electronic commerce value in Malaysia rising from US\$18 million in 1998 to US\$87.3 million in 1999 (Mohd Suki et al., 2006).

In order to investigate consumer attitudes, we need to know what characteristics of consumers typically online shopping is and what their attitude in online shopping is. In simple terms, this means that there is no point having an excellent product online if the types of consumers who would buy it are unlikely to be online. In a situation of appropriate e-shopping environment if the product characteristics have electronic appeal and the consumers are familiar and feel confident in buying, e-shopping potential

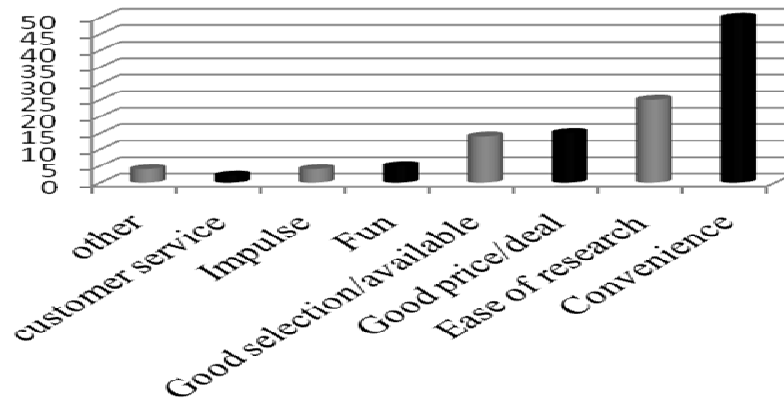


Figure 1. Reasons why people shop online. Source: Delhagen, 1997.

may still suffer from other setbacks.

In a greater sense, this may be caused by consumers' preference to use traditional shopping modes rather than shopping online. Alternatively, they may switch from ever visiting the store and their shifting tendency may ultimately reduce the profit margin of the physical stores. Therefore, evaluating attitudes of target consumers towards online shopping is critical. Consequently, the group with the higher attitude score should be the target market (Shwu-Ing, 2003).

According to the study by Armstrong and Kotler, (2000), a person's shopping choices are influenced by four major psychological factors: motivation, perception, learning and beliefs and attitude. That means that, through motivation and perception, attitudes are formed and consumers make decisions. Attitudes serve as the bridge between consumers' background characteristics and the consumption that satisfies their needs.

Therefore, it is thus important to recognize that numerous factors precede attitude formation and change. Consumers' characteristics such as personality nature, online shopping benefits and perceptions have also been found to influence consumers' online shopping behaviors and online shopping rate (Cheung and Lee, 2003; Goldsmith and Flynn, 2004; Shwu-Ing, 2003; Wolfinbarger and Gilly, 2001). Therefore, understanding consumer attitudes help marketing managers to predict the online shopping rate and evaluate the future growth of online commerce.

METHODOLOGY

Conceptual foundation and framework

The classic theory of reasoned action (TRA) (Ajzen and Fishbein, 1980) and TAM have been extensively adopted for explaining and predicting user behavior in an online shopping environment (Pavlou, 2003). TAM posits that actual system use is determined by users' behavioral intention to use, which is in turn influenced by their attitude toward usage. Attitude is directly affected by users' belief about a system, which consist of perceived usefulness and ease of use (Davis, 1986).

This belief-affect-intention-behavior causality has proven valid in the online shopping environment (Chen et al., 2002; Limayem et al., 2000). Researcher developed TAM to predict and to explain consumer acceptance of online shopping by extending the belief-attitude-intention-behavior relationship in TAM from the following perspectives:

- (i) Perceived usefulness and perceived enjoyment replaced by perceived outcome to cover perceived benefits of online shopping.
- (ii) Shopping orientations were added as antecedents of online shopping attitude. Shopping orientations (Lee et al., 2006) is identified from traditional retailing and marketing literature. The research model is shown at Figure 2.

The researchers applied the motivation, perception and personality factors in the context of attitude behavior models such as the Theory of Reasoned Action (Ajzen and Fishbein, 1980) and the Technology Acceptance Model (TAM) (Davis et al, 1989). In construction/development of TAM, Perceived usefulness and perceived ease of use can be instrumental in achieving valued outcomes, whereas perceived enjoyment can occur from the technology usage itself without any other reward. Perceived usefulness and perceived ease of use reflect the utilitarian aspects of online shopping and perceived enjoyment reflects the hedonic aspects of online shopping.

Therefore, in TAM, both utilitarian and hedonic aspects can be considered. Online shopping offers both hedonic and utilitarian aspects (Childers et al., 2001). Past research showing that perceived usefulness and perceived ease of use reflect utilitarian aspects of online shopping, whereas perceived enjoyment reflects hedonic aspects of online shopping (Monuwe et al., 2004). Therefore, in TAM, both utilitarian and hedonic aspects can be considered and also both utilitarian and hedonic aspects of consumer experience influence consumer attitude toward using a new technology or system.

The TRA and TAM claim that beliefs such as online shopping perceived benefits are completely mediated by attitude. The TRA assert that beliefs such as perceived benefits are completely mediated by attitude. Verhoef and Langerak (2001) also employed the TRA in a study of 415 Dutch internet shoppers and found that outcome beliefs had a significant influence on the attitude toward online shopping.

The perceived benefits of online shopping in relation to traditional store shopping are one of the driving forces in the adoption. Perceived benefits were also found to significantly influence attitude and intention to shop online (Limayem et al., 2000). The empirical findings supported the premise that beliefs in online shopping attri-

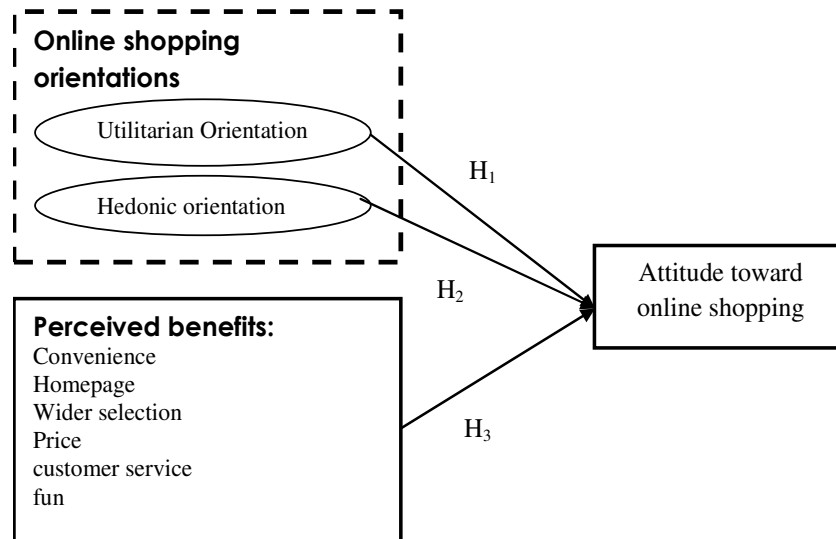


Figure 2. Research model.

butes were positively related to attitudes to online shopping.

Sample

Since university students have been found to be frequent users of technology and likely to buy products online and activities participate in online purchasing, as a result, postgraduate students were chosen as the target sample during the first semester of 2008. It must be mentioned; the majorities of postgraduate students are employed and have different online cards to purchase products through the internet. In addition, today's university students represent a significant part of the online buying consumers and a long-term potential market (Bruin and Lawrence, 2000).

A self-administered questionnaire was distributed to 500 students randomly in the selected faculties and institutes. All the selected respondents were enrolled in their respective faculties or institutes doing broad range of courses. Among 500 questionnaires that were distributed, approximately 405 were returned and only 370 fully answered questionnaires from the respondents were utilized.

The respondents' profile was categorized into groups namely; gender, age, income, education level and race. Table 1 illustrates this pattern. Frequency distribution profile of respondents showed that 64.3% of the respondents are female while 35.7% of the remaining respondents are male. The majority of the respondents 43.8% fall in the age range between 20 to 25 years of age and approximately 1.1% was above 40 years old. Population studied comprised Masters and PhD students, and post-doctoral researchers with frequency distributions of 78, 20 and 2.0% respectively.

Respondents having a monthly income ranging from RM 1000 to 2000 comprised the majority income group 37.3% followed by those with a monthly income within the range of RM 2000 to 3000 (9%). From the ethnic point of view, Malays comprised 44% of the study sample while Chinese and Indians comprised 40 and 13% respectively. Goods mostly purchased by students are "Computer/Electronics/Software" and "book/DVD/CD". Only a small proportion of purchases were "Toys".

Data analysis

The first objective was to determine relationship between utilitarian orientation, hedonic orientation and perceived benefits with attitude

toward online shopping. In order to test the three hypotheses, Pearson correlation was proposed. Moreover, the second objective of the study, was to determine the proportion of the variance in consumer's attitude toward online shopping that can be predicted by shopping orientations (utilitarian and hedonic) and consumer perceived benefits (convenience, homepage, price, wider selection, customer service and fun) and relative significant of each, the independent variables in explaining the dependent variable.

Multiple regressions were conducted to investigate second objective. This study employs user attitude toward online shopping as dependent variables and online shopping orientation and online shopping perceived benefits as independent variables.

RESULT AND DISCUSSION

To determine relationship on attitude toward online shopping

H1: There is positive relationship between utilitarian orientation and attitude

The relationship between attitude toward online shopping and utilitarian orientation was investigated using Pearson product-moment correlation coefficients. Table 2 illustrates this pattern. From the results, the strongest linear relationship was found to exist between attitude toward online shopping and utilitarian orientation ($r = .596$, $P\text{-value} = 0.000$). Since the average score is $p < 0.01$, hypothesis 1 is accepted.

This finding was supported by theory acceptance model (TAM) that utilitarian orientation aspect of consumer experience influence consumer attitude toward using a new technology or system (Lee et al., 2006). Since utilitarian orientation of online shopping reflects usefulness and ease of use aspects (Monzuwe et al., 2004).

Moreover, Li et al. (2002) suggested that future research investigate the effects of utilitarian shopping orientations on online shopping adoption. The present study

Table 1. Demographic characteristics of respondents.

Variables and categories	F (N = 370)	%
Gender		
Male	132	35.7
Female	238	64.3
Age (Years)		
20-25years	162	43.8
25-30	108	29.2
30-35	61	16.5
35-40	35	9.5
More than 40 years	4	1.1
Level of education		
Master	290	78.4
PhD	72	19.5
Post-doctoral	8	2.2
Monthly Income		
Under RM1000	73	19.7
RM 1001-2000	138	37.3
RM 2001-3000	36	9.7
RM 3001-4000	82	22.2
Over RM 4000	41	11.1
Ethnicity		
Malay	165	44.6
Chinese	150	40.5
Indian	49	13.2
Others	6	1.6
Product purchase		
Food and beverage	29	5.35
Clothing/accessory/shoes	99	18.26
Toy	23	4.24
Computer/electronics/software	200	36.9
Book/DVD/CD	169	31.18
Others	22	4.05

Table 2. Pearson’s correlation coefficients between shopping orientations and perceived benefits with attitude.

Variables	Atti	HO	UO	PB
Atti (Y)	1			
HO	0.492**	1		
UO	0.596**	0.067	1	
PB	0.734**	0.039	0.021	1

Atti = Attitude, UO = Utilitarian Orientation, HO = Hedonic Orientation, PB = Perceived Benefits; Notes: ** is significant at the 0.01 level (1-tailed) and * is at the 0.05 level (1 - d

H2: There is positive relation between hedonic orientation and attitude

The relationship between attitude toward online shopping and hedonic orientation was investigated using Pearson product-moment correlation coefficients. As indicated in Table 2, the strongest linear relationship was found to exist between attitude toward online shopping and perceived online shopping benefits ($r = 0.492$, P-value = 0.000). Since the average score is $p < 0.01$, hypothesis 2 is accepted.

This finding was supported by the theory acceptance model (TAM) that hedonic orientation of online shopping reflects enjoyment aspect because hedonists seek fun, fantasy, and enjoyable experiences (Monsuwe et al., 2004). Thus, within TAM, hedonic orientation appears to influence consumer attitude toward online shopping

answers this call: utilitarian shopping orientation as aspects of usefulness and ease of use had a significant positive relationship with attitude toward online shopping.

(Davis et al., 1989). Moreover, Moon and Kim (2001) indicated that playfulness as hedonic aspect significantly affects attitude and behavioral intention toward use of the World Wide Web. Hedonic value had the positive relationship with attitude toward online retailers, which is in line with Childers et al.'s (2001) findings. They tend to pursue hedonic experience by creating positive emotional arousal while purchasing and consuming products (Babin et al., 1994). The present study answers this call: hedonic shopping orientation as aspect of enjoyment had a significant positive relationship with attitude toward online shopping.

H3: There is positive relationship between the perceived benefits and the attitude

The relationship between attitude toward online shopping and perceived online shopping benefits was investigated using Pearson product-moment correlation coefficients. As depicted in Table 2, the strongest linear relationship was found to exist between attitude toward online shopping and perceived online shopping benefits ($r = 0.734$, $P\text{-value} = 0.000$).

The positive correlation coefficient of 0.73 indicates that as the score for attitude toward online shopping increases so do the rating for perceived benefits. Therefore, it showed that consumers' perceived benefits are highly and significantly correlated with attitude toward online shopping. Since the average score is $p < 0.01$, hypothesis 3 is accepted.

Therefore, Pearson correlation proved that there is a significant relationship between attitude and benefits. It is consistent with the earlier study of (Jarvenpaa and Todd, 1997; Vijayasarathy and Jones, 2000) who found that Intent shopping benefits was significantly associated with attitude toward online shopping and intentions to shop online. Moreover, Shwu-Ing (2003) found consumers' benefits perception comprised convenience, selections freedom, information abundance, homepage design and company name familiarity has a significant relationship with attitude toward online shopping.

To predict consumers' attitude toward online shopping

The result of multiple regression analysis for attitude toward online shopping and factors of online shopping orientation, online shopping perceived benefits showed significant positive correlation for purchase convenience, price, wider selection and utilitarian orientation. $R^2 = 0.66$ for relationship between convenience, price, wider selection, utilitarian orientation, and attitude, implies that the predictors explained 66 % of the variance/variation in the attitude toward online shopping. The value of test statistic indicates a statistically significant relationship between attitude toward online shopping and purchase convenience, price, wider selection, utilita-

rian orientation ($p < 0.05$, $p < 0.01$). Table 3 illustrates estimates of the model coefficients. The result is consistent with the findings that has been shown in the literature (Forsythe and Shi, 2003), consumers have generally revealed that their main motivation to use the Internet to shop that it is more convenient to shop online than in-store, wider selection of retailers and comparing price among retailer (Burke, 2002; Chiang and Dholakia, 2003; Rohm and Swaminathan, 2004). As a result, convenience and wider selection and price are the main determinant of attitude toward online shopping.

In terms of findings convenience is the most common factor that motivates consumers to shop online through the internet which is in line with (Chen and Chang, 2003; Fenech and O'Cass, 2001; Jarvenpaa and Todd, 1997; Karayanni, 2003; Kim and Kim, 2004; McKinney, 2004) findings.

Moreover, researchers have mentioned that time efficiency and convenience (24-hour availability of online storefront and accessibility from almost any location) have been found to be significant explanatory factors for Internet shopping adoption (Karayanni, 2003) and also provides consumers with a powerful alternative channel for making purchases.

The second dominant factor that motivates online consumers to purchase goods and services over the Internet is the good selection and wider availability of product choices offered by online retailers. Online retailers are able to provide a wide range and assortments of products as compared to traditional channels simply because there is no physical space limit on the number of products that online retailers can display on their online storefronts. Furthermore, the number of online stores that consumers are able to visit online compared to far physical stores, thus, exceeds the number of providing them with a wider selection of products to choose from (Harn et al., 2006).

The third dominant factor that influences consumers to shop online through the internet is good price offered by online retailers.

The finding is consistent with the research done by Ghani et al. (2001) on online purchasing in general, the study identified price as the major factors influencing online purchase behavior. Online retailers are able to offer cheaper price because of the shrinking cost of information processing, lower operating cost and global reach provided by the internet (Rowley, 2000).

In addition, Strauss and Frost (1999) also identified the ease of comparing price as one of the most important motivator to online shopping. The simplest reason for consumers to purchase online is to save money from the cheaper price offered by online retailers compared to traditional channel.

Finally, in terms of shopping orientation, utilitarian orientation seems to have an effect on attitude toward online shopping. This result is consistent with that reported by Wolfinger and Gilly (2001) that 71% of shoppers were goal-oriented and had previously planned their most recent online purchase and 29% of shoppers were experi-

Table 3. Estimates of coefficients for the model.

Attitude dimension (Y)	B (unstandardized coefficients)	Std. error	Beta (standardized coefficients)	t	p-value
Constant	-5.513	0.750		-7.349	0.000
Convenience	0.800	0.050	0.437	16.121	0.000
Price	0.961	0.097	0.206	9.948	0.000
Wider selection	1.154	0.115	0.243	9.768	0.000
Utilitarian	0.273	0.053	0.115	5.196	0.000
homepage	-0.057	0.046	-0.019	-1.251	0.212
Hedonic	-0.050	0.028	-0.037	-1.780	0.076
Customer service	0.052	0.034	0.050	1.234	0.160
Fun	0.125	0.045	0.063	2.799	0.095

Notes: $R = 0.682$; $R^2 = 0.664$; Adj. $R^2 = 0.643$.

ential and had been browsing when they made a purchase. Therefore, online shopping is more likely to be goal-oriented rather than experiential.

Conclusion

This paper proposes a framework for enhancing our understanding of consumers' attitudes toward online shopping. The findings suggest that utilitarian orientations, convenience, price and wider selection are an important determinant of consumer's attitude toward online shopping. Moreover they have a significant positive impact on consumers' attitude toward online shopping.

Consumers' personality tendency was shown to affect their attitude toward online shopping. Findings was showed utilitarian consumers had higher affect on attitude while hedonic consumers had no significant effect with attitude toward online shopping.

Therefore, finding from this study confirmed that shoppers are goal-orientation and have previously been planning their most recent online purchase. Utilitarian shoppers may be inclined to shop through internet in order to increase shopping productivity. On the other hand, consumers' tendency when doing online shopping would be more likely to be utilitarian than hedonic. Therefore e-retailers, which focus on utilitarian customers, should emphasize more user friendly function in order to provide utilitarian customers a way to find what they need efficiently.

Moreover, the next aspect of the study is online shopping perceived benefits. The findings of the study also implies that consumers are looking for more convenience (time and money saving), cheaper prices and wider selection when they shop online, making them as the dominant factors that motivates online consumers in Malaysia to shop online. Consumers who value the convenience, prices and wider selection of Internet shopping tend to purchase more online and more often.

A practical assessment of these dimensions revealed

That individuals who purchase online, perceived significantly greater benefit in terms of convenience and price. Clearly, shopping motivations explain consumer's adoption of the internet as a shopping medium and consequently contribute to innovation adoption research. Therefore, online retailers need to ensure that the online shopping process through their websites and made as easy, simple and convenient for consumers to shop online.

Moreover, online retailers need to provide competitive price for products in order to attract online shoppers to their websites and encourage them to make a purchase decision. However, this will lead to intense price competition which is expected to increase even further with the availability of intelligent search engines and comparing shopping agents that enable online consumers to easily compare product offerings from various online retailers. Thus, in order to avoid intense price competition, online retailers need to find other ways to differentiate themselves from their competitors.

Therefore, the finding suggests that online retailers need to provide more connivance and competitive price and more variety products in order to attract online shoppers to their websites and encourage them to make a purchase decision. However, this will lead to competition among retailers and the level of competition is expected to increase even further with the availability of intelligent search engines and comparing shopping agents that enable consumer to easily obtain product information and compare product offerings from various online retailers.

Limitations and future direction

It is necessary to recognize the limitations of the current study. Firstly, since the survey was conducted among a group of postgraduate students from Public University, the results should be interpreted with caution, particularly with respect to the generalization of research findings of Malaysian consumers as a whole. Next, the sample size

itself is relatively small. To accurately evaluate Malaysian consumers' perceptions of online shopping, a larger sample size is desirable.

Future research needs to focus on a larger cross section of Internet users and more diversified random samples to verify the findings of the current study. Moreover, to further studies clarity of the factors influence on attitude toward online shopping, other behavioral model could be used. Future investigation could also examine the causal relationships between factors and how consumers' attitude overall online shopping by employing a structural equation modeling technique. In addition, the final research model accounted for only a portion of the variance, $R^2 = .66$, in the dependent variable (attitude toward online shopping).

Certainly, there are other factors that influenced attitude toward online shopping, which have not been included in this study. Enhancement of the model by addition of other relevant variables could produce a model that has more clarifying power. Therefore, future research needs to select the other variables by means of other essential elements such as system, product/service and vendor-related factors that influence consumers' e-shopping behavior.

REFERENCES

- ACNielsen. (2005). Global consumers attitudes towards online shopping', Available at: http://www2.acnielsen.com/reports/document/2005_cc_onlineshopping.pdf. Accessed on 28 January 2006.
- ACNielsen (2007). Seek and You Shall Buy. Entertainment and Travel. viewed 18 January 2007< <http://www2acnielsen.com/news/20051019.shtml>>.
- Ajzen I, Fishbein M (1980). Understanding Attitude and Predicting Social Behavior. New Jersey: Prentice-Hall.
- Albarq AN (2006). Intention to Shop Online Among University Students In Jordan. Universiti Utara Malaysia.
- Armstrong G, Kotler P (2000). Marketing. Paper presented at the 5th ed., Prentice-Hall, Englewood Cliffs. pp.153-4.
- Babin BJ, Darden WR, Griffin M (1994). Work and/or fun: measuring hedonic and utilitarian shopping value. *J. Consumer Res.* 20, 644-456.
- Bhatnagar A, Ghose S (2004a). A Latent Class Segmentation Analysis of E-Shoppers. *J. Bus. Res.* 57:58-767.
- Bhatnagar A, Ghose S (2004b). Segmenting Consumers Based on the Benefits and Risks of Internet Shopping. *J. Bus. Res.* 57: 1352-1360.
- Bruin M, Lawrence F (2000). Differences in spending habits and credit use of college students. *J. Consum. Aff.* 34(1): 113-133.
- Burke RR (2002). Technology and customer interface: What consumers want in the physical and virtual store? *Academy of Marketing Science J.* 30(4): 411-432.
- Chen SJ, Chang TZ (2003). A descriptive model of online shopping process: Soe empirical results. *Int. J. service Industry Manag.* 14: 556-569.
- Cheung CMK, Lee MKO (2003). An Integrative Model of Consumer Trust in Internet Shopping". Paper presented at the European Conference on Information Systems (ECIS), Naples, Italy.
- Chiang KP, Dholakia RR (2003). Factors Driving Consumer Intention to Shop Online: An Empirical Investigation. *J. Consumer Psychol.* 13(1-2): 177-183.
- Childers TL, Carr CC, Peck J, Carson S (2001). Hedonic and Utilitarian motivations for online retail shopping behavior. *J. Retailing* 77: 511-535.
- Chiu YB, Lin CP, Tang LL (2005). Gender differs: assessing a model of online purchase intentions in e-tail service. *Int. J. service Industry Manag.* 16(5).
- Davis FD (1989). Percived Usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quart.* 13: 319-340.
- Davis FD, Bagozzi RP, Warshaw PR (1989). User acceptance of computer technology: a comparison of two theoretical models. *Manag. Sci.* 35(8): 982-1003.
- Delhagen (1997). Retailers revs up. *Forester Research* p. 4.
- Fenech T, AOC (2001). Internet users' adoption of web retailing: User and product dimensions. *J. Prod. Brand Manag.* 10, 361-381.
- Fishbein M, Ajzen I (1975). Belief, Attitude, Intention and Behavior: An Introduction to theory and Research. Reading, Massachusetts: Addison-Wesley.
- Forrester (2006). 'Online Retail: Strong, Broad Growth', viewed 18 January 2007. <<http://www.forester.com/Research/Document/Excerpt/0,7211,39915,00.html>>.
- Forsythe SM, Shi B (2003). Consumer patronage and risk perceptions in Internet shopping. *J. Bus. Res.* 56: 867-875.
- Forsythe S, Petee T, Kim JO (2002). Modeling Consumer Behavior in On-line Environments: Scale Development: National Textile Center. Annual Report.
- Garbarino E, Strabilevitz M (2004). Gender Differences in the Perceived Risk of Buying Online and the Effects of Receiving a Site Recommendation. *J. Bus. Res.* 57: 768-775.
- George JF (2002). Influence on the intent to make Intent to make Internet purchases. *Internet Res.* 12(2): 165-180.
- Goldsmith RE, Flynn LR (2004). Psychological and behavioural drivers of online clothing purchase. *J. Fashion Mkt. Manag.* 8(1): 84-95.
- Grandom E, Mykytyn P (2004). Theory-based Instrumentation to Measure the Intention to use Electronic Commerce in Small and Medium Sized Businesses. *J. Comp. Inf. Systems* 44(3), 44-57.
- Gutman J (1982). A means-end chain model based on consumer categorization processes. *J. Marketing* 46: 60-72.
- Haque A, Sadeghzadeh J, Khatibi A (2006). Identifying Potentiality Online Sales In Malaysia: A Study On Customer Relationships Online Shopping. *J. Appl. Bus. Res.* 22(4): 119-130.
- Harn ACP, Khatibi A, Ismail HB (2006). E-commerce: A Study on Online Shopping in Malaysia. *J. Social Sci.* 13(3): 231-242.
- Huang WY, Schrank H, Dubinsky AJ (2004). Effect of Brand Name on Consumers' Risk Perceptions of Online Shopping. *J. Consumer Behavior* 4(1): 40-50.
- Jarvenpaa SL, Todd PA (1997). Consumer reactions to electronic shopping on the World Wide Web. *Int. J. Electronic Commerce* 1(2): 59-88.
- Karayanni DA (2003). Web-shoppers and non-shoppers: Compatibility, relative advantage and demographics. *Euro. J. Bus. Rev.* 15(3), 141-152.
- Khatibi A, Haque A, Karim K (2006). E-Commerce: A study on Internet Shopping in Malaysia. *J. Appl. Sci.* 3(6): 696-705.
- Kim EY, Kim YK (2004). Predicting online purchases intentions for clothing products. *European J. Marketing* 38: 883-897.
- Kim YM, Shim KY (2002). The influence of Internet shopping mall characteristics and user traits on purchase intent. *Irish Marketing Rev.* 15(2): 25-34.
- Korgaonkar PK, Wolin LD (1999). A multivariate analysis of web usage. *J. advertising Research* 39(2): 53-68.
- Lee HH, Fiore AM, Kim J (2006). The role of the technology acceptance model in explaining effects of image interactivity technology on consumer responses. *Int. J. Retail Distribution Manag.* 34(8): 621-644.
- Legard D (1998). E-commerce boom ahead for Malaysia. . Paper presented at the Computer World Hong Kong, [Http://](http://).
- Li H, Daugherty T, Biocca F (2002). Impact of 3-D advertising on product knowledge, brand attitude and purchase intention: the mediating role of presence. *J. Advertising Res.* 31(3): 43-57.
- Liao Z, Cheung MT (2001). Internet-based e-shopping and consumer attitudes: An empirical study. *Inf. Manag.* 38(5): 299-306.
- Limayem M, Cheung MC, Chan WWG (2003). a meta- analysis of online shopping consumer behavior: empirical research. University of Hong Kong.
- Limayem M, Khalifa M, Frini A (2000). What makes consumers buy from internet: a longitudinal study of online shopping, *IEEE* 30(4).
- Liu C, Arnett KP (2000). Exploring the factors associated with Web site success in the context of electronic commerce. *Inf. Manag.* 38: 23-33.

- Lohse GL, Bellman S, Johnson EJ (2000). Consumer buying behavior on the Internet. *J. Interactive Marketing*, 14(1), 15-29.
- Louis C, Leon. ML (1999). *Computime: Evolving with E-commerce*. New Straits Times, Weekly, p.26.
- McKinney L (2004). Creating a satisfying internet shopping experience via atmospheric variables. *International J. Consumer Stu.* 28: 268-283.
- Menon S, Kahn B (2002). Cross-category effects of induced arousal and pleasure on the internet shopping experience. *J. Bus. Res.* 78:31-40.
- Michieal KSd (1998). *E-shock the electronic shopping revolution: Strategies for retailers and manufactures*. London, Mac Millan Business.
- Moe WW (2003). Buying, Searching, or Browsing: Differentiating between Online Shoppers Using In-Store Navigational Clickstream. *J. Consum. Psychol.* 13.
- Mohd Suki N, Mohd Ismail A, Thyagarajan V, Mohd Suki (2006). A study on the effect of normative belief on online shopping innovativeness: structural equation modeling analysis Paper presented at the The Brunei, Indonesia, Malaysia and Philippines – East Asean Growth Area (BIMP-EAGA) Conference 2006, June 21-23.
- Monswue TP, Dellaert BGC, de Ruyter KR (2004). What drives consumers to shop online? A literature review. *Int. J. Services industry Manag.* 15(1): 102-121.
- Muyllle S, Moenaert P, Despontin M (2004). The conceptualization and empirical validation of web site user satisfaction. *Inf. Manag.* 41: 543-560.
- Pavlou PA (2003). Consumer Acceptance of Electronic Commerce: Integrating Trust and Risk with the Technology Acceptance Model". *International J. Electronic Commerce*, 7(3), 101-134.
- Rohm AJ, Swaminathan V (2004). A Typology of Online Shoppers Based on Shopping Motivations. *J. Bus. Res.* 57(7), 748-757.
- Rowley I (2000). Product search in e-shopping: A review and resaerch propositions. *J. consumer Marketing* 17, 20-35.
- Safavi MA (2007). Predicting Important Factors of Customer Behavior Shopping in Iran. Master Thesis, Marketing and e-commerce, Tarbiat Modares University faculty of engineering, Lulea university of technology.
- Schlosser AE (2003). Experiencing products in the virtual world-the role of goal and imagery in influencing attitudes. *J. Consumer Res.* 30(2): 184-198.
- Schlosser AE (2003b). Experiencing products in the virtual world: the role of goal and imagery in influencing attitudes versus purchase intentions. *J. Consumer Res.* 30(2): 184-198.
- Shang RA, Chen YC, Shen L (2005). Extrinsic versus intrinsic motivation for consumer to shop online. *Inf. Manag.* 42: 410-413.
- Shih HP (2004). An empirical study on predicting user acceptance of e-shopping on the web. *Inf. Manag.* 41:351-368.
- Shim SMA, Eastlick s.II PW (2001). An online pre-purchase intentions model: The role of intention to search. *J. Retailing* 77: 397-416.
- Shwu-Ing W (2003). The relationship between consumer characteristics and attitude toward online shopping. *Manag. Intelligence Planing* 21(1):37-44.
- Strauss J, Frost R (1999). *E-Marketing ,2nd Edition*, Upper Saddle River, New Jersey: Prentice Hall.
- Swaminathan V, Lepkowska-White E, Rao BP (1999). Browsers or buyers in cyberspace? An investigation of factors influencing electronic exchange. (Retrieved December 22, 2004 from <http://www.ascusc.org/jcmc/vol5/issue2/swaminathan.htm>). *J. Comp .Mediated Communication* 5(2)
- The Malaysian Communications and Multimedia Commission (MCMC) (2006), Overview of ecommerce in Malaysia, viewed 18 January 2007<http://globaltechforum.eiu.com/index.asp?layout=printer_friendly&doc_id=8706>
- Vijayarathy LR, Jones JM (2000). Print and Internet catalog shopping: Assessing attitudes and intentions. *Internet Res.* 10(3):191-202.
- Wolfenbarger M, Gilly MC (2001). Shopping Online for Freedom, Control, and Fun. *California Manag. Rev.* 43(2): 34-55.