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Antecedents and consequences of e-shopping: an integrated model

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Abstract

Purpose – The purpose of this paper is to present an integrated information systems–consumer behavior (IS-CB) model for e-shopping to examine the antecedents and consequences of e-shopping and usage behavior.

Design/methodology/approach – The study tests 320 usable responses collected from e-shoppers against the integrated model using structural equation modeling.

Findings – The main research results support the use of antecedents of e-shopping acceptance and usage by drawing from unified knowledge of IS and CB underpinnings. The findings show the significance of perceived value, social factors, perceived ease of use, perceived usefulness, entertainment gratification (EG), web irritation (WI), emotional state, and web atmospherics (WA) in the process of e-shopping.

Practical implications – The results suggest that e-retailers should establish positive perceived value in consumers' minds and uphold trust to foster favorable attitudes and intentions toward e-shopping and actual e-shopping purchase. Proper and good construction of WA can lead to useful and easy-to-use e-shopping sites, EG, and minimization of WI. Capitalizing on online social influences also would be an advantage.

Originality/value – This paper bridges a gap in the studies of IS and CB, contributing to a more comprehensive understanding of the influence of IS and CB antecedents on acceptance and usage of e-shopping.

Keywords Consumer behaviour, e-commerce

Paper type Research paper

1. Introduction

As a relatively new medium for business, e-shopping has changed the way consumers purchase products and services. E-shopping has empowered consumers with widespread selections, plenty of product information, and no temporal and spatial limitations (Wen *et al.*, 2011), and many consumers now purchase products and/or services from e-shopping sites instead of going to a physical store.

With the increasing importance of online sales and the growing number of shoppers purchasing online, it is imperative for marketers to develop a better understanding of e-shoppers (Constantinides, 2004; George, 2002, 2004; Jeong *et al.*, 2009). To develop this understanding, Zhou *et al.* (2007) argue that both academics and online retailers must understand the antecedents of consumer acceptance of e-shopping. Although a substantial body of literature has examined e-shopping issues, in terms of the factors that influence e-shopping, many scholars in information systems (IS) and consumer behavior (CB) concede that significant gaps still remain in the understanding of e-shopping (Dennis *et al.*, 2009; Hand *et al.*, 2009; Hansen and Jensen, 2009; Kim and Forsythe, 2007; Lim and Ting, 2012a, b). Current literature is fragmented, either with a

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one-sided focus on IS antecedents or a sole concentration on CB antecedents to e-shopping. Arguably, in-depth research on the empirical evidence of a model that can explain the IS and CB antecedents in the process of e-shopping usage is scarce. In addition, Ha *et al.* (2010) and Wen *et al.* (2011) both call for future work on consumers' continued usage of e-shopping sites. From a marketing perspective, the cost to retain a customer is much less than the cost to obtain a new customer, highlighting the importance of understanding how to increase customers' continued use of an e-shopping site. When taken separately, each perspective offers only a partial analysis of the issues involved – the former focusing only on the antecedents to e-shopping and the latter focusing only on the consequences of e-shopping.

Accordingly, this study attempts to fill this gap by conducting an analysis of the literature and presenting a unified model that explains e-shopping founded on sound theoretical underpinnings. This study synthesizes the findings of state-of-the-art research into a reference model called the "integrated IS-CB model" for e-shopping to provide a holistic view of consumer e-shopping behavior. More specifically, this work extends the reference model Dennis *et al.* (2009) propose by solidifying the underpinnings of their theoretical model through the lens of theory of reasoned action (TRA) (a CB viewpoint), technology acceptance model (TAM) (an IS viewpoint), and uses and gratifications theory (UandG) (an IS viewpoint). The study also includes recent research findings that verify the ability of perceived value (Chu and Lu, 2007; Korgaonkar *et al.*, 2006), trust (Lee *et al.*, 2011; Papadopoulou *et al.*, 2001; Roy *et al.*, 2001), e-shopping experience (Constantinides *et al.*, 2010; Hsiao *et al.*, 2012), social factors (Lim and Ting, 2010; Ramayah *et al.*, 2009; Weisberg *et al.*, 2011), emotional state (ES) (Chen *et al.*, 2013; Penz and Hogg, 2011), and web atmospherics (WA) (Lim, 2013b; Manganari *et al.*, 2011) in helping gain e-shopping acceptance. Furthermore, this study captures actual e-shopping purchases rather than asking respondents to stimulate the experience, thereby overcoming the shortcoming of stimulated responses in prior research. In addition, unlike other e-commerce studies, which include consumers with low propensity to e-shop (e.g. Rohm and Swaminathan, 2004), web browsers (e.g. Celik and Yilmaz, 2011), and students (e.g. Dennis *et al.*, 2010; Vijayasarathy and Jones, 2000) in their research sample, the present study targets regular e-shoppers (i.e. average of at least two e-purchases per month over the last six months) at an actual e-shopping web site as an appropriate sample of actual e-shoppers. Thus, the primary aim of this study is to develop an integrated model of consumer e-shopping behavior, drawing from both viewpoints. The study's secondary research objective is to document empirically the significance of the proposed integrated IS-CB model for e-shopping using a validated sample of regular e-shoppers at an e-shopping mall. The study should be highly valuable to both practitioners and scholars because, even in the current post-recession period, e-shopping volumes around the world are continuing with fast-paced, double-digit growth, whereas traditional shopping languishes at a much slower pace of growth (Deloitte, 2011). Moreover, a holistic customer-oriented viewpoint lends the integrated model a unique edge and focus that facilitate the organization of related literature. Both integrating IS and CB perspectives and testing the integrated model empirically provide more coherence by advancing understanding of the underlying constructs and their linkages to online CB. From a managerial perspective, uncovering the importance of antecedents and consequences as triggers for consumers to start (or stop) e-shopping enables e-retailers to target behavioral change attempts and helps them take more appropriate, proactive steps to improve retention rates. Although complete coverage of all potential

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factors and issues is not feasible, this study attempts to include as many empirical findings about the influential IS-CB factors in e-shopping acceptance as possible.

The remainder of this study proceeds as follows: the study develops the proposed model in two stages. The first stage draws from existing CB literature to present well-known factors and the process of shopping and to form the core of the proposed model. The second stage presents an integrated framework that introduces factors from IS underpinnings and subsequently examines the interrelationships between the IS-CB factors and their influence on the e-shopping process. The study then presents the methodology and the results of the empirical analyses. This study tests usable sample data collected from regular e-shoppers in Malaysia against the model using structural equation modeling (SEM). Finally, the study presents concluding remarks and proposes relevant recommendations for practitioners and researchers.

2. Theoretical framework and research hypothesis

2.1 The central model

The foundation in developing an integrated framework for e-shopping is underpinned by the TRA. The TRA is a widely studied model from social psychology that is concerned with the determinants of consciously intended behaviors (Fishbein and Ajzen, 1975). This theoretical lens was chosen because of its acceptance as a useful theory in the study of shopping behavior. The model, which highlights the links among attitudes, subjective norms, intentions, and behavior, not only seems to predict intentions and behavior well but also provides a relatively simple basis for identifying where and how to target shoppers' behavioral change attempts (Ng and Paladino, 2009). Typically, the TRA suggests that a person's performance of a specified behavior is determined by his or her behavioral intention to perform that behavior, and this behavioral intention is jointly determined by his or her attitudes and subjective norms (Ajzen and Fishbein, 1980).

Use of the TRA herein follows the flow of many central models in the literature, such as those of Connolly and Bannister (2006), Dennis *et al.* (2009), and Ng and Paladino (2009), to provide an extended explanation of the factors that influence the formation of e-shoppers' attitudes toward e-shopping behavior, the influence of these formed attitudes on intentions to e-shop before actually making an e-purchase decision, and the subsequent results of the actual e-shopping purchase on shoppers' post-purchase e-shopping experience and trust. As such, the central model (as illustrated in Figure 1) argues that e-shoppers' attitudes toward e-shopping is influenced by value-seeking considerations (Broekhuizen, 2006; Swait and Sweeney, 2000), in which the attitudes influence the intentions to e-shop with e-retailers (Al-Rafee and Cronan, 2006), which in turn may lead to actual e-shopping activities (Ajzen, 1991; Cheung *et al.*, 2005), including e-shopping purchases and continued e-loyalty behavior. Lim (2013b) suggests that e-shopping experiences can only be acquired by e-shoppers through prior e-purchases from e-retailers. Laroche *et al.* (2005) add that e-shoppers rely heavily on past e-shopping experiences in deciding whether or not to purchase from e-retailers that they have previously made e-purchases. Other scholars have supported this notion by proposing that e-shopping experience is a reflection of an e-shopper's familiarity with shopping through web sites (Broekhuizen and Huizingh, 2009), whereby this direct result of actual e-purchases strongly influences the subsequent e-purchase intention and e-purchasing behavior with an e-retailer (Bucklin and Sismeiro, 2003; Gefan *et al.*, 2003; Montoya-Weiss *et al.*, 2003; Pavlou, 2003; Venkatesh and Agarwal, 2006). Many of these e-commerce studies have taken an attitudinal approach and investigated the direct effects of previous

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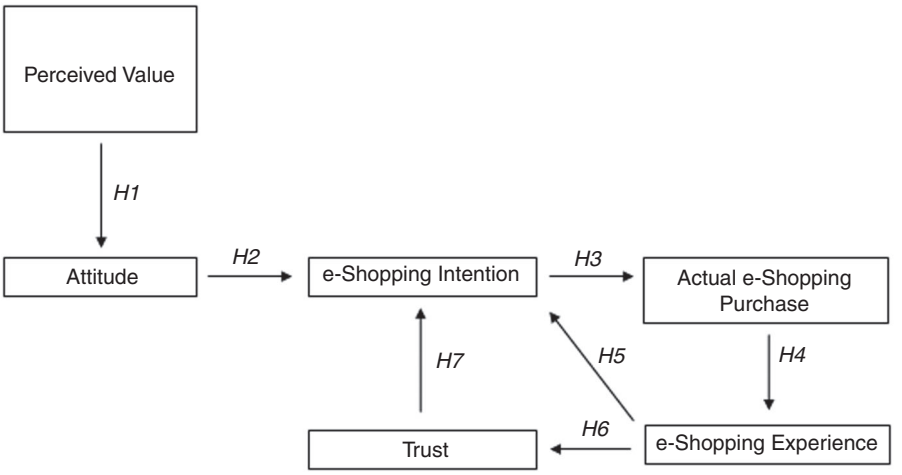

Figure 1.
The central model

e-shopping experiences on e-purchase intentions, whereby findings indicate that pleasurable, memorable, and satisfying e-shopping experiences, such as those that are hassle free and protect consumer privacy, will result in higher likelihood for intentions to repurchase from e-retailers. In addition, Chen and Barnes (2007) suggest that trust is often built on prior e-shopping experiences, whereby e-retailers who are able to provide secure and reliable e-shopping experiences will be able to gain the trust of e-shoppers (Delgado-Ballester and Munuera-Aleman, 2001). Many studies have suggested that trust is the foundation of e-purchase intention (Fukuyama, 1995; Keen 1999; Morgan and Hunt 1994) and regard it as an important factor in the success of an e-retailer in generating sales (Kimery and McCord, 2002; McKnight and Chervany, 2002). This is supported by Bhattacherjee (2002), Dash and Saji (2007), Gefan (2000), Gefan *et al.* (2003), Kim and Kim (2004), Salam *et al.* (2005), Suh and Han (2002), and Sultan *et al.* (2002), who have empirically shown that an increase in e-shopper's trust increases e-purchase intentions. Therefore, the following hypotheses are proposed:

H1. E-shoppers' attitudes toward e-shopping will be positively influenced by their perceived value of e-shopping.

H2. E-shoppers' intentions to e-shop will be positively influenced by their favorable attitudes toward e-shopping.

H3. Actual e-shopping purchases will be positively influenced by e-shoppers' intentions to e-shop.

H4. E-shoppers' e-shopping purchases will have a positive influence on their e-shopping experience.

H5. E-shoppers' e-shopping experience will positively influence their intentions to e-shop.

H6. E-shopping experiences that reassure e-shoppers will positively influence their trust in e-shopping.

H7. E-shoppers' trust in e-shopping will positively influence their intentions to e-shop.

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2.2 Integration of the TAM

The TAM (Davis, 1989), with its basis in the TRA (Ajzen, 1991), has emerged as a powerful model in investigating the acceptance and usage of IS; its relationship to TRA has been discussed extensively in the literature (Davis, 1989; Keil *et al.*, 1995; Roger, 1995). The TAM postulates that the perceptions of or beliefs about innovation are instrumental in the development of attitudes that eventually will result in system utilization behavior (Davis, 1989). It also posits that actual system use is determined by each user's behavioral intention to use, which in turn is influenced by each user's attitude toward use. Finally, this attitude is directly affected by the usefulness and ease of use of the system. Figure 2 shows that TAM is integrated into the central model, which influences attitude.

Bisdee (2007) refers to PEOU as the degree to which an e-shopper believes that online shopping will be free of effort. Prior research in IS has confirmed the importance of PEOU, showing that it is a significant factor in predicting attitudes toward technology-based services (Dabholkar, 1994; Heijden, 2000). Complexity, the antithesis of ease of use, has been a major cause of unfavorable attitudes toward e-shopping (Verhoef and Langerak, 2001). Rogers (1995) indicates that complexity is a determinant in reducing an e-shopper's willingness to adopt a system. This is supported by the work of Teo *et al.* (1999), who find that e-shoppers' perceived ease to use and fewer complexities increase the likelihood of favorable attitudes toward adoption and usage. Thus:

H8. PEOU of e-shopping sites will positively influence e-shoppers' attitudes toward e-shopping.

Chen *et al.* (2002) refer to PU as the degree to which e-shoppers believe that online shopping will be useful to them. Online shoppers are often concerned about making poor decisions because of their inability to examine the product physically, such as in

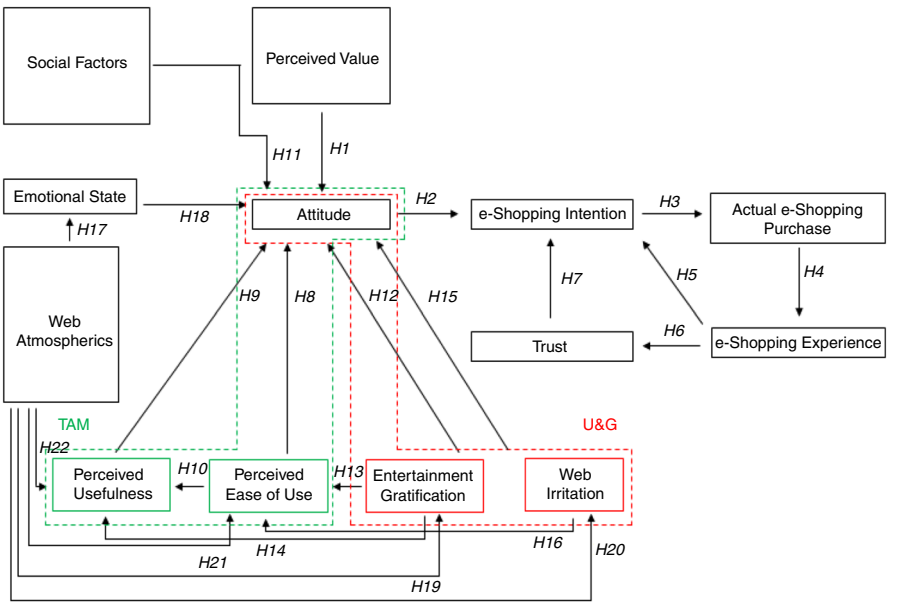

Figure 2.
The integrated model

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the online purchase of apparels. Here, the importance of apparel characteristics in shoppers' decision making (e.g. appearance on the body, size, fit) is difficult to present on-screen, and standard product descriptors are often insufficient for product evaluation (Grewal *et al.*, 2004). As such, Bisdee (2007) suggests that e-retailers that can provide e-shoppers other useful services, such as comparability of product function and convenience, that are not available in bricks-and-mortar retailers will be perceived as useful by e-shoppers, which in turn will lead to the development of favorable attitudes toward e-shopping. Thus:

H9. PU of e-shopping sites will positively influence e-shoppers' attitudes toward e-shopping.

In the context of IS acceptance, most researches have demonstrated strong empirical support for a positive relationship between PEOU and PU (Davis, 1989; Segars and Grover, 1993). According to Ramayah and Ignatius (2005), an e-shopper who perceives that purchase through the internet is effortless develops a tendency to perceive it as useful. This tendency is due to e-shoppers inherently trying to mold their perceptions of the usefulness of online shopping to their experiences in engaging in online shopping and the ease in which the task was executed. Thus:

H10. PEOU of e-shopping sites will have a positive influence on e-shoppers' PU of e-shopping sites.

Another extension of the TAM is the inclusion of subjective norms as an antecedent of beliefs and intentions to use technology (Hung *et al.*, 2003). According to Ajzen and Fishbein (1980), subjective norms refer, on the one hand, to beliefs that specific referents dictate whether a person should perform the behavior and, on the other hand, to his or her motivation to comply with specific referents. The effect of subjective norms on the adoption of IS is supported by Rogers's (2003) diffusion of innovations theory, which suggests that social pressure influences the rate of adoption of an innovation. Thus:

H11. E-shoppers' attitudes toward e-shopping will be positively influenced by social factors.

2.3 Integration of the UandG

The UandG originates from the functionalist perspective on mass media communication (Luo, 2002). The theory aims to recognize the important role of consumers in the use of mass media by focusing on what they do with mass media (Klatz, 1959; Klapper, 1960). A basic assumption of UandG is that users are actively involved in media usage and interact highly with the communication media (Luo, 2002). Insofar as the interactive nature of the web requires high user involvement, prior research has applied UandG to provide an improved understanding of e-shoppers (Eighmey and McCord, 1998; Korgaonkar and Wolin, 1999). Essentially, UandG considers not only the pleasure users search for in media but also their attitudes toward the medium and its contents (Fagerlind and Kihlman, 2000). Figure 2 shows that UandG is integrated into the central model and influences attitude and the two dimensions of TAM (PEOU and PU). The constructs entertainment gratification (EG) and web irritation (WI) extend the central model. In addition the informativeness gratification construct in UandG takes form in the construct of PU in the integrated model. Prior research has defined this construct as the extent to which the web provides users with resourceful and helpful information (Chen and Wells, 1999), which is part of PU (Huang, 2008).

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Eighmey and McCord (1998) refer to EG as the degree to which web media is fun and entertaining to users. According to Luo (2002), the value of media entertainment lies in its ability to fulfill users' needs for escapism from the offline world, hedonistic pleasure, aesthetic enjoyment, and/or emotional release. Similarly, e-shoppers tend to desire these entertainment pleasures when shopping online (Hooff *et al.*, 2010; Kim and Forsythe, 2007), and e-shopping sites that are able to fulfill such pleasures are often perceived as useful (Huang, 2008). This is supported by Kim and Forsythe (2010), who find that e-retailers that provide entertainment in the form of visualization proxies, such as virtual try-ons and three-dimensional rotations of multiple products, were perceived as easier to use and useful by shoppers. Notably, prior research indicates that web sites that provide higher entertainment value to audiences create favorable attitudes among users and motivate them to use the website more often (Stafford and Stafford, 2001). Thus:

H12. EG will have a positive effect on e-shoppers' attitudes toward e-shopping.

H13. EG will have a positive effect on e-shoppers' PEOU of e-shopping sites.

H14. EG will have a positive effect on e-shoppers' PU of e-shopping sites.

Although several studies have examined the relationship between playfulness and continued internet use (Stafford and Stafford, 2001; Wolfinbarger and Gilly, 2001), such studies have often overlooked negative factors, such as irritation (Stafford, 2003). Eighmey and McCord (1998) refer to WI as the degree to which surfers perceive the web as messy and irritating. In the context of e-commerce, criticisms of advertising and marketing schemes, such as pop-up ads and glaring attention-seeking layouts aimed to attract the attention of web surfers, tend to focus on the annoyance and irritation they cause (Peters *et al.*, 2007). Ducoffe (1996) notes that these irritating features often exploit human anxiety, distract e-shoppers' attentions, dilute human experiences, and lead to unfavorable attitudes. In addition, Huang (2008) indicates that e-shoppers who experience irritation when shopping online also experience difficulty in using the sites. Finally, Konrad (2002) finds that web sites with pop-up banners often cause irritation among e-shoppers because they distract shoppers' browsing activity on these sites. Thus:

H15. WI will have a negative influence on e-shoppers' attitudes toward e-shopping.

H16. WI will have a negative effect on e-shoppers' PEOU of e-shopping sites.

2.4 Integration of ES and WA

Prior studies in the bricks-and-mortar context have argued that cues in the retail atmosphere can affect shoppers' emotions, which subsequently influence shopping behavior (Demangeot and Broderick, 2006). According to Mehrabian and Russell (1974), stimulus cues such as color, music, and aroma can be manipulated by retailers to enhance shoppers' ES, such as shopping pleasure and arousal, which in turn lead to more "approach" behaviors, such as an intention to shop (rather than avoidance intention).

Several studies have suggested that similar forms of atmospherics in offline retailers can be applied to online retailers, called "web atmospherics" (WA), in the context of e-shopping (Eroglu *et al.*, 2003; Dailey, 2004; Lim, 2013a). Although tools to incorporate certain offline atmospheric cues, such as touch and aroma, to the online world are available (e.g. vibrating touch pad, odor stimulation systems), these have not yet achieved widespread adoption and have becomes less of a consideration for e-retailers

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when designing their web sites (Chicksand and Knowles, 2002). Dennis *et al.* (2009) show that cues such as graphics, visuals, audio, color, product presentation at different levels, video, and three-dimensional displays are among the most common stimuli found in e-shopping sites. McKinney (2004) derives a set of 36 WA variables from a content analysis of existing e-shopping sites. From this list, the cues of an online store were not necessarily limited to those commonly found in Dennis *et al.*'s (2009) study. For example, McKinney (2004) reveals that navigation features, such as site maps, ability to view shopping carts with the option to delete previously selected items, and wish lists or options to purchase later, were important because they made shopping easier (Griffiths, 2008). In addition, e-shopping sites with an interface that facilitated interaction were found to entertain e-shoppers (Wang *et al.*, 2007). That is, most e-shoppers found the interactive features, such as chat and comment functions (Wolfinbarger and Gilly, 2001), and product design/customization tools (Dixon, 2005) fun to use. Interactive features, such as live customer consultants and chat boxes, were also perceived as useful in voicing satisfaction or dissatisfaction when shopping with e-retailers (Machlis, 1998; Westhorpe, 2008). Nonetheless, poorly constructed WA may adversely lead to WI (Manganari *et al.*, 2009). For example, Baraggioli and Adam (2008) find that small fonts and congested placement of information, including text and images, contribute to browsing difficulties and WI.

These cues are consistent with the studies in environmental psychology that focus on the pleasure-arousal-dominance dimensions of emotional response to web environmental stimuli (Eroglu *et al.*, 2003). Scholars of environmental psychology often suggest that a person's initial response to any environment is affective, and in general this emotional impact guides subsequent relations within the environment (Wakefield and Baker, 1998; Machleit and Eroglu, 2000). Many studies have concluded that WA are akin to the physical retail environment, in which e-retailers manipulate the retail atmosphere to influence the ES of patrons in an attempt to foster favorable attitudes and behaviors toward the retailer and its offerings (Alba *et al.*, 1997; Childers *et al.*, 2001). In support of previous findings, Jayawardhena and Wright (2009) conclude that emotional consideration influenced by WA is one of the main influences of e-shoppers attitudes toward e-shopping. Thus:

H17. E-shopping sites' WA will have a positive influence on e-shoppers' ES.

H18. ES will have a positive influence on e-shoppers' attitudes toward e-shopping.

H19. E-shopping sites' WA will have a positive influence on e-shoppers' EG.

H20. E-shopping sites' poorly constructed WA will have a negative influence on e-shoppers' WI.

H21. E-shopping sites' WA will be positively related to e-shoppers' PEOU of e-shopping sites.

H22. E-shopping sites' WA will be positively related to e-shoppers' PU of e-shopping sites.

3. Research methodology

Building on the studies of Koufteros (1999) and Koufteros *et al.* (2001), the research steps and methods include construct measurement development, an exploratory factory analysis (EFA), a confirmatory factor analysis (CFA), and a test of the structural model. Figure 3 provides the analytical steps.

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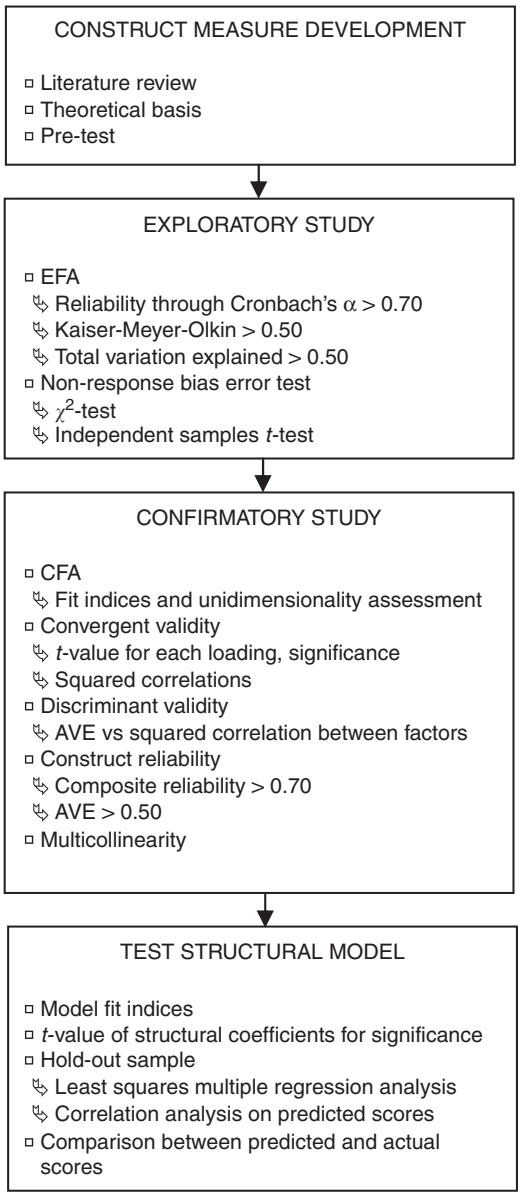

Figure 3.
Analytical steps

3.1 Construct measures

This study employs an e-questionnaire to gather primary data. The e-questionnaire entailed 13 relevant constructs that were used to measure e-shoppers' online shopping acceptance and usage behavior. Apart from these queries, the e-questionnaire also asked about the respondents' background.

This study measured responses to the items in perceived value, social factors, PEOU, PU, EG, WI, ES, WA, attitude, e-shopping intention, actual e-shopping purchase,

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e-shopping experience, and trust on a seven-point Likert scale from 1 ("strongly disagree") to 7 ("strongly agree"). To ensure content validity of the scales, the items must represent the concept about which generalizations are made (Ong *et al.*, 2004). Items chosen for the constructs in this study were adapted and revised from previous research. A pre-test on 60 e-shoppers was conducted; the final revised items appear in Table I along with their sources.

3.2 Sampling technique and procedure

In an attempt to provide an accurate representation of the behavior of e-shoppers, a selection criterion was imposed – that is, only consumers who regularly make online purchases were allowed to participate in this study; this study defines regular e-shoppers as consumers who make at least two online purchases in a month. The purpose of having this selection criterion is to ensure that the sample consists of only those who are actual (or regular) e-shoppers, excluding those who make casual e-purchases (e.g. once every few months or years) and those who simply browse e-shopping sites for product information. This way, the study can offer specific recommendations about what exactly matters (or is important) to regular e-shoppers when purchasing online.

To obtain the sample, e-questionnaires were sent to participants who were randomly selected from a list of Malaysian e-shoppers who made an average of at least two online purchases per month over the last six months at an e-shopping mall (i.e. virtual mall) based in Malaysia. The e-shopping mall chosen is one of the largest in Malaysia and it caters to e-shoppers of all ages. It sells a variety of goods, such as beauty products, electronics, games, and property. Of 3,147 e-shoppers identified, 542 took the survey, but only 373 completed it. In total, 53 cases were discarded because of large portions of missing values. Thus, 320 cases were analyzed. According to Hair *et al.* (1998), a sample size of 200-500 is considered sufficient for SEM data analysis. As such, the current sample size is large enough to conduct data analysis.

Measure	Source
Actual e-shopping purchase (asp)	Sihombing (2007)
Perceived value (pv)	Broekhuizen and Huizingh (2009), Xu and Paulins (2005), Morganosky and Cude (2000), Sorce *et al.* (2005)
Attitude (att)	Sorce *et al.* (2005), Vijayasarathy (2002), Hansen *et al.* (2004), Ramayah *et al.* (2009), Kim and Forsythe (2010)
e-shopping intention (esi)	Davis (1989), Kim and Forsythe (2010), Broekhuizen and Huizingh (2009), Chiu *et al.* (2009)
e-shopping experience (ese)	Lee *et al.* (2009)
Trust (tru)	Broekhuizen and Huizingh (2009), Ha and Stoel (2009), Kim *et al.* (2010)
Perceived usefulness (pu)	Ramayah *et al.* (2009), Bruner and Kumar (2005), O'Cass and Fenech (2003), Vijayasarathy (2004), Chen and Wells (1999)
Perceived ease of use (peou)	Chen and Wells (1999), Davis (1989), Buton-Jones and Hubona (2005)
Entertainment gratification (eg)	Chen *et al.* (2002), Ducoffe (1996), Korgaonkar and Wolin (1999), Bruner and Kumar (2005), Chiu *et al.* (2009)
Web irritation (wi)	Hausmann and Siekpe (2009), Chen *et al.* (2002), Ducoffe (1996), Korgaonkar and Wolin (1999)
Social factors (sf)	Ramayah *et al.* (2009), Hansen *et al.* (2004)
Web atmospherics (wa)	Koo and Ju (2010)
Emotional state (es)	Koo and Ju (2010)

Table I.
Primary sources of survey item measures

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4. Data analysis

4.1 Characteristics of respondents

As mentioned previously, all respondents were regular e-shoppers who made an average of at least two online purchases per month in the last six months. This is also confirmed by the actual e-shopping purchase measurement construct ($\overline{x} = 5.60$, $\sigma = 0.92$). Table II provides some demographic information about the sample.

To account for non-response bias error, the extrapolation estimation method was employed to compare the first 30 (i.e. early participants) and last 30 participants (i.e. later participants) of the main study's sample. χ^2-test and independent samples *t*-test was carried out to determine non-response bias. Table III presents the test results. From the results, it is observed that there are no significant differences at the 1 percent level in all demographic variables between early and later participants, which suggest that there might be no non-response bias.

4.2 EFA

EFA was used to investigate the possible underlying factor structure of a set of observed variables without imposing any pre-conceived structure on the outcome (Child, 1990). After the EFA, a 13-factor solution was obtained in which 39 items were

Characteristics of the respondents		Frequency	%
Gender	Male	*41*; 109	*41.0*; 34.1
	Female	*59*; 211	*59.0*; 65.9
Age	Below 20	*19*; 51	*19.0*; 15.9
	21-30	*56*; 187	*56.0*; 58.4
	31-40	*17*; 53	*17.0*; 16.6
	41 50	*5*; 21	*5.0*; 6.6
	51 and above	*3*; 8	*3.0*; 2.5
Income	RM2,000 and below	*29*; 75	*29.0*; 23.4
	RM2,001-RM5,000	*61*; 209	*61.0*; 65.3
	RM5,001 and above	*10*; 36	*10.0*; 11.3
Race	Malay	*33*; 121	*33.0*; 37.8
	Chinese	*61*; 165	*61.0*; 51.6
	Indian	*6*; 34	*6.0*; 10.6

Table II. Profile of the respondents

Notes: $n = 320$. Italic values represent predicted scores based on a holdout sample of 100 respondents, while non-italic values represent actual scores based on a sample of 320 respondents. US$1 = RM3.30 as of April 1, 2014

Variables	Group	Mean	SD	χ^2	*t*	df	*p*-value
Gender	1			2.22		1	0.136
	2						
Age	1	2.15	0.93		−0.28	58	0.78
	2	2.23	1.00				
Income	1	1.95	0.39		0.45	58	0.65
	2	1.88	0.69				
Race	1	2.00	0.46		1.37	58	0.18
	2	1.80	0.56				

Table III. Independent sample *t*-test and χ^2-test for non-response bias

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retained (see Table IV); these items measured all 13 constructs in the integrated model. All retained items had factor loadings $\geqslant 0.50$, communalities $\geqslant 0.50$, and no high cross-loadings. The total variance explained by the items loading on each factor was > 50 percent. In addition, the Kaiser-Meyer-Olkin measure of 0.79 (minimum threshold of 0.50) and the significant result found ($p < 0.01$) in Bartlett's test indicate acceptable applicability of the item pool for EFA. In terms of reliability, the Cronbach's α reliability coefficients ranged from 0.75 to 0.89, which is above the recommended coefficient of at least 0.70. Thus, these values suggest that the scales were reliable and could be used for further analysis.

4.3 CFA

In carrying out the CFA, five analyses were conducted to assess the measurement model. First, the most common rule used to perform CFA for the measurement model and test the structural model is ensuring that the goodness-of-fit index (GFI), adjusted goodness-of-fit index (AGFI), comparative fit index (CFI), and Tucker-Lewis index (TLI) are > 0.90 (Hair *et al.*, 1998). The root mean square error of approximation (RMSEA) should be < 0.08, and the χ^2/df should be > 3 (Bollen, 1989; Kline, 1998). The overall fit indices of the measurement model are as follows: $\chi^2 = 1{,}159.24$, df $= 624$; $\chi^2/\text{df} = 1.86$, $p < 0.01$; GFI $= 0.96$; AGFI $= 0.95$; CFI $= 0.96$; TLI $= 0.97$; and RMSEA $= 0.05$. The results of CFA show that the indices are above the respective common acceptance levels. Thus, in general the proposed model fits the sample data well.

Second, Anderson and Gerbing (1988) argue that convergent validity can be assessed from the measurement model by determining whether each item's estimated maximum likelihood loading on its designated construct is significant. Relationally, the assessment of the measurement properties of the scales indicated that the factor loadings were high (> 0.50) and significant ($p < 0.01$), which thus satisfies the criteria for convergent validity (see Table IV).

Third, the test of discriminant validity was adopted from the work of Broekhuizen (2006) and performed by examining whether the squared correlation between two constructs exceeded the average variance extracted (AVE) for each construct. Relationally, all squared correlations between distinctive-paired constructs did not exceed the AVE for each of the paired constructs, and thus the criterion for discriminant validity was met (see Tables IV and V).

Fourth, with regard to construct reliabilities, the composite reliabilities demonstrated by the scales were reliable because they met the recommended level of 0.70 (Kline, 1998). Conclusively, the measurement model empirically projects evidence for model fit, convergent and discriminant validity, and reliability (see Table IV).

Fifth, an investigation to detect multicollinearity using a correlation analysis was performed. No multicollinearity problems were encountered; the highest pairwise correlation among the independent latent constructs was for perceived usefulness and perceived ease of use ($r = 0.748$). According to Hair *et al.* (1998), correlations between independent constructs of 0.90 and above indicate multicollinearity problems (see Table V). As the highest correlation value was 0.748, it can be concluded that there is no multicollinearity problem in the research data.

4.4 Path analysis and hypothesis testing

Path analysis was used to test the hypothesized relationships. On the basis of the similar model fit indices under the CFA, the integrated model (see Figure 4) was judged

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Construct/measure	Mean ($\bar{x}$)	SD (σ)	Communalities	EFA	CFA	Cronbach's α	Composite reliability	AVE
Perceived value (pv)	5.82	0.65				0.82	0.89	0.73
pv1	5.78	0.69	0.93	0.58	0.97			
pv2	5.92	0.89	0.60	0.52	0.67			
pv3	5.78	0.70	0.72	0.56	0.90			
Attitude (att)	5.84	0.67				0.80	0.95	0.87
att1	5.83	0.72	0.83	0.78	0.97			
att2	5.90	0.91	0.88	0.75	0.96			
att3	5.79	0.74	0.63	0.70	0.87			
e-shopping intention (esi)	5.82	0.78				0.85	0.95	0.86
esi1	5.88	0.82	0.61	0.62	0.98			
esi2	5.77	0.96	0.63	0.61	0.86			
esi3	5.80	0.87	0.64	0.64	0.94			
Actual e-shopping purchase (asp)	5.60	0.92				0.89	0.94	0.83
asp1	5.62	0.97	0.82	0.71	0.95			
asp2	5.63	1.12	0.64	0.66	0.83			
asp3	5.55	0.95	0.86	0.72	0.95			
e-shopping experience (ese)	5.47	0.89				0.80	0.85	0.66
ese1	5.47	1.00	0.67	0.54	0.97			
ese2	5.33	1.16	0.69	0.59	0.85			
ese3	5.60	0.96	0.68	0.57	0.56			
Trust (tru)	5.61	0.82				0.86	0.94	0.83
tru1	5.62	0.84	0.78	0.59	0.92			
tru2	5.63	1.09	0.72	0.56	0.86			
tru3	5.59	0.83	0.76	0.59	0.95			
Perceived usefulness (pu)	5.67	0.67				0.75	0.87	0.70
pu1	5.64	0.76	0.66	0.54	0.91			
pu2	5.73	0.96	0.64	0.57	0.74			
pu3	5.65	0.73	0.71	0.56	0.85			
Perceived ease of use (peou)	5.71	0.67				0.78	0.95	0.86
peou1	5.68	0.74	0.71	0.63	0.93			
peou2	5.77	0.96	0.74	0.61	0.89			
peou3	5.68	0.72	0.75	0.64	0.96			
Entertainment gratification (eg)	5.67	0.83				0.88	0.92	0.80
eg1	5.65	0.83	0.88	0.54	0.96			
eg2	5.75	1.08	0.69	0.50	0.77			
eg3	5.62	0.86	0.89	0.54	0.94			
Web irritation (wi)	2.29	0.70				0.75	0.80	0.58
wi1	2.23	0.78	0.67	0.55	0.88			
wi2	2.36	0.95	0.51	0.52	0.61			
wi3	2.28	0.83	0.55	0.52	0.77			

Table IV.
Psychometric properties of measurement model

(*continued*)

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Construct/measure	Mean ($\bar{x}$)	SD (σ)	Communalities	EFA	CFA	Cronbach's α	Composite reliability	AVE
Social factors (sf)	5.74	0.78				0.85	0.94	0.84
sf1	5.62	0.96	0.86	0.52	0.94			
sf2	5.84	0.88	0.73	0.59	0.83			
sf3	5.75	0.80	0.81	0.59	0.98			
Web atmospherics (wa)	5.52	0.75				0.84	0.87	0.69
wa1	5.42	0.84	0.80	0.68	0.91			
wa2	5.59	0.97	0.58	0.53	0.72			
wa3	5.55	0.77	0.64	0.60	0.85			
Emotional state (es)	5.81	0.69				0.84	0.91	0.77
es1	5.77	0.74	0.61	0.63	0.95			
es2	5.88	0.90	0.59	0.60	0.74			
es3	5.78	0.78	0.68	0.63	0.92			

Notes: All EFA and CFA factor loadings are significant at $p < 0.01$. The composite reliabilities were calculated on the basis of the formula provided by Hair *et al.* (1998); the AVEs were computed on the basis of the formula proposed by Fornell and Larcker (1981)

Table IV.

to be adequate and to have acceptable goodness-of-fit indices: $\chi^2 = 1{,}089.57$, df = 641, $p < 0.01$; $\chi^2/\text{df} = 1.70$ (< 3); GFI = 0.98 (> 0.90); AGFI = 0.97 (> 0.90); CFI = 0.99 (> 0.90); TLI = 0.99 (> 0.90); and RMSEA = 0.05 (< 0.08). In addition, the measurement model is assessed for generalizability using 100 holdout samples (first 50 cases and last 50 cases) using least squares multiple regression analysis. The study explored whether similar paths and coefficients could be found in the main study's sample and the holdout samples, which provides a basis for generating valid cross-comparison – that is, the results obtained is consistent. In general, the results (as indicated by the consistency between predicted and actual scores) support the hypothesized integrated model (see Table VI). A considerable part of the variance of the endogenous latent constructs was explained by their predictors, which were based on the squared multiple correlations (Byre, 2001; Hair *et al.*, 1998). Further, when compared with the central model (see Figure 5; goodness-of-fit indices: $\chi^2 = 302.50$, df = 128, $p < 0.01$; $\chi^2/\text{df} = 2.36$ (< 3); GFI = 0.95 (> 0.90); AGFI = 0.91 (> 0.90); CFI = 0.94 (> 0.90); TLI = 0.94 (> 0.90); and RMSEA = 0.07 (< 0.08)), the integrated model explained a higher degree of variance in e-shopper's behavior (e.g. from 27 to 73 percent of e-shopper's attitudes and from 40 to 46 percent of e-shopper's intentions), thus providing evidence of higher explanatory power when the theoretical underpinnings of CB and IS are integrated to explain consumer e-shopping behavior. In addition, it is noticed that the proposed relationships in the integrated model were enhanced when CB and IS variables were integrated to predict consumer e-shopping behavior – this is indicated by the increase in coefficients for the proposed relationships.

The hypotheses were tested by analyzing the direction of standardized coefficients (i.e. positive or negative) and the critical ratio values at a significance level of 0.05. All 22 proposed hypotheses were supported. Thus, the results provide support for the proposed integrated model; that is, the proposed relationships in the integrated model were confirmed by the data, in addition to attaining an acceptable structural model fit (i.e. goodness-of-fit). The following section provides a discussion of the implications of the study's findings.

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Table V.
Correlations between latent constructs

	att	pv	esi	asp	ese	tru	pu	peou	eg	wi	sf	wa	es
att	1												
pv	*0.666*												
	0.510												
	(0.260)												
esi	*0.577*	*0.349*											
	0.576	0.338											
	(0.332)	(0.114)											
asp	*0.068*	*0.031*	*0.392*										
	0.125	0.065	0.402										
	(0.016)	(0.004)	(0.161)										
ese	*0.034*	*0.096*	*0.010*	*0.360*									
	0.236	0.063	0.431	0.441									
	(0.056)	(0.004)	(0.186)	(0.195)									
tru	*0.616*	*0.404*	*0.619*	*0.111*	*0.004*								
	0.437	0.220	0.489	0.177	0.198								
	(0.191)	(0.048)	(0.239)	(0.031)	(0.039)								
pu	*0.541*	*0.522*	*0.306*	*0.123*	*0.014*	*0.432*							
	0.628	0.344	0.380	0.098	0.178	0.465							
	(0.394)	(0.118)	(0.145)	(0.010)	(0.032)	(0.216)							
peou	*0.696*	*0.478*	*0.507*	*0.115*	*0.001*	*0.572*	*0.482*						
	0.643	0.310	0.468	0.111	0.153	0.673	0.748						
	(0.413)	(0.096)	(0.219)	(0.012)	(0.023)	(0.453)	(0.559)						
eg	*0.696*	*0.571*	*0.485*	*0.142*	*0.020*	*0.417*	*0.418*	*0.578*					
	0.562	0.302	0.376	0.109	0.127	0.261	0.339	0.366					
	(0.316)	(0.091)	(0.141)	(0.012)	(0.016)	(0.068)	(0.115)	(0.134)					
wi	*−0.524*	*−0.305*	*−0.348*	*−0.098*	*−0.087*	*−0.412*	*−0.228*	*−0.410*	*−0.425*				
	−0.509	−0.257	−0.374	−0.138	−0.156	−0.318	−0.331	−0.423	−0.272				
	(0.259)	(0.066)	(0.140)	(0.019)	(0.024)	(0.101)	(0.109)	(0.179)	(0.074)				
sf	*0.610*	*0.392*	*0.288*	*0.130*	*0.100*	*0.364*	*0.316*	*0.450*	*0.589*	*−0.230*			
	0.672	0.363	0.392	0.083	0.151	0.220	0.386	0.385	0.465	−0.244			
	(0.451)	(0.132)	(0.154)	(0.007)	(0.023)	(0.048)	(0.149)	(0.148)	(0.216)	(0.059)			

(*continued*)

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	att	pv	esi	asp	ese	tru	pu	peou	eg	wi	sf	wa	es
wa	*0.080*	*0.022*	*0.144*	*0.245*	*0.032*	*0.128*	*0.183*	*0.106*	*0.150*	*−0.070*	*0.250*		
	0.126	0.081	0.181	0.131	0.059	0.140	0.197	0.208	0.170	−0.146	0.288		
	(0.016)	(0.006)	(0.033)	(0.017)	(0.003)	(0.020)	(0.039)	(0.043)	(0.029)	(0.021)	(0.083)		
es	*0.579*	*0.401*	*0.418*	*0.205*	*0.073*	*0.365*	*0.429*	*0.406*	*0.602*	*−0.429*	*0.472*	*0.248*	1
	0.648	0.484	0.413	0.097	0.135	0.229	0.426	0.393	0.425	−0.408	0.559	0.245	
	(0.420)	(0.234)	(0.171)	(0.009)	(0.018)	(0.053)	(0.181)	(0.155)	(0.181)	(0.166)	(0.312)	(0.060)	

Notes: att, attitude; pv, perceived value; esi, e-shopping intention; asp, actual e-shopping purchase; ese, e-shopping experience; tru, trust; pu, perceived usefulness; peou, perceived ease of use; eg, entertainment gratification; wi, web irritation; sf, social factors; wa, web atmospherics; es, emotional state. The values outside the parentheses are the correlation values; those inside the parentheses are the squared correlation values. Italic values represent predicted scores based on a holdout sample of 100 respondents, while non-italic values represent actual scores based on a sample of 320 respondents

Table V.

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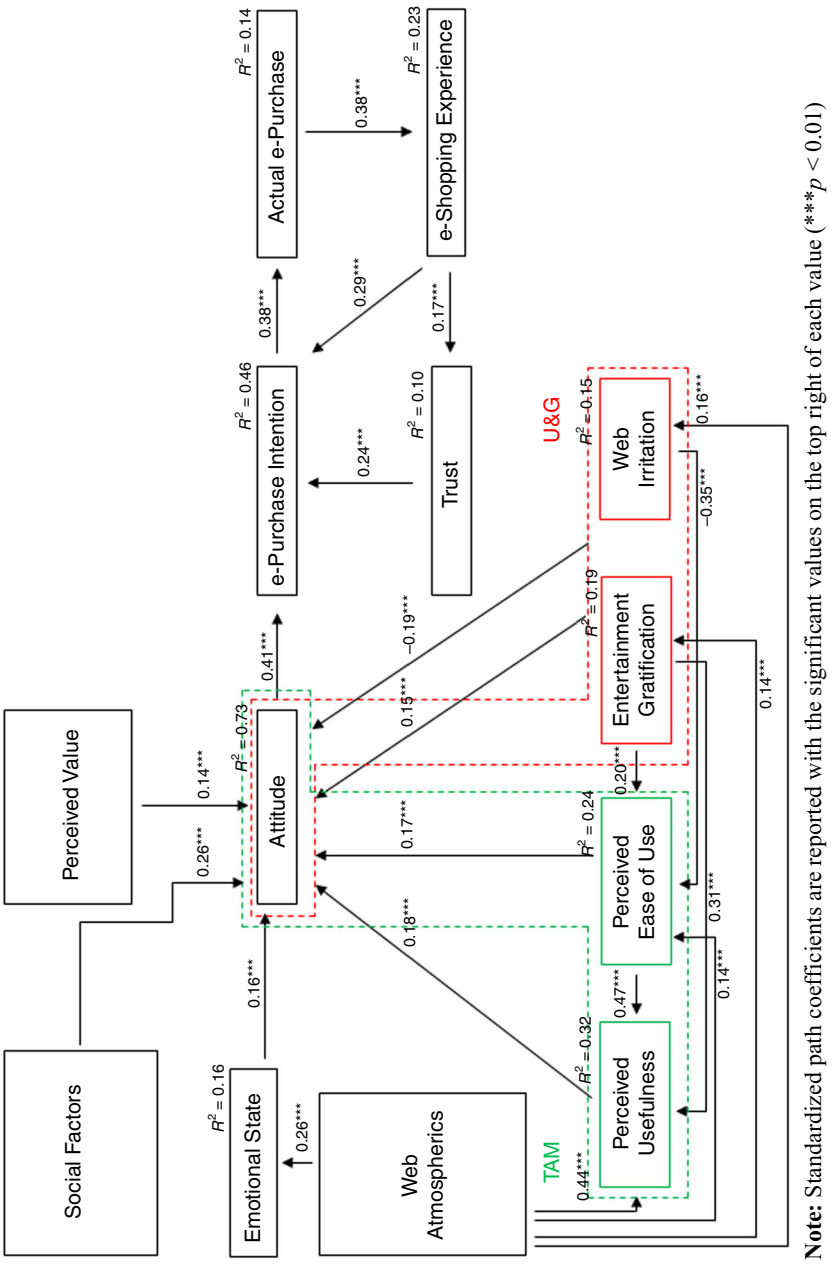

Note: Standardized path coefficients are reported with the significant values on the top right of each value (***$p < 0.01$)

Figure 4.
Results of SEM analysis for the integrated model

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Structural relationships	Unstandardized structural coefficients	Standardized structural coefficients	CR	Hypothesis testing
Antecedents of attitude ($R^2 = 0.75$; 0.73)				
H1: perceived value → attitude (+ve)	*0.27*; 0.14	*0.26*; 0.14	4.04***	Supported
H8: perceived ease of use → attitude (+ve)	*0.25*; 0.17	*0.26*; 0.17	3.81***	Supported
H9: perceived usefulness → attitude (+ve)	*0.12*; 0.18	*0.12*; 0.18	4.17***	Supported
H11: social factors → attitude (+ve)	*0.16*; 0.23	*0.19*; 0.26	7.29***	Supported
H12: entertainment gratification → attitude (+ve)	*0.09*; 0.12	*0.11*; 0.15	4.337***	Supported
H15: web irritation → attitude (−ve)	*−0.20*; −0.19	*−0.20*; −0.19	−5.62***	Supported
H18: emotional state → attitude (+ve)	*0.07*; 0.16	*0.08*; 0.16	3.98***	Supported
Antecedents of e-shopping intention ($R^2 = 0.45$; 0.46)				
H2: attitude → e-shopping intention (+ve)	*0.43*; 0.48	*0.48*; 0.41	9.14***	Supported
H5: e-shopping experience → e-shopping intention (+ve)	*0.12*; 0.26	*0.12*; 0.29	6.81***	Supported
H7: trust → e-shopping intention (+ve)	*0.33*; 0.22	*0.36*; 0.24	5.23***	Supported
Antecedents of actual e-shopping purchase ($R^2 = 0.11$; 0.14)				
H3: e-shopping intention → actual e-shopping purchase (+ve)	*0.44*; 0.44	*0.34*; .38	7.21***	Supported
Antecedents of e-shopping experience ($R^2 = 0.15$; 0.23)				
H4: actual e-shopping purchase → e-shopping experience (+ve)	*0.29*; 0.46	*0.38*; 0.48	9.83**	Supported
Antecedents of trust ($R^2 = 0.12$; 0.10)				
H6: e-shopping experience → trust (+ve)	*0.11*; 0.15	*0.11*; 0.17	2.98***	Supported
Antecedents of perceived usefulness ($R^2 = 0.35$; 0.32)				
H10: perceived ease of use → perceived usefulness (+ve)	*0.35*; 0.47	*0.36*; 0.47	9.76***	Supported
H14: entertainment gratification → perceived usefulness (+ve)	*0.15*; 0.25	*0.22*; 0.31	7.13***	Supported
H22: web atmospherics → perceived usefulness (+ve)	*0.17*; 0.40	*0.24*; 0.44	8.27***	Supported
Antecedents of perceived ease of use ($R^2 = 0.21$; 0.24)				
H13: entertainment gratification → perceived ease of use (+ve)	*0.13*; 0.17	*0.17*; 0.20	4.05***	Supported
H16: web irritation → perceived ease of use (−ve)	*−0.28*; −0.34	*−0.28*; −0.35	−6.91***	Supported
H21: web atmospherics → perceived ease of use (+ve)	*0.16*; 0.12	*0.16*; 0.14	2.72***	Supported
Antecedents of entertainment gratification ($R^2 = 0.15$; 0.19)				
H19: web atmospherics → entertainment gratification (+ve)	*0.14*; 0.15	*0.14*; 0.14	2.51***	Supported
Antecedents of web irritation ($R^2 = 0.17$; 0.15)				
H20: web atmospherics → web irritation (−ve)	*−0.10*; −0.15	*−0.10*; −0.16	−2.84***	Supported
Antecedents of emotional state ($R^2 = 0.16$; 0.16)				
H17: web atmospherics → emotional state (+ve)	*0.26*; 0.24	*0.26*; 0.26	4.71***	Supported

Notes: +ve, positive; −ve, negative. The critical ratio (CR) is the ratio between the estimate and the standard error. When CR > 1.96 for a regression weight, the path is significant at the 0.05 level (i.e. its estimated path parameter is significant) (Sundararajan, 2009). Italic values represent predicted scores based on a holdout sample of 100 respondents using least squares multiple regression analysis, while non-italic values represent actual scores based on a sample of 320 respondents using structural equation modeling

Table VI. Structural coefficients for the integrated model (predicted and actual)

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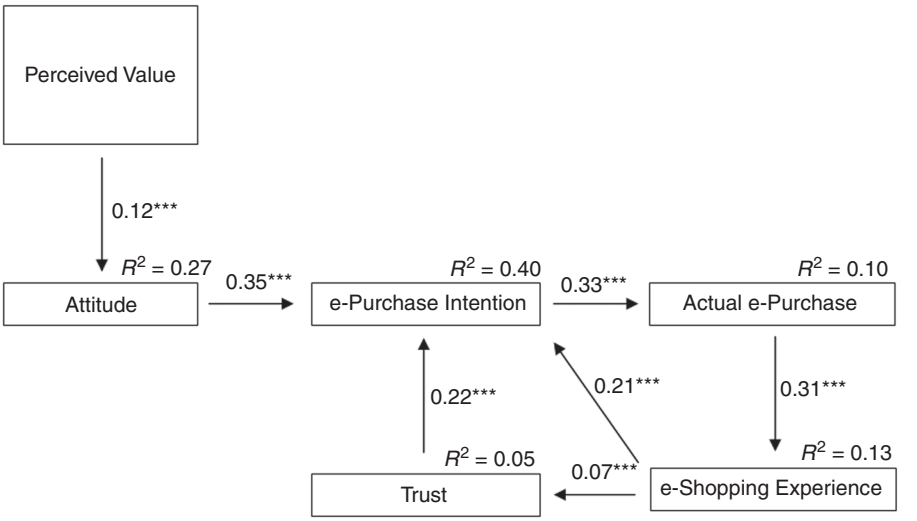

Figure 5.
Results of SEM analysis for the central model

Note: Standardized path coefficients are reported with the significant values on the top right of each value (***$p < 0.01$)

5. Discussion and implications

The objectives of this study were twofold:

(1) to enhance understanding of the antecedents of e-shopping acceptance and usage behavior drawn from both IS and CB theoretical underpinnings; and

(2) to subsequently test the significance of this model empirically and thus offer useful and practical implications for organizations wanting to venture successfully into e-shopping in terms of realizing and maintaining gains of site traffic and e-shopping transactions.

The integrated model (i.e. IS-CB model) also confirmed a higher degree of explanatory power as compared to the central model, which was primarily based on theoretical underpinnings from CB. In addition, the proposed relationships in the integrated model were enhanced (as seen by the increase in coefficients) when CB and IS variables are integrated to predict consumer e-shopping behavior. Each segment is now discussed in the light of the empirical results with corresponding implications.

5.1 Antecedents to user beliefs

From the results of the structural model, one of the antecedents to multiple-user beliefs in terms of e-shopper acceptance and usage is WA. This study showed that WA had significant effects on user beliefs of e-shopping. In particular, WA positively affected EG, PEOU, PU, and ES and negatively affected WI. This result clarifies the much sought-after knowledge in the infertile area of e-shopping research (Dennis *et al.*, 2009). Notably, the results reveal that e-shoppers perceived placement of graphics, visually appealing colors, interactive features, and the ability to find what they want within three clicks from the first page as helpful in facilitating ease of use of the e-shopping site. Navigation features, such as site maps and ability to view shopping carts, were also part of an established set of atmospheric variables that e-shoppers perceived as

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useful, and these greatly contributed to the ease of use of e-shopping sites (McKinney, 2004). Zauki (2009) observes a similar situation in a Malaysian context; well-designed e-shopping sites that were less complicated, facilitated fun and interaction, and were attractive enhanced e-shopping enjoyment and increased e-shopping activities. However, constructing WA in e-shopping sites can be challenging, especially for e-retailers that do not have sufficient computer skills. For example, this study found that poorly constructed WA of e-shopping sites create WI for e-shoppers. This is in line with the findings of Eighmey and McCord (1998), who show that messy web sites contribute to WI. Indeed, poorly constructed WA distract from e-shopping activities (Lim *et al.*, 2010). Furthermore, in the current study, WA had a significant influence on e-shoppers' ES. The results reveal that cues in the e-retail atmosphere, such as graphics, product presentations, and interactive features, positively affect e-shoppers' emotions, which in turn influence e-shopping acceptance and usage behavior (Wang *et al.*, 2007). That is, WA can significantly influence the emotions of online shoppers, good or bad, by the way the elements are constructed (Baraggioli and Adam, 2008).

5.2 User beliefs and technology acceptance

This study found that PEOU, PU, EG, SF, and ES positively influenced e-shoppers' attitudes toward e-shopping. Simultaneously, PEOU affected e-shoppers attitudes toward e-shopping indirectly through PU. The study further revealed that EG had similar simultaneous effects on e-shoppers' attitudes toward e-shopping indirectly through PEOU and PU. In addition, e-shoppers' attitudes toward e-shopping had a positive impact on their intentions to e-shop at online shopping sites, and their intentions to e-shop with e-retailers positively affected actual e-shopping purchases. Essentially, the results reveal that strategies to enhance the effectiveness of e-shopping should be channeled mainly toward SF and then toward PU, PEOU, ES, and EG. The rationale behind such a focus is explained by the strength of structural loadings projected by the results of the study. The work of Suki (2001) and Osman (2008) add substance to such a focus; their studies reveal that most online shoppers do not perceive shopping online as a complex activity, though most sites were easy to use. Such perceptions might be due to the effort of most site support developers to design online shopping sites with user friendliness as their main criteria (Eko, 2010).

Since the emergence of social networking sites and interactive web content, the global growth of new web users has risen tremendously (Broekhuizen, 2006). Such findings reveal a lucrative opportunity for e-shopping sites to capitalize on the increased site traffic and shopping transactions. Notably, the results of this study indicate that web designers and e-marketers should reflect both intrinsic and extrinsic motivation issues in their user interface design and e-marketing strategies to increase e-shoppers' involvement with their shopping sites, such as interactive chat features and group or fan pages on social networking sites (Zauki, 2009). Nonetheless, e-shopping sites should take note of the negative influence of WI on the attitudes of e-shoppers. The study further indicates that the design interface of e-shopping sites is crucial because its influence on e-shoppers' ES will determine whether an evoked attitude toward e-shopping is favorable or unfavorable. Thus, to avoid creating user irritation and nuisance, e-retailers should ensure that their online shopping sites are clear and free from unwanted pop-ups. Ignoring such issues will create a negative PEOU and an unfavorable attitude in e-shoppers. Thus, e-shopping sites should use system features that make e-shoppers' experiences enjoyable, easy, and useful.

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5.3 Perceived value of e-shopping

In brief, the findings of this research are in line with the findings from previous studies that e-shoppers' attitudes toward e-shopping are positively influenced by their perceived value of e-shopping sites (Zeithaml, 1988; Swait and Sweeney, 2000). That is, the study demonstrates that e-shoppers' attitudes are positively influenced by their perceived value of e-shopping. The findings highlight the importance for e-retailers to ensure highly valuable e-market offerings – goods, services, information, and experiences delivered in electronic and physical forms sold online – to attract consumers and induce them to develop an inclination for e-shopping. To improve consumers' perceptions of e-shopping, e-retailers could consider displaying prices of and time savings of making e-purchases (i.e. corresponding e-market offerings). Increasing product variety and enhancing product selection are other possible ways to increase the perceived value of e-purchases.

5.4 Actual e-shopping purchase and post-purchase evaluations

In this study, the proposed model explains only 14 percent of variance of actual e-shopping purchases, which is rather low as compared to the eight external variables (i.e. perceived value, perceived ease of use, perceived usefulness, EG, WI, social factors, ES, and WA) that explain 73 percent of variance in e-shoppers' attitude. This finding supports the work of Ajzen (1991) and Carrigan and Attalla (2001) who suggest that consumers with favorable attitudes and intentions toward a behavior do not necessarily engage in that behavior, since various factors may impede such consumers from actually performing that behavior (e.g. perceived behavioral control, affordability). More important, e-shoppers' actual e-shopping purchases had a significant, positive impact on their e-shopping experience. Thus, ensuring that e-shoppers are pleased, are delighted, and have a good time shopping online are paramount to creating a positive e-shopping experience. As a result of these positive experiences, the study further reveals that these e-shoppers feel safe in purchasing from e-shopping sites, as indicated by the positive trust levels. In addition, secure e-shopping sites should increase e-shoppers' confidence that the sites will safeguard their private information. In turn, having trust in e-retailers positively influences their intentions to e-shop. These findings conform to Lim's (2013a) findings that e-shopping experiences that are fruitful, safe, and secure give rise to trust and increase the likelihood of subsequent e-purchases. Given this trait of e-CB, this study recommends that e-retailers consider engaging in follow-up activities to ensure that e-shoppers develop loyalty (i.e. repurchases). Fostering trust by making e-shopping sites safe and secure is crucial for increasing repurchase intentions among e-shoppers.

6. Conclusions

In line with established theories and empirical studies, this study proposes an integrated IS-CB model for e-shopping that integrates TRA, TAM, and UandG and includes WA, ES, perceived value, e-shopping experience, and trust to demonstrate the IS and CB antecedents for acceptance and usage of e-shopping. The main research results are summarized as follows: first, perceived value, PEOU, PU, EG, WI, social factors, and ES are the direct predictors of e-shoppers' acceptance of e-shopping. WA affect e-shoppers' acceptance of e-shopping indirectly through PEOU, PU, EG, WI, and ES, whereas EG affect e-shoppers' acceptance of e-shopping indirectly through PEOU and PU. WI affects e-shoppers' acceptance of e-shopping indirectly through PEOU, whereas PEOU affects e-shoppers' acceptance of e-shopping indirectly through PU. Furthermore, e-shoppers' acceptance of e-shopping in terms of their attitudes toward

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e-shopping, which influence their intention to e-shop and subsequently affect their actual e-shopping purchase, along with the consequential cycle effect on e-shopping experience and trust, provides a detailed account of the key factors underpinning e-shopping with regard to usage of e-shopping sites. Such a situation can lead to the enhancement of site traffic and increased shopping transactions. These findings further advance the multi-disciplinary IS literature on the interaction of IS-CB dynamics that explain the booming e-shopping phenomenon in the virtual world.

6.1 Research contributions

This study aimed to bridge the gap in the studies of IS and CB, contributing to a more comprehensive understanding of the influence of IS and CB antecedents on acceptance and usage of e-shopping. By applying and synthesizing the theoretical underpinnings from the IS scholarship (i.e. TAM and UandG) with the widely applied imperative CB framework (i.e. TRA) to describe e-shopping acceptance and usage behavior, this study revealed the importance of a set of meaningful constructs in the e-shopping process. Essentially, this study revealed how e-shoppers view a particular set of IS-CB constructs when they conduct online shopping activity, providing more comprehensive insights into how IS motivates the shopping behavior of consumers in the virtual world. Furthermore, the results of this research support developers of e-shopping technologies in managing and expanding intelligent shopping factors, such as WA, user friendliness, and entertainment value, to fulfill the expectations of online shoppers.

Through investigation of the antecedents of acceptance and usage of e-shopping, this study provided a comprehensive framework that can be translated into the knowledge of the current state of the online shopping phenomenon. The results from the integrated model provide clear direction on the areas in which e-shoppers believe their expectations should be met. Finally, intelligent shopping support can dynamically adapt the knowledge derived from the IS-CB viewpoints to better manage and expand the value provided by e-shopping site environments.

6.2 Suggestions for practice

The results of this study indicate that perceived value, PU, PEOU, EG, social factors, and ES have positive influences on attitudes toward e-retailers. In contrast, WI have a negative impact on e-shoppers' attitudes toward e-shopping. Relationally, favorable e-shopper attitudes will lead to positive e-shopping intentions and a greater likelihood of actually purchasing online. Satisfactory actual e-shopping purchases should lead to delightful e-shopping experiences, which will cause e-shoppers to increase trust in online shopping with e-retailers. In addition, well-constructed WA of e-shopping sites positively influence e-shoppers' ES, PU, PEOU, and EG. However, poorly constructed WA naturally create WI for online shoppers.

These findings reveal that the critical elements in providing a good online shopping experience to e-shoppers include establishing positive perceived value in the minds of target e-shoppers, such as by increasing monetary and time savings and providing a good selection of products; upholding e-shoppers' trust by addressing the issues of privacy, providing adequate security features, and establishing a credible image in the minds of target e-shoppers; and ensuring online shopping sites are useful in helping e-shoppers make purchase decisions and accomplish shopping goals when shopping online. In addition, e-retailers should ensure that their sites are easy to use and include flexible features that foster positive ES, provide EGs, and minimize WI. This can be done through proper and good construction of WA of the online shopping site,

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including having attractive graphics and animations, visually appealing colors, and site maps within three clicks. Finally, e-retailers should tap into the success of social influences, such as including group or fan pages on their social networking sites, sharing postings on instant messenger sites, and initiating online reviews for their e-stores and e-offerings.

6.3 Limitations and suggestions for further research

Four main limitations of this study suggest avenues for further research. First, this study employs data collected mainly from Asian e-shoppers. Future research could collect data from American and European e-shoppers and conduct a cross-culture analysis to identify possible similarities and/or differences between studied relationships. Second, this study did not investigate the influence of demographics; only the demographic characteristics of Malaysians were presented. Nevertheless, some differences in demographic findings were encountered when comparing demographic characteristics of sample in this study against the majority of other IS and CB studies, for example, the gender differences in e-shoppers in this study (i.e. women) and prior studies (i.e. men). The potential outcome of such an investigation is likely to be fruitful because the moderating effects of demographic variables, such as age, gender, and race, may provide contrasting responses and further contribute to deeper understanding of e-shopping. Third, this study is limited in its explanation of e-purchases made individually. In an attempt to garner a larger pool of customers, a new form of e-commerce has recently emerged for online group buying, in which consumers gather together to make a group purchase in return for discounted e-market offerings. Thus, future research could consider replicating the integrated model to examine its generalizability in a group buying context. Fourth, certain limitations regarding the measurement of the constructs require some attention. For example, WA, perceived value, and social factors were only measured as single factors, though prior literature has discussed their multi-dimensional nature. Finer-grained constructs of these three latent constructs may offer better insights into their exact workings and the subsequent consequences that each dimension may produce. Last, although the study obtained a sample from an e-shopping mall that caters to consumers of all ages, the sample used was limited to only one e-shopping mall. There may be a possibility that customers of other e-shopping malls may have different perceptions toward their preferred e-shopping malls. Thus, further research can consider collecting data from various e-shopping malls, such as those that cater specifically to a distinctive set of products (e.g. property or vehicles), and compare the findings from the integrated model across the different types of e-shopping malls to improve the generalizability of the study's findings.

References

Ajzen, I. (1991), "The theory of planned behaviour", *Organizational Behaviour and Human Decision Process*, Vol. 50 No. 2, pp. 179-211.

Ajzen, I. and Fishbein, M. (1980), *Understanding Attitudes and Predicting Social Behaviour*, Prentice-Hall, Englewood Cliffs, NJ.

Alba, J., Lynch, J., Weitz, B. and Janiszewski, C. (1997), "Interactive home shopping: consumer, retailer, and manufacturer incentives to participate in electronic marketplaces", *Journal of Marketing*, Vol. 61 No. 3, pp. 38-53.

Downloaded by TASHKENT UNIVERSITY OF INFORMATION TECHNOLOGIES At 20:27 09 November 2016 (PT)

Al-Rafee, S. and Cronan, T.P. (2006), "Digital piracy: factors that influence attitude toward behaviour", *Journal of Business Ethics*, Vol. 63 No. 3, pp. 237-259.

Anderson, J.C. and Gerbing, D.W. (1988), "Structural equation modeling in practice: a review and recommended two-step approach", *Psychological Bulletin*, Vol. 103 No. 3, pp. 411-423.

Baraggioli, F. and Adam, B.S. (2008), "Visual velocity: content font effects and incidental online ad exposure", *Advances in Consumer Research*, Vol. 35 No. 1, pp. 600-606.

Bhattacherjee, A. (2002), "Individual trust in online firms: scale development and initial trust", *Journal of Management Information Systems*, Vol. 19 No. 1, pp. 213-243.

Bisdee, D. (2007), "Consumer attitudes review", *Office of Fair Trading*, June, pp. 1-147.

Bollen, K.A. (1989), *Structural Equations with Latent Variables*, Wiley, New York, NY.

Broekhuizen, T. (2006), "Understanding channel purchase intentions: measuring online and offline shopping value perceptions", doctoral dissertation, Labyrinth Publications, Ridderkerk.

Broekhuizen, T. and Huizingh, E.K.R.E. (2009), "Online purchase determinants: is their effect moderated by direct experience?", *Management Research News*, Vol. 32 No. 5, pp. 440-457.

Bruner, G.C. and Kumar, A. (2005), "Explaining consumer acceptance of handheld internet devices", *Journal of Business Research*, Vol. 58 No. 5, pp. 553-558.

Bucklin, R.E. and Sismeiro, C. (2003), "A model of web site browsing behaviour estimated on clickstream data", *Journal of Marketing Research*, Vol. 40 No. 3, pp. 249-267.

Buton-Jones, A. and Hubona, G.S. (2005), "Individual differences and usage behaviour: revisiting a technology acceptance model assumption", *The DATA BASE for Advances in Information Systems*, Vol. 36 No. 2, pp. 58-77.

Byre, B.M. (2001), *Structural Equation Modeling with AMOS: Basic Concepts, Applications and Programming*, Erlbaum, Mahwah, NJ.

Carrigan, M. and Attalla, A. (2001), "The myth of the ethical consumer – do ethics matter in purchase behaviour?", *Journal of Consumer Marketing*, Vol. 18 No. 7, pp. 560-578.

Celik, H.E. and Yilmaz, V. (2011), "Extending the technology acceptance model for adoption of e-shopping by consumers in Turkey", *Journal of Electronic Commerce Research*, Vol. 12 No. 2, pp. 152-164.

Chen, L., Gillenson, M.L. and Sherrell, D.L. (2002), "Enticing online consumers: an extended technology acceptance perspective", *Information and Management*, Vol. 39 No. 8, pp. 705-719.

Chen, Q. and Wells, W.D. (1999), "Attitude toward the site", *Journal of Advertising Research*, Vol. 39 No. 5, pp. 27-37.

Chen, Y. and Barnes, S. (2007), "Initial trust and online buyer behavior", *Industrial Management and Data Systems*, Vol. 107 No. 1, pp. 21-36.

Chen, Y.H., Wu, J.J. and Chang, H.T. (2013), "Examining the mediating effect of positive moods on trust repair in e-commerce", *Internet Research*, Vol. 23 No. 3, pp. 355-371.

Cheung, C.M.K., Chan, G.W.W. and Limayen, M. (2005), "A critical review of online consumer behaviour: empirical research", *Journal of Electronic Commerce in Organisations*, Vol. 3 No. 4, pp. 1-19.

Chicksand, L. and Knowles, R. (2002), "Overcoming the difficulties of selling 'look and feel' goods online: implications for web site design", *IBM E-Business Conference, Birmingham University, Birmingham*.

Downloaded by TASHKENT UNIVERSITY OF INFORMATION TECHNOLOGIES At 20:27 09 November 2016 (PT)

Child, D. (1990), *The Essentials of Factor Analysis*, 2nd ed., Casel Educational Limited, London.

Childers, T.L., Carr, C.L., Peck, J. and Carson, S. (2001), "Hedonic and utilitarian motivations for online retail shopping behaviour", *Journal of Retailing*, Vol. 77 No. 4, pp. 511-535.

Chiu, C.M., Chang, C.C., Cheng, H.L. and Fang, Y.H. (2009), "Determinants of customer repurchase intention in online shopping", *Online Information Review*, Vol. 33 No. 4, pp. 761-784.

Chu, C.W. and Lu, H.P. (2007), "Factors influencing online music purchase intention in Taiwan: an empirical study based on the value-intention framework", *Internet Research*, Vol. 17 No. 2, pp. 139-155.

Connolly, R. and Bannister, D. (2006), "Consumer trust in internet shopping in Ireland: towards the development of a more effective trust measurement instrument", *Journal of Information Technology*, Vol. 22 No. 2, pp. 102-118.

Constantinides, E. (2004), "Influencing the online consumer's behavior: the web experience", *Internet Research*, Vol. 14 No. 2, pp. 111-126.

Constantinides, E., Lorenzo-Romero, C. and Gomez, M.A. (2010), "Effects of web experience on consumer choice: a multicultural approach", *Internet Research*, Vol. 20 No. 2, pp. 188-209.

Dabholkar, P.A. (1994), "Technology-based service delivery: a classification scheme for developing marketing strategies", in Swartz, T.A., Bowen, D.E. and Brown, S.W. (Eds), *Advances in Services Marketing and Management*, JAI Press, Greenwich, CT, pp. 241-271.

Dailey, L. (2004), "Consumers' responses to navigational atmospherics on the web: an empirical test", *American Marketing Association Conference Proceedings*, *Vol. 13, American Marketing Association*, *Chicago, IL*.

Dash, S.B. and Saji, K.B. (2007), "Role of self-efficacy and website social-presence in customers' adoption of B2C online shopping: an empirical study in the Indian context", *Journal of International Consumer Marketing*, Vol. 20 No. 2, pp. 33-48.

Davis, F.D. (1989), "Perceived usefulness, perceived ease of use, and user acceptance of information technology", *MIS Quarterly*, Vol. 13 No. 3, pp. 319-340.

Delgado-Ballester, E. and Munuera-Aleman, J.L. (2001), "Brand trust in the context of consumer loyalty", *European Journal of Marketing*, Vol. 35 Nos 11/12, pp. 1238-1258.

Deloitte (2011), *Online Retailers Still Ahead in Retail Sales*, Deloitte, London.

Demangeot, C. and Broderick, A.J. (2006), "Exploring the experiential intensity of online shopping environments", *Qualitative Market Research: An International Journal*, Vol. 9 No. 4, pp. 325-351.

Dennis, C., Merrilees, B., Jayawardhena, C. and Wright, L.T. (2009), "E-consumer behaviour", *European Journal of Marketing*, Vol. 43 Nos 9/10, pp. 1121-1139.

Dennis, C., Morgan, A., Wright, L.T. and Jayawardhena, C. (2010), "The influences of social e-shopping in enhancing young women's online shopping behaviour", *Journal of Customer Behaviour*, Vol. 9 No. 2, pp. 151-174.

Dixon, C. (2005), "Online customisation", Tuck School of Business at Dartmouth Papers, Hanover, NH.

Ducoffe, R.H. (1996), "Advertising value and advertising on the web", *Journal of Advertising Research*, Vol. 36 No. 5, pp. 21-35.

Eighmey, J. and McCord, M. (1998), "Adding value in the information age: uses and gratifications of sites on the world wide web", *Journal of Business Research*, Vol. 41 No. 3, pp. 187-194.

Downloaded by TASHKENT UNIVERSITY OF INFORMATION TECHNOLOGIES At 20:27 09 November 2016 (PT)

Eko, S. (2010), *Building Effective Websites*, Sage Publications, Thousand Oaks, CA.

Eroglu, S.A., Macleit, K.A. and Davis, L.M. (2003), "Empirical testing of a model of online store atmospherics and shopper responses", *Psychology and Marketing*, Vol. 20 No. 2, pp. 139-150.

Fagerlind, H. and Kihlman, D. (2000), "How do they use internet? The use of internet among youth in a gender perspective", paper presented at HTU 2001.

Fishbein, M. and Ajzen, I. (1975), *Belief, Attitude, Intention and Behaviour: An Introduction to Theory and Research*, Addison-Wesley, Reading, MA.

Fornell, C. and Larcker, D.F. (1981), "Evaluating structural equation models with unobserved variables and measurement error", *Journal of Marketing Research*, Vol. 18 No. 1, pp. 39-50.

Fukuyama, F. (1995). *Trust: the Social Virtues and the Creation of Prosperity*, Free Press, New York, NY.

Gefan, D. (2000), "E-commerce: the role of familiarity and trust", *The International Journal of Management Science*, Vol. 28 No. 6, pp. 725-737.

Gefan, D., Karahanna, E. and Straub, D.W. (2003), "Trust and TAM in online shopping: an integrated model", *MIS Quarterly*, Vol. 27 No. 1, pp. 51-90.

George, J.F. (2002), "Influences on the intent to make internet purchases", *Internet Research*, Vol. 12 No. 2, pp. 165-180.

George, J.F. (2004), "The theory of planned behavior and internet purchasing", *Internet Research*, Vol. 14 No. 3, pp. 198-212.

Grewal, D., Iyer, G.R. and Levy, M. (2004), "Internet retailing: enablers, limiters and market consequences", *Journal of Business Research*, Vol. 57 No. 7, pp. 703-713.

Griffiths, K. (2008), "More than just a shopping cart", *Industrial Distribution*, Vol. 95, p. 28.

Ha, H.Y., Janda, S. and Muthaly, S.K. (2010), "A new understanding of satisfaction model in e-repurchase situation", *European Journal of Marketing*, Vol. 44 Nos 7/8, pp. 997-1016.

Ha, S. and Stoel, L. (2009), "Consumer e-shopping acceptance: antecedents in a technology acceptance model", *Journal of Business Research*, Vol. 62 No. 5, pp. 565-571.

Hair, J.F., Ronald, L.T., Anderson, R.E. and Black, W. (1998), *Multivariate Data Analysis*, Prentice-Hall International, London.

Hand, C., Riley, F.D., Harris, P. and Singh, J. (2009), "Online grocery shopping: the influence of situational factors", *European Journal of Marketing*, Vol. 43 No. 9, pp. 1205-1219.

Hansen, T. and Jensen, J.M. (2009), "Shopping orientation and online clothing purchases: the role of gender and purchase situation", *European Journal of Marketing*, Vol. 43 No. 9, pp. 1154-1170.

Hansen, T., Jensen, J.M. and Solgaard, H.S. (2004), "Predicting online grocery buying intention: a comparison of the theory of reasoned action and the theory of planned behaviour", *International Journal of Information Management*, Vol. 24 No. 6, pp. 539-550.

Hausmann, A.V. and Siekpe, J.S. (2009), "The effect of web interface features on consumer online purchase intentions", *Journal of Business Research*, Vol. 62 No. 1, pp. 5-13.

Heijden, H. (2000), "E-TAM: a revision of the technology acceptance model to explain websites revisits", Research Memorandum, September.

Hooff, B.V.D., Weenen, F.D.L., Soekijad, M. and Huysman, M. (2010), "The value of online networks of practice: the role of embeddedness and media use", *Journal of Information Technology*, Vol. 25 No. 2, pp. 205-215.

Downloaded by TASHKENT UNIVERSITY OF INFORMATION TECHNOLOGIES At 20:27 09 November 2016 (PT)

Huang, E. (2008), "Use and gratification in e-consumers", *Internet Research*, Vol. 18 No. 4, pp. 405-426.

Hung, S.Y., Ku, C.Y. and Chang, C.M. (2003), "Critical factors of WAP services adoption: an empirical study", *Electronic Commerce Research and Applications*, Vol. 2 No. 1, pp. 42-60.

Hsiao, C.C., Yen, H.J.R. and Li, E.Y. (2012), "Exploring consumer value of multi-channel shopping: a perspective of means-end theory", *Internet Research*, Vol. 22 No. 3, pp. 318-339.

Jayawardhena, C. and Wright, L.T. (2009), "An empirical investigation into e-shopping excitement: antecedents and effects", *European Journal of Marketing*, Vol. 43 Nos 9/10, pp. 1171-1187.

Jeong, S.W., Fiore, A.M., Niehm, L.S. and Lorenz, F.O. (2009), "The role of experiential value in online shopping: the impacts of product presentation on consumer responses towards an apparel web site", *Internet Research*, Vol. 19 No. 1, pp. 105-124.

Keen, P.G.W. (1999), *Electronic Commerce Relationships: Trust by Design*, Prentice-Hall, Englewood Cliffs, NJ.

Keil, M., Beranek, P.M. and Konsynski, B.R. (1995), "Usefulness and ease of use: field study evidence regarding task considerations", *Decision Support Systems*, Vol. 13 No. 1, pp. 75-91.

Kim, E.Y. and Kim, Y.K. (2004), "Predicting online purchase intentions for clothing products", *European Journal of Marketing*, Vol. 38 No. 7, pp. 883-897.

Kim, J. and Forsythe, S. (2007), "Hedonic usage of product virtualization technologies in online apparel shopping", *International Journal of Retail and Distribution Management*, Vol. 35 No. 6, pp. 502-514.

Kim, J. and Forsythe, S. (2010), "Factors affecting adoption of product virtualization technology for online consumer electronics shopping", *International Journal of Retailing and Distribution Management*, Vol. 38 No. 3, pp. 190-204.

Kim, M.J., Chung, N. and Lee, C.K. (2010), "The effects of perceived trust on electronic commerce: shopping online for tourism products and services in South Korea", *Tourism Management*, Vol. 32 No. 2, pp. 256-265.

Kimery, K. and McCord, M. (2002), "Third-party assurances: mapping the road to trust in e- retailing", *Journal of Information Technology Theory and Applications*, Vol. 4 No. 2, pp. 63-82.

Klapper, J.T. (1960), *The Effects of Mass Communication*, Free Press, Glencoe, IL.

Klatz, E. (1959), "Mass communication research and the study of popular culture: an editorial note on a possible future for this journal", *Studies in PublicCommunication*, Vol. 2 No. 1, pp. 1-6.

Kline, R.B. (1998), *Principles and Practice of Structural Equation Modeling*, Guilford Press, New York, NY.

Konrad, R. (2002), "Is it time to stop the pop-ups?" *ZDnet News*, June, available at: www.zdnet.com/article/is-it-time-to-stop-the-pop-ups/

Koo, D.M. and Ju, S.H. (2010), "The interactional effects of atmospherics and perceptual curiosity on emotions and online shopping intention", *Computers in Human Behaviour*, Vol. 26 No. 3, pp. 377-388.

Korgaonkar, P.K. and Wolin, L.D. (1999), "A multivariate analysis of web usage", *Journal of Advertising Research*, Vol. 39 No. 2, pp. 53-68.

Downloaded by TASHKENT UNIVERSITY OF INFORMATION TECHNOLOGIES At 20:27 09 November 2016 (PT)

Korgaonkar, P.K., Silverblatt, R. and Girard, T. (2006), "Online retailing, product classifications, and consumer preferences", *Internet Research*, Vol. 16 No. 3, pp. 267-288.

Koufteros, X.A. (1999), "Testing a model of pull production: a paradigm for manufacturing research using structural equation modelling", *Journal of Operations Management*, Vol. 17 No. 4, pp. 467-488.

Koufteros, X.A., Vonderembse, M.A. and Doll, W.J. (2001), "Con-current engineering and its consequences", *Journal of Operations Management*, Vol. 19 No. 1, pp. 97-115.

Laroche, M., Yang, Z., McDougall, G.H.G. and Bergeron, J. (2005), "Internet versus brick-and-mortar retailers: an investigation into tangibility and its consequences", *Journal of Retailing*, Vol. 81 No. 4, pp. 251-267.

Lee, H., Choi, S.Y. and Kang, Y.S. (2009), "Formation of e-satisfaction and repurchase intention: moderating roles of computer self-efficacy and computer anxiety", *Expert Systems with Applications*, Vol. 36 No. 4, pp. 7848-7859.

Lee, J., Park, D.H. and Han, I. (2011), "The different effects of online consumer reviews on consumers' purchase intentions depending on trust in online shopping malls: an advertising perspective", *Internet Research*, Vol. 21 No. 2, pp. 187-206.

Lim, W.M. (2013a), "The effects of web atmospherics on entertainment gratification and web irritation: some empirical evidence from online shopping", *Modern Applied Science*, Vol. 7 No. 12, pp. 15-23.

Lim, W.M. (2013b), "Toward a theory of online buyer behavior using structural equation modeling", *Modern Applied Science*, Vol. 7 No. 10, pp. 34-41.

Lim, W.M. and Ting, D.H. (2010), "Young adults' susceptibility to interpersonal influence: a case of apparel purchases", *International Journal of Management Studies*, Vol. 17 No. 2, pp. 143-164.

Lim, W.M. and Ting, D.H. (2012a), "E-shopping: an analysis of the technology acceptance model", *Modern Applied Science*, Vol. 6 No. 4, pp. 49-62.

Lim, W.M. and Ting, D.H. (2012b), "E-shopping: an analysis of the uses and gratifications theory", *Modern Applied Science*, Vol. 6 No. 5, pp. 48-63.

Lim, Y.M., Yap, C.S. and Lau, T.C. (2010), "Response to internet advertising among Malaysian young consumers", *Cross-Cultural Communication*, Vol. 6 No. 2, pp. 93-99.

Luo, X. (2002), "Uses and gratification theory and e-consumer behaviours: a structural equation modelling study", *Journal of Interactive Advertising*, Vol. 2 No. 2, pp. 34-41.

McKinney, L.N. (2004), "Creating a satisfying internet shopping experience via atmospheric variables", *Journal of Consumer Studies*, Vol. 28 No. 3, pp. 268-283.

McKnight, D. and Chervany, N. (2002), "What trust means in e-commerce customer relationships: an interdisciplinary conceptual typology", *International Journal of Electronic Commerce*, Vol. 6 No. 2, pp. 35-39.

Machleit, K.A. and Eroglu, S.A. (2000), "Describing and measuring emotional response to shopping experience", *Journal of Business Research*, Vol. 49 No. 2, pp. 101-111.

Machlis, S. (1998), "E-retailers adopt chat to connect with buyers", *Computerworld*, Vol. 32 No. 1, pp. 1-2.

Manganari, E.E., Siomkos, G.J. and Vrechopoulos, A.P. (2009), "Store atmosphere in web retailing", *European Journal of Marketing*, Vol. 43 Nos 9/10, pp. 1140-1153.

Manganari, E.E., Siomkos, G.J., Rigopoulou, I.D. and Vrechopoulos, A.P. (2011), "Virtual store layout effects on consumer behaviour: applying an environmental psychology approach in the online travel industry", *Internet Research*, Vol. 21 No. 3, pp. 326-346.

Downloaded by TASHKENT UNIVERSITY OF INFORMATION TECHNOLOGIES At 20:27 09 November 2016 (PT)

Mehrabian, A. and Russell, J.A. (1974), *An approach to Environmental Psychology*. MIT Press, Cambridge, MA.

Montoya-Weiss, M.M., Voss, G.B. and Grewal, D. (2003), "Determinants of online channel use and overall satisfaction with a relational, multichannel service provider", *Journal of the Academy of Marketing Science*, Vol. 31 No. 4, pp. 448-458.

Morgan, R.M. and Hunt, S.D. (1994), "The commitment-trust theory of relationship marketing", *Journal of Marketing*, Vol. 58 No. 3, pp. 20-38.

Morganosky, M.A. and Cude, B.J. (2000), "Consumer response to online grocery shopping", *International Journal of Retail and Distribution Management*, Vol. 28 No. 1, pp. 17-26.

Ng, S. and Paladino, A. (2009), "Examining the influences of intentions to purchase green mobile phones among young consumers: an empirical analysis", *ANZMAC 2009*, pp. 212-230.

O'Cass, A. and Fenech, T. (2003), "Web retailing adoption: exploring the nature of internet users web retailing behaviour", *Journal of Retailing and Consumer Services*, Vol. 10 No. 2, pp. 81-94.

Ong, C.S., Lai, J.Y. and Wang, Y.S. (2004), "Factors affecting engineers' acceptance of asynchronous e-learning systems in high-tech companies", *Information and Management*, Vol. 41 No. 6, pp. 795-804.

Osman, S. (2008), "Mood as a mediating variable between store atmospheric and in-store behaviour: a study of young and old consumers", doctoral dissertation, University Putra Malaysia, Malaysia.

Papadopoulou, P., Andreou, A., Kanellis, P. and Martakos, D. (2001), "Trust and relationship building in electronic commerce", *Internet Research*, Vol. 11 No. 4, pp. 322-332.

Pavlou, P.A. (2003), "Consumer acceptance of electronic commerce: integrating trust and risk with the technology acceptance model", *International Journal of Electronic Commerce*, Vol. 7 No. 3, pp. 101-134.

Penz, E. and Hogg, M.K. (2011), "The role of mixed emotions in consumer behaviour: investigating ambivalence in consumers' experiences of approach-avoidance conflicts in online and offline settings", *European Journal of Marketing*, Vol. 45 No. 1, pp. 104-132.

Peters, C., Amato, C.H. and Hollenback, C.R. (2007), "An exploratory investigation of consumers' perceptions of wireless advertising", *Journal of Advertising*, Vol. 36, pp. 129-145.

Ramayah, T. and Ignatius, J. (2005), "Impact of perceived usefulness, perceived ease of use and perceived enjoyment on intention to shop online", *ICFAI Journal of Systems Management*, Vol. 3 No. 3, pp. 36-51.

Ramayah, T., Rouibah, K., Gopi, M. and Rangel, G.J. (2009), "A decomposed theory of reasoned action to explain intention to use internet stock trading among Malaysian investors", *Computers in Human Behaviour*, Vol. 25 No. 6, pp. 1222-1230.

Roger, E.M. (1995), *Diffusion of Innovations*, The Free Press, New York.

Roger, E.M. (2003), *Diffusion of Innovations*, 5th ed., The Free Press, New York, NY.

Rohm, A.J. and Swaminathan, V. (2004), "A typology of online shoppers based on shopping motivations", *Journal of Business Research*, Vol. 57 No. 7, pp. 748-757.

Roy, M.C., Dewit, O. and Aubert, B.A. (2001), "The impact of interface usability on trust in web retailers", *Internet Research*, Vol. 11 No. 5, pp. 388-398.

Salam, A.F., Iyer, L., Palvia, P. and Singh, R. (2005), "Trust in e-commerce", *Communications of the ACM*, Vol. 48 No. 2, pp. 73-77.

Downloaded by TASHKENT UNIVERSITY OF INFORMATION TECHNOLOGIES At 20:27 09 November 2016 (PT)

Segars, A.H. and Grover, V. (1993), "Re-examining perceived ease of use and usefulness: a confirmatory factor analysis", *MIS Quarterly*, Vol. 17 No. 4, pp. 517- 525.

Sihombing, S.O. (2007), "Predicting environmentally purchase behaviour: a test of the value-attitude-behaviour hierarchy", *The 2nd Indonesian Business Management Conference*, pp. 73-82.

Sorce, P., Perotti, V. and Widrick, S. (2005), "Attitude and age differences in online buying", *International Journal of Retail and Distribution Management*, Vol. 33 No. 2, pp. 122-132.

Stafford, T.F. (2003), "Differentiating between adopter categories in the uses and gratifications for internet services", *IEEE Transactions and Engineering Management*, Vol. 50 No. 4, pp. 427-435.

Stafford, T.F. and Stafford, M.R. (2001), "Identifying motivations for the use of commercial websites", *Information Resources Management Journal*, Vol. 14 No. 1, pp. 22-30.

Suh, B. and Han, I. (2002), "Effect of trust on customer acceptance of internet banking", *Electronic Commerce and Applications*, Vol. 1 No. 3, pp. 247-263.

Suki, N.B.M. (2001), "Malaysian internet user's motivation and concerns for shopping online", *Malaysian Journal of Library and Information Science*, Vol. 6 No. 2, pp. 21-33.

Sultan, F., Urban, G.L., Shankar, V. and Bart, I.Y. (2002), "Determinants and role of trust in e-commerce: a large scale empirical study", working paper, Sloan School of Management (MIT), Cambridge, MA.

Sundararajan, B. (2009), "Impact of communication patterns, network positions and social dynamics factors on learning among students in a CSCL environment", *Electronic Journal of e-Learning*, Vol. 7 No. 1, pp. 71-84.

Swait, J. and Sweeney, J.C. (2000), "Perceived value and its impact on choice behaviour in a retail setting", *Journal of Retailing and Consumer Services*, Vol. 7 No. 2, pp. 77-88.

Teo, T.S.H., Lim, V.K.G. and Lai, R.Y.C. (1999), "Intrinsic and extrinsic motivation in internet usage", *Omega*, Vol. 27 No. 1, pp. 25-37.

Venkatesh, V. and Agarwal, R. (2006), "Turning visitors into customers: a usability-centric perspective on purchase behaviour in electronic channels", *Management Science*, Vol. 52 No. 3, pp. 367-382.

Verhoef, C.P. and Langerak, F. (2001), "Possible determinants of consumers' adoption of electronic grocery shopping in the Netherlands", *Journal of Retailing and Consumer Services*, Vol. 8 No. 5, pp. 275-285.

Vijayasarathy, L.R. (2002), "Product characteristics and internet shopping intentions", *Internet Research: Electronic Networking Applications and Policy*, Vol. 12 No. 5, pp. 411-426.

Vijayasarathy, L.R. (2004), "Predicting consumer intentions to use online shopping: the case for an augmented technology acceptance model", *Information and Management*, Vol. 41 No. 6, pp. 747-762.

Vijayasarathy, L.R. and Jones, J.M. (2000), "Print and internet catalog shopping: assessing attitudes and intentions", *Internet Research*, Vol. 10 No. 3, pp. 191-202.

Wakefield, K.L. and Baker, J. (1998), "Excitement at the mall: determinants and effects on shopping response", *Journal of Retailing*, Vol. 74 No. 4, pp. 515-539.

Wang, L.C., Baker, J., Wagner, J.A. and Wakefield, K. (2007), "Can a retail web site be social?", *Journal of Marketing*, Vol. 71 No. 3, pp. 143-157.

Weisberg, J., Te'eni, D. and Arman, L. (2011), "Past purchase and intention to purchase in e- commerce: the mediation of social presence and trust", *Internet Research*, Vol. 21 No. 1, pp. 82-96.

Wen, C., Prybutok, V.R. and Xu, C. (2011), "An integrated model for customer online repurchase intention", *Journal of Computer Information Systems*, Vol. 52 No. 1, pp. 14-23.

Downloaded by TASHKENT UNIVERSITY OF INFORMATION TECHNOLOGIES At 20:27 09 November 2016 (PT)

Westhorpe, P. (2008), "Live chat: the new secret weapon to better online customer service", *Bamboo Cricket*, pp. 2-14.

Wolfinbarger, M. and Gilly, M.C. (2001), "Shopping online for freedom, control and fun", *California Management Review*, Vol. 43 No. 2, pp. 39-51.

Xu, Y. and Paulins, V.A. (2005), "College students' attitudes toward shopping online for apparel products: exploring a rural versus urban campus", *Journal of Fashion Marketing and Management*, Vol. 9 No. 4, pp. 420-433.

Zauki, N.M. (2009), "Virtual reality features for e-commerce 3D PDF advertising", doctoral dissertation, University Utara Malaysia, Malaysia.

Zeithaml, V.A. (1988), "Consumer perceptions of price, quality and value: a means-end model and synthesis of evidence", *Journal of Marketing*, Vol. 52 No. 3, pp. 2-22.

Zhou, L., Dai, L. and Zhang, D., (2007), "Online shopping acceptance model – a critical survey of consumer factors in online shopping", *Journal of Electronic Commerce Research*, Vol. 8 No. 1, pp. 41-62.

Further reading

Bhatnagar, A., Misra, S. and Rao, H.R. (2000), "On risk, convenience, and internet shopping behaviour: why some consumers are online shoppers while others are not", *Communications of the ACM*, Vol. 43, pp. 98-105.

Brown, M., Pope, N. and Voges, K. (2003), "Buying or browsing? An exploration of shopping orientations and online purchase intention", *European Journal of Marketing*, Vol. 37, pp. 1666-1684.

Dali, M.M. and Nordin, N.A. (2010), "Is there an integrated society in urban neighbourhoods of Klang Valley in Malaysia?", *Journal of Sustainable Development*, Vol. 3, pp. 266-274.

Eastlick, M.A., Lotz, S.L. and Warrington, P. (2006), "Understanding online B-to-C relationships: an integrated model of privacy concerns, trust and commitment", *Journal of Business Research*, Vol. 59 No. 8, pp. 877-886.

Goldsmith, R.E. (2001), "Using the domain specific innovativeness scale to identify innovative internet consumers", *Internet Research*, Vol. 11 No. 2, pp. 149-158.

Gorsuch, R.L. (1990), "Common factor analysis versus component analysis: some well and little known facts", *Multivariate Behavioural Research*, Vol. 25 No. 1, pp. 33-39.

Guo, Y.M. and Poole, M.S. (2009), "Antecedents of flow in online shopping: a test of alternative models", *Information Systems Journal*, Vol. 19 No. 4, pp. 369-390.

Hair, J., Black, W., Babin, B., Anderson, R. and Tatham, R. (2006), *Multivariate Data Analysis*, 6th ed., Pearson Prentice Hall, Upper Saddle River, NJ.

Harris, L. and Dennis, C. (2008), *Marketing the E-Business*, 2nd ed., Routledge, Abingdon and New York, NY.

Jayawardhena, C., Wright, L.T. and Dennis, C. (2007), "Consumers online: intentions, orientations and segmentations", *International Journal of Retail and Distribution Management*, Vol. 35 No. 6, pp. 515-526.

Kau, A.K., Tang, Y.E. and Ghose, S. (2003), "Typology of online shoppers", *Journal of Consumer Marketing*, Vol. 20 No. 2, pp. 139-156.

Khalifa, M. and Liu, V. (2007), "Online consumer retention: contingent effects of online shopping habit and online shopping experience", *European Journal of Information Systems*, Vol. 16, pp. 780-792.

Downloaded by TASHKENT UNIVERSITY OF INFORMATION TECHNOLOGIES At 20:27 09 November 2016 (PT)

Kim, J.O. and Mueller, C.W. (1978), *Factor Analysis: Statistical Methods and Practical Issues*, Sage Publications, Newbury Park, CA.

Lin, C.P. and Bhattacherjee, A. (2010), "Extending technology usage models to interactive hedonic technologies: a theoretical model and empirical test", *Information Systems Journal*, Vol. 20 No. 2, pp. 163-181.

Mathwick, C., Malhotra, N.K. and Rigdon, E. (2002), "The effect of dynamic retail experiences on experiential perceptions of value: an Internet and catalog comparison", *Journal of Retailing*, Vol. 78 No. 1, pp. 51-60.

Menon, S. and Kahn, B. (2002), "Cross-category effects of induced arousal and pleasure on the internet shopping experience", *Journal of Retailing*, Vol. 78 No. 1, pp. 31-40.

Phang, C.W., Kankanhalli, A. and Ramakrishnan, K. (2010), "Customers' preference of online store visit strategies: an investigation of demographic variables", *European Journal of Information Systems*, Vol. 19 No. 3, pp. 344-358.

Rossiter, J.R. (2002), "The C-OAR-SE procedure for scale development in marketing", *International Journal of Research in Marketing*, Vol. 19 No. 4, pp. 305-335.

Steenkamp, J.B.E.M. and Baumgartner, H. (2000), "On the use of structural equation models for marketing modeling", *International Journal of Research in Marketing*, Vol. 17 No. 2, pp. 195-202.

Susskind, A.M. and Stefanone, M.A. (2010), "Internet apprehensiveness: an examination of online information seeking and purchasing behaviour", *Journal of Hospitality and Tourism Technology*, Vol. 1 No. 1, pp. 5-29.

Swinyard, W.R. and Smith, S.M. (2003), "Why people (don't). shop online: a lifestyle study of the internet consumer", *Psychology and Marketing*, Vol. 20 No. 7, pp. 567-597.

Van Zyl, A.S. (2009), "The impact of social networking 2.0 on organisations", *The Electronic Library*, Vol. 27, pp. 906-918.

Wang, Y.S., Lin, H.H. and Luarn, P. (2006), "Predicting consumer intention to use mobile service", *Information Systems Journal*, Vol. 16 No. 2, pp. 157-179.

Wright, L.T. (2008), "Qualitative research", in Baker, M. (Ed.), *The Marketing Textbook*, Elsevier, Amsterdam, pp. 156-169.

Wright, S.S. (1921), "Correlation and causation", *Journal of Agricultural Research*, Vol. 20 No. 7, pp. 557-585.

(The Appendix follows overleaf.)

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Appendix

Construct	Item	Measure	Source
Actual e-shopping purchase (asp)	asp1	I make online purchases frequently	Sihombing (2007)
	asp2	I make online purchases intensively	
	asp3	Overall, I have made many online purchases	
Perceived value (pv)	pv1	I save more money when I shop online than when shopping at bricks-and-mortar retailers	Broekhuizen and Huizingh (2009), Xu and Paulins (2005), Morganosky and Cude (2000), Sorce *et al.* (2005)
	pv2	Online retailers provide a good selection of products	
	pv3	Shopping online avoids the hassle of going to bricks-and-mortar retailers	
Attitude (att)	att1	I like to purchase what I need from online retailers	Sorce *et al.* (2005), Vijayasarathy (2002), Hansen *et al.* (2004)
	att2	I feel shopping online is a wise choice	
	att3	I hold a positive evaluation of shopping online	
e-shopping intention (esi)	esi1	I prefer to shop online	Davis (1989), Kim and Forsythe (2010), Broekhuizen and Huizingh (2009), Chiu *et al.* (2009)
	esi2	I plan to do more of my shopping via online retailers	
	esi3	When I need to buy a particular product, I search for an online retailer that has the product	
e-shopping experience (ese)	ese1	I usually have a good time shopping online	Lee *et al.* (2009)
	ese2	I am pleased with my shopping activity	
	ese3	I have a delightful shopping experience over the internet	
Trust (tru)	tru1	I am confident in buying what I want from secured online retailers	Broekhuizen and Huizingh (2009), Ha and Stoel (2009), Kim *et al.* (2010)
	tru2	I feel safe in purchasing at e-retailers that protects my privacy	
	tru3	I believe a secured online retailer will safeguard my private information	
Perceived usefulness (pu)	pu1	I am able to accomplish my shopping goals more quickly when I shop online	Ramayah *et al.* (2009), Bruner and Kumar (2005), O'Cass and Fenech (2003), Vijayasarathy (2004), Chen and Wells (1999)
	pu2	Shopping from e-retailers improves my shopping decisions	
	pu3	Shopping from e-retailers makes it easier for me to satisfy my needs	
Perceived ease of use (peou)	peou1	I find it easy learning to use most online shopping sites	Chen and Wells (1999), Davis (1989), Buton-Jones and Hubona (2005)
	peou2	I find it easy to use most online shopping sites to find what I want	
	peou3	I learn how to use most online shopping sites very quickly	

Table AI.
Measurement items for study

(*continued*)

Construct	Item	Measure	Source
Entertainment gratification (eg)	eg1	Using online shopping sites to purchase products provides me with lots of enjoyment	Chen *et al.* (2002), Ducoffe (1996), Korgaonkar and Wolin (1999), Bruner and Kumar (2005), Chiu *et al.* (2009)
	eg2	I find it boring to shop at online shopping sites	
	eg3	I find it unpleasant to shop at online shopping sites	
Web irritation (wi)	wi1	I often feel irritated when shopping online	Hausmann and Siekpe (2009), Chen *et al.* (2002), Ducoffe (1996), Korgaonkar and Wolin (1999)
	wi2	I feel that most online shopping sites are messy	
	wi3	Online shopping sites are not a nuisance to me	
Social factors (sf)	sf1	I am concerned about what others say when I shop online	Ramayah *et al.* (2009), Hansen *et al.* (2004)
	sf2	I tend to shop online for products that are recommended by my friends in their postings on social networking sites	
	sf3	I tend to shop at online shopping sites that my peers shop at	
Web atmospherics (wa)	wa1	Visually appealing colors, graphics, and animations make online shopping sites interesting	Koo and Ju (2010)
	wa2	Most online shopping sites makes it possible to find out what e-shoppers want within three clicks from the first page	
	wa3	It is desirable for online shopping sites to have interactive features (e.g. live feedback) and navigation features (e.g. site maps, ability to view shopping carts)	
Emotional state (es)	es1	Using online shopping sites gives me satisfaction in my shopping activity	Koo and Ju (2010)
	es2	I am pleased to shop for products using online shopping sites	
	es3	I tend to get frenzied when I shop in online shopping sites	

Table AI.

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2. LimWeng Marc Weng Marc Lim School of Business, Monash University Malaysia, Bandar Sunway, Malaysia and Faculty of Business and Design, Swinburne University of Technology, Kuching, Malaysia . 2016. Social media in medical and health care: opportunities and challenges. *Marketing Intelligence & Planning* **34**:7, 964-976. [Abstract] [Full Text] [PDF]
3. Brian P. Cozzarin, Stanko Dimitrov. 2016. Mobile commerce and device specific perceived risk. *Electronic Commerce Research* **16**:3, 335-354. [CrossRef]
4. Rosidah Musa, Janiffa Saidon, Mior Harris Mior Harun, Ainul Azreen Adam, Dzarul Farhan Dzahar, Siti Safrina Haussain, Wan Muinuddin Wan Lokman. 2016. The Predictors and Consequences of Consumers' Attitude Towards Mobile Shopping Application. *Procedia Economics and Finance* **37**, 447-452. [CrossRef]