



Internet Research

Female online shoppers: Examining the mediating roles of e-satisfaction and e-trust on e-loyalty development

Shihyu Chou Chi-Wen Chen Jiun-You Lin

Article information:

To cite this document:

Shihyu Chou Chi-Wen Chen Jiun-You Lin , (2015),"Female online shoppers", Internet Research, Vol. 25 Iss 4 pp. 542 - 561

Permanent link to this document:

<http://dx.doi.org/10.1108/IntR-01-2014-0006>

Downloaded on: 09 November 2016, At: 20:32 (PT)

References: this document contains references to 70 other documents.

To copy this document: permissions@emeraldinsight.com

The fulltext of this document has been downloaded 1870 times since 2015*

Users who downloaded this article also downloaded:

(2015),"Consumer attitudes towards online shopping: The effects of trust, perceived benefits, and perceived web quality", Internet Research, Vol. 25 Iss 5 pp. 707-733 <http://dx.doi.org/10.1108/IntR-05-2014-0146>

(2014),"Moderating effects of online shopping experience on customer satisfaction and repurchase intentions", International Journal of Retail & Distribution Management, Vol. 42 Iss 3 pp. 187-204 <http://dx.doi.org/10.1108/IJRDM-03-2012-0034>

Access to this document was granted through an Emerald subscription provided by emerald-srm:563821 []

For Authors

If you would like to write for this, or any other Emerald publication, then please use our Emerald for Authors service information about how to choose which publication to write for and submission guidelines are available for all. Please visit www.emeraldinsight.com/authors for more information.

About Emerald www.emeraldinsight.com

Emerald is a global publisher linking research and practice to the benefit of society. The company manages a portfolio of more than 290 journals and over 2,350 books and book series volumes, as well as providing an extensive range of online products and additional customer resources and services.

Emerald is both COUNTER 4 and TRANSFER compliant. The organization is a partner of the Committee on Publication Ethics (COPE) and also works with Portico and the LOCKSS initiative for digital archive preservation.

*Related content and download information correct at time of download.

Female online shoppers

Examining the mediating roles of e-satisfaction and e-trust on e-loyalty development

542

Received 8 January 2014
Revised 24 January 2014
1 April 2014
3 July 2014
2 September 2014
Accepted 2 September 2014

Shihyu Chou

*Department of Business Administration, National Taiwan Normal University,
Taipei, Taiwan*

Chi-Wen Chen

*Department of Computer Information Systems, City University of New York,
New York, New York, USA, and*

Jiun-You Lin

*Department of Marketing, National Chung Hsing University,
Taichung, Taiwan*

Abstract

Purpose – As the number of female customers shopping in online clothing stores increases, understanding how female customers' e-loyalty is formed and fostered in this type of online store becomes very pivotal. Yet, despite its importance, little research has been done on this issue. The purpose of this paper is to focus on female online clothing shoppers and aim to examine the mediators of e-loyalty in the context of online clothing stores: e-satisfaction and e-trust.

Design/methodology/approach – A total of 482 subjects who are female and have online clothing store shopping experience in Taiwan were obtained and structural equation modeling was performed to analyze the measurement and structural models.

Findings – The results show that both perceived online privacy and security are positively associated with e-trust, whereas web design is not. Furthermore, perceived delivery time and web site design are positively associated with e-satisfaction. Both e-trust and e-satisfaction in turn positively influence e-loyalty for female online clothing shoppers.

Research limitations/implications – On the basis of the literature review, there is a lack of theoretical knowledge of the relationships between e-loyalty, e-satisfaction, and e-trust among female online clothing shoppers. The research fulfills this important theoretical gap by extending prior studies on e-loyalty to further examine the factors that form e-satisfaction and e-trust, and how they, as mediators, influence the development of female customers' e-loyalty in the context of online clothing stores. The result provides a model that contributes to understanding the formation of female customers' e-loyalty.

Practical implications – The results of this study are helpful to online store managers in increasing their customers' loyalty. Specifically, online clothing store managers have to create quick item delivery methods and friendly online shopping web sites that provide all necessary information and are easy to navigate and use so as to increase customers' e-satisfaction. They also need to establish reliable and trustworthy web sites by letting their customers easily perceive the web sites' privacy and security features to enhance customers' e-trust. As e-satisfaction and e-trust increase, e-loyalty is fostered.

Originality/value – The contributions of this study are threefold. First, this study focusses on an important but previously neglected group in the context of online clothing stores: female online clothing shoppers. Second, the authors' investigation extends the literature on e-loyalty by identifying important mediators (e-satisfaction and e-trust) and probing into their relationships to e-loyalty in the context of online clothing stores. Third, the findings contribute to academia and to future research by increasing understandings of the importance of the concerns and experiences of female online clothing shoppers and by suggesting that future research pay more attention to female online shoppers.

Keywords e-Loyalty, e-Satisfaction, e-Trust, Female online clothing shoppers, Perceived online privacy, Perceived online security

Paper type Research paper



Introduction

e-Loyalty has become one of the critical issues for online business partly because customers can easily switch from one online store to another and partly because they can easily compare similar items across different online stores (Lu *et al.*, 2013). In other words, online customers can freely visit different online stores and purchase items without needing to remain with one specific online store for all purchases. As a result, low customer loyalty frequently occurs in the online context, creating difficulty in realizing a sustainable and long-term profit for online businesses (Yen, 2010).

This issue, we believe, is particularly important for female online shoppers because female are more likely to shop online for clothing than male (Goldsmith and Flynn, 2004). Also, female consumers have become very active in online clothing shopping in recent years (Huddleston and Minahan, 2011; Warner, 2005). For example, a survey from PriceGrabber (2008) that investigated 1,850 online shoppers indicated that 74 percent of female shoppers browse for clothing online, compared to 64 percent of male shoppers. More importantly, female shoppers have greater spending power (Huddleston and Minahan, 2011; Warner, 2005) and decision power (Popcorn and Marigold, 2000) than before. This phenomenon has been identified as sheconomics (Luscombe, 2010; Pine and Gnessen, 2013), which postulates that female consumers have found a right to control and spend their own money and thereby have been an important factor boosting company profits (Pine, 2011). Finally, female online shoppers generally have great influential power in altering others' purchase decisions (Huddleston and Minahan, 2011) – they are in general good communicators who like to share positive or negative word-of-mouth feedback to influence the purchasing decisions of their friends, families, and colleagues, which can help grow or contribute to damaging an online clothing store (Huddleston and Minahan, 2011). Therefore, understanding how to build female customers' e-loyalty is an essential and practical issue, yet little research has been done on female shoppers, resulting in a knowledge gap concerning the e-loyalty development of female online clothing shoppers.

Furthermore, in the last few years, researchers have explored how to create and/or enhance customers' e-loyalty. In general, prior studies have found that e-satisfaction and e-trust are two key factors that foster customers' e-loyalty. Nevertheless, their relationships have rarely been discussed, particularly for female online shoppers in the context of online clothing stores, despite these stores' popularity. Some of the research considered single factors, whereas other research did not take e-satisfaction and/or e-trust into account (Hu and Chuang, 2012; Nguyen *et al.*, 2013), resulting in a lack of both practical and theoretical knowledge of their influences on e-loyalty. Hence, another important gap that needs to be fulfilled is to understand the relationships between e-satisfaction, e-trust, and e-loyalty.

Finally, prior suites have suggested that online consumer concerns (e.g. online privacy and security) and online consumer experiences (e.g. web site design and delivery efficiency) are two salient factors that female online shoppers always perceive while shopping on a web site (Cyr and Bonanni, 2005; Garbarino and Strahilevitz, 2004) and can be viewed as antecedents of e-trust (Shukla, 2014) and e-satisfaction (Cyr and Bonanni, 2005; Myers and Mintu-Wimsatt, 2012), respectively. However, how online concerns and online experiences together influence online female shoppers' e-trust and e-satisfaction is still unknown.

On the basis of the research background and a literature review on e-satisfaction, e-trust, and e-loyalty, this study focusses on three important knowledge gaps and addresses the following three research questions:

- RQ1.* How do female online clothing shoppers develop their e-loyalty?
- RQ2.* Do e-satisfaction and e-trust play mediating roles in e-loyalty development for female online clothing shoppers?
- RQ3.* How do online consumer concerns and experiences influence e-satisfaction and e-loyalty for female online clothing shoppers?

The objective of this study is to contribute to the existing limited knowledge on how female online clothing shoppers develop their e-loyalty by answering the preceding research questions and by proposing and testing a model of female customer e-loyalty in the context of online clothing stores.

Theoretical development

Customer loyalty

Customer loyalty has been studied in various fields and contexts. The concept of loyalty generally is defined as a commitment to consistently revisit a site or repurchase an item or service from the same company, without switching to other companies (Oliver, 1997). This definition has been well-accepted among practitioners and academics. However, with the emergence of e-commerce, researchers have extended the concept of loyalty into the context of the online environment, renaming it e-loyalty. This development is important because e-loyalty is somewhat different from loyalty in the offline business context (Horppu *et al.*, 2008; Shankar *et al.*, 2003). Prior studies defined e-loyalty as a commitment to consistently revisit a web site because of a preference for shopping on that web site without switching to other web sites (Cyr, 2008; Flavián *et al.*, 2006). Most research focussing on e-loyalty has studied the issue of how to foster and/or improve e-loyalty (Cyr, 2008; Doong *et al.*, 2008; Gommans *et al.*, 2001; Harris and Goode, 2004; Jin *et al.*, 2008; Wolfinger and Gilly, 2003). These studies have found that e-satisfaction and e-trust are the two most important antecedents of e-loyalty. We summarize recent literature on e-loyalty, e-satisfaction, and e-trust in Table I.

On the basis of the literature review on e-loyalty, we have found two important knowledge gaps. First, though e-satisfaction and e-trust are two important antecedents of e-loyalty, the relationships among these factors have rarely been tested in the context of online clothing stores. Second, despite the importance of female online clothing shoppers, little research has been done on how female shoppers form e-loyalty. This study thereby addresses these knowledge gaps by examining the relationships between e-satisfaction, e-trust, and e-loyalty in the context of online clothing stores for female online clothing shoppers.

Online concerns: e-trust

Online privacy and online security are two main concerns while consumers are shopping on a web site. Liu *et al.* (2005) have proposed a privacy-trust-behavioral intention model of electronic commerce, which asserts that privacy is the major antecedent of trust. When trust is formed, people are more like to purchase or repeat their purchase of an item from a web site. Shukla (2014) has further discussed the concept of online concern, pointing out that in addition to online privacy, online security is also a fundamental prerequisite before any commercial activities involving confidential and sensitive information can get

Authors	Factors	Context	Gender
Kuo <i>et al.</i> (2013)	e-Loyalty e-Satisfaction	Online clothing	Female shopper
Nguyen <i>et al.</i> (2013)	e-Loyalty e-Satisfaction	Clothing and home ware	Male and female shoppers
Nsairi and Khadraoui (2013)	e-Loyalty e-Trust	Bookstore	Male and female shoppers
Rai and Medha (2013)	e-Loyalty e-Trust e-Satisfaction	Life insurance	Male and female shoppers
Valvi and West (2013)	e-Loyalty e-Trust e-Satisfaction	Online bookselling web sites	Male and female shoppers
Ha and Stoel (2012)	e-Loyalty e-Satisfaction	Online clothing	Male and female shoppers
Hu and Chuang (2012)	e-Loyalty e-Trust	e-Commerce	Male and female shoppers
Ltifi and Gharbi (2012)	e-Loyalty e-Satisfaction	Online shopping web site	Male and female shoppers
Eid (2011)	e-Loyalty e-Trust e-Satisfaction	e-Commerce	Male and female shoppers
Kim <i>et al.</i> (2009)	e-Loyalty e-Trust e-Satisfaction	Online book and CD stores	Male and female shoppers

Table I.
Literature on e-loyalty, e-satisfaction, and/or e-trust

started. Indeed, both online privacy and security are main concerns for consumers in the context of online stores, because customers need to provide their personal information, such as password and credit card information, to the web site. Without a secure merchant mechanism and well-designed privacy policy, customers may develop negative e-trust toward the web site (Kim *et al.*, 2009; Kivijärvi *et al.*, 2007).

Online consumer experience: e-satisfaction

An online consumer is not just a user who interacts with a web site by browsing, searching, finding, selecting, comparing, and evaluating items but also an online shopper who eventually places an order online and waits one or a few days to receive the ordered item. This whole process (i.e. from interacting with the web site to waiting for the item) is called the online consumer experience (Constantinides, 2004; Constantinides *et al.*, 2010). On the basis of this concept, consumer online experience with a given electronic commerce firm may come from two sources: service from the web site (e.g. waiting for the item) (Collier and Carol, 2006; Kim *et al.*, 2009) and the web site itself (e.g. interacting with the web site) (Jeong *et al.*, 2009). This study adopts delivery efficiency as the former source and web site design as the latter source because they have been found as salient factors in the context of online shopping (Collier and Carol, 2006; Jeong *et al.*, 2009; Kim *et al.*, 2009). Also, these two factors while shopping in a web store may generate a customer's e-satisfaction (Cyr, 2008; Flavián *et al.*, 2006; Myers and Mintu-Wimsatt, 2012). Specifically, prior studies have suggested that when an item can be delivered efficiently and when a web site is designed in a way that saves shoppers time, that makes the site easy to use, and that allows the site to provide a variety of information, customers may feel satisfied (Collier and Carol, 2006; Cyr, 2008; Flavián *et al.*, 2006; Goetzinger *et al.*, 2006).

Female shoppers with online concerns and online experiences

Female shoppers tend to have more concerns about privacy and security than male shoppers (Garbarino and Strahilevitz, 2004). Specially, prior studies have found that in decision-making situations (e.g. online purchasing decisions), male shoppers tend to be more assertive and self-confident with their decisions than females, resulting in overconfidence and risk-seeking behavior (Estes and Hosseini, 1988; Lundeberg *et al.*, 1994). Conversely, in comparison to men, women have a lower degree of confidence in their capability of making correct financial decisions, resulting in high perceived uncertainty regarding these decisions as well as risk-averse behavior (Estes and Hosseini, 1988). As a result, female shoppers are more sensitive to risks than male shoppers and thereby privacy and security issues (i.e. online concerns) are female shoppers' concerns while shopping on the internet (Garbarino and Strahilevitz, 2004).

Additionally, the online experience is important to female shoppers. Female shoppers are more motivated by emotions than male shoppers (Zhou *et al.*, 2007). They prefer and enjoy physical evaluation of products such as seeing and feeling the product before they buy it (Cho, 2004). Without physical touching, they rely more on other online shopping experiences. As a result, web site design and delivery efficiency (i.e. online experience) become critical to them because web site design and delivery efficiency can be used to improve online shopping enjoyment (e.g. female shoppers were more attracted by the colors on web sites (Cyr and Bonanni, 2005), making online shopping more pleasurable and enhancing the online shopping experience. Therefore, to understand how female online shoppers form e-loyalty, both online concerns and online experiences need to be taken into account.

Literature review and hypotheses development*e-Satisfaction*

e-Satisfaction is defined as "the contentment of a customer with respect to his or her prior purchasing experience with a given electronic commerce firm" (Anderson and Srinivasan, 2003, p. 125). This experience may come from two sources: service from the web site and the web site itself. Consumer experience with service from a web site is mainly concerned with item delivery time (Collier and Carol, 2006; Goetzinger *et al.*, 2006). Schaupp and Bélanger (2005) defined delivery time as "the total time between order placement and delivery, which includes dispatch, shipping, and delivery" (p. 99). Prior studies have found that long delivery time is one major complaint among online customers because they do need to wait to receive the item they order (Goetzinger *et al.*, 2006; Schaupp and Bélanger, 2005). The longer the wait time between ordering and receiving, the more anxious and discontent the customer feels (Collier and Carol, 2006; Schaupp and Bélanger, 2005). After all, similar wait times may not be a factor in the context of brick-and-mortar stores. Thus, customers would be more satisfied with their online shopping experiences if online firms could guarantee to process their orders and deliver their items quickly (Schaupp and Bélanger, 2005). Therefore, we hypothesize the following:

H1. Perceived delivery efficiency will be positively associated with e-satisfaction for female online clothing shoppers.

Consumer experience with a web site may come from the web site design itself (i.e. layout, interface, and decoration of the web site). A good web site design has been found as a key factor increasing customers' satisfaction (Cyr, 2008; Shergill and Chen, 2005; Szymanski and Hise, 2000; Wolfenbarger and Gilly, 2003). Shukla (2014), for example, indicated that a good web site design helps customers browse easily. Also, an aesthetically pleasing

layout makes users feel happy and satisfied (Shukla, 2014). Similarly, Wolfenbarger and Gilly (2003) suggested that a good web site design may increase perceived quality, satisfaction, and positive attitude toward the web site. Also, Cyr (2008) examined different types of web designs, including browsing design, visual design, and information design, and suggested these types of web design need to be considered together when designing a web site because together they can make customers feel satisfied. Other studies in the literature have supported that a good web site design positively influences customer satisfaction (Anderson and Srinivasan, 2003). Thus, we posit the following:

H2. The web site design will be positively associated with e-satisfaction.

e-Trust

Customers always have some concerns when purchasing an item online because online shopping is full of uncertainty (e.g. Is it safe to provide my credit card information? Will the quality of the item I ordered be as good as expected?) (Chen *et al.*, 2013; Teoh *et al.*, 2013; Sabiote *et al.*, 2012; Shukla, 2014). Therefore, e-trust is always an important issue in the context of online stores (Corritore *et al.*, 2003; Hampton-Sosa and Koufaris, 2005; Koufaris and Hampton-Sosa, 2004; Papadopoulou *et al.*, 2001). Corritore *et al.* (2003) systematically summarized prior studies on e-trust and defined it as “an attitude of confident expectation in an online situation of risk that one’s vulnerabilities will not be exploited” p. 740).

Prior studies suggested that a good web site design (e.g. easy to use and having smoothly transactional procedures) makes the web site look professional (Hampton-Sosa and Koufaris, 2005; Papadopoulou *et al.*, 2001), an experience that creates an image in customers’ minds that the web site is reliable. This image in turn enhances customers’ sense of security and increases web site quality perception (Anderson and Srinivasan, 2003; Cyr, 2008; Flavián *et al.*, 2006). For instance, Flavián *et al.* (2006) found that a good web site design can relieve feelings of anxiety and also provide a sense of confidence while shopping online. Therefore, we hypothesize the following:

H3. The web site design will be positively associated with e-trust.

Online privacy is a technical mechanism and/or policy to protect customer data from unauthorized use or disclosure (Lauer and Deng, 2007; Milne and Culnan, 2004). This mechanism and/or policy, if well-designed, and if customers perceive the policy, may help customers feel safe in providing personal and/or transactional data while shopping online (Milne and Culnan, 2004). Also, customers may have greater confidence about an online vendor’s ability to protect customer data, which in turn will reduce uncertainty and improve e-trust (Connolly and Frank, 2007; Hsu *et al.*, 2014). Indeed, prior studies have posited that perceived online privacy can be considered an important source of e-trust (Connolly and Frank, 2007; Teoh *et al.*, 2013; Hsu *et al.*, 2014). When consumers believe that an online firm tries hard to protect their privacy through technical mechanisms and/or policies, they will be more comfortable providing personal data while shopping online (Teoh *et al.*, 2013; Yousafzai *et al.*, 2003). Hence, we posit the following:

H4. Perceived online privacy will be positively associated with e-trust.

Although online security techniques have continued to develop and improve, web security vulnerability still exists, and security measures are violated frequently, even among widely reputable companies. As a result, online security is always a main concern for online shoppers (Lauer and Deng, 2007; Shukla, 2014), particularly for female shoppers in the context of online clothing shopping (Cho and Fiorito, 2009). This concern may negatively influence customers’ perceptions about online firms’ technical abilities to prevent their web

sites from being intentionally invaded and damaged, resulting in reduced e-trust (Lauer and Deng, 2007; Teoh *et al.*, 2013; Yousafzai *et al.*, 2003). After all, customers are often required to provide essential data, such as credit card information and personal profiles, while shopping online. If customers feel insecure (e.g. the web site has been invaded before), they may not trust the web site (Yousafzai *et al.*, 2003). Thus, we posit the following:

H5. Perceived online security will be positively associated with e-trust.

e-Satisfaction and e-trust

e-Satisfaction has been found as one of the factors enhancing the sense of e-trust (Doong *et al.*, 2008; Fang *et al.*, 2011; Flavián *et al.*, 2006; Horppu *et al.*, 2008). Doong *et al.* (2008), for example, suggested that when customers are satisfied with a seller, such satisfaction might create a belief that the seller is trustworthy. Horppu *et al.* (2008) used brand familiarity as a moderator to examine the relationships between e-satisfaction and e-trust and found that no matter whether there is a high or low level of brand familiarity, the positive relationship between e-satisfaction and e-trust always exists, indicating that e-satisfaction is one source of e-trust. Thus, the higher the level of e-satisfaction, the higher the level of e-trust there may be (Fang *et al.*, 2011). We posit the following:

H6. e-Satisfaction will be positively associated with e-trust.

e-Satisfaction and e-loyalty

When customers are satisfied with a web site, they are more willing to interact with that web site in the future, resulting in becoming loyal customers (Anderson and Srinivasan, 2003; Fang *et al.*, 2011). There are several reasons for satisfied customers to turn into loyal customers. For example, switching to other web sites may entail some switching costs. To avoid extra effort in searching other web sites, satisfied customers would rather stay with the same web site (Yang and Peterson, 2004). Additionally, uncertainty about whether customers can receive the same satisfaction and service from other web sites also triggers them to stick with the same web site (Chandrashekar *et al.*, 2007). Indeed, the positive effect of e-satisfaction on e-loyalty has been suggested by several studies (Anderson and Srinivasan, 2003; Chandrashekar *et al.*, 2007; Flavián *et al.*, 2006; Harris and Goode, 2004; Yang and Peterson, 2004). Thus, we posit the following:

H7. e-Satisfaction will be positively associated with e-loyalty.

e-Trust and e-loyalty

When customers have perceived e-trust from an online store, they may feel comfortable and confident while shopping at that store (Connolly and Frank, 2007; Corritore *et al.*, 2003; Lauer and Deng, 2007). Such a secure feeling generated from e-trust increases customers' willingness to provide truthful information (Cho and Fiorito, 2009) and to continue shopping on the same web site (Liu *et al.*, 2005), resulting in higher loyalty (i.e. willingness to revisit). In other words, e-trust can reduce consumers' uncertainty when shopping online and then increase the possibility of rebuying actions (Cyr, 2008; Doong *et al.*, 2008). Indeed, the positive relationship between e-trust and e-loyalty has been suggested by several studies conducted in the context of the online environment (Harris and Goode, 2004; Horppu *et al.*, 2008; Kassim and Abdullah, 2008). Therefore, we posit the following:

H8. e-Trust will be positively associated with e-loyalty.

On the basis of the preceding literature review and hypothesis development, we propose a research framework (see Figure 1).

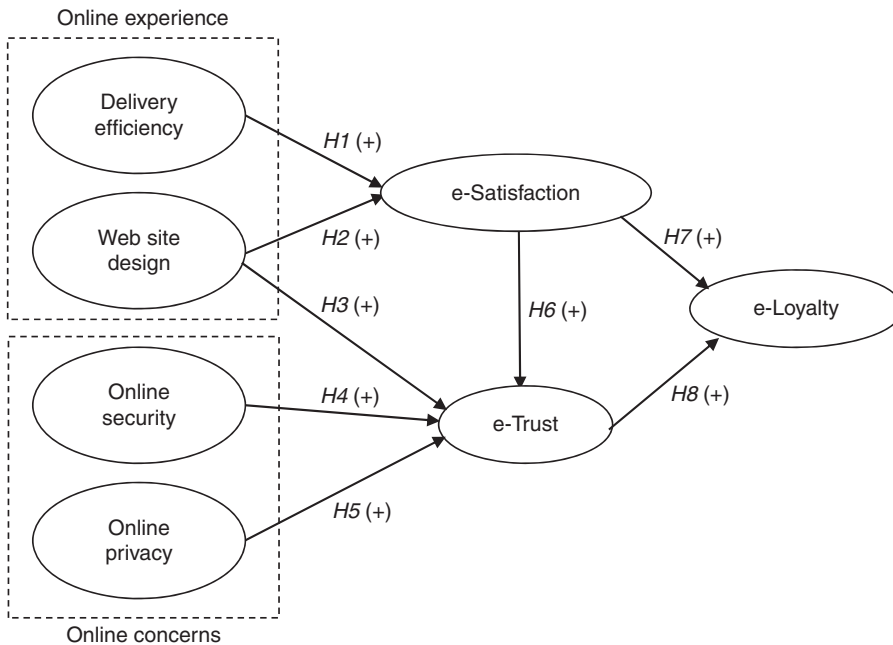


Figure 1.
Proposed research model

Method

Procedure

The model was tested by means of a field study and survey data collected via an online survey platform to sample from the mass population that shop online clothing stores. To collect the data, we posted the URL of our online survey on the largest electronic bulletin board system (BBS) in Taiwan (Lu *et al.*, 2013), called PTT BBS (www.ptt.cc/). Established in 1995, PTT BBS has become one of most important online forums in Taiwan, through which people can discuss a variety of topics. This study targets online shopping topics, and so we posted our survey information, including the study purpose, study duration, and survey link. Also, to increase the response rate, this study follows prior studies' suggestions (e.g. Brown and Venkatesh, 2005; Lee *et al.*, 2013) by offering USB flash disks and gift vouchers as an incentive to encourage subjects to provide validated responses.

The first question on the questionnaire asked whether the participant had ever purchased clothing online before. If he or she answered no, a thank-you message was given and the questionnaire was closed.

Measures

The online questionnaire instrument used in the study consisted of seven-point Likert scales derived from previous research. The scale for perceived delivery efficiency was adapted from Schaupp and Bélanger's (2005) three items, that for web site design was adapted from Wolfenbarger and Gilly's (2003) five items, and that for perceived online privacy was based on Liu *et al.*'s (2005) five items. The scale for perceived online security was adapted from Connolly and Frank (2007) two items and Schaupp and Bélanger's (2005) three items. The scale for e-satisfaction was adapted

from Fang *et al.*'s (2011) four items. The scales for e-trust and e-loyalty were adapted from Horppu *et al.*'s (2008) four items.

To assure that all questionnaire items are readable, one marketing scholar and one marketing manager of a big apparel retailing chain store were invited to comment on the draft of the questionnaire. On the basis of their comments, we made adjustments to the wording. Then, we conducted a pilot and interview with 43 experienced online clothing shoppers. According to their opinions, we made further modifications to the wording of some of the questionnaire items.

Results

Respondents' demographic information

A total of 620 subjects filled out the questionnaire. We removed 138 data points that had either significantly incomplete responses, were extreme outliers or male shoppers, resulting in a sample size of 482. All subjects are female online clothing shoppers who live in Taiwan and have shopped on Taiwanese online clothing store web sites. The demographic information is showed in Table II. The average age of the subjects was 23 years. More than half of the subjects on average spent 16-25 hours per week on the internet.

Reliability and validity

An exploratory factor analysis was performed to test the construct validity. The KMO value was 0.912, and Bartlett spherical test showed a significant result with $\chi^2 = 8,934.213$, indicating the appropriateness of the factor analysis. We then conducted an orthogonal rotation with the varimax method. On the basis of Kaiser's eigenvalue rule and the scree plot, seven factors were retained, which accounted for 75.391 percent of total variation of all variables. We eliminated the first two items about online privacy because of poor factor loadings. All other items loaded consistently with their factors. Additionally, Cronbach's α values show that all variables are higher than 0.7 (from 0.73 to 0.91), indicating good reliability.

Confirmatory factor analysis was performed to analyze the reliability and validity of the measurement scales. The result shows a good model fit with $\chi^2/df = 3.0753$, $p < 0.000$, NFI = 0.92, NNFI = 0.93, RMR = 0.046, CFI = 0.90, GFI = 0.87, AGFI = 0.88, and RMSEA = 0.067. It is important to note that significant χ^2 value can be disregarded due to its sensitivity to the sample size and large number of items (Bagozzi and Yi, 1988). Also, there is no consensus on the ration of χ^2 to degree of freedom. While generally the ration should be less than 3.00, in practice, however, some

Variables	Frequency	%	Internet usage	Frequency	%
<i>Age</i>			<i>Time spending on web surfing per week</i>		
19 years and below	54	10.02	5 hour and less	52	10.07
20-24 years	346	64.19	6-15 hours	139	28.83
25-29 years	125	23.19	16-25 hours	67	13.90
30years and above	14	2.60	26-35 hours	80	16.59
<i>Education</i>			36 hours and more	144	29.87
College	392	81.32			
Graduate school	90	18.68			

Table II.
Profile analysis
of the
investigated sample

researchers interpret ratios as high as 3.00 or 4.00 as representing good data-model fit (Mueller, 1996; Munro, 2005).

Table II displays the averages, standardized loading estimates, composite reliabilities, and average variance extracted (AVE) of all measured items. All standardized loading estimates were higher than 0.5, indicating convergent validity. Moreover, none of the confidence intervals of the PHI estimates included one, providing evidence of discriminate validity. The composite reliabilities for each construct were above 0.7, thereby suggesting internal consistency. Additionally, the AVE were all higher than 0.45, demonstrating that latent variables has a high degree of reliability and the variance captured by the construct was greater than the variance due to measurement error (Table III).

The correlations among all constructs are shown in Table IV.

Model estimation and hypothesis testing

The goodness-of-fit measures of the proposed research model are summarized in Table III. All goodness-of-fit measures reach the recommended threshold values of an acceptable model with the exception of GFI (0.88), which is a little lower than the recommended value of 0.90. Thus, the proposed model fits well with the sample data. Figure 2 shows the estimated path coefficients and the squared multiple correlations of the three latent

Construct	Item	Average	Factor loading	Cronbach's α	Composite reliability (CR)	Average variance extracted (AVE)
Web site design (WSD)	WSD1	4.56	0.64*	0.821	0.832	0.51
	WSD2	4.65	0.72*			
	WSD3	4.69	0.73*			
	WSD4	4.33	0.69*			
	WSD5	4.48	0.64*			
Perceived delivery efficiency (PDE)	PDT1	3.83	0.76*	0.730	0.733	0.493
	PDT2	4.03	0.69*			
	PDT3	4.37	0.65*			
Perceived online security (POS)	POS1	3.42	0.82*	0.912	0.901	0.683
	POS2	3.49	0.88*			
	POS3	2.93	0.87*			
	POS4	3.64	0.81*			
	POS5	3.44	0.72*			
Perceived online privacy (POP)	POP3	4.01	0.83*	0.891	0.910	0.765
	POP4	4.31	0.89*			
	POP5	3.99	0.85*			
e-Satisfaction (SAT)	SAT1	4.21	0.82*	0.908	0.918	0.739
	SAT2	4.57	0.78*			
	SAT3	4.39	0.88*			
	SAT4	4.50	0.91*			
e-Trust (TRU)	TRU1	4.12	0.84*	0.869	0.872	0.673
	TRU2	3.85	0.85*			
	TRU3	3.93	0.80*			
	TRU4	4.42	0.74*			
e-Loyalty (LOY)	LOY1	4.09	0.75*	0.834	0.844	0.645
	LOY2	4.05	0.73*			
	LOY3	4.39	0.85*			
	LOY4	4.38	0.81*			

Note: *Indicates a 0.05 significance level

Table III.
Summary of reliability and validity measures

variables (e-satisfaction, e-trust, and e-loyalty) in the research model. According to the results, all research hypotheses are supported, except hypothesis *H3* (Table V).

The supports of *H1* and *H2* indicate that customers are more satisfied when they perceive fast delivery time ($\gamma = 0.32, t = 9.03, p < 0.01$) and/or when they feel the web site design is good ($\gamma = 0.28, t = 9.82, p < 0.01$). However, the relationship between web site design and e-trust was not supported ($\gamma = 0.06, t = 1.01, p > 0.1$). This result implies that female customer e-trust might not be directly formed from a well-designed web site in the context of online clothing stores. The significant results of *H4* and *H5* suggest the positive influences of both online privacy ($\gamma = 0.28, t = 7.08, p < 0.01$) and online security ($\gamma = 0.14, t = 4.50, p < 0.01$) on e-trust. Thus, online privacy and online security are both important determinants of e-trust.

Table IV.
Correlations between
constructs with
reflective items

	Web site design	Delivery efficiency	Online security	Online privacy	e-Satisfaction	e-Trust	e-Loyalty
Web site design	1						
Delivery efficiency	0.39	1					
Online security	0.32	0.63	1				
Online privacy	0.36	0.45	0.64	1			
e-Satisfaction	0.65	0.57	0.48	0.56	1		
e-Trust	0.53	0.60	0.65	0.65	0.77	1	
e-Loyalty	0.52	0.38	0.41	0.42	0.69	0.62	1

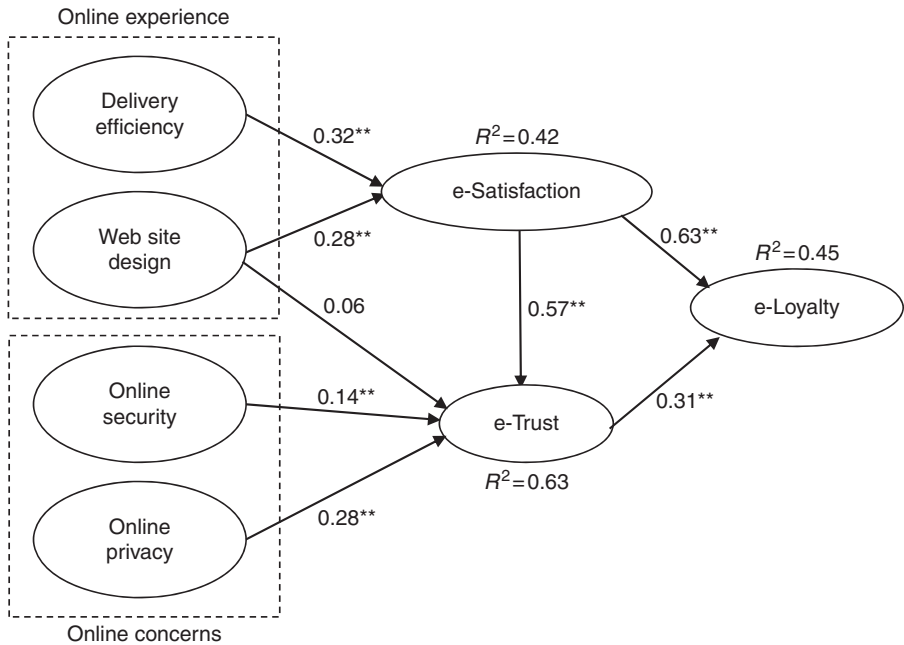


Figure 2.
SEM result

Note: ***p*-value < 0.05

H6 and *H7* were supported with $\beta = 0.57$, $t = 9.28$, and $p < 0.01$, and $\beta = 0.63$, $t = 7.29$, and $p < 0.01$, respectively. These results indicate that as e-satisfaction increases, e-trust and e-loyalty will be higher in the context of online clothing stores. Finally, *H8* was supported ($\beta = 0.31$, $t = 4.89$, $p < 0.01$), suggesting that e-trust directly influences e-loyalty. Also, this result indicates that e-trust is a mediator between e-satisfaction and e-loyalty. The estimated squared multiple correlations of these endogenous variables is $R^2 = 0.42$ for e-satisfaction, $R^2 = 0.63$ for e-trust, and $R^2 = 0.45$ for e-loyalty, showing that more than half of the variations of the endogenous variable can be well explained through the proposed model in this study.

To further validate the mediator roles of e-satisfaction and e-trust in our research model, we modified the proposed model by creating direct relationships between perceived delivery time, web site design, perceived online privacy, perceived online security, and e-loyalty. The purpose of this modified model was to test whether e-satisfaction and e-trust are main mediators of e-loyalty. If web site features can directly influence e-loyalty, then the mediating roles of e-satisfaction and e-trust are not salient. The estimation result of this modified model showed satisfactory goodness-of-fit with $\chi^2/df = 3.12$, $p < 0.0000$, NFI = 0.97, NNFI = 0.97, CFI = 0.98, GFI = 0.88, AGFI = 0.85, and RMSEA = 0.063. However, in addition to the insignificant relationship between web site design and e-trust shown in our proposed model, the direct influences of delivery efficiency, online privacy, and online security were all not statistically significant. Moreover, the direct influence of web site design on e-loyalty was only marginally statistically supported. Hence, the proposed model is better than the modified model, suggesting that e-satisfaction and e-trust are important moderators of e-loyalty in the context of online clothing stores (Figure 3).

Conclusions and discussion

The contributions of this study are threefold. First, this study focusses on an important but previously neglected group in the context of online clothing stores: female online clothing shoppers. Given that, on the basis of the literature review, female online shoppers have rarely been discussed in the context of online clothing stores, the findings close the research gap and provide new insight into female online shoppers by understanding how their e-loyalty is formed. Second, the results indicate that mitigating online consumer concerns (i.e. online privacy and online security) and enhancing online consumer experiences (i.e. delivery efficiency and web site design) can generate female shoppers' e-trust and e-satisfaction, respectively, which in turn form their e-loyalty. These findings contribute to academia and to future research by aiding in understandings of the importance of online concerns and experiences of female

Goodness-of-fit measure	Recommended threshold value	Estimated
χ^2/df	< 5	3.08
GFI	> 0.9	0.88
AGFI	> 0.8	0.87
RMR	0.05-0.08	0.052
RMSEA	< 0.08	0.067
CFI	> 0.9	0.96
NFI	> 0.9	0.97
NNFI	> 0.9	0.96

Table V.
Goodness-of-fit
measures for the
research model

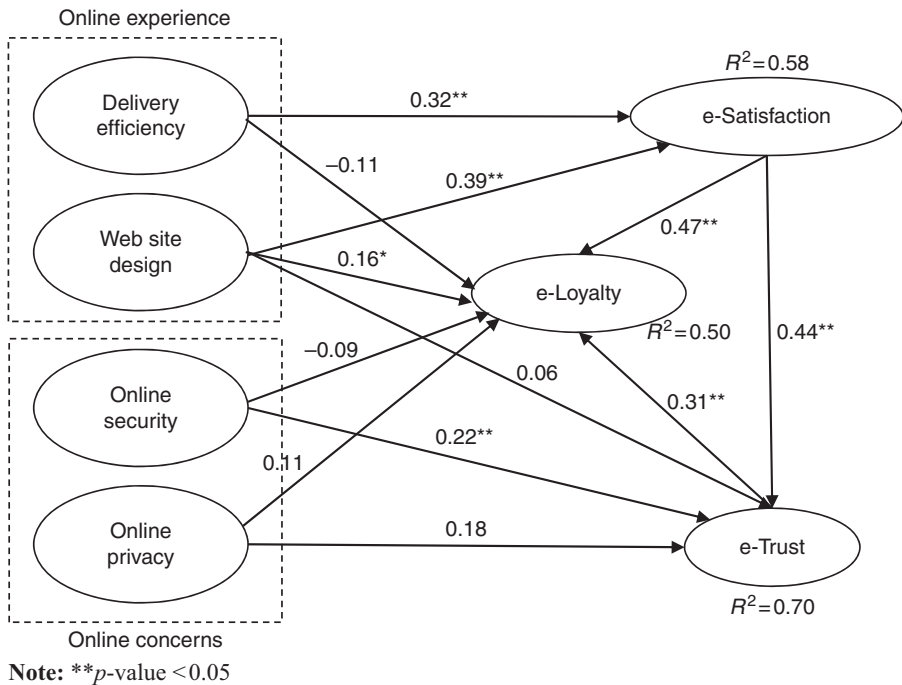


Figure 3.
Result of the
modified model

online clothing shoppers and by suggesting that future research pay more attention to the impacts of online concerns and experiences on the female group. Finally, the present study also enhances previous studies' findings (e.g. Valvi and West, 2013; Rai and Medha, 2013) by delineating a more detailed relationship between e-trust, e-satisfaction, and e-loyalty. Specifically, e-trust and e-satisfaction serve as mediators in e-loyalty development. Also, e-satisfaction positively influences e-trust in the context of online clothing stores for female online clothing shoppers.

In sum, these three main contributions fulfill the important theoretical gap by extending prior studies on e-loyalty to further examine the factors that form e-satisfaction and e-trust, and how they, as mediators, influence the development of customers' e-loyalty in the context of online clothing stores for female online clothing shoppers.

Discussion

The relationship between perceived delivery time and e-satisfaction was supported. This result suggests that the waiting time between order and delivery is one of the major concerns for female shoppers shopping in online clothing stores. Additionally, web site design, such as easy navigation and friendly interface, may also help satisfy online female customers. However, unlike prior studies, this study has found that web site design does not significantly influence female consumers' e-trust. A possible reason for this finding is that online clothing stores typically have a unique web site design. In addition to ease-of-use in interface and modern homepages, they normally feature beautiful models and/or pictures of clothing. As a result, online clothing web sites generally look attractive. Such web site attractiveness, which may not exist for other types of web sites, neither increases nor decreases customers' e-trust, resulting in an

insignificant relationship between web site design and e-trust. Finally, We found that e-trust and e-satisfaction are important mediators of e-loyalty. When customers feel satisfied with and have trust in an online clothing store, their e-loyalty may be formed.

Female online shoppers

Managerial implications

On the basis of this study's findings, perceived delivery time is an essential determinant of e-satisfaction for female online clothing shoppers. Online clothing store managers, therefore, need to pay attention to this important concern by considering more effective ways to deliver items to customers. Additionally, web site design influences e-satisfaction as well. Thus, online clothing store managers have to create a friendly online shopping web site that provides all necessary information and is easy to navigate and use so as to increase customers' e-satisfaction. However, it is important to note that a good web site design does not guarantee an increase in e-trust in the context of online clothing stores for female online clothing shoppers. Hence, online clothing store managers should not just concentrate on designing a good web site but also on establishing a reliable and trustworthy web site by letting their customers easily perceive the web sites' privacy and security features. Specifically, to make online clothing stores more trustworthy, online clothing store managers need to adopt state-of-the-art online security techniques and strictly prohibit their employees from leaking customers' information. Also, they need to acquire web site security certification from a reputable third party to further increase customers' perceptions of online security.

Limitations and future research directions

Although this study has important contributions, a few limitations need to be addressed. First, although the results found the mediating roles of e-satisfaction and e-trust in the context of online clothing stores, this result cannot be generalized to different contexts. After all, each context has its unique features. For example, since our study focusses on only female online shoppers, it would be problematic to extend our results to male shoppers. Further research can apply this study's framework to different contexts and examine whether mediating roles of e-satisfaction and e-trust still exist. Second, this study's research model focusses on e-satisfaction and e-trust, two important antecedents of e-loyalty. However, some other factors are interesting to take into account, such as brand, product endorser, and pricing strategy. Future studies can extend the proposed model by incorporating some of these factors to obtain a complete picture of how to foster e-loyalty. Third, to increase the response rate, this study follows prior studies' suggestions by providing gift vouchers as an incentive to subjects. However, providing such an incentive might cause socially desirable responses. Thus, we suggest that further studies can employ different recruiting methods to test and valid the proposed model. Additionally, the correlations are high in some constructs (see Table IV), indicating the possibility of multicollinearity. While we have excluded extreme outliers and the result of the skewness and kurtosis of the distribution (i.e. normality test) for our constructs falls between -1.0 and $+1.0$, the issue of multicollinearity still should be the concern in our study. Interestingly, we have found that other studies (e.g. Valvi and West, 2013) have the similar issue; hence, this could be the area in which further research can be conducted. Finally, e-loyalty was measured at a static point rather than as it was developing, thus losing the time aspect of explanation. Therefore the data presented are cross-sectional, and spurious cause-effect inferences may have occurred. Future studies can adopt a longitudinal methodology that can provide a dynamic perspective on how e-loyalty can be built.

References

- Anderson, R.E. and Srinivasan, S.S. (2003), "E-satisfaction and e-loyalty: a contingency framework", *Psychology & Marketing*, Vol. 20 No. 2, pp. 123-138.
- Bagozzi, R.P. and Yi, Y. (1988), "On the evaluation of structural equation models", *Journal of the Academy of Marketing Science*, Vol. 16 No. 1, pp. 74-94.
- Brown, S.A. and Viswanath, V. (2005), "Model of adoption of technology in households: a baseline model test and extension incorporating household life cycle", *MIS Quarterly*, Vol. 29 No. 3, pp. 399-426.
- Chandrashekar, M., Rotte, K., Tax, S.S. and Grewal, R. (2007), "Satisfaction strength and customer loyalty", *Journal of Marketing Research*, Vol. 44 No. 1, pp. 153-163.
- 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.
- Cho, H. and Fiorito, S.S. (2009), "Acceptance of online customization for apparel shopping", *International Journal of Retail & Distribution Management*, Vol. 37 No. 5, pp. 389-407.
- Cho, J. (2004), "Likelihood to abort an online transaction: influences from cognitive evaluations, attitudes, and behavioral variables", *Information & Management*, Vol. 41 No. 7, pp. 827-838.
- Collier, J.E. and Carol, C.B. (2006), "Measuring service quality in e-retailing", *Journal of Service Research*, Vol. 8 No. 3, pp. 260-275.
- Connolly, R. and Frank, B. (2007), "Consumer trust in electronic commerce: social & technical antecedents", *World Academy of Science, Engineering and Technology*, Vol. 2 No. 4, pp. 239-248.
- 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 Gómez, M.A. (2010), "Effects of web experience on consumer choice: a multicultural approach", *Internet Research*, Vol. 20 No. 2, pp. 188-209.
- Corritore, C.L., Kracher, K. and Wiedenbeck, S. (2003), "On-line trust: concepts, evolving themes, a model", *International Journal of Human-Computer Studies*, Vol. 58 No. 6, pp. 737-758.
- Cyr, D. (2008), "Modeling web site design across cultures: relationships to trust, satisfaction, and e-loyalty", *Journal of Management Information Systems*, Vol. 24 No. 4, pp. 47-72.
- Cyr, D. and Bonanni, C. (2005), "Gender and website design in e-business", *International Journal of Electronic Business*, Vol. 3 No. 6, pp. 565-582.
- Doong, H.S., Wang, H.C. and Shih, H.C. (2008), "Exploring loyalty intention in the electronic marketplace", *Electronic Markets*, Vol. 18 No. 2, pp. 142-149.
- Estes, R. and Hosseini, J. (1988), "The gender gap on wall street: an empirical analysis of confidence in investment decision making", *The Journal of Psychology*, Vol. 122 No. 6, pp. 577-590.
- Fang, Y.H., Chiu, C.M. and Wang, T.G. (2011), "Understanding customers' satisfaction and repurchase intentions: an integration of IS success model, trust, and justice", *Internet Research*, Vol. 21 No. 4, pp. 479-503.
- Flavián, C., Guinaluand, M. and Gurrea, R. (2006), "The role played by perceived usability, satisfaction and consumer trust on website loyalty", *Information & Management*, Vol. 43 No. 1, pp. 1-14.
- Garbarino, E. and Strahilevitz, M. (2004), "Gender differences in the perceived risk of buying online and the effects of receiving a site recommendation", *Journal of Business Research*, Vol. 57 No. 7, pp. 768-775.

- Goetzinger, L., Park J.K. and Widdows, R. (2006), "E-customers' third party complaining and complimenting behavior", *International Journal of Service Industry Management*, Vol. 17 No. 2, pp. 193-206.
- Goldsmith, R.E. and Flynn, L.R. (2004), "Psychological and behavioral drivers of online clothing purchase", *Journal of Fashion Marketing and Management*, Vol. 8 No. 1, pp. 84-95.
- Gommans, M., Krishnan K.S. and Scheffold, K.B. (2001), "From brand loyalty to e-loyalty: a conceptual framework", *Journal of Economic and Social Research*, Vol. 3 No. 1, pp. 43-58.
- Ha, S. and Stoel, L. (2012), "Online apparel retailing: roles of e-shopping quality and experiential e-shopping motives", *Journal of Service Management*, Vol. 23 No. 2, pp. 197-215.
- Hampton-Sosa, W. and Koufaris, M. (2005), "The effect of web site perceptions on initial trust in the owner company", *International Journal of Electronic Commerce*, Vol. 10 No. 1, pp. 55-81.
- Harris, L.C. and Goode, M.H. (2004), "The four levels of loyalty and the pivotal role of trust: a study of online service dynamics", *Journal of Retailing*, Vol. 80 No. 2, pp. 139-158.
- Horppu, M., Kuivalainen, O., Tarkiainen, A. and Ellonen, H.K. (2008), "Online satisfaction, trust and loyalty, and the impact of the offline parent brand", *Journal of Product & Brand Management*, Vol. 17 No. 6, pp. 403-413.
- Hsu, M.H., Chuang, L.W. and Hsu, C.S. (2014), "Understanding online shopping intention: the roles of four types of trust and their antecedents", *Internet Research*, Vol. 24 No. 3, pp. 332-352.
- Hu, F.L. and Chuang, C.C. (2012), "A study of the relationship between the value perception and loyalty intention toward an e-retailer website", *Journal of Internet Banking & Commerce*, Vol. 17 No. 1, pp. 1-18.
- Huddleston, P. and Minahan, S. (2011), *Consumer Behavior: Women and Shopping*, Business Expert Press, New York, NY.
- 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.
- Jin, B., Park, J.Y. and Kim, J. (2008), "Cross-cultural examination of the relationships among firm reputation, e-satisfaction, e-trust, and e-loyalty", *International Marketing Review*, Vol. 25 No. 3, pp. 324-337.
- Kassim, N.M. and Abdullah, N.A. (2008), "Customer loyalty in e-commerce settings: an empirical study", *Electronic Markets*, Vol. 18 No. 3, pp. 275-290.
- Kim, J., Jin, B. and Swinney, J.L. (2009), "The role of e-tail quality, e-satisfaction and e-trust in online loyalty development process", *Journal of Retailing and Consumer Services*, Vol. 16 No. 4, pp. 239-247.
- Kivijärvi, M., Laukkanen, T. and Cruz, P. (2007), "Consumer trust in electronic service consumption: a cross-cultural comparison between Finland and Portugal", *Journal of Euromarketing*, Vol. 16 No. 3, pp. 51-65.
- Koufaris, M. and Hampton-Sosa, W. (2004), "The development of initial trust in an online company by new customers", *Information & Management*, Vol. 41 No. 3, pp. 377-397.
- Kuo, Y.F., Hu, T.L. and Yang, S.C. (2013), "Effects of inertia and satisfaction in female online shoppers on repeat-purchase intention: the moderating roles of word-of-mouth and alternative attraction", *Managing Service Quality*, Vol. 23 No. 3, pp. 168-187.
- Lauer, T.W. and Deng, X. (2007), "Building online trust through privacy practices", *International Journal of Information Security*, Vol. 6 No. 5, pp. 323-331.
- Lee, S.H., Noh, S.E. and Kim, H.W. (2013), "A mixed methods approach to electronic word-of-mouth in the open-market context", *International Journal of Information Management*, Vol. 33 No. 4, pp. 687-696.

- Liu, C., Marchewka, J.T., Lu, J. and Yu, C.S. (2005), "Beyond concern: a privacy-trust-behavioral intention model of electronic commerce", *Information & Management*, Vol. 42 No. 1, pp. 127-142.
- Ltifi, M. and Gharbi, J.E. (2012), "E-satisfaction and e-loyalty of consumers shopping online", *Journal of Internet Banking & Commerce*, Vol. 17 No. 1, pp. 123-138.
- Lu, L.C., Chang, H.H. and Yu, S.T. (2013), "Online shoppers' perceptions of e-retailers' ethics, cultural orientation, and loyalty: an exploratory study in Taiwan", *Internet Research*, Vol. 23 No. 1, pp. 47-68.
- Lundeberg, M.A., Fox, P.W. and Punčochař, J. (1994), "Highly confident but wrong: gender differences and similarities in confidence judgments", *Journal of Educational Psychology*, Vol. 86 No. 1, pp. 114-121.
- Luscombe, B. (2010), "Woman power: the rise of the sheconomy", *Time Magazine*.
- Milne, G.R. and Culnan, M.J. (2004), "Strategies for reducing online privacy risks: why consumers read (or don't read) online privacy notices", *Journal of Interactive Marketing*, Vol. 18 No. 3, pp. 15-29.
- Mueller, R.O. (1996), *Basic Principles of Structural Equation Modeling: An Introduction to LISREL and EQS*, Springer-Verlag, New York, NY.
- Munro, B.H. (2005), *Statistical Methods for Health Care Research*, Lippincott Williams & Wilkins, Philadelphia, PA.
- Myers, C.A. and Mintu-Wimsatt, A. (2012), "Exploring antecedents influencing internet shopping satisfaction: the case of the apparel industry", *International Journal of Business and Social Science*, Vol. 3 No. 8, pp. 1-9.
- Nguyen, N., Leclerc, A. and LeBlanc, G. (2013), "The mediating role of customer trust on customer loyalty", *Journal of Service Science & Management*, Vol. 6, No. 1, pp. 96-109.
- Nsairi, Z.B. and Khadraoui, M. (2013), "Website satisfaction: determinants and consequences on website loyalty", *International Business Research*, Vol. 6 No. 9, pp. 77-92.
- Oliver, R.L. (1997), *Satisfaction: A Behavioral Perspective on the Consumer*, McGraw-Hill, New York, NY.
- 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.
- Pine, K. (2011), "Sheconomics: why more women on boards boosts company performance", *Significance*, Vol. 8 No. 2, pp. 80-81.
- Pine, K. and Gnessen, S. (2013), *Sheconomics*, Hachette Digital Inc., London.
- Popcorn, F. and Marigold, L. (2000), *Evolution: The Eight Truths of Marketing to Women*, Hyperion, New York, NY.
- PriceGrabber (2008), "Apparel trends October consumer behavior report", available at: www.yumpu.com/en/document/view/19069779/apparel-october-consumer-behavior-report-pricegrabber-market- (accessed May 2014).
- Rai, A.K. and Medha, S. (2013), "The antecedents of customer loyalty: an empirical investigation in life insurance context", *Journal of Competitiveness*, Vol. 5 No. 2, pp. 139-163.
- Sabiote, C.M., Frías, D.M. and Castañeda, J.A. (2012), "The moderating effect of uncertainty-avoidance on overall perceived value of a service purchased online", *Internet Research*, Vol. 22 No. 2, pp. 180-198.
- Schaupp, L.C. and Bélanger, F. (2005), "A conjoint analysis of online consumer satisfaction", *Journal of Electronic Commerce Research*, Vol. 6 No. 2, pp. 95-111.

- Shankar, V., Smith, A.K. and Rangaswamy, A. (2003), "Customer satisfaction and loyalty in online and offline environments", *International Journal of Research in Marketing*, Vol. 20 No. 2, pp. 153-175.
- Shergill, G.S. and Chen, Z. (2005), "Web-based shopping: consumers' attitudes towards online shopping in New Zealand", *Journal of Electronic Commerce Research*, Vol. 6 No. 2, pp. 79-94.
- Shukla, P. (2014), "The impact of organizational efforts on consumer concerns in an online context", *Information Management*, Vol. 51 No. 1, pp. 113-119.
- Szymanski, D.M. and Hise, R.T. (2000), "E-satisfaction: an initial examination", *Journal of Retailing*, Vol. 76 No. 3, pp. 309-322.
- Teoh, W., Siong, M.Y., Chong, C., Lin, B. and Chua, J.W. (2013), "Factors affecting consumers' perception of electronic payment: an empirical analysis", *Internet Research*, Vol. 23 No. 4, pp. 465-485.
- Valvi, A.C. and West, D.C. (2013), "E-loyalty is not all about trust, price also matters: extending expectation-confirmation theory in bookselling websites", *Journal of Electronic Commerce Research*, Vol. 14 No. 1, pp. 99-123.
- Warner, F. (2005), *The Power of the Purse: How Smart Businesses are Adapting to the World's Most Important Consumers-Women*, PH Professional Business, Upper Saddle River, NJ.
- Wolfenbarger, M. and Gilly, M.C. (2003), "eTailQ: dimensionalizing, measuring and predictingetail quality", *Journal of Retailing*, Vol. 79 No. 3, pp. 183-198.
- Yang, Z. and Peterson, R.T. (2004), "Customer perceived value, satisfaction, and loyalty: the role of switching costs", *Psychology & Marketing*, Vol. 21 No. 10, pp. 799-822.
- Yen, Y.S. (2010), "Can perceived risks affect the relationship of switching costs and customer loyalty in e-commerce?", *Internet Research*, Vol. 20 No. 2, pp. 210-224.
- Yousafzai, S.Y., Pallister, J.G. and Foxall, G.R. (2003), "A proposed model of e-trust for electronic banking", *Technovation*, Vol. 23 No. 11, pp. 847-860.
- 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.

Appendix. Questionnaire items

Operationalization of variables

Variables and items:

- (1) Perceived delivery time (PDT) (with seven-point scale: 1 means very low, 7 means very high):
 - on the whole, I can receive the ordered item quickly;
 - overall, I feel that the online store process my order quickly; and
 - generally speaking, I would be able to know my order status at any time.
- (2) Web site design (WSD) (with seven-point scale: 1 means very disagree, 7 means very agree):
 - the online store provides in depth information;
 - the online store does not waste time;
 - it is easy to complete a transaction at this online store;
 - this online store offers appropriate personalized services; and
 - this online store has good selection.

- (3) Perceived online privacy (POP) (with seven-point scale: 1 means very disagree, 7 means very agree):
 - I was informed what information the company would collect about me;
 - the online store explained how they would use the information collected about me;
 - the online store has a clear mechanism/policy to review and change incorrect personal information;
 - I feel that the online store is making effort to keep my personal information out of hands of unauthorized individuals; and
 - I feel that the online store will not release my personal information about me without my express permission.
- (4) Perceived online security (POS) (with seven-point scale: 1 means very disagree, 7 means very agree):
 - I believe that the online store implements security measures to protect internet shoppers;
 - I believe that the online store usually ensures that transactional information is protected from accidentally altered or destroyed during transmission on the internet;
 - I believe that the online store has a very safe online paying mechanism;
 - I believe that the online store has the superior ability to handle online hijackings; and
 - I believe that transactions are protected by the state-of-the-art security technique at this online store.
- (5) e-Satisfaction (with seven-point scale: 1 means very disagree, 7 means very agree):
 - I like to purchase products from the online store;
 - I am pleased with the experience of purchasing products from the online store;
 - I think purchasing products from the online store is a good idea; and
 - overall, I am satisfied with the experience of purchasing products from the online store.
- (6) e-Trust (with seven-point scale: 1 means very disagree, 7 means very agree):
 - I believe that this online store honestly provides correct information;
 - I believe there is no misrepresentation at this online store;
 - I believe this online store makes recommendations to consumers on the basis of mutual benefit; and
 - I believe that this online store would not take adverse actions against its consumers.
- (7) e-Loyalty (with seven-point scale: 1 means very disagree, 7 means very agree):
 - if the online store continues maintaining current service performance, I will not switch to other online stores;
 - as far as the product types sold at this online store are concerned, I donot quite consider purchasing at other online stores;
 - I like to utilize this online store; and
 - To me, this online store is the best web site to shop clothing.

About the authors

Shihyu Chou is a Professor in the Bachelor Program of Business Administration at the National Taiwan Normal University, Taiwan. He has published paper in *Communications in Statistics*, *International Journal of System Science*, *Expert Systems with Applications*, *Quality and Quantity*, *Journal of Systems and Software*, and *ACM Operating Systems Review*. His current research interests are on e-commerce applications and customer relationships management issues.

Chi-Wen Chen is an Assistant Professor in the Department of Information Systems and Operations Management at California State University, Dominguez Hills. His work has appeared in the journals including *International Journal of Electronic Commerce*, *European Journal of Information Systems*, and *Cyberpsychology, Behavior, and Social Networking*. Dr Chi-Wen Chen is the corresponding author and can be contacted at: chchen@csudh.edu

Jiun-You Lin is a Graduate Student at the Department of Marketing, National Chung Hsing University, Taiwan.

For instructions on how to order reprints of this article, please visit our website:

www.emeraldgrouppublishing.com/licensing/reprints.htm

Or contact us for further details: permissions@emeraldinsight.com

This article has been cited by:

1. Shweta Pandey, Deepak Chawla. 2016. Understanding Indian Online Clothing Shopper Loyalty and Disloyalty: The Impact of E-Lifestyles and Website Quality. *Journal of Internet Commerce* 1-21. [[CrossRef](#)]
2. AgagGomaa Gomaa Agag El-masryAhmed Ahmed El-masry AlharbiNawaf Sulaiman Nawaf Sulaiman Alharbi Ahmed AlmamyAhmed Ahmed Ahmed Almamy Department of Management, Plymouth University, Plymouth, UK and Sadat University, Sadat City, Egypt Department of Finance, Plymouth University, Plymouth, UK and Umm al-Qura College of Business, Mecca, Saudi Arabia King Abdulaziz City for Science and Technology, Riyadh, Saudi Arabia Department of Management and Marketing, University of Plymouth, Plymouth, UK . 2016. Development and validation of an instrument to measure online retailing ethics. *Internet Research* 26:5, 1158-1180. [[Abstract](#)] [[Full Text](#)] [[PDF](#)]
3. Dianne Cyr, David Gefen, Rita Walczuch. 2016. Exploring the relative impact of biological sex and masculinity–femininity values on information technology use. *Behaviour & Information Technology* 1-16. [[CrossRef](#)]
4. Abubaker Shaouf, Kevin Lü, Xiaoying Li. 2016. The effect of web advertising visual design on online purchase intention: An examination across gender. *Computers in Human Behavior* 60, 622-634. [[CrossRef](#)]
5. Imran Khan Department of Management Studies, Indian Institute of Technology Roorkee, Roorkee, India Zillur Rahman Department of Management Studies, Indian Institute of Technology Roorkee, Roorkee, India . 2016. E-tail brand experience's influence on e-brand trust and e-brand loyalty. *International Journal of Retail & Distribution Management* 44:6, 588-606. [[Abstract](#)] [[Full Text](#)] [[PDF](#)]