Consumers’ perceptions of online ethics and its effects on satisfaction and loyalty

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Abstract
Purpose – This paper aims to examine the effects of consumers’ perceptions concerning the ethics of online retailers on web site satisfaction and loyalty.

Design/methodology/approach – An online survey instrument was administered to a sample of 220 students who were enrolled in various business undergraduate classes at a mid size university located in the southwestern USA. Participants completed a questionnaire based on their latest online purchase. The measurement model and structural relationships were estimated using AMOS 18.

Findings – Non-deception, fulfillment, and security are significant predictors of web site satisfaction. Only privacy is related directly with loyalty. While direct effects of fulfillment and non-deception on loyalty are not significant; satisfaction mediates these relationships. Results provide a strong support for the web site satisfaction-loyalty relationship.

Practical implications – Internet retailers must address ethical issues surrounding their web sites by protecting financial and personal information, delivering accurate products, and avoiding deceptive practices.

Originality/value – The current research is one of few studies in online retailing that examines the relationship between perceived online ethics, satisfaction and loyalty. By offering evidence to prior conflicting results in the literature, a strong association between what consumers perceive as ethical online retailing, their satisfaction and loyalty to online retailers was confirmed.

Keywords Individual perception, Consumers, Customer satisfaction, Internet shopping, Retailing, United States of America

Paper type Research paper

Introduction
With increasing acceptance of the internet as a source for retail, ethical issues concerning internet usage have prompted serious concerns to consumers and created new challenges for practitioners (Roman and Cuestas, 2008). These growing concerns about safety and ethical behavior in online retailing can harm and restrain internet retail growth and deter consumers from online activities. Marketers must understand how these ethical challenges relate to dissatisfaction and distrust in the online retailing environment to foster further growth. For that reason, it is particularly relevant that online retailers understand how consumers perceive and evaluate the ethical dimensions of their web sites.
in facing severe competition and continually rising consumer expectation (Anderson and Srinivasan, 2003).

Few ethical issues surrounding e-commerce are similar to the ethics of traditional brick-and-mortar retailing (Palmer, 2005) suggesting that additional research on perceived ethical behavior in online settings is needed. Some ethical factors such as privacy and security substantially influence consumers’ willingness to purchase from online retailers (Adam et al., 2007). Research analyzing consumers’ perceptions about the ethical behavior of online retailers mostly rests on studies of a conceptual nature (Maury and Kleiner, 2002; Stead and Gilbert, 2001). Some have begun to examine consumers’ perceptions of ethics of online retailers in more recent studies. For example, Roman (2007) provides a scale that measures the perception of an online retailer’s integrity and responsibility in dealing with consumers in a secure, confidential, fair, and honest manner. Other studies investigate the effect of perceived online ethics on general internet expertise and word of mouth testimonials (Roman and Cuestas, 2008), the effect of shopping web sites’ perceived ethical performance on consumer trust (Yang et al., 2009), and the role of consumer trust on the general acceptance of electronic commerce (Grabner-Kraeuter, 2002). While the recent research offers a progression in what consumers perceive as ethical in online retailing, more research needs to examine other affected variables such as satisfaction and loyalty (Flavian and Guinaliu, 2006).

In an online retailing context, this study proposes and tests a model that will discover the relationships between ethical factors associated to online retailers’ web sites (e.g. security, privacy, non-deception, and fulfillment) and loyalty to online retailers’ web sites. It also explores a mediating role of satisfaction on the link between ethical factors and loyalty. A need for this type of research is implied by the fact that customer loyalty is important to the success of a business and directly affects word-of-mouth and willingness to pay more (Oliver, 1997; Srinivasan et al., 2002; Ribbink et al., 2004). Because of the ease with which customers can switch from one online store to another, customer loyalty towards online retailers’ appears extremely difficult to maintain (Bergeron, 2001), thus has become a main concern for online retailers (Kabadayi and Gupta, 2005). Research examining the impact of online retailers’ manipulative practices on consumer loyalty to retailers’ web sites is limited. Thus, the current study aims to fill the gap by examining direct and indirect effects of non-deception, fulfillment, privacy, and security on consumer loyalty to an online retailer.

The second purpose of this study is to reexamine the consumers’ perception of ethics of online retailers (CPEOR) measurement developed by Roman (2007) by drawing from a sample of US online consumers and testing the relationships between CPEOR dimensions and web site loyalty. The instrument measures consumers’ perceptions about the integrity and responsibility of the company that is behind the web site in its attempt to deal with consumers in a secure, confidential, fair, and honest manner that ultimately protects consumers’ interests. Since its publication, the CPEOR scale has experienced limited validation in academic research. The importance of an instrument measuring the perception of ethical behavior of online retailers is given by continued concerns of internet security, privacy, and truthfulness of information in global internet transactions (Anderson and Srinivasan, 2003; Stead and Gilbert, 2001; Roman and Cuestas, 2008). Ethical factors such as privacy and security substantially influence consumers’ willingness to purchase from online retailers (Adam et al., 2007).
It therefore seems plausible to reexamine and expand the validity of the CPEOR scale by employing a different sample.

Additional motivation to employ the CPEOR scale stems from its development using a Spanish consumer sample. Past studies indicate consumers’ online behavior varies across the different cultures (Chau et al., 2002; Park and Jun, 2003), which may raise questions regarding the ability to generalize findings across nations and cultures using the instrument. Arguments regarding inconsistencies of the adoption of online shopping behavior often reference infrastructural development and cultural differences (DeMoj and Hofstede, 2002; Soares et al., 2007). For example, variation in the use of the internet is found even in economically homogeneous Europe (DeMoj and Hofstede, 2002). Thus, by surveying a US online consumer sample, this study also seeks to validate previous theoretical findings of consumer perception regarding the ethics of online retailers.

Literature review
There has been much research on consumers’ understanding of companies’ ethical behavior. This research includes consumers’ ethical behavior movements in the light of green consumption, social responsibility, and fair trade (Valor, 2007). Empirical studies that have analyzed the influence of ethical criteria on consumer behavior (Hiller, 2010; Roberts, 1995; Shaw and Shiu, 2003; Valor, 2007) found that consumers’ ethical perception may depend on product criteria and their individual value systems (Hiller, 2010). Some findings suggest that ethical behavior of a company ranked behind the importance of image, fashion, and price (Carrigan and Attalla, 2001) suggesting that ethical behavior may be secondary when making purchase decisions. As justification, Carrigan and Attalla (2001) stated that consumers often lack the information to make a judgment of whether a company’s action is ethical or not.

While research in the traditional retailing context has taken shape during the past three decades, online retailing as a venue for consumer shopping has added new complexities to retailers’ ethical behaviors. For example, the lack of information consumers need to judge whether a company is behaving ethically may be harder to come by in online retailing as there is less physical interaction between the two parties. Consumers might develop different strategies to sense unethical behavior of their retailers. Research that investigates consumers’ perceptions of ethical behavior of online retailers is still in the beginning and therefore requires exploration (Roman, 2007; Roman and Cuestas, 2008). Some studies exploring online consumers’ ethical concerns proposed that consumers are mostly worried about privacy of information, web security, fraud, retailer reliability, and quality when making online purchases (Grabner-Kraeuter, 2002; Miyazaki and Fernandez, 2001; Koehn, 2003). Others suggest that security and privacy are the biggest barriers to online shopping (Ahuja et al., 2003). Whereas these studies have taken a more scattered approach of what might raise consumers’ ethical concerns, a recent study proposes a more concrete framework of consumers’ perceptions of ethical behavior in online retailing (Roman, 2007). The author defined consumer perception of retailers’ ethical behavior and offered a multidimensional measurement to capture consumer perception of ethics in online retailing. The findings conclude that perceived online ethics is comprised of four dimensions: security, privacy, non-deception, and fulfillment, and the perceived violation of any of the four dimensions may raise ethical concerns about online retailers. We will define those four dimensions as well as the other two constructs used in the study.
Security
Most studies suggested security as the most important factor of online ethics (Belanger et al., 2002; Chen and Shergill, 2005; Flavian and Guinaliu, 2006). In an online retailing context, security refers to consumers’ perceptions about the security of the online transactions as well as the protection of financial information from unauthorized access (Roman, 2007). Thus, this concern can be categorized into financial security (concern about providing financial information) and non-financial security (relating to revealing personal information) (Janda et al., 2002). Past studies suggest online consumers have serious concerns about conveying their financial as well as personal information to online retailers (Miyazaki and Fernandez, 2001). Thus, if retailers treat customer data negligently or purposefully leak or offer customer information to other companies may trigger ethical concerns among online shoppers resulting in a negatively perceived ethical behavior.

Privacy
Privacy as part of consumers’ ethical perception is a crucial construct in online retailing (Chen and Shergill, 2005; Jones, 1991; Stead and Gilbert, 2001). This is because consumers share personal and financial data with the retailer on nearly all interaction and expect confidential treatment of their information. Thus, privacy in online retailing is defined as consumers’ perceptions about the protection of individually identifiable information on the internet (Bart et al., 2005) or the willingness of consumers to share information over the internet (Belanger et al., 2002). Past studies showed that consumers are concerned with online retailers’ marketing practices that have the potential to invade consumers’ privacy (Taylor et al., 2006). Past studies showed significant effects of privacy on consumers’ loyalty to online retailers (Ratnasingham, 1998), trust in an online retailer (Lauer and Deng, 2007), and satisfaction with the web sites of online retailers (Roman, 2007).

Fulfillment
An additional dimension of online ethics is the fulfillment or reliability of online purchases (Chen and Shergill, 2005; Wolfinbarger and Gilly, 2003). The term or “fulfillment” refers to on-time and accurate delivery of the online purchase, accurate product representation, and a proper technical functioning of the web site (Wolfinbarger and Gilly, 2003; Zeithaml et al., 2002). Studies suggest fulfillment is an important determinant of consumers’ satisfaction with an online retailer’s web site (Wolfinbarger and Gilly, 2003).

Non-deception
One critical issue of online retailing is non-deception wherein the consumers believe that the retailer does not use deceptive or manipulative practices with the intent to persuade the consumers to purchase the web site’s offerings. Deceptive practices occur when the online retailer creates an impression or belief among consumers that is different from what could be expected by the consumer with reasonable knowledge, and that impression or belief is literally false or possibly misleading. Roman (2007) found a significant impact of non-deception on Spanish consumers’ trust and satisfaction with the web sites of online retailers.

Loyalty
Chiu et al. (2009) defined loyalty as the subjective probability a customer will make future purchases from the same web site. Zhao (2010) characterized loyalty in terms
of the dependence and recognition of a web site’s products or services, as well as the consumer’s confidence in continuing to purchase products or services from the web site. Akbar and Parvez (2009) characterized the attitude dimension of loyalty as the intention to continue purchasing products or services. Consistent with these studies, our study applies loyalty as the customer’s favorable attitude toward an electronic retailer’s web site resulting in repeat buying behavior from the retailer’s web site (Anderson and Srinivasan, 2003).

Satisfaction
Chiu et al. (2009) reported that satisfaction is an evaluation and emotional response to the online shopping experience. Zhao (2010) described satisfaction in terms of a pleasing psychological experience in response to an online purchase. Akbar and Parvez (2009) characterized satisfaction as a positive emotional reaction based on all aspects of the relationship between the consumer and the web site. In the context of online retailing, consumers’ satisfaction with an online retailer is described as the consumers’ judgment of their internet retail experiences (Evanschitzky et al., 2004; Szymanski and Hise, 2000). In this research, consumer satisfaction is defined as the satisfaction of consumers with the web sites of online retailers.

Research framework and hypotheses
As shown in Figure 1, the current study proposes a model that will explore direct and indirect relationships between ethical factors associated to online retailers’ web sites (e.g. security, privacy, non-deception, and fulfillment) and loyalty to online retailers’ web sites in which satisfaction is conceptualized to mediate the ethical factors – loyalty links.

Effect ethics on satisfaction with the web site (web site satisfaction)
Customer satisfaction is crucial for the success of online retailing businesses (Wang and Huarng, 2004), but very little is known about the key indicators of consumers’ satisfaction with online retailers’ web sites (Evanschitzky et al., 2004; Wang and Huarng, 2004).
It is suggested that customers’ ratings of satisfaction are influenced by their reactions to online retailers’ web sites (Gommans et al., 2001). For instance, the level of interactivity and the amount of information provided by the web site (Ballantine, 2005), convenience and site design (Evanschitzky et al., 2004), and product offerings (Szymbaski and Hise, 2000) are significant determinants of satisfaction. Moreover, satisfaction is the outcome of customer service (Wolfinbarger and Gilly, 2003), retailers’ service quality (Jun et al., 2004), product quality, provided value, and product selection (Burke, 2002). Wang and Huarng (2004) found satisfaction was related to the customers’ perception of an online retailer in which satisfaction increased as the customer perception of online retailer became more positive and decreased as the customer perception of an online retailer became negative. In addition, fulfillment or reliability has an impact on satisfaction (Wolfinbarger and Gilly, 2003).

A few studies have suggested ethical issues as the determinants of web site satisfaction. Privacy and security are found to be important predictors of consumers’ satisfaction with online retailers’ web sites (Szymbaski and Hise, 2000; Roman, 2007). Online consumers are mainly concerned with the financial security, which in turn influenced their satisfaction (Wolfinbarger and Gilly, 2003). In addition, non-deception has an impact on satisfaction (Roman, 2007).

The expectancy and disconfirmation model suggests consumer satisfaction is a response to the congruency between an individual’s expectations and the actual performance of a product (Oliver, 1981). If there is a discrepancy between expectations and actual performances, the result is a positive disconfirmation (if performance exceeds expectations) or a negative disconfirmation (if expectations exceed performance). Positive disconfirmation leads to satisfaction. In an online retailing context, consumer satisfaction to an online retailer’s web site may be viewed as a function of the interrelationship between what consumers expect from the web site and their perceptions or evaluations of services rendered by the web site. For example, if an online retailer creates an impression or belief among consumers that is possibly deceptive and different from what could be expected by the consumer, that may have an adverse impact on web site satisfaction.

Because online consumers are becoming increasingly concerned about ethical issues associated with the web sites especially security of their transactions and fulfillment of their orders, internet retailers who maintain a high level of ethics should perform better resulting in positive disconfirmation, thus ensuring satisfaction. We, therefore, hypothesize that security, fulfillment, and non-deception have positive effects on consumer’s satisfaction with the web site of an online retailer:

\[
H1a. \text{ Non-deception is related positively to web site satisfaction.}
\]

\[
H1b. \text{ Fulfillment is related positively to web site satisfaction.}
\]

\[
H1c. \text{ Security is related positively to web site satisfaction.}
\]

**Effect of ethics on loyalty to the web site (web site loyalty)**

Consumer loyalty plays an important role in the success of business (Oliver, 1997) and influences business profitability through cost reduction effects and increased revenues per customer (Berry, 1995). Loyal consumers are more willing to pay a higher price and easier to satisfy (Reichheld and Schefter, 2000). A consumer’s loyalty to a brand or firm is one of the most extensively studied constructs in marketing; however, only a few studies
have discussed the effects of ethics of online retailing on web site loyalty (Gommans et al., 2001). Customer loyalty is also extremely valuable in e-commerce (Ribbink et al., 2004) as it directly affects word-of-mouth and willingness to pay more (Srinivasan et al., 2002). Since the consumers can easily switch from one web site to another (Reichheld and Schefter, 2000), the notion of web site loyalty has become an important issue for online retailers (Kabadayi and Gupta, 2005).

Several studies examined the determinants of web site loyalty, including Casalo et al. (2008) and Kabadayi and Gupta (2005). Some studies suggest that trust (Jevons and Gabbott, 2000), commitment (Thatcher and George, 2004), online supporting services (Van Riel et al., 2004), and web site attributes such as convenience and ease of use (Belanger et al., 2002) directly affect loyalty to a web site. The web site design and customer service are related to customer loyalty toward the web site (Wolfinbarger and Gilly, 2003). According to Srinivasan et al. (2002), customization, cultivation, care, community, choice, and character are significant antecedents of web site loyalty. Casalo et al. (2008) found a positive and significant influence of reputation, usability, and satisfaction on web site loyalty. Customers have greater loyalty to the retailers’ web sites that request the least information (Lawler, 2003).

Research from traditional retail settings reported a positive impact of ethical sales behavior on customer loyalty (Chen and Mau, 2009). Studies that examine the roles of ethical issues on web site loyalty are scarce, but some research reports that order fulfillment (Wolfinbarger and Gilly, 2003) is an important ethical issue that impacts web site loyalty. Research found that customer privacy significantly impacts web site loyalty and the willingness to purchase from online retailers (Lawler, 2003; Adam et al., 2007). However, studies also reported that privacy is not a direct antecedent of web site loyalty (Cases et al., 2006; Belanger et al., 2002).

Social contract theory suggests that consumers exchange their personal information as an implied social contract (Milne and Gordon, 1993). In an online retailing context, exchanging personal information may be conceptualized as a direct social contract between online retailers and consumers and occurs when a consumer provides information to the online retailer; and the retailer in turn offers an incentive to the consumer. Online consumers seek out and carefully examine specific ethical issues (e.g. privacy, security, reliability) before they commit themselves to a transactional relationship. For example, Pan and Zinkhan (2006) report that privacy policies influence shoppers’ trust in the online store and thus their tendency to patronize those. Given these arguments, we hypothesize that perceived ethical behavior of online retailers’ influences consumers’ intention of making a future purchase from a retailer’s web site:

\[ H2a. \] Privacy is related positively to web site loyalty.

\[ H2b. \] Non-deception is related positively to web site loyalty.

\[ H2c. \] Fulfillment is related positively to web site loyalty.

**Satisfaction-loyalty relationship**

Several studies have investigated the relationship between web site satisfaction and web site loyalty in business-to-consumer e-commerce. For example, Chiu et al. (2009) investigated the role of web site satisfaction on web site loyalty using Davis’ (1989) technology acceptance model. They found that satisfaction had a positive influence on loyalty intention. Studies by Zhao (2010) and Akbar and Parvez (2009) also confirmed...
the relationship between satisfaction and loyalty. Although these studies did not employ theory as extensively researched as the technology acceptance model, their findings were consistent with Chiu et al. (2009). While these three studies do not specifically address satisfaction and loyalty in conjunction with ethics, it is likely that the findings will be consistent. On the other hand, some studies reported conflicting results in regard to the satisfaction-loyalty relationship. For example, Anderson and Srinivasan (2003) found a strong positive link between satisfaction and loyalty; however, such association was not evident in a study by Yen and Gwinner (2003).

Because past experience has direct effects on behavioral intentions, satisfying experiences can enhance the motivation to remain in the relationship (Blau, 1964; Thibaut and Kelley, 1959). In another words, a satisfied customer is less likely to search for information on alternatives and more likely to be loyal by depending on and maintaining a close relationship. This proposition has been confirmed by a number of studies showing a positive relationship between satisfaction and loyalty (Anderson and Sullivan, 1993; Fornell et al., 1996; Anderson and Srinivasan, 2003). In line with this concept and applying it in the online retailing context, we will propose a positive impact of web site satisfaction on web site loyalty:

H3. Web site satisfaction is related positively to web site loyalty.

Method
Sample
A survey instrument was administered to a sample of 220 online consumers by using a link to an online questionnaire created through Survey Monkey. The participating students were enrolled in various business undergraduate classes at a mid size university located in the southwestern USA. The email message described the research purpose and invited each student to participate in an e-questionnaire by accessing it through an attached link. Participants were asked to respond to the questionnaire based on their latest online purchase. Inclusion in the study was based on the requirement that at least one online purchase was made within the last four months. The survey included a screening question to assure proper inclusion of valid responses. The vast majority of participants fulfilled the requirements of having completed an online purchase within the past four months. Out of the 220 questionnaires, 18 were excluded due to either not fulfilling the online purchase requirement or not having completed the questionnaire. Of the 202 useable responses, 57.9 percent were male (42.1 female). Study participants ranged in ages from 18 to 54 years with 79 percent in ages from 20 to 29 followed by 11.5 percent between ages of 30 and 39. In terms of ethnicity, the three major groups represented in the sample were Caucasian (35.1 percent), Hispanics (27.2 percent), and African American (25.7 percent) followed by Asians (3 percent), Native American (2.5), and others (6.4 percent).

Convenience samples are sometimes criticized for not being sufficiently qualified to validate theory. However, given that nearly all study participants fulfilled the requirement of having at least one purchase within the past four month, we conclude that our student sample qualifies to address the purpose of this study. In other words, students in today’s university climate are exposed to working with online web sites, and shop regularly online, thus confirming students as active participants in online consumption (Bigne et al., 2005).
Measures
Web site satisfaction was measured with the three item scales originated by Anderson and Srinivasan (2003). Factor loadings for this measure ranged from 0.871 to 0.893 and a coefficient $\alpha$ was 0.92 (Table I). Web site loyalty was assessed with Zeithaml et al.’s (1996) five-item scale. The factor loadings for this construct ranged from 0.783 to 0.866. The items evinced adequate construct reliability (coefficient $\alpha = 0.89$). The scale

<table>
<thead>
<tr>
<th>Constructs/items</th>
<th>Loadings</th>
<th>AVE</th>
<th>Construct reliabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Loyalty to the web site</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LSITE1</td>
<td>I encourage friends and relatives to do business with the web site</td>
<td>0.783</td>
<td>0.715</td>
</tr>
<tr>
<td>LSITE2</td>
<td>I say positive things about the web site to other people</td>
<td>0.793</td>
<td></td>
</tr>
<tr>
<td>LSITE3</td>
<td>I will do more business with the web site in the next few years</td>
<td>0.866</td>
<td></td>
</tr>
<tr>
<td>LSITE4</td>
<td>I would recommend the web site to someone who seeks my advice</td>
<td>0.836</td>
<td></td>
</tr>
<tr>
<td>LSITE5</td>
<td>I consider this web site to be my first choice to buy the kind of product I most recently purchased online</td>
<td>0.795</td>
<td></td>
</tr>
<tr>
<td><strong>Satisfaction with the web site</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SSTIE1</td>
<td>I am happy I made my purchase at this web site</td>
<td>0.880</td>
<td>0.787</td>
</tr>
<tr>
<td>SSTIE2</td>
<td>My choice to purchase from this site was a wise one</td>
<td>0.871</td>
<td></td>
</tr>
<tr>
<td>SSTIE3</td>
<td>I am satisfied with my decision to purchase from this site</td>
<td>0.893</td>
<td></td>
</tr>
<tr>
<td><strong>Security</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SECU1</td>
<td>The security policy is easy to understand</td>
<td>0.696</td>
<td>0.614</td>
</tr>
<tr>
<td>SECU2</td>
<td>The site displays the terms and conditions of the online transaction before the purchase has taken place</td>
<td>0.646</td>
<td></td>
</tr>
<tr>
<td>SECU3</td>
<td>The site appears to offer secure payment methods</td>
<td>0.835</td>
<td></td>
</tr>
<tr>
<td>SECU4</td>
<td>This site has adequate security features</td>
<td>0.810</td>
<td></td>
</tr>
<tr>
<td><strong>Privacy</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRIV1</td>
<td>The site clearly explains how user information is used</td>
<td>0.638</td>
<td>0.543</td>
</tr>
<tr>
<td>PRIV2</td>
<td>Only the personal information necessary for the transaction to be completed needs to be provided</td>
<td>0.586</td>
<td></td>
</tr>
<tr>
<td>PRIV3</td>
<td>Information regarding the privacy policy is clearly presented</td>
<td>0.846</td>
<td></td>
</tr>
<tr>
<td><strong>Non-deception</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NONDEC1</td>
<td>The site exaggerates the benefits and characteristics of its offerings</td>
<td>0.673</td>
<td>0.610</td>
</tr>
<tr>
<td>NONDEC2</td>
<td>This site takes advantages of less experienced consumers to make them purchase</td>
<td>0.953</td>
<td></td>
</tr>
<tr>
<td>NONDEC3</td>
<td>This site attempts to persuade you to buy things that you do not need</td>
<td>0.615</td>
<td></td>
</tr>
<tr>
<td><strong>Fulfillment</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FULFILL1</td>
<td>The price shown on the site is the actual billed</td>
<td>0.652</td>
<td>0.572</td>
</tr>
<tr>
<td>FULFILL2</td>
<td>You get what you ordered from this site</td>
<td>0.903</td>
<td></td>
</tr>
<tr>
<td>FULFILL3</td>
<td>Promise to do something by a certain time, they do it</td>
<td>0.548</td>
<td></td>
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Table I. Factor loadings, AVE, and construct reliabilities
to measure consumers’ perceptions of online ethics was adapted from Roman (2007) and
included four security, three privacy, three non-deception, and three fulfillment items.
The factor loadings for the ethical dimensions ranged from 0.55 to 0.95, thus all are above
the recommended cut-off value of 0.5 (Hair et al., 2005). Reliability for each of these factors
ranged from 0.75 to 0.84, above the recommended level of 0.7 (Bagozzi and Yi, 1988).

Results
Measurement model
The measurement model and structural relationships were estimated using AMOS
18 and the maximum likelihood estimation method. The assessment of the structural
model follows the two-stage analytic technique, confirmatory factor analysis or
measurement model followed by structural model. The goodness-of-fit indices (GFIs) for
the measurement model are: $\chi^2(170) = 300.75; \quad p < 0.00; \quad GFI = 0.92; \quad$ adjusted
goodness-of-fit index (AGFI) = 0.90; root mean square error of approximation
(RMSEA) = 0.062; Tucker-Lewis index (TLI or NNFI) = 0.94; normed fit index
(NFI) = 0.90; and comparative fit index (CFI) = 0.96. The RMSEA (0.062) indicates
acceptable fit, which are close to the cut-off value of 0.08 suggested by MacCallum et al.
(1996). The values of TLI or NNFI and CFI are close to or above the cutoff value of 0.95
(Hu and Bentler, 1999). GFI is higher than 0.90 recommended by Hair et al. (2005).
Although the $\chi^2$-test is significant, the normed $\chi^2$ value ($\chi^2/df$) is 1.77, which is far
below the cut-off value 3 recommended by Fornell and Larcker (1981). Given that a
single fit index cannot be used to fully interpret the model, the evaluation must be based
on collective interpretation of the fit indices. We, therefore, interpret the overall model
fit as acceptable.

As shown in Table I, all standardized regression weights (loading estimates) are
significant and higher than 0.5 and thus supporting convergent validity (Gerbing and
Anderson, 1988). All average variance extracted (AVE) estimates are higher than
recommended level of 0.5 and construct reliabilities are higher than recommended level
of 0.6 (Bagozzi and Yi, 1988; Fornell and Larcker, 1981). Thus, taking loadings, AVE, and
construct reliabilities together, they provide initial support for the convergent validity of
the measurement model. Since all AVE estimates are larger than the corresponding
squared interconstruct correlation estimates, the discriminant validity is demonstrated
(Fornell and Larcker, 1981).

Structural model
As shown in Table II, the fit indices for the hypothesized structural model are acceptable:
$\chi^2(171) = 279.61; \quad p < 0.00; \quad GFI = 0.93; \quad AGFI = 0.92; \quad$ RMSEA = 0.056; \quad $\text{TLI} = 0.95;$
NFI = 0.92; CFI = 0.96; and normed $\chi^2 = 1.635$. The values of fit indices were close to
or above recommended levels.

Results of hypothesis testing including path coefficients and $t$-values for each
structural path are presented in Table II. $H1a-H1c$ predicted that security, fulfillment,
and non-deception would be related positively to web site satisfaction. $H1$ is supported
for security: $t = 2.653, p \leq 0.05$; fulfillment: $t = 4.214, p \leq 0.001$; and non-deception:
$t = 1.988, p \leq 0.05$. Fulfillment is the most dominant determinant of satisfaction,
followed by non-deception and security.

$H2a-H2c$ predicted that privacy, non-deception, and fulfillment would have a positive
association with web site loyalty. Providing a support for $H2a$, privacy was a significant
antecedent of loyalty ($t = 3.519$, $p \leq 0.001$). Contrary to the expectation, the direct effects of non-deception and fulfillment on web site loyalty were not significant (non-deception: $t = 0.891$, $p > 0.05$ and fulfillment: $t = 0.083$, $p > 0.05$). Thus, $H2b$ and $H2c$ were not supported. Interestingly, web site satisfaction mediated the effects of non-deception and fulfillment on web site loyalty (Figure 2). The indirect effect of fulfillment on loyalty through satisfaction ($\beta = 0.253$) was much greater than its direct effect ($\beta = 0.004$). Similarly, the indirect effect of non-deception on loyalty through

<table>
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<th>Estimate</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction $\leftarrow$ security</td>
<td>0.268</td>
</tr>
<tr>
<td>Satisfaction $\leftarrow$ fulfillment</td>
<td>0.539</td>
</tr>
<tr>
<td>Satisfaction $\leftarrow$ non-deception</td>
<td>0.197</td>
</tr>
<tr>
<td>Loyalty $\leftarrow$ satisfaction</td>
<td>0.469</td>
</tr>
<tr>
<td>Loyalty $\leftarrow$ non-deception</td>
<td>0.041</td>
</tr>
<tr>
<td>Loyalty $\leftarrow$ privacy</td>
<td>0.248</td>
</tr>
<tr>
<td>Loyalty $\leftarrow$ fulfilment</td>
<td>0.004</td>
</tr>
</tbody>
</table>

$\chi^2 = 279.61$
$df = 171$
$\chi^2/df = 1.635$
$GFI = 0.93$
$AGFI = 0.92$
$TLI or NNFI = 0.95$
$NFI = 0.92$
$CFI = 0.96$
$RMSEA = 0.056$

**Notes:** Significance at: *$p < 0.05$, **$p < 0.01$**

Table II. Structural parameter estimates and fit indices

Consumers’ perceptions of online ethics

Figure 2. Structural model

Notes: 1. Solid lines represent statistically significant paths; 2. Dashed lines indicate non-significant paths
satisfaction was stronger than the direct effect ($\beta = 0.092$ versus $0.041$). These indirect effect sizes of fulfillment and non-deception on loyalty were determined by multiplying the coefficients along the paths connecting the variables between exogenous (fulfillment and non-deception) and endogenous (loyalty) constructs.

As predicted in $H3$, the result provided a strong support for the satisfaction-loyalty link ($t = 5.335$, $p < 0.001$). It suggests that consumers who are satisfied with the web sites of online retailers are more likely to revisit the web sites and repeat purchase from the web sites.

**Discussion and managerial implications**

With the rapid growth of online retailing, the ethics of online retailing has become a major concern for consumers posing substantial challenges to industry and regulators. This study empirically tested a model that predicted the effects of ethical factors associated to online retailers’ web sites on web site satisfaction and loyalty. In line with Roman’s (2007) findings, security, fulfillment, and non-deception were related positively to web site satisfaction confirming that there is not much difference between Spanish and US online consumers’ responses to the ethical perceptions of online retailers. Interestingly, fulfillment was the most dominant determinant of web site satisfaction, followed by non-deception, and security. Online marketers must understand that these ethical issues may relate to consumer satisfaction and loyalty. Consumer’s perception of online retailers’ deceptive practice is one of the major drivers of customer dissatisfaction. For example, online shoppers do not have an opportunity to touch, feel, and evaluate the product physically, thus, their product evaluation and purchase decisions largely rely on information available on the web site (e.g. product description and graphics, customers, reviews). Therefore, online shoppers are more likely to experience post-purchase dissonance, possibly leading to dissatisfaction. To cope with this situation, online retailers should not exaggerate the benefits and characteristics of their offerings. Although product graphic styles (e.g. color, layout, size, animation) are critical to some product categories and are helpful in persuading online shoppers, inaccurate and inflated visual product presentations can further intensify purchase dissonance and dissatisfaction. To fulfill the orders, online marketers should ensure precise and prompt delivery of products and services. Concerns relating to late deliveries can be overcome by providing information on product availability, stockouts, order status or tracking information, and reasons for the delays. To ensure the security of the transactions, consumers should be provided a secure server for transaction, multiple payment options that offer additional layers of security (e.g. credit card or paypal), and clear instructions about security policies and issues such as statement about a guarantee against credit card fraud.

Because customers can easily switch from one web site to another (Reichheld and Schefter, 2000), establishing and maintaining loyalty toward an online retailer’s web site is very delicate. Given the importance of loyalty in online retailing, we examined a direct and indirect effect of non-deception and loyalty. Contrary to prediction, results did not find any support for a direct effect of non-deception on web site loyalty. However, satisfaction mediates this relationship in such a way that non-deception influences satisfaction that eventually results in loyalty. Contrary to Wolfinbarger and Gilly’s (2003) finding, results did not support for a direct influence of fulfillment on loyalty, but a satisfaction-mediated indirect effect on loyalty was evident. Similarly, web site
satisfaction mediated the relationship between security and web site loyalty. Because security, non-deception, and fulfillment are important determinants of web site satisfaction thus eventually resulting in web site loyalty, the primary focus of an online retailer’s web site should be satisfying customers (i.e. improving evaluation and positive emotional response to the web site). This can partly be achieved by establishing ethical standards (e.g. protection of financial information, on-time and accurate delivery, accurate product representation, reducing manipulative practice, etc.).

Previous studies focused on online retailing reported contradictory findings in regard to a direct association between privacy and loyalty. Although some studies revealed that privacy is not related positively to web site loyalty (Cases et al., 2006; Belanger et al., 2002), other research, including our study, found a positive effect of privacy on loyalty (Ratnasingham, 1998; Adam et al., 2007). It indicates that US consumers are still suspicious of online retailer’s use of individually identifiable information and doubtful to share information through the online retailers’ web sites even if internet retailers, as required laws, are providing necessary information regarding privacy. Possible explanations for this finding may be that web sites do not present information regarding the privacy policy clearly; available information are difficult to read and comprehend caused by small fonts and technical languages; and large amounts of personal identifiers are requested from the consumers. To overcome these issues, retailers’ web sites should focus on providing information regarding privacy policies in an enhanced fashion that will improve online shoppers’ attention and comprehension. Moreover, online retailers should collect only the information necessary to process customer orders and keep data gathering to a minimum. Trying to collect more information about ones customers may severely damage consumers’ evaluations and their intentions to repurchase from the web sites.

One potential tool online retailers can adopt to assuage customers is the use of web assurance seals. Prior research has shown the benefits of web assurance seals such as BBBOnline, Verisign®, TRUSTe, Good House Keeping, and CPA WebTrust. Odom et al. (2002) reviewed three studies related to the roles and value of web assurance seals on consumers’ perceptions and found that:

1. online consumers have fears;
2. fears involve both security and privacy of transactions, as well as retailer issues; and
3. knowledge about and recognition of web assurance seals influence consumers’ perceptions.

Moores and Dhillon (2003) reported that even without information about the nature of web assurance seals, the presence of seals reassured study participants that web sites provided protection against fraud. This prior research points to two opportunities, one for researchers and the other for online retailers. Researchers may assess the impact of assurance seals on consumers’ perceptions. Online retailers may wish to perform the assessment processes and incur the expenses necessary to include an appropriate web assurance seal to reassure consumers.

The current research is one of few studies in online retailing that attempted to examine the relationship between perceived online ethics, satisfaction and loyalty. By offering evidence to prior conflicting results in the literature, we confirmed a strong association between what consumers perceive as ethical online retailing, satisfaction
and loyalty. This finding is consistent with Anderson and Srinivasan (2003) and Casalo et al. (2008); but is contradictory to Yen and Gwinner (2003). Because customers are less likely to search for alternative purchase options when the current web site offers satisfaction, internet marketers should focus on enhancing web site satisfaction rather than concentrating on loyalty programs as evident in current practice.

The current study also contributes to the validation of the CPEOR scale by employing a sample of US consumers versus the initial Spanish sample. The CPEOR measure is the first multidimensional measurement developed to capture consumers’ perceptions of ethics of online retailers. Instead of individually assessing possible ethical elements in online retailing, the measure established four standard dimensions (privacy, security, fulfillment, and non-deception) to capture consumers’ perceived ethical behaviors of online retailers. Since its publication in 2007, the CPEOR measure has experienced limited validation in academic research, thus it can benefit from additional validation. Additionally, by showing the associations of CPEOR dimensions with web site loyalty, this study also strengthens the nomological validity of this measure.

**Limitation and future research**

There are limitations to the present study, some of which are study-specific whereas others are common to survey research. A possible concern with our conceptual model is that we only focus on loyalty as a result to consumers’ ethical perceptions to ethical behavior. It would be interesting to explore other variables such as trust and attitude towards the web site as antecedents to loyalty. There are some standard limitations, including a sample that, although reflective of the broader population of online shoppers, may not be representative of consumers that make the large part of online business. By sampling from a broader, non-student sample, future research may establish the representativeness of our sample and generalizability of our findings. Another limitation is the marginal loading of two measurement item of the ethics measurement; fulfillment and privacy. Despite their loading above the recommended 0.5 by Hair et al. (2005), we think that these items should require attention in future employment.

Future research should examine the impact of ethics of web sites of online retailers on other dependent variables (e.g. purchase intention, willingness to recommend friends and others). The current study utilized a convenience sample; therefore, future studies should employ samples in diverse cultures where online shopping is likely to become the forefront of retailing. Also, future inquiries may investigate the consumers’ responses to ethics of the retailers that have both an online and physical presence. For example, does a physical presence in retailing offer benefits to how its online operation is perceived ethically? If so, can loyalty benefits be derived from establishing different shopping venues for consumers?

**References**


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