The determinants and consequences of website credibility in e-retailing: examining the roles of ethical issues

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Abstract: In the e-tailing context, little is known about ethical determinants of consumers’ perceptions of the credibility of a retailer’s website (i.e., website credibility). Thus, this study examines the impact of ethical issues (i.e., privacy, security, fulfilment, and non-deception) on website credibility and its subsequent influence on consumers’ attitudes toward site and behavioural intentions. Results show that fulfilment and non-deception are related positively to website credibility, which ultimately influences consumers’ attitudes toward retailer’s website. However, security and privacy were not significant predictors of website credibility. Attitude toward the website is significantly related to purchase intent, revisit intent, and positive word-of-mouth.

Keywords: online retailing; website credibility; online retailing ethics; privacy; security; fulfilment; non-deception; attitude toward the website; purchase intent; revisit intent; positive word-of-mouth; WOM.


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1 Introduction

Online marketing has become a significant source of revenue for retailers. The United States Census reported that retail online sales totalled $92.8 billion in the first quarter of 2016 and accounted for 7.7% of all sales revenue (DeNale, 2016). Online retailing (e-tailing) is a global phenomenon; it is projected to total more than $3.5 trillion by 2020 and account for 12.5% of sales worldwide (Lindner, 2015). In 2016, the National Retail Foundation reported that e-commerce created an economic impact of more than $200 billion in the USA (Larson and Shay, 2016). In spite of the rapid growth of e-tailing, much of the public has significant concerns about the privacy and safety of purchasing goods and services from e-tailing sites. In 2015 report by the Pew Research Center suggests that 46% of Americans were not confident that credit card transactions online are safe and secure. A 2016 article in The Washington Post suggests that one out of two shoppers in the USA fears shopping online not worth the risk of safety and security threats (Peterson, 2016). Several academic studies paint a similar picture; many consumers are fearful about the safety and security threats associated with shopping online (McCole et al., 2010; Kim et al., 2006; Metzger, 2006; George, 2004; Rifon et al., 2005).

Trustworthiness and credibility are important considerations that influence the purchasing behaviour of consumers. Trustworthiness has been defined as the extent to which retailers are thought to be truthful and unbiased; building increased trust among consumers will likely benefit retailers because it has been proposed that customers may be more willing to purchase from firms they trust (Toufaily et al., 2013; McCole et al., 2010; Benedickus et al., 2010; Mukherjee and Nath, 2007). Credibility is closely related to trustworthiness. Consumers form perceptions about the credibility of websites and e-tailers by assessing the extent to which the claims and promises that are presented are believable (Rains and Karmikel, 2009; Rifon et al., 2005; George, 2004; Choi and Rifon, 2002). Several studies suggest that consumers are more likely to make online purchases when websites present credible information (Choi and Rifon, 2002; Fan et al., 2013; Kim et al., 2012; Izquierdo-Yusta and Newell, 2011; McCole et al., 2010; Fogg, 2003; Rains and Karmikel, 2009). It was recently reported that many customers may be more influenced by the trust of an e-retailer’s website more than the price of items offered for sale, according a study by Kim et al. (2012). It is essential to understand the processes through which today’s consumers make decisions about online purchases because the internet has empowered individuals to buy many of the products they need and want directly from e-tailers (Labrecque et al., 2013).

Despite the existence of several studies that attempt to focus on the extent to which trust and credibility may influence consumer purchases from e-tailers, little is known about how the process through which consumers evaluate the credibility of an online
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In the e-tailing context, no studies have attempted to examine the ethical determinants of website credibility and their impact on attitude toward the website. Therefore, the purpose of this study is to attempt to fill the gap in the academic literature by examining the impact of four ethical factors (i.e., privacy, security, fulfilment, and non-deception) on website credibility and its subsequent influence on consumers’ attitudes toward retailer’s website and behavioural intentions. Such an understanding can help online retailers gain a competitive advantage by creating a credible website.

2 Literature review

The commitment trust theory proposes that individuals are often more willing to purchase from businesses they trust (Morgan and Hunt, 1994; Mukherjee and Nath, 2007). It is important to understand how trust is formed since many consumers are concerned about the extent that they can trust online retailers, in part because they may believe some websites are not always safe, secure, and credible (McCole et al., 2010; Rains and Karmikel, 2009; Fogg, 2003; Choi and Rifon, 2002; Hernandez et al., 2011).

Several academic studies have focused on the themes associated with the trust and credibility of shopping via online retailing. Toufaily et al. (2013) define trust in the internet retail environment as the conviction that allows consumers to willingly become exposed to web retailers after having taken the characteristics of the retailer into account. Fan et al. (2013) found that consumers with more trust in online retailers are more likely to take the risk of engagement, interaction, and purchases during internet transactions. McCole et al. (2010) suggest that trust strongly affects online consumer purchases. Fogg (2003) conceptualised website credibility as a multi-dimensional construct that results from prominence and interpretation; individuals must first recognise website content (prominence) and then must make sense of what they have seen (interpretation) and once they have done this they can assess the credibility of e-tailers. A recent study by Bateman et al. (in press) indicates that trust mediates the relationship between website quality and both satisfaction and repurchase intentions.

The extent to which trustworthiness may make some consumers more likely to make online purchases has been investigated in a few research projects (Fan et al., 2013; Kim et al., 2012; Izquierdo-Yusta and Newell, 2011; Hernandez et al., 2010; George, 2004). Fan et al. (2013) suggest the level of customer trust in the electronic retail environment affects engagement, interaction, and purchases. Kim et al. (2012) suggest that consumer trust on e-retailers is a very important factor that influences consumer decision-making; they found that many online consumers place a higher consideration on the trust of e-tailers than the price items are offered for sale. Izquierdo-Yusta and Newell (2011) found that many people are more inclined to make purchases from online retailers they believe are convenient and trustworthy. Hernandez et al. (2010) studied the extent to which demographics and user experience may influence consumer online behaviour; they suggest that older individuals and people inexperienced at purchasing online may often be fearful of making online transactions. In contrast, George (2004) examined the role that trust plays among college students; they suggest that beliefs about trustworthiness positively affected attitudes and behaviours about buying online among young people.
Several studies have investigated the extent to which concerns about security and privacy are related to consumer decision-making when making online purchases (Izquierdo-Yusta and Newell, 2011; McCole et al., 2010; Kim et al., 2006; Metzger, 2006; Rifon et al., 2005; Rains and Karmikel, 2009). Izquierdo-Yusta and Newell (2011) investigated the role that trust plays in motivating people to make repeat online purchases and defined trust as the extent to which privacy and security policies are certified by an external authority; they suggest that concerns about privacy and security risks significantly affect consumer perceptions of the convenience of shopping online. McCole et al. (2010) investigated the ways in which consumers balance the risks and rewards of shopping online; they suggest that retailers may be able to build trust in potential customers that persuades people to shop online in spite of their worries. Kim et al. (2006) investigated the attributes of online retailing websites consumers believe are most important; consumer privacy and the safety and security of online transactions are major concerns, along with such issues as fulfillment, product availability, and responsiveness. Metzger (2006) examined the extent to which website privacy policies and the retailers’ reputation influenced consumer willingness to disclose personal information to commercial websites; results suggest that reputation influences consumer trust more than assurances of privacy. Rifon et al. (2005) investigated the extent to which consumers believe voluntary privacy seals provided by third-party organisations may make onsite retailing experience secure and protect their privacy; findings suggest that privacy seals enhance trust in the retailing websites. Fogg (2003) suggests that individuals assess the safety, security, and credibility of online retailers based on prominence and interpretation; they have to notice factors in websites that speak about safety and trust and they have to interpret what they have seen.

In contrast, a few investigations have concluded that concerns about privacy and security seem to have little or no effect on consumer perceptions of website quality (LaRose and Rifon, 2006; Wolfinbarger and Gilly, 2003; Belanger et al., 2002; Yang and Jun, 2002). LaRose and Rifon (2006) suggest that many e-commerce consumers do not notice safety and security seals on e-tailing sites or may not pay attention to what these statements mean. Belanger et al. (2002) investigated the relative importance of third party privacy seals, privacy statements, and security features in influencing consumer decisions to make an online purchase as well was perceptions about the trustworthiness of retailing websites; the results indicate that privacy and security features played only a minor role in influencing consumer decisions to make a purchase. Wolfinbarger and Gilly (2003) investigated the factors that lead to customer satisfaction, retention and loyalty when purchasing from online retailers; the authors suggest that concerns about privacy and security are one of several predictors of customer perceptions of website quality, along with website design, reliability, and customer service. Yang and Jun (2002) conducted an exploratory study about the extent to which service dimensions of retailing websites influenced the perceptions of internet purchasers and those who do not buy online; they found that internet purchasers were most concerned about the reliability of online websites while non-internet purchasers believed security issues were the most important concern.

Several studies have explored the antecedents of website credibility that influence the purchase decisions of online consumers and the consequences of those actions. For example, Hernandez et al. (2011) suggest that older individuals may be more likely to not
trust making online internet purchases because they are not familiar with the internet retailing environment. Rains and Karmikel (2009) examined consumer perceptions of health website credibility including messages on the website (e.g., statistics, testimonials, etc.) and structural features of the websites (e.g., privacy policy statements and third-party endorsements); results suggest that consumer perceptions of website credibility were influenced by message characteristics and structural features. Flanagin and Metzger (2007) studied consumer perceptions of the credibility of e-commerce websites; they found that consumers viewed online retailers as being less credible than the websites of news organisations but more credible than personal websites. Robins and Holmes (2008) explored the ways in which individuals may perceive the credibility of websites based on the appearance of the site. Wang et al. (2004) proposed a theory to explain the online shopping behaviour of consumers through what they called ‘cue-based trust’; the idea is that cues on e-tailing sites related to security and privacy disclosures and return policies influence the extent to which consumers trust an e-retailer. Dutta-Bergman (2004) investigated the ways in which individuals assessed the credibility of information they found on health-related websites; the study suggests that individuals who were motivated to seek information online were more likely to believe websites were credible if they perceived these resources were informative. Fogg (2003) proposed the prominence-interpretation theory to attempt to explain the process through which people assess the credibility of online sources; they suggest consumers first notice prominent features of websites and then make personal interpretations. Choi and Rifon (2002) focused on how consumers view third-party privacy statements on electronic retailing websites and touched on how credibility may influence consumer attitudes about these sites; results suggest that consumers assign more credibility to privacy policies from third parties they know and trust.

More research is needed to examine the extent to which the ethical nature of the websites of online retailers influence consumer decision making and how consumer perceptions of ethical factors such as privacy and security can influence consumer perceptions of website credibility. The present study focuses on the extent to which consumers may view online retailers’ websites as being trustworthy and credible, with a focus on the antecedents that form perceptions of these issues. It differs from previous research in several important ways. Firstly, it is one of the few studies to examine concept of website credibility as applied to online retailing. Secondly, this is the first study that examines simultaneously the relationships between various ethical variables (non-deception, fulfilment, security, and privacy) and website credibility. Finally, this is one of the few studies that examine the impact of website credibility on attitude toward a site in e-tailing context.

3 Conceptual framework and research hypotheses

As shown in Figure 1, the current study proposes a model that examines relationships between four ethical factors associated with websites of online retailers (e.g., privacy, security, fulfilment, and non-deception) and website credibility. This investigation also examines the relationships between website credibility and consumers’ attitudes towards websites of online retailers and their subsequent impacts on behavioural intentions.
3.1 Relationships between ethical factors and website credibility

From a theoretical perspective, ethical theory can play an important role in understanding online retailers’ ethics. Ethical theory can broadly be described as issues relating to the morals of what is right or wrong in human contact. When applied to the conduct of companies or individuals in business, ethical theory can be used to assess the extent to which business treat consumers, competitors, and the communities that they serve fairly and equitably (Brenkert and Beauchamp, 2010). The ethics of business practices on the internet have been the focus of several investigations including Yang et al. (2009), Roman and Cuestas (2008), Corritore et al. (2003), Limbu et al. (2012), and Grazioli and Jarvenpaa (2000). When taken as a whole, these studies demonstrate that there is a strong relationship between the ethical behaviour of online retailers, consumer perceptions of trustworthiness, and behavioural intentions. An underlying theme is that unethical behaviours negatively influence perceptions of website credibility. Brenkert and Beuchamp (2010) published a handbook of business ethics in which they articulate that web-based businesses must protect consumer privacy and security during online transactions. Yang et al. (2009) suggest online retailers must prove to consumers that they are acting ethically in order to earn trust; this means e-tailers must accurately and honestly describe product offerings and protect personal information and make sure purchase are safe and secure. Roman and Cuestas (2008) recognised the need for scholars to examine the ethics of online retailers and developed a survey instrument to measure consumers’ perceptions regarding the ethics of online retailers; they suggest that consumer perceptions of the ethics of online retailers should be viewed as a second-order
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Corritore et al. (2003) developed a theoretical model that examines the level of trust between online consumers and retail websites; they suggest perceptions of the risk of purchasing on these websites, ease-of-use, and credibility influence trust. Grazioli and Jarvenpaa (2000) suggest that is especially important for online retailers to demonstrate they are ethical because online commerce sites cannot see the seller face-to-face and thus may fear being deceived.

These studies build upon the tradition of studying business ethics in offline settings (not online, e-tailing environments). Gundlach and Murphy (1993) recommend that all businesses must treat must treat consumers ethically and fairly in order to win their trust. Brown et al. (2005) suggest that individuals who perceive retailers are ethical and credible will be more likely to be repeat purchasers from these businesses and spread positive word-of-mouth (WOM).

**Fulfilment** (also called *reliability*) relates to the extent that consumer orders placed online are processed and shipped accurately and promptly and thus provide consumers with a problem-free and effective experience. It refers to a retailer’s ability to honour the promises made on the website. For example, the price shown on an e-tailing website should match the price consumers actually pay (Nardal and Sahin, 2011). Research by Roman (2007) found that fulfilment is a key dimension that influences consumer perceptions of online retailing service quality. Kim et al. (2006) suggests that fulfilment is one of several factors that influences consumer trust in online transactions.

**Deception** refers to business practices that defraud or mislead consumers, and the actions of retailers that take advantage of customers (Nardal and Sahin, 2011; Roman, 2007). Deception is an especially important component associated with online commerce sites because the shopper usually cannot engage in face-to-face contact with the seller; therefore consumers may be more likely to be subject to deception while shopping online (Grazioli and Jarvenpaa, 2000). Roman (2007) advocated that deception is an essential component that needs to be measured in order to assess consumer perceptions of website quality.

The concept of **security** focuses on the extent to which online transactions will be safe and secure and that shoppers will not incur financial liabilities as a result of shopping through a retailer’s website. Several academic studies have revealed that concerns about the security of online shopping weigh heavily on the minds of consumers, especially those individuals who are experienced in making e-retail buys (Hernandez et al., 2010; Kim et al., 2006; Metzger, 2006; George, 2004; Rifon et al., 2005). A study by Toufailly et al. (2013) suggests that concerns about the security and privacy threats posed by shopping online affect attitudes about website credibility and purchase intentions. These concerns may be exacerbated because so many high-profile security incidents have occurred (Larson and Shay, 2016; Peterson, 2016).

Similar to worries about security, concerns about **privacy** focus on fears that information about an individual’s financial information and purchasing behaviour might be shared, rented or sold to third parties that have marketing-related interests or those who may be intent on causing harm (Miyazaki and Fernandez, 2000). Studies by the Pew Research Center (Madden and Rainie, 2016) show that many consumers are concerned about the amount of personal information about them that is collected when using the internet or shopping online while The Harvard Business Review (Rigby, 2011)
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recommends that successful online retailers will have to safeguard consumer privacy. Rifon et al. (2005) indicate that privacy seals enhance trust in the website.

Based on the above discussion and arguments, we predict the followings:

H1a Fulfilment is an antecedent that influences consumer perceptions of website credibility.

H1b Deception is an antecedent that influences consumer perceptions of website credibility.

H1c Security is an antecedent that influences consumer perceptions of website credibility.

H1d Privacy is an antecedent that influences consumer perceptions of website credibility.

3.2 Relationship between website credibility and attitude toward website

Source credibility theory attempts to explain how the persuasiveness of a communication is determined in part by the perceived credibility of the source of the communication (Berlo et al., 1969). The theory suggests people are more likely to be persuaded when the source presents itself as credible (Hovland et al., 1953). Highly credible sources produce more favourable consumer attitudes than less credible sources (Atkin and Block, 1983; Kamins et al., 1989). Attitude toward the website can be defined as a person’s predisposition to respond in a favourable or unfavourable manner to websites (Chen and Wells, 1999). Studies have investigated the critical role that credibility exerts in influencing consumers attitudes towards e-retailing sites (Rains and Karmikel, 2009; Choi and Rifon, 2002; George, 2004). Toufaily et al. (2013) suggest e-retailers exhibit high degrees of credibility when they reassure consumers that transactions will be processed promptly, items will be delivered quickly and problems will be quickly resolved. Research shows that trust is positively related to attitude toward websites (e.g., Donthu, 2001; Elliott and Speck, 2005). We therefore hypothesise the following:

H2 Perceptions of website credibility influence attitudes to online retailing websites.

3.3 Relationship between attitude toward website and behavioural intention

In e-tailing context, several studies have shown that consumer attitudes toward websites influence behavioural intentions. For example, Supphellen and Nysveen (2001) suggest that consumers are more likely to revisit e-tailers they prefer and view positively. Consumers’ attitudes toward websites have been found to influence their intentions to shop online (Monsuwe et al., 2004; Van Noot et al., 2008). From a theoretical perspective, the theory of reasoned action (TRA) suggests behavioural intentions are determined by attitudes to behaviours (Ajzen and Fishbein, 1980). When applying the theory to online retailing, the attitude consumers develop towards websites might influence their behavioural intentions. Consumers may differ in the extent to which they trust e-retailers compared to traditional brick-and-mortar companies that sell items online. Toufaily et al. (2013) suggest that trust plays a larger role when consumers purchase online than when they purchase at traditional brick-and-mortar stores because people assume more risks associated with security and privacy.
Based on the above arguments and TRA theory, we purport that consumers’ attitudes towards online retailing websites are positively related to behavioural intentions.

H3a Consumer attitudes about online retailing websites influence consumers’ purchase intent.

H3b Consumer attitudes about the online retailing websites influence consumers’ intentions to spread WOM.

H3c Consumer attitudes about online retailing websites influence consumer intent to revisit those websites.

4 Methodology

The convenience sample consisted of undergraduate and graduate students enrolled at a mid-sized university located in the Southwestern USA. Inclusion in the study was based on the requirement that at least one online purchase was made within the last three months. Given that all study participants fulfilled the requirement of having made at least one purchase within the past three months and because college students shop online on a regular basis, the use of student sample in this study is deemed to be acceptable.

Questionnaires were administered to 320 participants by using a link to an online questionnaire created through Survey Monkey. The e-mail 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. Follow up e-mails were sent to the participants who did not response to the first e-mail solicitation. The vast majority of participants (96%) fulfilled the requirements of having completed an online purchase within the past three months. Out of the 282 completed questionnaires 14 were excluded due to either not fulfilling the online purchase requirement or not having completed the questionnaire. The final sample consisted of 143 males and 125 females. Study participants ranged in ages from 23 to 49 years. The average age of the respondents was 25.8, indicating that the majority of them were undergraduate students. The three major groups represented in the sample were Caucasian (41%) followed by African American (24%) and Hispanics (20%).

4.1 Measures

All items were measured on a five-point Likert-scale. To assess participants’ perceptions of a website’s trustworthiness and believability, a website credibility measure was adapted from Rains and Karmikel (2009), Dutta-Bergman (2004), and Lee and Nass (2004). It included five items: believable, trustworthy, accurate, complete, and biased (‘biased’ was reverse-scored). The item ‘I perceive the site to be biased (reverse item)’ was dropped due to poor loading. In line with previous studies, as shown in Table 1, the current study demonstrated acceptable factor loadings ranged from 0.671 to 0.831, thus, all are above the recommended cut off value of 0.5 (Hair et al., 2010). The items evinced adequate construct reliability (coefficient alpha = 0.839), above the recommended level of 0.7 (Bagozzi and Yi, 1988). The consumer WOM was assessed with Wolfinbarger and Gilly’s (2003) three-item scale (see Table 1). The factor loadings for this measure were
deemed to be acceptable and ranged from 0.725 to 0.887, with an adequate construct reliability (coefficient alpha = 0.833). Consumers’ attitude toward the site was measured using a five-item scale adapted from Chen and Wells (1999). The factor loadings for this three-item scale ranged from 0.645 to 0.825. The reliability of the measure was satisfactory (coefficient alpha = 0.851). Measurement items for revisit intention and purchase intention were adapted from Yoo and Donthu (2001). The factor loadings for these two-item scales were satisfactory ranged from 0.705 to 0.866. Reliability for revisit intention was 0.788 and purchase intention was 0.756. Measurement items for fulfilment and non-deception were adapted from Roman (2007). These measures were previously used by a number of studies (Wolfinbarger and Gilly, 2003; Roman, 2010; Limbu et al., 2011). The factor loadings for these three-item scales ranged from 0.572 to 0.907. Reliability for fulfilment was 0.766 and non-deception was 0.875. Four-item security and three-item privacy measures were adapted from Roman (2007). The factor loadings for these measures ranged from 0.572 to 0.891 and a coefficient alpha was 0.740 for security and 0.871 for privacy.

5 Results

5.1 Measurement model

The measurement model and structural relationships were estimated using AMOS 18 that follows the two-stage analytic technique: a measurement model followed by a structural model. The construct validity and reliability of the measurement model were assessed with the use of confirmatory factor analysis. The goodness-of-fit indices for the measurement model are: $\chi^2(324) = 604.551; p < 0.00; \text{goodness-of-fit index (GFI)} = 0.92; \text{adjusted goodness-of-fit index (AGFI)} = 0.90; \text{root mean square error of approximation (RMSEA)} = 0.061; \text{Tucker-Lewis index (TLI or NNFI)} = 0.95; \text{normed fit index (NFI)} = 0.94; \text{and comparative fit index (CFI)} = 0.96.$ The RMSEA (0.061) indicates acceptable fit, which is below and 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 cut-off value of 0.95 (Hu and Bentler, 1999). GFI is higher than 0.90 recommended by Hair et al. (2010). Although the chi-square test is significant, the normed chi-square value ($\chi^2/df$) is 1.989, which is far below the cut-off value three 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 1, all standardised 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 or close to 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, taken as a whole, the loadings, AVE, and construct reliabilities provide initial support for the convergent validity of the measurement model. Since all AVE estimates are larger than the corresponding squared interconstruct correlation estimates (SIC), the discriminant validity is demonstrated (Fornell and Larcker, 1981).
### Table 1: Factor loadings, AVE, and construct reliabilities

<table>
<thead>
<tr>
<th>Constructs/items</th>
<th>Factor loadings</th>
<th>Average variance extracted</th>
<th>Construct reliabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Website credibility</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I perceive the site to be believable.</td>
<td>0.671</td>
<td>0.839</td>
<td></td>
</tr>
<tr>
<td>I perceive the site to be trustworthy.</td>
<td>0.752</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I perceive the site to be accurate.</td>
<td>0.831</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I perceive the site to be complete.</td>
<td>0.749</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Security</td>
<td>0.491</td>
<td>0.740</td>
<td></td>
</tr>
<tr>
<td>The site displays the terms and conditions of the online transaction before the purchase have taken place.</td>
<td>0.750</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The site appears to offer secure payment methods.</td>
<td>0.764</td>
<td></td>
<td></td>
</tr>
<tr>
<td>This site has adequate security features.</td>
<td>0.572</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Privacy</td>
<td>0.514</td>
<td>0.871</td>
<td></td>
</tr>
<tr>
<td>The site clearly explains how user information is used.</td>
<td>0.891</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Only the personal information necessary for the transaction to be completed needs to be provided.</td>
<td>0.702</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information regarding the privacy policy is clearly presented.</td>
<td>0.865</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-deception</td>
<td>0.700</td>
<td>0.875</td>
<td></td>
</tr>
<tr>
<td>The site exaggerates the benefits and characteristics of its offerings.</td>
<td>0.776</td>
<td></td>
<td></td>
</tr>
<tr>
<td>This site takes advantages of less experienced consumers to make them purchase.</td>
<td>0.883</td>
<td></td>
<td></td>
</tr>
<tr>
<td>This site attempts to persuade you to buy things that you do not need.</td>
<td>0.848</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fulfilment</td>
<td>0.531</td>
<td>0.766</td>
<td></td>
</tr>
<tr>
<td>The price shown on the site is the actual billed.</td>
<td>0.665</td>
<td></td>
<td></td>
</tr>
<tr>
<td>You get what you ordered from this site.</td>
<td>0.907</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Promise to do something by a certain time, they do it.</td>
<td>0.572</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitudes to site</td>
<td>0.534</td>
<td>0.851</td>
<td></td>
</tr>
<tr>
<td>This website makes it easy for me to build a relationship with this company.</td>
<td>0.687</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel comfortable in surfing this website.</td>
<td>0.719</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would like to visit this website again in the future.</td>
<td>0.825</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am satisfied with the service provided by this website.</td>
<td>0.645</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel surfing this website is a good way for me to spend my time.</td>
<td>0.765</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 1  Factor loadings, AVE, and construct reliabilities (continued)

<table>
<thead>
<tr>
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<th>Average variance extracted</th>
<th>Construct reliabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchase intent</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I intend to purchase through this site in the near future.</td>
<td>0.705</td>
<td></td>
<td></td>
</tr>
<tr>
<td>It is likely that I will purchase through this site in the near future.</td>
<td>0.850</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Revisit intent</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am likely to revisit this site in the near future.</td>
<td>0.866</td>
<td></td>
<td>0.788</td>
</tr>
<tr>
<td>I am encouraged to revisit this site in the near future.</td>
<td>0.743</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WOM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would recommend the website to someone who seeks my advice.</td>
<td>0.753</td>
<td></td>
<td>0.833</td>
</tr>
<tr>
<td>I encourage friends and relatives to do business with the website.</td>
<td>0.887</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I say positive things about the website to other people.</td>
<td>0.725</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5.2 Structural model

The fit indices for the hypothesised structural model are acceptable showing a good fit between the data and the model (see Table 2): $\chi^2_{(124)} = 676.145; p < 0.00; GFI = 0.91; AGFI = 0.89; RMSEA = 0.064; TLI = 0.94; NFI = 0.91; CFI = 0.94; and normed chi-square = 2.087$. The values of fit indices were close to or above recommended levels.

Table 2 and Figure 2 show the results of hypothesis testing including path coefficients and t-values for each structural path. Hypotheses 1a to 1d predicted that retailer’s ethics would be significant predictors of website credibility. Fulfilment and non-deception impacted website credibility, but security and privacy had little effect on website credibility, thus supporting Hypotheses 1a and 1b but rejecting Hypotheses 1c and 1d. The results show that credibility of a retailing website can be established through ethical factors such as reliability and non-deception.

Hypothesis 2 predicted that website credibility would be positively associated to attitudes toward e-tailing websites. Consistent with previous studies (e.g., Donthu, 2001; Elliott and Speck, 2005), the hypothesis was supported ($t = 12.54, p < 0.01$) suggesting that consumer attitudes towards website can be enhanced by improving credibility of the website. Providing supports for Hypothesis 3a to 3c, attitude toward website demonstrated strong positive associations with behavioural intentions. The attitude towards website significantly predicted purchase intent ($t = 9.88, p < 0.01$), revisit ($t = 12.016, p < 0.01$), and positive WOM ($t = 11.99, p < 0.01$). Thus, Hypotheses 3a to 3c were supported.
Table 2  Structural parameter estimates and fit indices

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Estimate</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Website credibility &lt;--- Fulfilment</td>
<td>0.272</td>
<td>2.364*</td>
</tr>
<tr>
<td>Website credibility &lt;--- Non-deception</td>
<td>0.315</td>
<td>2.796**</td>
</tr>
<tr>
<td>Website credibility &lt;--- Security</td>
<td>0.290</td>
<td>1.602</td>
</tr>
<tr>
<td>Website credibility &lt;--- Privacy</td>
<td>0.161</td>
<td>1.614</td>
</tr>
<tr>
<td>Attitude to site &lt;--- Website credibility</td>
<td>0.954</td>
<td>12.54**</td>
</tr>
<tr>
<td>Purchase intent &lt;--- Attitude to site</td>
<td>0.924</td>
<td>9.88**</td>
</tr>
<tr>
<td>Revisit intent &lt;--- Attitude to site</td>
<td>0.954</td>
<td>12.016**</td>
</tr>
<tr>
<td>WOM &lt;--- Attitude to site</td>
<td>0.934</td>
<td>11.99**</td>
</tr>
</tbody>
</table>

Chi-square ($\chi^2$) = 676.145  
Degree of freedom ($df$) = 324  
Normed chi-square ($\chi^2/df$) = 2.087  
Goodness-of-fit index (GFI) = 0.91  
Adjusted goodness-of-fit index (AGFI) = 0.89  
Tucker-Lewis index (TLI or NNFI) = 0.94  
Normed fit index (NFI) = 0.91  
Comparative fit index (CFI) = 0.94  
Root mean square error of approximation (RMSEA) = 0.064

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

Figure 2  Structural model (see online version for colours)

Retailer’s Ethics

Notes: Solid lines represent statistically significant paths. Dashed lines indicate non-significant paths.
6 Discussion and managerial implications

Several studies confirm that establishing website credibility among potential and repeat consumers is critical to the success of online retailers (Greenfield and Bhasin, 2016; Taylor, 2015; Andruss, 2012; Schiff, 2013; McCole et al., 2010; Choi and Rifon, 2002). But despite the existence of several academic studies on this topic, little is known about the processes through which consumers evaluate the credibility of an online retailer’s website, especially the impacts of consumer perceptions of the ethics of online retailers on website credibility. Our study attempted to address this issue by empirically testing a model that predicted the influence of privacy, security, fulfilment, and non-deception on website credibility and its subsequent impacts on consumer behavioural intentions (e.g., intent to revisit the website, spread WOM and make purchases).

To the best of our knowledge, this is the first study of online retailing that attempted to examine the ethical determinants of website credibility based on such antecedents as privacy, security, fulfillment and non-deception. Results of this study show that fulfillment and non-deception are related to enhanced website credibility which ultimately influence consumers’ attitude and future behaviour, and consumers perceive e-retailers to be less credible when they fail to provide safety and security for online consumers and deceive customers.

These results reinforce the findings from other studies that fulfillment and non-deception enhance consumer perceptions of trustworthiness of retailer’s website (Roman, 2010; Roman and Cuestas, 2008; Grazioli and Jarvenpaa, 2000; Limbu et al., 2012), while retailers’ deceptive practices and failure to provide safety and security lessen credibility (McCole et al., 2010; Miyazaki and Fernandez, 2000; Rifon et al., 2005; Belanger et al., 2002). Findings of this study suggest that it is essential for e-tailers to accurately and promptly fulfill orders and resolve customer complaints in order to enhance consumer perceptions of credibility (Andruss, 2012; Rigby, 2011; Kim et al., 2006). In order to earn the trust of consumers, online retailers must alleviate the concerns of potential customers who fear that shopping online might expose them to deceptive and unethical e-tailers and might compromise safety and security (McCole et al., 2010; Miyazaki and Fernandez, 2000; Rifon et al., 2005; Belanger et al., 2002). In 2013, an unexpected surge in the number of orders placed online overwhelmed such retailers as Wal-Mart and Kohls; as a result, consumer orders did not arrive on time and thousands of dissatisfied customers demanded refunds (Banjo et al., 2013). To increase successful fulfillment, online marketers should ensure orders are fulfilled accurately and promptly; concerns about late deliveries can be overcome by providing regularly updated information on product availability, the extent to which goods are in stock, order status or tracking information, and reasons for possible delays (Andruss, 2012). Results also indicate that any instances in which retailers are thought to deceive consumers will compromise website credibility. This reinforces the findings of Roman (2007) and Limbu et al. (2011, 2012) who indicate that ethical factors are strongly predictive of online consumers’ satisfaction and trust. Hence, inclusion of accurate product representation is extremely important in determining how credible the website is perceived by consumers. A 2016 article in The New York Times (Streitfield, 2016) reported that many consumers feel online retailers do not consistently display the best price of items being sold; to remedy this online retailers should be transparent in making decisions about pricing; as a result, many online shoppers have sued over unfair trade practices. Recently, there have
been many complaints that e-tailers are charging shoppers hidden fees (Turner, 2016). A prominent example is online lingerie retailer AdoreMe, which has been accused of charging consumers with an annual membership fee without their consent when they place an online order; as a result, shocked consumers receive a bill for the item they purchased plus a subscription they did not ask for (Greenfield and Bhasin, 2016).

Contrary to the majority of previous studies (Metzger, 2006; Rifon et al., 2005; Rains and Karmikel, 2009), this investigation suggests security and privacy concerns were not significant predictors of website credibility. This finding is consistent with a few studies (Wolfinbarger and Gilly, 2003; Belanger et al., 2002; Yang and Jun, 2002) which reported little or no impact of privacy and security features on predicting website quality. Belanger et al. (2002) found that privacy and security features were less important to consumers intending to make purchases from e-tailers, while Wolfinbarger and Gilly (2003) suggest that the role of security and privacy is not significant in predicting quality, except among the most frequent buyers at the website. One possible explanation of the finding of the present study could be that the sample population consisted of college students who have been shown to be less concerned about online privacy issues than older individuals (Madden and Rainie, 2016; Campbell, 1997) and may place a higher importance on website attributes, fulfillment, non-deception, and customer service (Kim et al., 2006; Wolfinbarger and Gilly, 2003; George, 2004). Consumers may judge security and privacy based on elements such as the professional look and feel of the website, as well as functionality of a website, and company reputation (Wolfinbarger and Gilly, 2003). Thus, security and privacy features may be considered less important site attributes than the design and function of retailing websites, convenience, ease of use, and cosmetics (Fan et al., 2013; Flanagin and Metzger, 2007; Belanger et al., 2002). Another possible explanation is that consumers may not notice, understand, or pay attention to privacy and security statements and policies on e-tailing sites (LaRose and Rifon, 2006). Fogg (2003) suggests that privacy and security statements on e-tailing websites have not been shown to impact perceived credibility unless users recognize and understand them. From a practical perspective, privacy and security statements provided by online retailers are difficult to notice or comprehend because they are written in small fonts using technical language.

Findings also reveal that credibility of a retailer’s website is positively related to consumers’ attitude toward the website, which ultimately influences consumer’s purchase intent, revisit intent, and positive WOM. This is consistent with Schlosser et al. (2006) who suggest that consumers will continue to make purchases from online retailers that have established a relationship of trust with shoppers, and Supphellen and Nyaveen (2001) who suggest that consumers will revisit retailing websites that have established loyalty with the public. The finding that consumers who believe websites are credible will spread positive WOM reinforces the findings of Toufaily et al. (2013) who found that consumer perceptions of website credibility and benevolence are more likely to spread positive WOM and suggest others consider purchasing from trusted e-tailing sites. With the rapid growth of online retailers and competition and because of the ease with which customers can switch from one online store to another, it has become increasingly essential for e-tailers to retailers to maintain and improve consumers’ attitudes and behavioural intentions with consumers (Larson and Shay, 2016; Peterson, 2016; Rigby, 2011). Thus, one way in which e-tailers can gain potential consumers, increase consumer loyalty, and build positive WOM is to enhance consumer’s perceived website credibility.
by making sure that online retailing sites are believable, trustworthy, accurate, complete, and complete, and present unbiased information.

7 Limitations and future research

There are some limitations to this study. Although the use of student sample appears to be acceptable in the online shopping content, student samples are generally criticised for not being sufficiently representative of the breadth of the population. Thus, future research should consider replicating these findings using a larger and more and more representative sample drawn from a wide range of populations. Another interesting avenue for future research would be to explore the direct relationships between ethics associated to retailers’ websites and consumers’ attitudinal and behaviour responses. Future research should consider examining the role of other ethical issues (i.e., websites that carry an ‘advertising’ label, poor service, baits and switches, selling illegal products online) on website credibility.

References


The determinants and consequences of website credibility in e-retailing


