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FACULTAD DE ECONOMÍA Y EMPRESA

**Ethical issues in online retailing from consumers'
perspective**

**Aspectos éticos del comercio electrónico desde la
perspectiva de los consumidores**

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INTRODUCTION

Online retailing is a form of electronic commerce that allows consumers to directly buy goods and/or services from a seller over the Internet, a process usually called business-to-consumer (B2C) e-commerce (Belanger et al., 2002). Electronic commerce applications have created a new global market (Cohan, 2000) where businesses and consumers are no longer restricted by physical boundaries such as geographical or time differences (Guo and Sun, 2004). Today, e-commerce influences business in a major way and is reshaping the retail sector (Nelson and Leon, 2012).

Encouraged by retailers themselves who see in the online channel significant opportunities to reduce their operating expenses, e-commerce in the B2C segment, or online retailing, has grown rapidly despite the dismal economy in recent years (Hu et al., 2010; Nelson and Leon, 2012). According to the U. S. Census Bureau, e-commerce retail sales for 2012 reached nearly \$224.5 billion, an increase of 15.9% from 2011 (www.census.gov/retail). Findings from this research firm also show that, while in the last five years total retail trade sales¹ in USA have increased by less than 9% (from \$3,999.3 billion in 2007 to \$4,355.2 billion in 2012, retail sales made through the Internet have risen by 66% since 2007, which indicates that online retail sales have grown about seven times faster than overall retail sales in this period (Nelson and Leon, 2012). In Spain, the volume of business generated by retail e-commerce amounted to 10.917 million Euros in 2011, representing an increase of 19.8% over 2010 (ONTSI, 2012). Moreover, it is expected to grow at this rate annually through 2016, ahead of until now leading European countries as Germany and UK, with expected growth rates about 12% per year (Gill, 2012). This growth is usually attributed to the increasingly penetration of e-commerce in different population groups and retail segments (Nelson and Leon, 2012), and it is expected to continue even more rapidly in the next few years due to the huge and accelerating shift recently observed in the rates at which consumers adopt new “mobile shopping devices” (i.e., smartphones and tablets) that both enable and ultimately favor online transactions over physical stores (Hale, 2012; Mulpuru, 2012; Nelson and Leon, 2012; yStats, 2013). According to recent global B2C e-commerce market reports, either through new mobile devices or other

¹ Total retail trade sales include the value of overall sales (i.e., sales made through traditional and online channels) reported by firms classified in 11 retail trade-related sectors as defined by the 2007 NAICS (www.census.gov/retail).

technological formats (i.e., personal computers, notebooks, laptops), Internet users now account for one-third of the world population (yStats, 2013), and it is expected that by 2016 1.3 billion persons will make a purchase online (eMarketer, 2013). Similar to that suggests by other research firms (i.e., eMarketer, Nielsen, Citigroup), Forrester Research estimates that retail e-commerce sales will reach \$327 billion in 2016, up 45% from 2012 and 67% from \$194 billion in 2011 (Mulpuru, 2012).

Although B2C e-commerce has experienced a huge growth in recent years, it is interesting to note that it still accounts for a relatively small share of total retail sales (Hu et al., 2010; Nelson and Leon, 2012). Internet-based retail sales represented only 5.2% of total retail sales in 2012, up from 3.4% in 2007 and, despite positive growth forecasts made for next years, they are expected to remain around 10% in 2016 (Hale, 2012; Mulpuru, 2012; Nelson and Leon, 2012). As previous research has also noted, this indicates that even though the expansion and development of B2C electronic commerce is encouraging, it is still far from reaching its full potential (Belanger et al., 2002; Hu et al., 2010; Nelson and Leon, 2012). As argued earlier, several studies are pointing that, due to the recent explosive consumer adoption of new mobile technologies, e-commerce is poised now more than ever for explosive growth (Hale, 2012; Mulpuru, 2012; Nelson and Leon, 2012). Undoubtedly, these recent and profound changes in rates of consumer adoption and enabling technology are providing significant new opportunities for the online retail channel, but it is also certain that for B2C e-commerce to reach these growth prospects relative to traditional stores, it also must overcome several important challenges. Specifically, this expected growth may be very difficult to achieve if the current prevailing obstacles for a greater acceptance of the Internet as a shopping channel are not successfully addressed, for which purpose factors that may inhibit or facilitate currently e-commerce growth must be better understood.

Consumers' concerns, perceptions and beliefs about ethical issues in e-commerce are among these factors, as they are at the core of the most important barriers related to e-commerce adoption (Miyazaki and Fernandez, 2000; 2001; Román, 2007; Román and Cuestas, 2008; Yang et al., 2009; Clarke, 2008; Román, 2010; Reddy, 2012). On the Internet, consumers are placed in a unique inference-making position in which information asymmetry abounds and decisions are made on the

basis of representations of reality (Grazioli, 2004; Aiken and Boush, 2006). Unlike bricks-and-mortar transactions, online transactions involve dependence on both unseen and often unknown retailers and transacting business on the Web, which exposes buyers to the additional risk of opportunistic seller behavior (McKnight et al., 2003; Pavlou and Gefen, 2004). Because neither product characteristics nor retailer identity can be fully assessed during the transaction, such consumers must trust that Internet firms will not provide misleading or deceptive information about their products (Yang et al., 2009; Román, 2010). Furthermore, as online transactions are in most cases non-instantaneous (payment may occur days or weeks before delivery is completed), they must assume that sellers will adhere to its transactional obligations (Kim et al., 2008). Additionally, Internet transactions are carried out over a public domain, where personal and financial information collected can be easily stored, copied, and shared (Bush et al., 2000). Thus, Internet consumers must also trust that their personal information will be securely held and that their privacy will be respected (Aiken and Boush, 2006). Overall, believe in all of these assumptions about the ethical behavior of online retailers (i.e., trustfulness of product information, fulfillment, privacy and security of personal data) is a fundamental prerequisite for successful e-commerce, because consumers will not make an online purchase unless they trust the seller (Kim et al., 2008; Yang et al., 2009). Likewise, consumers would not buy again on a website or even on the Internet in general if, after making an online purchase, they feel or believe that the seller has deceived them in some way or has not fulfilled any of his obligations or compromises (Pavlou and Gefen, 2005).

Recently, a few researchers have identified online distrust as a distinct construct that is related to, yet qualitatively different from online trust, showing that these two concepts predict and are predicted by different constructs and have differential effects on consumer behavior (McKnight and Chervany, 2001; McKnight et al., 2003; 2004; Pavlou and Gefen, 2004; 2005; Cho, 2006; McKnight and Choudhury, 2006; Chang, 2012). Moreover, among its potential sources (i.e., competence- or ethically-based sources), it has also been argued that consumer's ethical concerns are a more persistent and difficult to invalidate source of online distrust (Hsiao, 2003; Clarke, 2008). For instance, research has already shown that the growing inclusion of trusted third parties in e-

commerce and the increasing sophistication of the relevant technology have effectively helped online business to gendering trust in the process of online shopping (Grabner-Kraeuter, 2002; Mukherjee and Nath, 2007), and it has also been found that these trust-building mechanisms are effective in dealing with the reliability or technical competence source of consumer online distrust too (Hsiao, 2003). However, these technical or legal mechanisms not only have been found to be insufficient in addressing the ethical dimension of online distrust, but also even counterproductive (Sitkin and Roth, 1993; Hsiao, 2003; Clarke, 2008). As Sitkin and Roth (1993) argued, the increased use of technical or legalistic remedies might improve consumer trusting expectations, but can also generate ethical-based roots of distrust through the inference that high technical protections and security measures exist because of past online unethical behaviors. Therefore, compared with reliability or competence online issues, consumers' negative beliefs about the integrity of online retailers' ethical behavior have been considered as more persistent and difficult to invalidate source of online distrust (Hsiao, 2003; Clarke, 2008). Given this highlighted limitations of traditional trust-building mechanisms in addressing consumer's ethically-based online distrust, more research is needed to explore how this ethical dimension of online distrust can be explained by different factors that go beyond these retailers' actions and which can be rooted in the individual differences of consumers.

In addition, although over time significant advancements have been made against online fraud and deception, the continuous rise in the number of consumer complaints involving online retailers' fraudulent practices (e.g., misleading advertisements, product misrepresentation, cheating, trust betrayal, etc.) (Yang et al., 2009; Román, 2010), have further increased consumers' awareness of the risk stemming from online retailers' potential for opportunistic unethical behavior (McKnight et al., 2003; Pavlou and Gefen, 2004; Yang et al., 2009). The rapid rise in the number of consumer complaints related to online deception bears this out: in 2001, the Consumer Sentinel Network (www.ftc.gov/sentinel/) received just over 100,000 Internet fraud complaints. In 2012, it received over 2,000,000 complaints. Overall, the more generalized effects of consumer distrust generated by deceptive activities can operate through a defensive stereotyping mechanism, where deception

evokes a negative stereotype of the untrustworthiness of marketers as a group, both in traditional settings (Darke and Ritchie, 2007) and in the online environment (Pavlou and Gefen, 2005). These reactions can seriously undermine the general effectiveness of marketing communication strategies, and could present considerable difficulties for marketers (e.g., loss in sales and reputation). However, prior research has pointed out that, in the same way that not all manipulation tactics have the same potential to deceive, not all consumers are equally susceptible to deception (Langenderfer and Shimp, 2001; Putrevu and Lord, 2003; Compeau et al., 2004; Grazioli, 2004; Xie and Boush, 2011), and it has also been noted the importance of studying consumer's characteristics as potential sources of different susceptibility to deception in both traditional (Aditya, 2001; Kenneth et al., 2007; Ramsey et al., 2007) and online channels (e.g., Langenderfer and Shimp, 2001; Grazioli, 2004; Román, 2010). Nevertheless, in spite of its potential importance, there has not been any academic research that has examined the role of consumers' cognitive and psychographic traits in their different perceptions of retailer's deceptive practices in online and offline channels.

Finally, another important barrier to e-commerce adoption is still the consumer concern for information privacy and security in online transactions (Subramanian, 2008; Hu et al., 2010; Reddy, 2012). Since the birth of the Internet, these privacy and security concerns have been recognized as critical elements that online businesses have needed to address in order to build consumer online trust, and they are the most often cited antecedents of online trust (Bart et al. 2005; Urban et al. 2009). However, despite the existing general agreement among both practitioners and researchers that privacy and security are key determinants of online trust (e.g., Kini and Chobineh, 1998; Hoffman et al., 1999; Tavani, 1999; Belanger et al. 2002; Gefen et al. 2003; Schoder and Haenlein, 2004; Casaló et al., 2007; Kim et al., 2008; Casaló et al., 2011), the academic literature still presents some confusion and inconsistent findings about the conceptualization of privacy and security and their effects on online trust. Beyond some problems related to the conceptualization of privacy and security online issues, a potential explanation for the inconsistent findings may be that most of the prior literature implicitly assumes that the impact of privacy and security on online trust is identical across customers. Yet, scholars have long argued that this assumption might be too simplistic, and

recent evidence suggests that relationships among online trust and its antecedents may vary depending on the characteristics of consumers (e.g., Kim et al., 2004; Bart et al., 2005; Kim, 2005; Schlosser et al., 2006; Jin and Park, 2006; Leonard and Riemenschneider, 2008; San Martín and Camarero, 2008; Hwang, 2009; Yang et al., 2009; Chen and Dibb, 2010; Ganguly et al., 2011; Liao et al., 2011; San Martín and Jiménez, 2011). In this vein, although extant research on privacy and security issues has shown that individual perceptions and concerns about such online issues significantly differ depending on the demographic and personal characteristics of consumers (Milberg et al., 1995; Sheehan, 1999; Dommeyer and Gross, 2003; Dutton and Shepherd, 2003; Lightner, 2003; Gauzente, 2004; Junglas and Spitzmüller, 2006; Barnes et al., 2007; Brunet and Schmidt, 2007; Wong et al., 2009; San Martín and Jiménez, 2011), scant attention has been devoted to analyzing the potential moderating role of these consumer variables in the relationships between online trust and its antecedents (Bart et al., 2005; Chen and Lee, 2008; Yang et al., 2009). However, given that there is general agreement that consumers' characteristics play an important role in marketing since they provide the opportunity to customize products, services, as well as communications to better meet consumer needs (Ranaweera et al., 2005), the analysis of the moderating effect of these demographic and personal variables in the relationships between privacy, security and online trust may provide online marketers a better and easier understanding of how they would effectively communicate their trustworthiness to different consumers.

In the light of the above issues, the main objectives of this thesis are the following:

1. The analysis of the influence of consumers' personal characteristics (i.e., ethical ideology and risk aversion) on consumer's ethically-based distrust in online retailers.
2. The analysis of the influence of consumer's cognitive (i.e., Internet-based information search and perceived Internet usefulness) and psychographic variables (i.e., shopping enjoyment, materialism and risk aversion) on perceived deception in both online and traditional shopping channels.

3. The analysis of the moderating role of consumer's characteristics (i.e., extraversion and demographics) in the relationship between online trust and two of its most important antecedents, perceived privacy and security.

In order to address these objectives, this thesis is organized into three chapters. In Chapter 1, the challenge of e-commerce adoption is addressed by exploring the personal antecedents of consumer's ethically-based distrust toward online retailers for a sample of 409 shoppers in both the online and the traditional shopping channels. It has been argued that since the term "ethics" refers to personal values of conduct, "each individual can have a different view of what is ethical or unethical" (Fraedrich and Ferrell, 1992; p. 246), effectively preventing the discovery of individual differences in ethical beliefs or expectations about sellers' ethical behavior on the Internet. More precisely, there is strong evidence that people differ – sometimes drastically – in their attitudes and beliefs about online retailers' ethical behavior (Antin et al., 2011). Accordingly, it becomes critical for scholars and retailers to improve their understanding about ethical issues of consumers' distrust of online retailers. Importantly, understanding such differences in individual ethical judgment is critical, primarily because individuals possessing different ethical ideologies, predispositions toward ambiguous situations, or moral development are expected to evaluate and draw conclusions about ethical issues differently (Barnett et al., 1994; Kleiser et al., 2003; Ramsey et al., 2007). Despite the large body of marketing ethics literature that has noted the importance of considering such individual differences when investigating consumers' ethical perceptions in traditional settings (Forsyth, 1980; McIntyre et al., 1999; Singhapakdi et al., 1999; Ingram et al., 2005; Ramsey et al., 2007), to date, however, only a limited number of studies have investigated the role of personality and attitudinal factors in understanding consumers' perception of retailer's ethical practices (Román and Cuestas, 2008; Yang et al., 2009). Recently scholars have pointed out, therefore, that more research is needed to explain individual differences in ethical judgments or beliefs about retailers' practices in the online environment (Yang et al., 2009; Román, 2010). Accordingly, this chapter extends prior literature on online trust/distrust by analyzing the effects of two important consumer's personal variables (i.e., ethical ideology and risk aversion) on their ethically-based distrust in online

retailers. On a related issue, research has long argued that one of the reasons for the persistence of online distrust is in fact the lack of personal interaction with retail salespeople while searching for information or shopping online (Anckar, 2003; San Martín and Camarero, 2008). Although this lack of personal contact is perceived by some consumers as a benefit (Wolfenbarger and Gilly, 2001), many consumers like to have contact with sales personnel (Keeling et al., 2007), and thus they miss this contact when searching for information or shopping on the Internet (Anckar, 2003; Jepsen, 2007). Accordingly, Chapter 1 also adds to the literature by examining to what extent consumer's need for personal interaction with retail salespeople moderates the influence of ethical ideologies and risk aversion on consumers' ethically-based distrust of retailers' practices in the online environment.

Based on data from the same sample of Chapter 1, Chapter 2 investigates the antecedents of perceived deception in the online and the traditional shopping channels. Specifically, this second Chapter extends previous research on deception by investigating how individual differences in cognitive factors (Internet-based information search and perceived Internet usefulness) and psychographic variables (shopping enjoyment, materialism and risk aversion) influence both online and offline perceived deception, that is, their potential different effects associated with online versus in-store shopping. As the shopping experiences are different (traditional vs. online retailing), consumers may vary in the criteria and the weights they attribute to them when forming their ethical expectations and perceptions (Wolfenbarger and Gilly, 2001; Rieh and Danielson, 2007). In particular, we will reason that the strength of such influences differs depending on the channel used to purchase. In doing so, this research approach provides a more comprehensive understanding of perceived deception and its potential antecedents from the consumer's perspective using a side-by-side evaluation of channels from a consumer's perspective. This side-by-side comparison contributes to a better understanding of channel evaluation (Shankar et al., 2003), as it does not only determine the importance of the antecedents of perceived deception *within* each channel, but also *across* channels.

Chapter 3 utilizes a different sample of 397 online shoppers to provide a more comprehensive approach toward the study of the relationships between perceived privacy, security and consumer trust in the online retailer. Specifically, in this Chapter the moderating influence in such relationships of consumer's demographics (i.e., age, education and gender) and one consumer personality trait that has direct relevance to online shopping, namely, consumer's level of extraversion (Costa and McCrae, 1989; Kini and Chobineh, 1998; Barnes et al., 2007) is analyzed. Importantly, consumer's extraversion along with these demographic variables have been found to strongly affect consumer's attitudes, perceptions and behaviors towards privacy and security issues on the Internet (Milberg et al., 1995; Sheehan, 1999; Dommeyer and Gross, 2003; Dutton and Shepherd, 2003; Lightner, 2003; Gauzente, 2004; Junglas and Spitzmüller, 2006; Barnes et al., 2007; Brunet and Schmidt, 2007; Wong et al., 2009; San Martín and Jiménez, 2011), yet their moderating influence in the privacy-security-trust link has been rarely studied and results are unclear or inconsistent.

Finally, the main conclusions obtained from this thesis are presented in a last section.

CHAPTER I

THE INFLUENCE OF CONSUMERS' ETHICAL IDEOLOGY AND RISK AVERSION ON ETHICALLY-BASED DISTRUST OF ONLINE RETAILERS

1. INTRODUCTION

The commercial use of the Internet continues to increase and online shopping is more and more becomes a part of our daily lives (Van Noort et al., 2008). Yet the full potential of business-to-consumer e-commerce can only be realized if consumers feel comfortable transacting over the new medium with unfamiliar retailers (Benamati et al., 2006). However, unlike bricks-and-mortar transactions, online transactions involve dependence on both unseen and often unknown retailers and transacting business on the Web, which exposes buyers to the additional risk of opportunistic seller behavior (McKnight et al., 2003; Pavlou and Gefen, 2004). This is because neither product characteristics nor retailer identity can be fully assessed during the transaction, so making cheating easier (Román, 2010). The lean nature of the online environment also eliminates many otherwise prominent social cues (e.g., body language) that might otherwise be used to analyze whether a business partner (e.g., an online retailer) can be trusted (Pavlou and Gefen, 2004). The many problems publicized involving scams and personal information misuse (Grazioli and Jarvenpaa, 2000), as well as the continuous rise in the number of consumer complaints involving online retailers' fraudulent practices (e.g., misleading advertisements, product misrepresentation, cheating, privacy, property, trust betrayal, etc.) (Yang et al., 2009; Román, 2010), have further increased consumers' awareness of the risk stemming from online retailers' potential for opportunistic unethical behavior (McKnight et al., 2003; Pavlou and Gefen, 2004; Yang et al., 2009). These all happened because the development of ethics cannot keep pace with the growth of technology in the online business, and hence bringing a lot of problems whose scope is not clear yet (Yang et al., 2009). Consequently, many consumers have with time become more skeptical of online retailers' trustworthiness (McKnight et al., 2004; McKnight and Choudhury, 2006). Some researchers have proposed that suspicion and skepticism reflect not a lack of trust but instead manifest the distinct emotion of "distrust" in consumers' minds (Lewicki et al., 1998; Benamati and Serva, 2007).

Ultimately, these growing concerns about unethical actions in online retailing can harm and restrain Internet retail growth (Mukherjee and Nath, 2007). Therefore, today's most effective online vendors not

only must encourage trust, but also embrace and manage suspicion, concern, and wariness on the part of their customer. The presence of distrust in online settings has attracted, in fact, interest among some researchers on account of its strong negative impact on business transactions (McKnight et al., 2003; Benamati et al., 2006). Interestingly, as shown in Table 1, researchers have reported that distrust has a stronger effect than trust when consumers consider engaging in high-risk Internet behaviors (Cho, 2006; McKnight et al., 2003; 2004; McKnight and Choudhury, 2006; Ou and Sia, 2010; Chang, 2012), such as revealing personal information to an online retailer (Cho, 2006) or buying from a website (Chang, 2012). Other researchers have addressed the issue of online distrust by analyzing how several risk-reducer mechanisms, such as online retailers' safety cues – privacy policies, security disclosures, warranties, site design, brand strength or retailer reputation (Cho, 2006; Ou and Sia, 2010; Chang, 2012) –, or online infrastructure/structural assurances – accreditation, feedback mechanisms, monitoring, regulations and legal bonds (McKnight et al., 2003; Pavlou and Gefen, 2004; 2005; McKnight and Choudhury, 2006) –, can reduce initial distrust formation.

Nevertheless, consumer distrust is only recently beginning to be noticed as an important e-commerce issue and, unlike online trust, the nature and role of distrust is much less established (Cho, 2006; McKnight and Choudhury, 2006; Benamati and Serva, 2007). Although findings from these aforementioned studies provide useful insights about how online distrust can be reduced in terms of technology, reputation or legalistic mechanisms, they are limited in several aspects. First, these studies have focused on variables which are external to the individual (online retailer and/or third parties assurance seals), neglecting the importance of studying how consumers' characteristics may influence their distrust of online retailers. Also, even though such technology, reputation or legalistic-based mechanisms may provide certain guaranties about the security, reliability and technical competence of both specific online retailers and the broader Internet environment, these mechanisms do not necessarily guarantee that online retailers will not act unethically or manipulatively. Stated otherwise, while these proposed mechanisms can be effective in overcoming the reliability dimension of online distrust

(competence or reliability distrusting beliefs), they may be insufficient or even counterproductive when it comes to addressing the ethical dimension of such distrust (benevolence or integrity distrusting beliefs) (Sitkin and Roth, 1993; Hsiao, 2003; Clarke, 2008).

Moreover, since the term “ethics” refers to personal values of conduct, “each individual can have a different view of what is ethical or unethical” (Fraedrich and Ferrell, 1992; p. 246), effectively preventing the discovery of individual differences in ethical beliefs or expectations about sellers’ ethical behavior on the Internet. More precisely, there is strong evidence that people differ – sometimes drastically – in their attitudes and beliefs about online retailers’ ethical behavior (Antin et al., 2011). Accordingly, it becomes critical for scholars and retailers to improve their understanding about ethical issues of consumers’ distrust of online retailers. Importantly, understanding such differences in individual ethical judgment is critical, primarily because individuals possessing different ethical ideologies, predispositions toward ambiguous situations, or moral development are expected to evaluate and draw conclusions about ethical issues differently (Barnett et al., 1994; Kleiser et al., 2003; Ramsey et al., 2007). Despite the large body of marketing ethics literature that has noted the importance of considering such individual differences when investigating consumers’ ethical perceptions in traditional settings (Forsyth, 1980; McIntyre et al., 1999; Singhapakdi et al., 1999; Ingram et al., 2005; Ramsey et al., 2007), to date, however, only a limited number of studies have investigated the role of personality and attitudinal factors in understanding consumers’ perception of online retailer’s ethical practices (Román and Cuestas, 2008; Yang et al., 2009). Recently scholars have pointed out, therefore, that more research is needed to explain individual differences in ethical judgments or beliefs about retailers’ practices in the online environment (Yang et al., 2009; Román, 2010).

In this regard, an individual’s moral philosophy, or ethical ideology, which comprises the two dimensions of idealism and relativism, is one factor proposed to explain differences in ethical judgments (Schlenker and Forsyth, 1977; Forsyth, 1980; Forsyth, 1992). This set of beliefs, attitudes, and values may provide individuals with a framework within which to consider ethical dilemmas.

Ethical ideologies may also offer guidance to individuals as they make judgments about ethical issues (Forsyth and Nye, 1990). Prior research in traditional settings shows that moral philosophy is an important determinant of individuals' reactions to questionable business practice (Vitell et al., 1991; Erffmeyer et al., 1999). This phenomenon has been observed in both marketing personnel (e.g., Bass et al., 1998) and consumers (e.g., Vitell and Muncy, 1992). Arguably, then, one's ethical ideology is pivotal to one's ethical compass and influences how the individual chooses to respond to issues regarding right and wrong. One's perceptual and behavioral ethical reactions, then, are predicated at least partly on their moral credo (Vitell et al., 1991; Forsyth, 1992). For some, ideals and personal values may be compatible with the current online selling practices (Wolfenbarger and Gilly, 2001); others may experience feelings of concern, suspicion, skepticism, and wariness towards the integrity and responsibility of online retailers (Benamati and Serva, 2007). For all these individuals, however, it is posited that, given the uncertainties and risks of online transactions, risk-taking attitudes of consumers will act to influence their moral reasoning (Leonidou et al., 2012). In this vein, prior research has shown that, apart from ethical ideology, risk perceptions are strongly related to ethical judgments, intentions, and perceptions of an ethical issue (Jones, 1991; Singhapakdi et al., 1999; Leonidou et al., 2012). Yet the effects of these consumer's characteristics on online distrust are unknown.

In the light of these issues, the first objective of this study is to investigate the influence of consumers' ethical ideology (idealism and relativism) and risk aversion on ethically-based distrust of online retailers. On a related issue, research has long argued that one of the reasons for the persistence of online distrust is, in fact, the lack of personal interaction with retail salespeople while shopping online (Anckar, 2003; San Martín and Camarero, 2008). Several studies have found that the need for interaction with sales employees is positively related to the need to avoid technology-based self-services (e.g., Dabholkar and Bagozzi, 2002; Susskind, 2004; Susskind and Stefanone, 2010). Although this lack of personal contact is perceived by some consumers as a benefit (Wolfenbarger and Gilly, 2001), many consumers like to have contact with sales personnel (Keeling et al., 2007), and thus they miss this

contact when searching for information or shopping on the Internet (Anckar, 2003; Jepsen, 2007). Accordingly, the current study adds to the literature by examining to what extent consumer's need for personal interaction with retail salespeople moderates the influence of ethical ideologies and risk aversion on consumers' ethically-based distrust of retailers' practices in the online environment.

In what follows, we provide a review of the literature and outline our conceptual framework. Hypotheses are then presented and tested. Finally, implications of the study are discussed.

2. LITERATURE REVIEW AND THEORETICAL FRAMEWORK

The views on trust and distrust have been highly diverse, as researchers conceptualize them according to their own disciplinary perspective. There seems to be a general consensus in the business literature, however, that trust and distrust concern the expectancy aspect of an exchange partner's behavior. In particular, while trust is viewed as "confident *positive* expectations regarding another's conduct", distrust refers to "confident *negative* expectations regarding another's conduct" (Lewicki et al., 1998; p. 439). Specifically, distrust means a belief that a partner will be incompetent, exhibit irresponsible behavior, violate obligations and will not care about one's welfare or even intend to act harmfully (Lewicki et al. 1998; Kramer, 1999; Darke et al., 2010). While distrust is defined with the reciprocal terms of trust, these authors argued that distrust should be thought of as qualitatively distinct phenomena from trust. More specifically, distrust is not just the absence of trust, but the active expectation that the other party will behave in a way that violates one's welfare and security (Kramer, 1999). In fact, trust and distrust are sustained by cognitions that are distinct from each other: whereas hope, faith or assurance comprises high trust, high distrust is characterized by fear, suspicion or cynicism about negative outcomes and a watchful wariness or even vigilant monitoring for negative behavior from others (McKnight and Chervany, 2001). In addition, while both serve as risk-coping mechanisms, distrust may exert a more critical role than trust of consumer decisions (Singh and

Sirdeshmukh, 2000), especially in the high-risk environment of online shopping (McKnight et al., 2004; Chang, 2012). Furthermore, distrust is not only important because it allows one to avoid negative consequences, but because general distrust of other people and institutions is becoming more prevalent (Mitchell, 1996), which means that it may, to an extent, be displacing trust as a social mechanism for dealing with risk (McKnight and Chervany, 2001).

Negative feelings such as fear or being wary or nervous often describe people's feelings about transacting on the Web in general (McKnight et al., 2004). Hence, several scholars have argued that online distrust would be more important than online trust of risk-laden Web relationships because distrust embodies these negative feelings (McKnight et al., 2004; Ou and Sia 2010; Chang et al., 2012). Yet few have examined distrust explicitly in the e-commerce context as compared to the attention devoted to online trust. Some e-commerce researchers discuss aspects of both trust and distrust in their studies but do not always delineate these concepts clearly. For example, Grazioli and Jarvenpaa (2000) and Grazioli and Wang (2001) use trust as a construct in their models, but also include "perceived deception", a construct with distrust implications that they describe with the term "suspicion" – a synonym of distrust (McKnight et al., 2004). Gefen (2002) refers to consumers who doubt or question the integrity, benevolence or competence of an online retailer. Yet he relates doubt and questioning to the trust concept rather than to the distrust concept. Hoffman et al. (1999) use the term "mistrust" once and the term "lack of trust" three times to highlight Web problems, but do not refer to distrust as a concept separate from trust.

However, as it can be observed in Table 1, some researchers have recently identified online distrust as a distinct construct that is related to, yet different from online trust, showing that these two concepts predict and are predicted by different constructs and have differential effects on behavior (McKnight and Chervany, 2001; McKnight et al., 2003; 2004; Pavlou and Gefen, 2004; 2005; Cho, 2006; McKnight and Choudhury, 2006; Chang, 2012). For example, in predicting consumer's intentional outcomes, there is strong and consistent evidence in previous studies that trust and distrust generate

asymmetric effects on behaviors with different risk levels. In particular, studies have generally found that whereas trust has a stronger effect than distrust in predicting consumer's low risk or relational decisions, such as the willingness to explore an online retailer's website (McKnight et al., 2003; 2004), distrust overwhelmed trust in importance when predicting high risk-related consumer behaviors, such as the willingness to follow website advice (McKnight et al., 2003; 2004; McKnight and Choudhury, 2006), the willingness to provide personal information to the online retailer (Cho, 2006), or purchasing intentions from the online retailer's website (Ou and Sia, 2010; Chang, 2012). These findings highlight the critical role that online distrust can play in the high risk context of online shopping-related activities, showing that distrust may displace trust as a base of consumer's decisions involving e-commerce.

As shown in Table 1, the literature has defined and operationalized the distrust construct in different ways, such as a general disposition (McKnight et al., 2004), as a belief or expectancy (McKnight et al., 2002; Cho, 2006; Ou and Sia, 2010; Zhang et al., 2011; Chang, 2012), as a perceived risk or uncertainty (Pavlou and Gefen, 2004; Pavlou et al., 2007), and/or as an intention (Benamati et al. 2006; McKnight and Choudhury, 2006). A common point in all of these definitions, however, is the idea that individuals distrust the other/s (a particular website, institution, or people generally) because they find the other/s untrustworthy. In defining qualities involved in judging such untrustworthiness, researchers have also used diverse terms, such as ability, reliability, benevolence, integrity, credibility, honesty, fairness, and many others. Upon close inspection, however, these descriptions can be seen as essentially dealing with two main aspects: reliability/competence and integrity/benevolence. Scholars have commonly identified these two dimensions of online distrust and have shown that they are conceptually and empirically distinct (McKnight and Chervany, 2001; Cho, 2006; Dimoka, 2010). Reliability or competence-based distrust is based on negative judgments of the other's *ability or capability* to do for one what one needs done (McKnight and Chervany, 2001), and has been associated with technical incompetence (Hsiao, 2003). Integrity or benevolence-oriented distrust, on the other hand, refers to negative beliefs about the other's *values or motives*, that is, reflects a highly emotional assessment that deals with concerns that

the other party is not motivated to act in one's interest and implies that the individual assumes that others usually act in an opportunistically or manipulatively way (McKnight et al., 2003; Cho, 2006; Dimoka, 2010). While the former kind of distrust can be regarded as a rationally-based expectation that technically competent performance will not be forthcoming (Hsiao, 2003), the latter implies an ethical-based judgment or belief that overlaps conceptually with morality and honesty beliefs (McKnight et al., 2003).

Table 1

A summary of prior empirical studies examining the antecedents and consequences of consumers' online distrust

Authors	Conceptualization of the main variable	Context of the study	Relevant findings
Hsiao (2003)	Two sub-constructs based on Sitkin and Roth (1993): 1. Reliability-related distrust (relating to technical competence) 2. Value-oriented distrust (relating to cultural assumptions)	56 merchants: 15 intermediaries (managers and consultants directly involved in building an electronic marketplace), and 41 prospective adopters (all senior executives in their companies).	Perceived risk associated with e-marketplace adoption (relating to technical competence and intentional trust) increases the level of reliability-related distrust among adopters towards both the intermediary and the e-marketplace, whereas perceived incongruence among cultural beliefs embedded in e-marketplace and prospective adopters' cultural assumption about commerce engenders value-oriented distrust. Both reliability-related and value-oriented distrust engender fears that lead to resistance to e-marketplace adoption. Technical remedies (e.g., institution-, reputation- and technology-based trust building mechanisms) reduce reliability-related distrust by removing adoption barriers and restoring online trust, but they are ineffective and even counterproductive when it comes to addressing the value-oriented basis of distrust/fear. The resistance to e-marketplace adoption is concerned with technological features as well as the transfer of incongruent trust-production mechanisms.
McKnight et al.(2003) and (2004)	Institutional-based distrust: the belief that protective structures that are conducive to situational success are not in place. Disposition to distrust: a tendency to not be willing to depend on or become vulnerable to general others, accompanied by feelings of worry, fear, or concern.	1048 students from three large U. S. universities referring to an online legal advice provider.	Disposition to trust and distrust: (a) factor separately, (b) co-exist, and (c) have differential consequences. Faith in humanity (disposition to trust) tended to predict structural assurance (institutional-based trust) but not no-structural-assurance, while suspicion of humanity (disposition to distrust) was the major predictor of no-structural-assurance (institutional-based distrust). Disposition to trust and trust-related concepts affects low-risk Web perceptions (perceived website quality and willingness to explore) more than do distrust-related concepts; while disposition to distrust and distrust-related concepts affects high-risk perceptions (willingness to depend on the website) more than do trust-related concepts.

Table 1

Continues

Authors	Conceptualization of the main variable	Context of the study	Relevant findings
Pavlou and Gefen (2004)	Distrust as a perceived risk: consumers' fears that stem from online sellers' potential for opportunistic behavior.	274 consumers in Amazon's online auction marketplace referring to its community of online sellers and Amazon as the intermediary.	The perceived effectiveness of feedback mechanisms and escrow services combined with consumers' trust in the intermediary increased consumers' trust of the community of sellers in an online marketplace, even when controlling for trust propensity. Consumers' trust, in turn, reduced perceived risk (distrust) and increased intentions to transact, even when past experience and sellers' performance were included in the model. Contrary to authors' expectations, the proposed institutional structures did not have a direct impact on perceived risk (distrust), influencing it only indirectly, through trust.
Pavlou and Gefen (2005)	Distrust as a Psychological Contract Violation (PCV): consumer's overall perception that the seller community has generally failed to fulfill their contractual obligations.	404 consumers in eBay's (270) and Amazon's (134) auction marketplaces referring to their community of online sellers and eBay and Amazon as the intermediaries.	Consumers' perception of PCV with the entire community of sellers in a marketplace – a kind of generalized online distrust – directly influences trust, perceived risk, price premiums, transaction intentions, and consumer's beliefs about institutional structures. PCV with the community of sellers causing consumers to change their decision-making mode from a trust-based one toward a suspicious or risk-based one. Results support the moderating role of PCV with the community of sellers on the relative impact of institutional structures on trust and perceived risk, and also on the role of trust and of perceived risk on transaction intentions. The study also identifies two key antecedents of PCV with the community of sellers: (1) the consumer's past experience (quality of the consumer's own encounters with particular sellers in a marketplace), and (2) the sellers' past performance (overall reputation of sellers in the specific marketplace).
Benamati et al.(2006)	Distrust as an intention: the unwillingness to become vulnerable to a trustee having considered characteristics of that trustee.	500 college students located across two different universities referring to an online bank.	Trust and distrust are distinct constructs. Trustworthiness of the online bank is negatively related to distrust, and distrust has a negative effect on intention to use.
Cho (2006)	Distrust as a positive expectation of injurious action.	881 consumers referring to an online retailer (books vs. clothing).	Benevolence (i.e., motivational dimension) fosters trust, while competence (i.e., instrumental dimension) reduces distrust. The impact of distrust on reducing self-disclosure (risk-taking behavior) is greater than that of trust on enhancing it.
McKnight and Choudhury (2006)	Two sub-constructs based on McKnight and Chervany (2001): 1. Distrusting beliefs (the extent to which one believes that the other party does not have beneficial characteristics) 2. Distrusting intention (not willing to depend on the other party).	571 undergraduate students referring to an online legal advice provider.	Distrusting beliefs, distrusting intention, and institutional-based distrust are consistently distinct from their trust construct counterparts because: a) they are empirically discriminant, and b) they predict differently from their respective trust concepts. Distrust concepts tend to predict distrust and other negative concept, while trust concepts tend to predict trust and other positive concepts.

Table 1

Continues

Authors	Conceptualization of the main variable	Context of the study	Relevant findings
Pavlou et al.(2007)	Distrust as a perceived uncertainty in online transactions: the degree to which the outcome of a transaction cannot be accurately predicted by the consumer due to online retailer and product quality uncertainty factors.	521 consumers: 198 referring to an online retailer (books), and 173 referring to a specific group of online retailers in general (online prescription filling).	Perceived uncertainty (distrust) has a significant negative impact on purchase intentions over time (longitudinal analysis), that is moderated by purchase involvement. Perceived information asymmetry, fears of online retailer opportunism, and information privacy and security concerns increases consumer's perceived uncertainty of online exchange relationships. Four influential factors built through signals – trust, website informativeness, product diagnosticity, and social presence – act as uncertainty mitigators reducing the uncertainty's destructive impact.
Dimoka (2010)	Distrust as a set of beliefs. Two dimensions based on McKnight and Chervany (2001): 1. Discredibility: concerns about the trustee's competence, honesty, and reliability 2. Malevolence: concerns about the trustee's commitment to the trustor's welfare	192 university students in the context of eBay's auction marketplace.	Whereas trust is associated with brain areas linked to anticipating rewards, predicting the behavior of others, and calculating uncertainty, distrust is associated with brain areas linked to intense negative emotions and fear of loss. There is a clear distinction in the brain areas associated with the dimensions of trust and distrust with credibility and discredibility being mostly associated with the brain's more cognitive areas, while benevolence and malevolence are mostly associated with the brain's more emotional areas.
Ou and Sia (2010)	Distrust as a negative expectations regarding an online retailer's conduct, characterized as suspicion, wariness, and fear of transactions.	324 university students in the B2C online purchasing context.	Trust and distrust toward the online retailer are two separate concepts and can coexist in some individuals. Trust and distrust have different determinants: distrust is determined by consumers' functional perception (overall evaluation of a website's basic functionality and essential features to carry out the transactional exchanges as an online store/retailer), while trust is largely predicted by motivating perception (overall evaluation of the degree that a website motivates visitors to browse and buy from it). Distrust, as a negative-valent sentiment, overwhelms the effect of trust as a positive-valent sentiment in shaping a consumer's buying intention.
Zhang et al.(2011)	Distrust as the belief that the online retailer does not make good faith agreements, does not tell the truth, and does not fulfill promises.	360 university students in the B2C online purchasing context.	Online relationship quality (customer's trust on and satisfaction with an online retailer) was positively influenced by online retailer characteristics (website usability, expertise in order fulfillment and reputation) and negatively influenced by perceived malevolent online retailer behavior (distrust in online retailer behavior).
Chang (2012)	Distrust as a positive expectation of an online retailer's injurious action.	260 consumers referring to an online retailer.	Propensity to distrust and brand strength significantly influence online distrust. Brand strength is likely to be a distrust-avoiding factor. Navigation/presentation and privacy/security do not have a significant influence on online distrust. Online trust is distinct from online distrust. Online trust affects low-risk Internet behaviors more than online distrust does, while online distrust affects high-risk Internet behaviors more than does online trust.

Source: Own elaboration

Regardless of their conceptual differences, there are other important reasons to justify the relevance of the differentiation between these two main sources of online distrust. First, research has already shown that the growing inclusion of trusted third parties in e-commerce and the increasing sophistication of the relevant technology have effectively helped online business to generating trust in the process of online shopping (Grabner-Kraeuter, 2002; Mukherjee and Nath, 2007), and it has also been found that these trust-building mechanisms are effective in dealing with the reliability or technical competence source of consumer online distrust too (Hsiao, 2003). However, as argued in the introduction of this study, these technical or legal mechanisms not only have been found to be insufficient in addressing the ethical dimension of online distrust, but also even counterproductive (Sitkin and Roth, 1993; Hsiao, 2003; Clarke, 2008). As Sitkin and Roth (1993) argued, the increased use of technical or legalistic remedies might improve consumer trusting expectations, but can also generate ethical-based roots of distrust through the inference that high technical protections and security measures exist because of past online unethical behaviors. Therefore, compared with reliability or competence online issues, consumers' negative beliefs about the integrity of online retailers' ethical behavior have been considered as more persistent and difficult to invalidate source of online distrust (Hsiao, 2003; Clarke, 2008).

Hence, like the distinction between trust and distrust made earlier, a main assumption of this research is that ethically-based distrust of online retailers is a related yet distinct construct of reliability-oriented distrust, which is not only based on different beliefs (retailers' values or motives vs. ability or capability), but also has different antecedents and consequences (Hsiao, 2003; Cho, 2006; Dimoka, 2010). This assumption allows us to explore how this ethical dimension of online distrust can be explained by different factors that go beyond these retailers' actions and which are rooted in the individual differences of consumers. Following this last ethical approach, consumers' ethically-based distrust of online retailers (CEDOR) is defined in this study as the "subjective belief or expectation that online retailers are only motivated by their own interest (rather than the consumer's best interest), and

they will act to take advantage of the situation (virtual environment) or the consumer by using deceptive tactics in order to cause consumers to have false beliefs about the nature of the products and services that they actually offer”.

There are three attributes of this conceptualization of online distrust that are important to note. First, the *subjective belief* embraces the fact that distrust does not objectively capture the true degree of actual opportunistic behavior of online retailers, but rather it reflects the individual consumer perceptions or expectations of such risks that stem from online sellers' potential for opportunistic behavior (Pavlou and Gefen, 2004; 2005). Second, the belief that *online retailers are only motivated by their own interest and will act to take advantage of the situation (virtual environment) or the consumer by intentionally use ambiguous or even deceptive tactics* implies an ethical judgment based on consumer's perceptions of the integrity and benevolence of online vendors (McKnight et al., 2003; Cho, 2006). This subjective belief and ethical judgment underlying the construct of online distrust suggests that different consumers may have different perceptions about these ethical issues and risks of online transactions. Finally, the focus on the community of *online retailers* explains online distrust as a generalized belief, in which the entire population of online retailers, rather than a particular one, is the target of a consumer's distrust (Pavlou and Gefen, 2004; 2005).

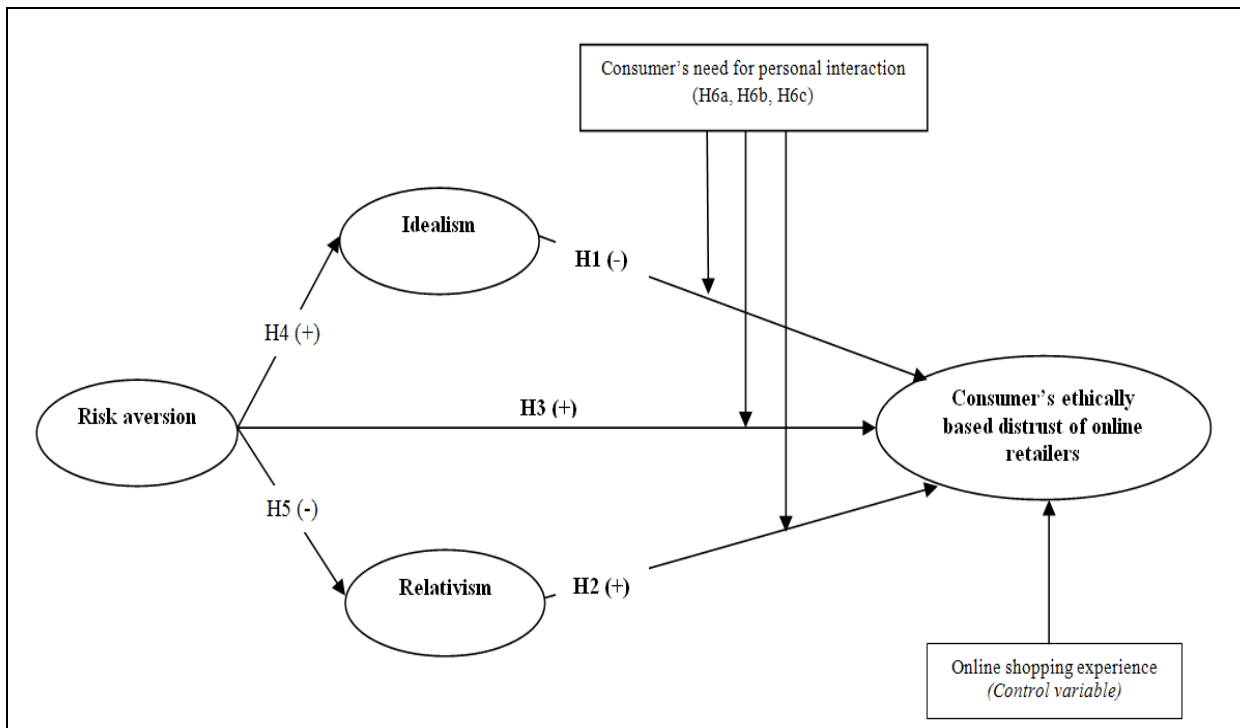
3. HYPOTHESES DEVELOPMENT

As a guide to the hypotheses development that follows, we begin with a brief overview of our model. Consumer's ethically-based distrust of online retailers (CEDOR) represents our key construct as the dependent variable in Figure 1. Because of the need to study how CEDOR are built from the start, we focus on two promising types of factors: individual ethical ideology (idealism and relativism) and consumers' level of risk aversion (i.e., attitude toward risk). We will develop Hypotheses H1–H3 to support the logic of the antecedent structure. Hypotheses H4 and H5 refer to the inter-connections

among these antecedents. Figure 1 also includes the effect of consumers' experience with online shopping on CEDOR as a control variable. We also propose that the direct effects of idealism, relativism and risk aversion on CEDOR will be moderated by consumers' need for personal interaction with retail salespeople (H6a-c). The rationale for each hypothesis follows.

Figure 1

The research model



3.1. Antecedents of consumer's ethically-based distrust of online retailers

Ethical ideology: idealism and relativism

A person's ethical ideology represents the individual's personal moral philosophy, as manifested in the way he/she makes judgment on another's morality (Forsyth, 1980). This ethical ideology can be explained as a set of beliefs, values and attitudes, which may influence an individual's judgment and

decision-making when faced with difficult situations and ethical dilemmas (Forsyth, 1980; Forsyth 1992). These moral judgments and decisions are based on a person's own individual system of ethics, and disagreements concerning morality must necessarily surface when personal ethical systems are different. Thus, differences in moral philosophy or ethical ideology are contended to explain differences in ethical judgments (Schlenker and Forsyth, 1977; Forsyth, 1980; Forsyth 1992). Empirical findings suggest that individuals who differ in terms of their ethical ideology reason differently about ethical issues, and often reach different conclusions about the morality of particular actions (Forsyth and Nye, 1990; Forsyth, 1992; Fritzsche and Becker, 1984; Fraedrich and Farrell, 1992).

Schlenker and Forsyth (1977) suggest that individual variations in personal moral philosophies can be described most parsimoniously by taking into account the degree to which an individual is relativistic and/or idealistic. Relativism describes the extent to which individuals reject universal moral rules or principles. Relativists tend to discount personal gains derived from a strict adherence to any standardized ethical code, and reject any universal moral rules or standards that attempt to define an act as moral or immoral based on the belief that exceptions always exist to moral principles. They practice a moral philosophy based on skepticism and "generally feel that moral actions depend upon the nature of the situation and the individuals involved [...] more than the ethical principle that was violated" (Forsyth, 1992; p. 462). Individuals who are non-relativistic have strong beliefs about absolute moral principles as guides by which the morality of a particular action can be determined. Forsyth et al. (1988; p. 244) provide the following example. Rules such as "You should not lie" are assumed by non-relativists to provide useful guidelines for action. In contrast, relativists would tend to believe that no rule concerning lying can be formulated, and whether a lie is permissible or not depends entirely on the situation.

The second factor underlying individual variations in moral judgment focuses on an individual's idealism in moral attitudes. Idealism is a personal ethic approach that simultaneously stresses the inherent goodness of certain natural laws and a commitment not to harm others despite any situational

urgency (Forsyth, 1980). Unlike relativism, idealism focuses on the outcome of decisions, being a key component the desire to avoid endangering others by any prospective decision outcome. To describe extremes, high idealistic individuals assume that desirable consequences can always be obtained with the 'right' action and those with less idealistic orientation admit that undesirable consequences will often be mixed in desirable ones (Forsyth, 1980). That is, less idealistic individuals assume a more pragmatic ethical approach and believe that ethical acts will sometimes produce negative outcomes for some and benefits for others (Forsyth, 1980). Importantly, idealism is not based on an embrace of moral absolutes; rather, it involves values related to altruism and a sense of optimism in considering responses to moral issues. Thus, idealism and relativism are conceptually independent, and individuals may be high or low on either or both characteristics (Singhapakdi et al., 1999).

According to Forsyth (1980), an individual's ethical ideology provides a unique perspective on moral questions that determines how he or she reasons about such issues. That is, the stance an individual takes with respect to these two factors – idealism and relativism – will influence the ethical judgments reached (Forsyth, 1992). Moreover, current theoretical views maintain that individuals' ethical ideology influences their ethical judgments of business practices (Ferrell and Gresham, 1985; Hunt and Vitell, 1986; Forsyth, 1992; Vitell et al., 1993; Davis et al., 2001), and several empirical studies suggest that individuals who differ on the above ethical ideologies do indeed differ in the extent to which they view "questionable" acts as objectionable, both in traditional (Singhapakdi et al., 1999; Sivadas et al., 2003; Ramsey et al., 2007; Leonidou et al., 2012) and online settings (Winter et al., 2004; Dorantes et al., 2006).

In this vein, although Forsyth's (1992) model is meant to describe individual differences "and does not argue that any one philosophy is more morally advanced than another" (p. 468), empirical findings suggest that idealism is associated with greater ethical sensitivity than is relativism. For instance, Vitell et al. (1993) reported that more idealistic and less relativistic individuals tended to exhibit higher honesty and integrity than less idealistic and more relativistic ones. Vaicys (1996) found that idealism

reduced and relativism increased judgments that morally questionable actions are ethical. Idealism has also been found to be positively related to other personal and cultural values, like religiosity (Vitell and Paolillo, 2003), prosocial or altruistic values (Davis et al., 2001), and collectivism orientation (Forsyth et al., 2008). In contrast, researchers have found that relativism lowers the perceptions of moral intensity, hinders the recognition of ethical issues and negatively influences the perceived importance of ethics and social responsibility (Forsyth, 1980; Singhapakdi et al., 1999; Winter et al., 2004).

Since ethical judgments and decisions are fundamentally based on personal values (Rokeach, 1973; Davis et al., 2001), these personal differences between idealism and relativism should materialize particularly in individuals' ethical judgments about the ethics of retailers' practices. It is known that personal values contribute to the generalized experience of trust/distrust and can even create a propensity to trust/distrust that surpasses specific situations and relationships (Mayer et al., 1995). Clearly existing theory and research suggest that distrust can be based on enduring and relatively stable characteristics of individuals enshrouded in a person's value system (Chen and Dhillon, 2003). Therefore, highly idealistic individuals, who endorse personal values related to altruism, honesty and integrity, are more likely to show a general tendency to trust others across a broad spectrum of situations and people, so they are also more likely to trust the ethical behavior of particular retail vendors. Findings from McKnight et al. (2004) provide support for this assumption, since they report that individuals who generally trust others are more likely to trust an unknown Internet provider. By contrast, highly relativistic individuals, whose value system emphasizes ethical skepticism or egoism, are more likely to have formed an ethically-based predisposition to distrust other people in general, and therefore to be more prone to doubt or question the integrity or trustworthiness of retailers' practices in particular. Accordingly, we propose the following hypotheses:

H1: Idealism will have a negative influence on CEDOR.

H2: Relativism will have a positive influence on CEDOR.

Risk aversion

Risk aversion has been defined as a decision maker's "preference for a guaranteed outcome over a probabilistic one having an equal expected value" (Qualls and Puto, 1989; p. 180). Risk-averse individuals do not feel comfortable about taking risks, and become uneasy and nervous in uncertain and ambiguous situations (Cho, 2007). Thus, it has been conceived as an individual difference or predisposition, an attitude toward taking risks that is relatively invariant across situations (Mandrick and Bao, 2005). Reflected in consumption, risk aversion strongly affects consumers' decision making (Shimp and Bearden, 1982). A risk-averse decision maker is "more likely to attend to and weigh negative outcomes, thus overestimating the probability of loss relative to the probability of gain. As a consequence, a risk-averse decision maker tends to overestimate the level of risk inherent in a decision situation" (Sitkin and Pablo, 1992; p.19). It is thus foreseeable that risk-averse individuals are more likely to weigh distrust (negative signal) than trust (positive signal) when assessing the risk associated with online shopping. Both theory and findings from prior literature offer support for this contention.

First, as argued earlier, findings from prior literature suggest that distrust is associated with the level of perceived risk in a given situation (Lewicki et al., 1998; McKnight and Chervany, 2001; McKnight et al., 2003; 2004; McKnight and Choudhury, 2006; Cho, 2007; Chang, 2012). This is because in high-risk situations, the individual relies more on the wary, suspicious side to assess the situation and its consequences, thus reducing the importance of basic trust and optimism (McKnight and Chervany, 2001). In fact, these researches suggested that one issue that differentiates low and high distrust is the associated level of perceived risk (Lewicki et al., 1998; McKnight et al., 2004). For example, Lewicki et al. (1998; p. 446) describes low distrust contexts as situations in which the parties have "no reason to be wary and watchful" and do not interact in a way that involves complex interdependencies or risk assessments. Because low interdependence implies low risk, this later situation reflects low perceived risk. On the contrary, risk is higher under complex or intensive interdependencies because "more things can go wrong", and the descriptions of the high distrust situations show that parties use caution,

controls, and have “multifaceted reciprocal interdependence” (Lewicki et al., 1998; p. 447), all of which indicates that perceived risk is high.

In the online setting context, several scholars have found that whereas trust can be more important than distrust when consumer actions bear low to medium perceived risk, distrust outweighs trust when consumers perceive a high degree of risk about an electronic commerce action (McKnight et al., 2003; 2004; McKnight and Choudhury, 2006; Cho, 2006; Chang, 2012). For these researchers, trust and distrust are based on different underlying psychological states which are determined by the level of risk a person perceives in a situation. While trust is based on feelings of calm and assurance, distrust is based on fears and worries. Feelings of fear and worry are more likely to prevail when an individual is in a situation that he/she perceives to be high risk (McKnight, et al., 2004). Arguably, Internet transactions are riskier than other forms of consumer exchange due to a lack of opportunity for physical inspection and human interaction, as well as privacy/security issues (Cho, 2006), and it is known that risk aversion increases these perceived risks of online shopping (Brashear et al., 2009; Lee et al., 2012). Therefore, it is reasonable to expect that risk-averse individuals will show a higher propensity to online distrust than online trust. As argued before, previous research offers strong support for this contention. For instance, findings from McKnight and Kacmar (2006) suggest that risk aversion and perceived online information credibility are negatively correlated, and Cho (2007) found that the effects of distrust on online information privacy concerns was higher for risk-averse individuals than for risk-seeking individuals. Accordingly, we expect that risk aversion will also be related to consumer's ethically-based distrust of online retailers, since belief in the integrity or reliability of the information provided by online retailers introduces specific risks because the Internet-specific characteristics (such as the impossibility to see or handle the products in person or the temporal separation of payment and product delivery) make it harder for customers to verify the truthfulness of the website or its claims (McKnight and Kacmar, 2006). Thus, we put forward the following hypothesis:

H3: Risk aversion will have a positive influence on CEDOR.

We also tested relationships among the three antecedents proposed. It has been argued that, because risk-averse individuals feel uncomfortable with uncertainty and ambiguity situations, they show a greater need for consensus and written rules, and also tend to adopt such rules and norms so as to avoid uncertainty in their actions and clear any ambiguities (Schlegelmilch and Roberston, 1995; Vitell et al., 2003). Accordingly, in their attempt to confront uncertainty surrounding ethical issues, high risk-averse individuals are expected to be more prone to adopt a more idealistic and less relativistic stance. The rationale behind this contention is that following a generalized rule or a more strict moral code may be one way of reducing unpredictability in ethical dilemmas (House and Javidan, 2004). As argued earlier, in determining what is ethical and what is not, highly idealistic individuals believe that ethical actions will always result in positive consequences for each person affected, and assume that desirable outcomes can only be obtained if the right algorithm of actions is followed (Forsyth, 1980). This golden rule to judge ethical issues (ethical actions are only ethical if they do not harm others) can help risk-averse individuals to reduce the unpredictability or ambiguity surrounding ethical dilemmas, so it is reasonable to expect that these individuals show a more idealistic ethical approach. Empirical findings from prior literature have shown, in fact, a positive relationship between one construct closely related to risk aversion, e.g., uncertainty avoidance², and idealism (Vitell et al., 2003). Accordingly, based on this evidence and the arguments described earlier, we expect that:

H4: Risk aversion will have a positive influence on idealism.

In a similar way, we also expect that risk aversion will be negatively related to relativism, since individuals who are non-relativistic, as opposed to high relativistic ones, believe strongly in absolute moral principles as guides by which the morality of a particular action can be determined (Forsyth,

² Uncertainty avoidance is defined as the extent to which individuals feel threatened by ambiguity and therefore try to avoid ambiguous situations by providing greater certainty and predictability (Hofstede, 1994). This conceptualization of uncertainty avoidance is closely related to the definition and measurement of risk-aversion (Mandrick and Bao, 2005), and previous research has also shown that these two construct are positive and strongly interrelated (Hofstede, 1984; Chakraborty et al., 2003; Money and Crotts, 2003).

1980). As argued earlier, following this more strict moral code may be one way of reducing unpredictability in ethical dilemmas for risk-averse consumers. In fact, Hofstede (1983) found that individuals with high uncertainty avoidance also believe that established rules have to be followed at all times and cannot be broken, which undoubtedly matches the non-relativistic ethical beliefs described previously. Other researchers have also proposed this negative relationship between risk aversion and relativism, but empirical findings are not consistent. For instance, whereas both Vitell et al. (2003) and Forsyth et al. (2008) found a negative influence of uncertainty avoidance on relativism, in their review of cultural studies Rawwas (2001) showed several cases in which relativism and risk aversion was positively related to each other. Moreover, findings from a recent study also showed a positive correlation between risk aversion and ethical egoism (Leonidou et al., 2012), which is closely related to relativism (Forsyth, 1980). Despite this inconsistent evidence, based on the above arguments we expect that:

H5: Risk aversion will have a negative influence on relativism.

3.2. The moderating effect of consumer's need for personal interaction

A personality characteristic that is of relevance in the context of online shopping is the need for personal interaction with retail salespeople (Dabholkar and Bagozzi, 2002). This need for interaction is defined as the importance of personal interaction for the consumer in retail encounters (Dabholkar, 1996). Several researchers have found that the need for personal contact with retail salespeople goes hand in hand with a need to avoid technology-based self-services (Dabholkar and Bagozzi, 2002; Susskind, 2004; Susskind and Stefanone, 2010). For such consumers with a high need for personal interaction online shopping can be a difficult and frustrating experience without a salesperson's assistance (Keeling et al., 2007), since the lack of interpersonal and situational cues in the online environment negatively impact the ability of these consumers to appropriately assess the purchase

decision consistent with their expectations for a shopping experience (Swaminathan et al., 1999). This in turn leads consumers with a high need for interpersonal contact to show a preference for a richer transactional medium (i.e., traditional stores), making the preference for online transactions less desirable or likely (Susskind and Stefanone, 2010). In addition, although the Internet offers abundant sources of product information, scoring highly in objectivity, accessibility, and browsing possibilities, electronic information also creates new pressures on credibility evaluation because of its relative lack of quality control mechanisms (Rieh and Danielson, 2007). Findings from Susskind and colleagues (Susskind, 2004; Susskind and Stefanone, 2010) suggest that consumers with a high need of interpersonal interaction are less inclined to focus on the relative conveniences of on-line shopping and are uncomfortable using the Internet, and therefore are likely to have feelings of uncertainty or uneasiness toward the use of Internet for shopping-related activities.

On the other hand, for consumers with a low need for personal interaction, the impersonal, efficient, and structured nature of the typical website “interaction” may be an attraction, since it removes the need for time-consuming pleasantries or avoiding persistent shop assistants (Keeling et al., 2007). These consumers tend rather to look favorably on technology and the use of Internet for shopping-related activities, they have stronger intrinsic motivation to shopping online, and a more positive attitude toward online shopping in general (Dabholkar and Bagozzi, 2002; Monsuwe et al., 2004). Therefore, consumers with a low need for personal interaction with retail salespeople are less likely to distrust online retailers, since a more positive attitude toward the online medium leads them to hold more positive beliefs about the trustworthiness of online retailers (George, 2002; Román, 2010).

In contrast, consumers with a high need for personal interaction would lack this positive attitude and intrinsic motivation to use the Internet for online shopping. Therefore, such consumers can be expected to be more prone to distrust online retailers, and the expected effect of idealism in reducing online distrust would be attenuated for these consumers. Furthermore, the expected positive effect of relativism and risk aversion on online distrust would be higher among consumers with a high need for personal

contact, since a high level of uncertainty or uneasiness toward the use of Internet for commerce-related activities increases the perceived risk associated with online shopping (Susskind, 2004) and, as argued earlier, distrust embodies negative feelings of fears and uneasiness that these consumers experience toward the use of Internet for commerce-related activities (McKnight et al., 2004; Ou and Sia, 2010; Chang et al., 2012). Accordingly, we propose that:

H6a: The negative influence of idealism on CEDOR will be weaker for consumers with a high need for personal interaction than for those with a low need for personal interaction.

H6b: The positive influence of relativism on CEDOR will be stronger for consumers with a high need for personal interaction than for those with a low need for personal interaction.

H6c: The positive influence of risk aversion on CEDOR will be stronger for consumers with a high need for personal interaction than for those with a low need for personal interaction.

3.3. Control variable: Online shopping experience

Finally, we have also incorporated consumer's online shopping experience as a control variable in our research model. Prior research has found that consumers' experience with the Internet reduces psychological contract violation, a construct closely related to online distrust that describes a buyer's perception of having being treated wrongly regarding the terms of an exchange agreement with an online seller (Pavlou and Gefen, 2005). Including this construct as an additional predictor of consumer's ethically-based distrust of online retailers allows us to determine whether the hypothesized antecedents have a significant impact on online distrust after accounting for the variance explained by this control variable.

4. RESEARCH METHOD

4.1. Data collection and sample

To test our hypotheses information was sought from consumers who had recently purchased a high-involvement product online or in the traditional channel. Technological products (e.g., personal computers, electronic products, and smartphones) were chosen because they constitute pure search goods (Bart et al., 2005), that is, dominated by attributes for which full information on dominant aspects can be gathered (either online and/or in traditional stores) prior to purchase. Moreover, consumers in these product categories (technological products) are typically engaged in a problem-solving task of moderate to high complexity (Bart et al., 2005). Such tasks and buying processes along with the technical complexity of computers and electronic specific features enhance the importance of our moderating variable (consumers' need for personal interaction with sales employees), since consumers are likely to seek the assistance and advice of sales employees, even if they finally purchase the product online (Bai et al., 2004; Kim and Stoel, 2005). In addition, research has also found that consumers buying complex, high-involvement products tend to search for product information online even though they end up purchasing from a traditional store (Bei et al., 2004; Mohr et al., 2009).

A survey was used as the data collection instrument. A marketing research firm was hired to assist with the data collection. Trained interviewers randomly approached respondents among individuals who passed the data collection point located on the pedestrian walkway in three major metropolitan cities. A similar procedure can be seen in previous research (Frambach et al., 2007; Román, 2010). Screening questions were administered before the respondent was invited for an interview. An invitation only followed if the respondent proved to be eligible for the study (that is, over eighteen years and should have purchased, at least, one technological product -via online or offline- in the last six months). The latter condition was required in order to facilitate consumers' evaluations of the retailers. Then, subjects were taken to the company office (conveniently located in the metropolitan area), where specialist

interviewers surveyed respondents about the questions included in the questionnaire instrument. Interviews typically lasted 15 minutes. The final sample consisted of data from 409 consumers (208 who shopped online and 201 who shopped at traditional stores).

Table 2

Sample profile

Variable	Percentage
Gender	
Male	59,4
Female	40,6
Age	
≤ 20	9,0
20-35	48,9
36-50	33,3
> 50	8,8
Education	
Low (primary school)	12,0
Middle (high school)	41,8
High (University; polytechnic)	46,2
Occupation	
Employed people	47,7
Self-employed workers	11,0
Students	19,1
Others (retired, homemaker, and unemployed)	22,2
Internet experience (years)	
< 4	13,4
4-6	40,6
7-10	40,3
> 10	5,8
Online shopping experience (number of online purchases ^a)	
< 2	46,0
2-4	35,5
> 4	18,6

^a Made in the last twelve months.

A profile of the sample is shown in Table 2. Respondents were mostly employed people, middle-aged, generally well-educated and experienced with the Internet. They bought, on average, about 3 products online in the last twelve months and, in their last purchase, they used both the traditional store (53%) and Internet (47%) as sources of product information. For those consumers who had made the last purchase online, the information searched for online represented 66%, whereas information searched for in traditional stores was a 34%. In contrast, for those who had made their last purchase at a traditional store, this information source supposed 73% of total (and thus, information searched for online represented 27%).

4.2. Instrument development

Existing multi-item scales adapted to suit the context of the study were used to measure the constructs. In order to get a better understanding of these research variables, we first interviewed 6 consumers who had recently purchased a technology product. Based on these interviews and the literature review, a questionnaire comprising 7-point Likert-scales was prepared and a formal pretest of the questionnaire with 60 consumers was conducted prior to the main survey to improve the measures. The respondents were asked to point out any scale items they found confusing, irrelevant, or repetitive. Final items are shown in Table 3.

Consumer's ethically-based distrust of online retailers was measured with four items adapted from Cho (2006) and Román (2010). Based on the results of the pretest, idealism and relativism were measured with three-item scales from the Ethical Position Questionnaire (EPQ) by Forsyth (1980). Shortened versions of Forsyth's (1980) EPQ scale have been used successfully in other studies (Steenhaut and Kenhove, 2006; Cadogan et al., 2009; Leonidou et al., 2012). Similarly, three items from Mandrick and Bao (2005) were used to measure risk aversion. Consumers' need for personal interaction with sales staff was measured using a three-item scale from Dabholkar (1996). Finally,

following existing research (Miyazaki and Fernandez, 2001; Corbitt et al., 2003), online shopping experience was measured by the number of online purchases made in the last twelve months.

Table 3

Construct measurement summary: confirmatory factor analysis of multi-item measures

Item description ^a	SD loading (t-value)
Consumer's ethically-based distrust of online retailers (CEDOR)	
Online retailers exaggerate the benefits and characteristics of their offerings	0,78 (18,42)
Online retailers attempt to persuade you to buy things that you do not need	0,83 (20,27)
Online retailers use misleading tactics to convince consumers to buy their products	0,93 (24,33)
Online retailers take advantage of less experienced consumers to make them purchase	0,89 (22,50)
Idealism	
The existence of potential harm to others is always wrong, irrespective of the benefits to be gained	0,72 (15,40)
If an action may harm an innocent other, then it should not be done	0,88 (19,45)
One should not perform an action which might in any way threaten the dignity and welfare of another individual	0,76 (16,50)
Relativism	
What is ethical varies from one situation and society to another	0,89 (20,53)
Moral standards should be seen as being individualistic; what one person considers to be moral may be judged to be immoral by another person	0,92 (21,24)
Ethical considerations in interpersonal relations are so complex that individuals should be allowed to formulate their own individual codes	0,52 (10,75)
Risk aversion	
I do not feel comfortable about taking chances	0,73 (16,31)
I prefer situations that have foreseeable outcomes.	0,84 (19,48)
Before I make a decision, I like to be absolutely sure how things will turn out.	0,88 (20,81)
Need for personal interaction	
I like interacting with retail salespeople when I shop	0,84 (20,48)
Personal contact with retail salespeople is important to me	0,96 (25,32)
I like to talk with salespeople when I shop	0,87 (21,55)
$\chi^2(105) = 273,32; p < 0,01; GFI = 0,93; AGFI = 0,90; CFI = 0,98; RMSEA = 0,06; RMSR = 0,05;$ TLI (NNFI) = 0,96	

^aAll scales consisted of 7-point Likert questions, ranging from "1 = strongly disagree" to "7 = strongly agree."

4.3. Confirmatory factor analyses: reliability, convergent and discriminant validity

A confirmatory factor analysis (CFA) by means of LISREL 8.80 was conducted to assess measurement reliability and convergent and discriminant validity. The measurement model had a good fit ($\chi^2(105) = 273.32$; $p < .01$; GFI = .93; AGFI = .90; CFI = .98; RMSEA = .06; RMSR = .05; TLI (NNFI) = .96). In addition, the observed normed χ^2 for this model was 2.60, which is smaller than the 3 recommended by Fornell and Larcker (1981), indicating a good model fit for the sample size.

Reliability of the measures was confirmed with a composite reliability index higher than the recommended level of .60 (Bagozzi and Yi, 1988) and average variance extracted was higher than the recommended level of .50 (Hair et al., 1998), as shown in Table 4. Following the procedures suggested by Fornell and Larcker (1981) and Bagozzi and Yi (1988), convergent validity was assessed by verifying the significance of the t values associated with the parameter estimates (Table 3). All t values were positive and significant ($p < .01$). Discriminant validity was tested by comparing the average variance extracted by each construct to the shared variance between the construct and all other variables. For each comparison, the explained variance exceeded all combinations of shared variance (see Table 4).

Table 4
Mean, SD, scale reliability, AVE, and correlations

Construct	Mean	SD	AVE	1	2	3	4	5	6
1. CEDOR ^a	4,40	1,15	0,74	0,92	0,02	0,14	0,16	0,04	
2. Idealism	5,41	1,11	0,62	-0,13	0,83	0,02	0,05	0,00	
3. Relativism	4,80	1,28	0,63	0,37	0,15	0,83	0,08	0,02	
4. Risk aversion	4,97	1,17	0,67	0,40	0,23	0,29	0,86	0,16	
5. Need for personal interaction	4,44	1,25	0,79	0,20	0,07	0,13	0,40	0,92	
6. Online shopping experience	2,89	4,07	na	-0,18	0,01	-0,09	-0,03	0,04	na

^a Consumer's ethically-based distrust of online retailers.

AVE average variance extracted, na not applicable.

Scale composite reliability of multi-item measures is reported along the diagonal. Shared variances of multi-item measures are reported in the upper half of the matrix. Correlations are reported in the lower half of the matrix. Correlations higher than .09 significant at 95%.

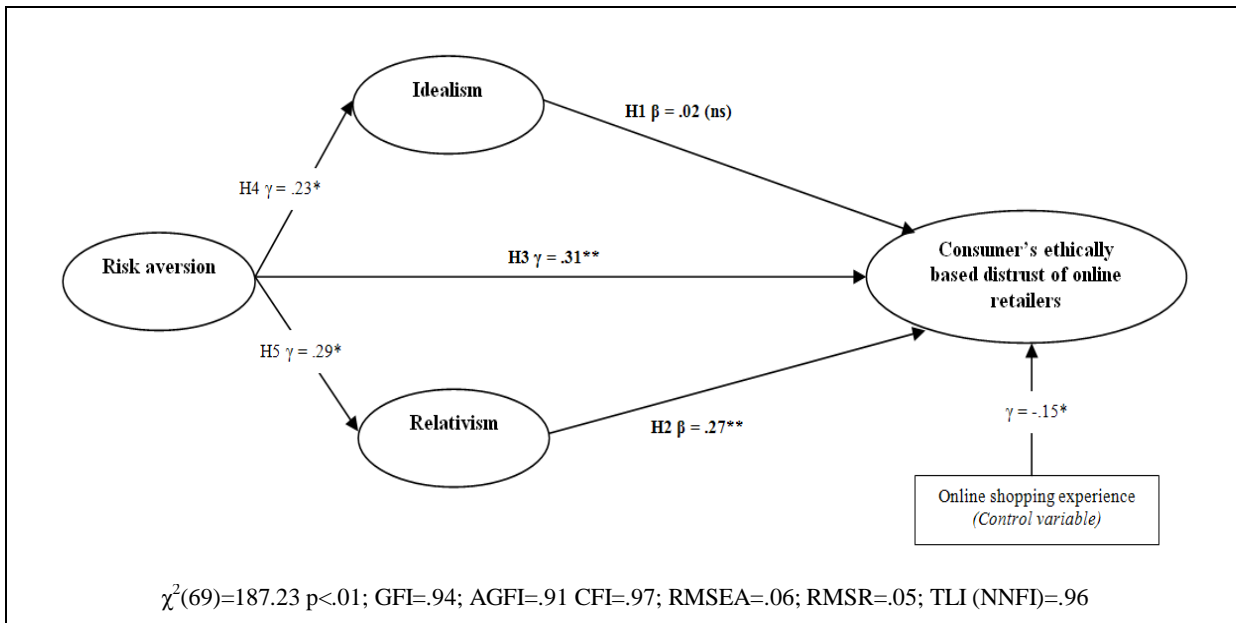
5. RESULTS

5.1. Main effects

The hypothesized relationships were estimated via LISREL 8.80. The results indicated a good fit between the model and the observed data ($\chi^2(69)=187.23$ $p<.01$; GFI=.94; AGFI=.91 CFI=.97; RMSEA=.06; RMSR=.05; TLI (NNFI)=.96). The model explained 25% of the variance in consumer's ethically-based distrust of online retailers (CEDOR).

Figure 2

The research model and results of direct effects (standardized coefficients)



* $p < .05$ ** $p < .01$, ns Not significant.

Results of hypothesized relationships are reported in Figure 2. After accounting for the variance explained by the control variable ($\gamma = -.15$, t -value = -3.19), the analyses provided strong support for the direct positive influence of both relativism ($\beta = .27$, t -value = 5.07) and risk aversion ($\gamma = .31$, t -value = 5.63) on CEDOR, but not for the expected negative influence of idealism ($\beta = .02$, t -value = .05).

Thus, Hypotheses 2 and 3 were confirmed, but not Hypothesis 1. Supporting Hypothesis 4, risk aversion was found to have a positive and significant influence on idealism ($\gamma = .23$, t -value = 3.98). Finally, risk aversion also affected significantly relativism, but not in a negative way as hypothesized in H5 ($\gamma = .29$, t -value = 4.71). This is an unexpected result that we will explain further in this study.

5.2. Moderating effects

Hypotheses 6a–c examined the moderating effect of consumer's need for personal interaction with retail salespeople on the CEDOR-antecedents link. We tested moderating effects through multigroup LISREL analysis. This test was conducted by using a median split in the moderator variable (consumers' need for personal interaction with sales staff) and the overall sample was split into subsamples, according to whether consumers scored high or low on the moderating variable, to ensure within-group homogeneity and between-group heterogeneity (Stone and Hollenbeck, 1989).

Table 5

Results of moderating analyses

Relationship	Moderator variable		Chi-square difference ($\Delta df = 1$)
	More need for personal interaction ($n = 201$)	Less need for personal interaction ($n = 208$)	
Idealism \rightarrow CEDOR ^a	$\beta = 0,06$ ($t = 1,24$)	$\beta = -0,04$ ($t = -1,02$)	$\Delta\chi^2 = 2,70$ ($p=0,10$)
Relativism \rightarrow CEDOR	$\beta = 0,39$ ($t = 5,59$)	$\beta = 0,18$ ($t = 2,45$)	$\Delta\chi^2 = 4,28^*$
Risk aversion \rightarrow CEDOR	$\gamma = 0,44$ ($t = 6,07$)	$\gamma = 0,03$ ($t = 0,38$)	$\Delta\chi^2 = 16,90^{**}$

^a Consumer's ethically-based distrust of online retailers.

* $p < .05$ ** $p < .01$

The results of the multi-group LISREL analysis are shown in Table 5. As anticipated, the positive influence of relativism on consumer's ethically-based distrust of online retailers was stronger among

individuals with a more need for personal interaction ($\gamma = .39, p < .01$) versus those with a less need for personal interaction ($\gamma = .18, p < .05$). Similarly, the positive effect of risk aversion on CEDOR was also stronger among individuals with a more need for personal interaction ($\beta = .44, p < .01$) versus those with a less need for personal interaction ($\beta = .03, ns$). In these two cases the decrease in chi-square when moving from the restricted (equal) model to the more general model was significant, providing support for Hypotheses 6b and 6c, respectively. However, in the case of idealism, no significant differences were found among the more and less groups of the moderating variable ($\Delta\chi^2 = 2.70, p > .05$). Therefore, Hypothesis 6a was not supported.

6. DISCUSSION AND CONCLUSIONS

Gaining the trust of consumers has long been considered one of the key issues necessary to ensure the success of online business (Lee and Turban, 2001; Gefen et al., 2003). However, recent evidence has clearly shown that, in the high risk context of online shopping-related activities, distrust can play a more important role than trust as a base of consumer's decisions involving e-commerce (McKnight et al., 2003; 2004; Cho, 2006; McKnight and Choudhury, 2006; Ou and Sia, 2010; Chang, 2012). Yet, only recently researchers have begun to pay attention to the topic of distrust in online retailing and, unlike trust, the nature and role of distrust is much less established (Cho, 2006; Benamati and Serva, 2007).

Focusing on consumers' characteristics as antecedents of ethically-based distrust of online retailers, findings from this study provide several useful contributions to both academics and practitioners. First, our results show that consumers' degree of idealism did not have a significant influence on ethically-based distrust of online retailers. Thus, whether an individual endorses trust-related personal values (altruism, honesty, and integrity) does not, seemingly, influence their levels of ethically-based distrust of online retailers. Apparently, then, although personal values of idealistic individuals can positively influence consumer trust in online retailers (McKnight et al., 2004; Yang et al., 2009), such personal

values or ethical orientation do not have an analogous effect in reducing online distrust. This is consistent with previous contentions about the differences of trust and distrust constructs (McKnight and Chervany, 2001; Cho, 2006), showing additional evidences about the idea that the positive predictors of trust would not necessarily be negative predictors of distrust (Lewicki et al., 1998). For example, although extant research has found that privacy and security increases online trust (e.g., Román, 2007), they do not seem to have a significant influence on online distrust, as recently shown by Chang (2012).

The extent of consumers' relativism, however, was found to be positively related to their levels of ethically-based distrust of online retailers. Again, this result parallels prior conceptual contentions about the different nature of online trust/distrust and the potential antecedents (Lewicki et al., 1998; McKnight and Chervany, 2001). Whereas idealism, in which ethical orientation and its associated personal values are more oriented toward trust than distrust, does not have a significant influence on consumer's ethically-based distrust of online retailers, such online distrust it does have is positively related to relativism, that is, with those ethical perspective and personal values that are most closely associated with skepticism and distrust of absolute moral principles (Forsyth, 1980). This ethical approach of highly relativistic consumers lowers the importance of ethical standards as guiding principles in their value system (Singhapakdi et al., 1999; Dubinsky et al., 2005) and, hence, the importance of such ethical standards in guiding their own behavior and their general expectations about others' ethical behavior (Singhapakdi et al., 1999; Chen and Dhillon, 2003; Sivadas et al., 2003). Accordingly, one plausible and logical explanation derived from our results for the distrust of consumers in online retailers' ethical behavior may be just their potential general lack of confidence in any standardized ethical code or universal moral rules of standards.

Our results also confirm that risk aversion strongly increases consumer's ethically-based distrust of online retailers. Several authors have highlighted the importance of risk perceptions in explaining the reasons for consumer distrust (Lewicki et al., 1998; McKnight et al., 2004; Cho, 2007). Although some

researchers have already shown the positive relationship between risk aversion and consumer distrust of online settings (Cho, 2006; McKnight and Kacmar, 2006), these studies are focused on consumers' concerns regarding information credibility or privacy issues (competence-based distrust). While expanding on the conceptual and empirical findings of prior literature, our results also provide strong support for the negative influence of risk aversion on consumer's ethically-based distrust of online retailers.

The relationships found among the three proposed antecedents of online distrust also yield interesting conclusions. First, our findings provide empirical support for the expected positive effect of risk aversion on idealism. According to that obtained in other previous studies (Rawwas, 2001; Vitell et al., 2003), this result suggests that, in their attempt to confront uncertainty surrounding ethical issues, risk-averse individuals are likely to adopt a more idealistic ethical stance, that is, to approach ethical dilemmas based on the general idealistic belief that desirable outcomes can always be obtained with the "right" action (Forsyth, 1980). While this partially confirms our proposed argument that the general discomfort felt by risk-averse individuals toward uncertainty and ambiguity may provide a basis for an idealistic ethical ideology, results from the unexpected positive relationship found between risk aversion and relativism seem to suggest a contradictory finding. As we argued in the discussion of hypothesis H5, because following a more strict moral code may be one means of reducing unpredictability in ethical dilemmas (House and Javidan, 2004), we expected that this may lead risk-averse consumers to adopt a less relativistic ethical approach, that is, to show a higher confidence in absolute moral principles as guides by which the morality of a particular action can be determined. Our results indicate, however, that the opposite relation occurs between these two variables. A plausible explanation for this finding can be derived from the idea that the non-relativistic philosophy of believing in universal moral standards and in that the established rules have to be followed at all times and should not be broken in any situation can be a somewhat "naïve" and difficult to maintain under the actual socio-economic global situation (e.g., economic crisis, financial scandals, political corruption, social and labor

instability). In this vein, as recent studies indicate, the global financial crisis has led not only to a general loss of credibility in the current economic, political and regulatory system of western societies, but also, through the steady erosion of traditional society's absolute and fundamental moral values, has long contributed to an emergence of relativism that is profoundly symbolized through the uncertainty of our modern financial and monetary system (Bogle, 2009; Argandoña, 2012; Larsen, 2012). This means that, although from a conceptual standpoint to be risk averse provides a basis for a non-relativistic ethical ideology, the actual socio-economic situation may have led risk adverse individuals to "lose their faith" in the existence of a solid and fundamental moral value system that could effectively help them to reduce unpredictability in ethical dilemmas, and thus to a shift from moral absolutism to moral relativism. Importantly, because idealism and relativism are conceptually independent, individuals may be high or low on either or both characteristics (Forsyth, 1980; Singhapakdi et al., 1999). Therefore, the fact that risk-averse individuals were found to be both idealistic and relativistic does not necessarily represent a contradictory finding. On the contrary, it may suggest that these individuals would be taking a more situationist ethical approach, under which the morality of an action is determined by the desirability of its consequences rather than by its consistency with absolute moral principles (Forsyth, 1980). Interestingly, our results suggest that risk-averse consumers in this study face uncertainty surrounding ethical dilemmas by holding the belief that individuals should act to secure the best possible consequences for all concerned even if doing so will violate traditional rules about ethics.

This study adds to the literature in another way. As shown earlier, most consumer studies on online ethics tend to explain consumers' expectations and perceptions of ethical issues on the Internet by proposing and analyzing direct effects. However, researchers have long argued that "hypothesizing direct effects may be somewhat redundant and obvious" (Dabholkar and Bagozzi, 2002; p.185), and it is much more meaningful to investigate the moderating effects of consumer traits (e.g., Baron and Kenny, 1986; Dabholkar, 1996; Dabholkar and Bagozzi, 2002). Our research shows that positive effects of relativism and risk aversion on consumer's ethically-based distrust of online retailers are moderated by

consumers' need for personal interaction, being more pronounced for those consumers with a high need for personal interaction with retail salespeople than for those with a low need for such personal interaction. In fact, the effects of risk aversion, which had the strongest positive influence on consumer's ethically-based distrust, become insignificant for consumers with a low need for such personal interaction. For the latter, only relativism has a significant influence on their ethically-based online distrust, although this influence is significantly lower than for consumers with a high need for personal interaction. Thus, the lack of opportunities for personal interaction with retail salespeople in online shopping context has found to be an important factor in explaining consumer distrust of online settings.

6.1. Managerial implications

This study has several implications for online retailers. First, our results show that, whereas consumers' ethical idealism does not have a significant influence in reducing ethically-based distrust of online retailers, relativism does significantly increase it. This suggests that this online distrust is positively related to the lack of cognitive faith in moral principles, norms, or laws as guiding principles of ethical behavior that characterizes the ethical orientation of relativistic consumers. Therefore, several widely used trust-building strategies by online retailers, which are based on signaling their ethical behavior, may backfire with consumers with a high disposition to ethical skepticism. For example, the use of third-party assurance seals such as TRUST-e or Safe Harbor self-certification, which reflects that the online retailers' security methods and e-commerce practices are compliant with the set of moral principles or legal standards established by the respective third-party organism, may be ineffective and even counterproductive in overcoming the ethically-based distrust of relativistic consumers, given their lack of confidence in moral principles or legal standards. We therefore encourage online retailers to provide an adequate set of warranty policies that not only offer clear and fair options for returns, but also

convenient and compensatory responses to customers if the online retailer fails to meet its promises or stated commitments. Such policies may be a more effective strategy to persuade skeptical relativistic consumers that the integrity or benevolence of the online retailer can be trusted, compared to the use of certifications and references from outside-source third parties.

Second, our results revealed that risk aversion had the strongest positive influence on consumers' distrust. Derived from the previous discussion about the ethical orientation found in this study for risk-averse consumers (high idealist and high relativist), an important way in which online retailers would cope with the ethically-based distrust of these consumers may be to focus their communication strategies on their commitment with a "right-doing" business model that ensures customer satisfaction and provides solid guaranties against the potential risks incurred in the online transaction. In addition, since prior research has already shown that the usability of a website in terms of speed and ease of use help to reduce the perceived risks of such website (Vila and Küster, 2012), enhancing navigation quality could help to reduce the initial distrust experienced by risk-averse consumers. It is also important for online retailers to provide clear and comprehensive information on security and privacy policies, and to avoid the use of excessively technical or legalistic terms.

Finally, our results regarding the moderating influence of consumers' need for personal interaction with sales staff have interesting managerial implications. In particular, an additional way in which online business can cope with ethically-based distrust of relativistic and/or risk-averse consumers is to help replace the customer-salesperson interaction with a believable, engaging, synthetic virtual salesperson or sales character on computer screens. Previous research has already shown that the introduction of certain interactive mechanisms on a retail website, such as an interactive affect-support agent that reminds customers of face-to-face communication, help customers to reduce negative emotions like confusion and anxiety (Klein et al., 2002), which are feelings closely related those experienced by risk averse individuals in online shopping (Cho, 2006; 2007).

6.2. Research limitations and suggestions for future research

Substantively, building on the findings of this study, several suggestions can be offered to future researchers. Online distrust is a complex and highly elusive construct. This study focuses on ethically-based distrust of online retailers. However, as the discussion of our findings suggests, distinct entities of these online retailers, such as issuing firms of online assurance seals may also be the object of consumers' ethically-oriented online distrust. Therefore, further research can improve our findings by considering other objects (e.g., issuing firms, public organisms, e-marketplace intermediaries, etc.) of these consumers' ethically-oriented online distrust and the potential relationships among distrust of these different objects. It would be also interesting to examine if the relationships supported by this study can be extended to these different contexts as well. One additional limitation and a need for further research concerns the causality suggested in our findings. The research design is cross-sectional in nature, and purely causal inferences remain difficult to make. Hence, evidence of causality through longitudinal studies is recommended.

This study represents an initial step in the analysis of consumer characteristics as antecedents of ethically-based distrust of online retailers. Further research is needed to extend the conceptual model. For instance, in this study, no empirical support was found for both the expected direct effect of idealism on online distrust or for the moderation effect of consumer need for personal interaction in this relationship. This could be examined further. Moreover, researchers could also consider the effect of different personal variables such as cognitive style, and others consumer's personal values such as Machiavellism that may affect the consumer's ethical perceptions (Winter et al., 2004; Dorantes et al., 2006; Yang et al., 2009). The inclusion of other potential moderator variables, such as consumer demographics, would also be an interesting direction for further research. Finally, another important issue for further investigation can be derived from our managerial implications. Specifically, further research could analyze whether a "synthetic virtual salesperson" would be perceived as an equal

replacement to a face-to-face customer-salesperson interaction, as well as to what extent this interactive mechanism would help to effectively reduce customer distrust in the online retailer.

CHAPTER 2

THE INFLUENCE OF CONSUMERS' COGNITIVE AND PSYCHOGRAPHIC TRAITS ON PERCEIVED DECEPTION: A COMPARISON BETWEEN ONLINE AND OFFLINE RETAILING CONTEXTS

1. INTRODUCTION

Tactics involving deception and other variants of untruthfulness (e.g., misleading advertisements, misrepresentations of product information) are common within business disciplines, and raise several ethical questions and issues for companies, consumers and policy makers (Mujtaba and Jue, 2005). Research shows that, as a consequence of the abuse to which such deceptive practices have been utilized, consumers today are becoming increasingly distrustful of marketing tactics (Darke and Ritchie, 2007; Darke et al., 2010). For instance, consumers often associate sales contexts with relatively high levels of unethical behavior and distrust (Main et al., 2007). Moreover, the recent financial and economic scandals related to the current global crisis have increased even more the importance of business ethics (Olmedo et al., 2012), and most consumers today show a clear interest in the ethicality and/or social responsibility of companies (Marín, 2011). Likewise, consumers concerns about the ethics of selling activities have also grown in recent years in the Internet retail environment (Román, 2007; Yang et al., 2009; Limbu et al., 2011). The rapid rise in the number of consumer complaints related to online deception bears this out: in 2001, the Consumer Sentinel Network (www.ftc.gov/sentinel/) received just over 100,000 Internet fraud complaints. In 2012, it received over 2.000,000 complaints. Overall, the more generalized effects of consumer distrust generated by deceptive activities can operate through a defensive stereotyping mechanism, where deception evokes a negative stereotype of the untrustworthiness of marketers as a group, both in traditional settings (Darke and Ritchie, 2007) and in the online environment (Pavlou and Gefen, 2005). These reactions can seriously undermine the general effectiveness of marketing communication strategies, and could present considerable difficulties for marketers (e.g., loss in sales and reputation).

Importantly, although companies and retail chains have traditionally enjoyed an advantageous position to influence consumers' expectations about its offerings (Pitt et al., 2002), it is argued that Internet is rewriting the rules of engagement between companies and customers (Berry et al., 2010). Traditional power-limiting conditions of consumers – lack of information and lack of influence – are

being swept away by advancements in information technology, particularly through the potency of the Internet. Specifically, the Web has strengthened consumers' bargaining position, giving them a formidable tool to gather information and to be heard, not just by a few but by many (Varadarajan et al., 2010). This has two implications: first, the greater accessibility to different information sources that provides the Internet not only might help consumers to be less susceptible to potential deceptive offerings online, but also might be critical in driving their perceptions and behaviors when they shop offline (Neslin et al., 2006; Verhoef et al., 2007). Second, retailers' image or reputation is now more vulnerable to the reactions of displeased customers, given the unparalleled scope and diffusion that Internet allows of their negative comments about potential deceptive online and traditional sellers (Berry et al., 2010). Considering the potentially very high negative impacts of perceived deception and dissatisfaction (e.g., e-WOM, intention not to repurchase) on business success (Kwon and Sung, 2012), it is critical for online and traditional retailers to gain a better understanding of consumers' perceptions of deceptive practices and how consumers' characteristics influence such perceptions of deception in each shopping channel.

Previous research has noted the importance of studying consumer's characteristics as potential sources of different susceptibility to deception in both traditional (Aditya, 2001; Kenneth et al., 2007; Ramsey et al., 2007) and online channels (e.g., Langenderfer and Shimp, 2001; Grazioli, 2004; Román, 2010). Nevertheless, in spite of its potential importance, there has not been any academic research that has examined the role of consumers' variables (e.g., cognitive and psychographic traits) in their different perceptions of retailer's deceptive practices in online and offline channels. In the light of these issues, this study extends previous research on deception by specifically investigating how individual differences in cognitive factors (i.e., Internet-based information search and perceived Internet usefulness) and psychographic variables (i.e., shopping enjoyment, materialism and risk aversion) influence perceived deception. In addition, this study adds to the literature by analyzing the role of the same cognitive and psychographic antecedents on both online and offline perceived deception, that is,

their potential different effects associated with online versus in-store shopping. As the shopping experiences are different (traditional vs. online retailing), consumers may vary in the criteria and the weights they attribute to them when forming their ethical expectations and perceptions (Wolfinger and Gilly, 2001; Rieh and Danielson, 2007). In particular, we will reason that the strength of such influences differs depending on the channel used to purchase. In doing so, this research approach provides a more comprehensive understanding of perceived deception and its potential antecedents from the consumer's perspective using a side-by-side evaluation of channels from a consumer's perspective. This side-by-side comparison contributes to a better understanding of channel evaluation (Shankar et al., 2003), as it does not only determine the importance of the antecedents of perceived deception *within* each channel, but also *across* channels.

2. LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1. Deception in traditional and e-commerce settings

Deception is a general phenomenon that can occur in virtually any form of communication under conflict of interest (Johnson et al., 2001). At its most basic level deception involves a deliberate act by one party that is intended to produce a belief in another party that is inconsistent with what the first party believes to be true (DePaulo and DePaulo, 1989). This conscious misrepresentation of the truth can take a wide array of forms other than the outright lie, including concealment, omissions, exaggerations, half-truths or misdirection (Buller and Burgoon, 1994). Whatever the case, as a conscious, intentional, or deliberate act, manipulation through deception has always a goal or end purpose, i.e., to induce certain desired perceptual and/or behavioral changes in the target that would not otherwise have been feasible (Buller and Burgoon, 1994; Masip et al., 2004).

Over time, the function within business firms most often linked to the use of manipulative and deceptive practices has been marketing (Cox et al., 1965; Moyer and Hutt, 1978; Murphy and Laczniak,

1981; Hunt and Chonko, 1984; Aditya, 2001; Darke and Ritchie, 2007; Darke et al., 2010). Deception in the context of marketing practices has been defined as “unethical and unfair to the deceived” (Aditya, 2001; p. 737). These twin themes of *manipulative* and *unethical* underlie indeed many of the historical criticisms leveled at marketing activities (Hunt and Chonko, 1984). For instance, earlier research in retailing and personal selling has identified “the exaggeration of the features and benefits of a product” and “high-pressure selling techniques” as common examples of deceptive or manipulative tactics perceived by consumers in traditional shopping settings (Ingram et al., 2005; Román and Ruiz, 2005; Ramsey et al., 2007). Also, the belief that marketing and advertising unethically manipulate consumers into purchasing products they do not really need or want, that is increasingly common today (Shrum et al., 2011), had already been identified almost fifty years ago in prior marketing literature (Cox et al., 1965). In the marketing field, deception has received in fact special attention in the area of advertising for more than four decades regarding the following: 1) the definition, identification and measurement of advertising deception (Gardner, 1975; Carson et al., 1985; Gaeth and Heath, 1987; Aditya, 2001), 2) the identification of the specific types of claims that lead consumers to make erroneous judgments, along with the conditions under which they may be more or less susceptible to deception (Shimp, 1978; Shimp and Preston, 1981; Burke et al., 1988; Snyder, 1989; Johar, 1995; Burke et al., 1997; Kenneth et al., 1997; Bearden et al., 2001; Compeau et al., 2004; Kardes et al., 2007; Boush et al., 2009; Xie and Boush, 2012), and 3) the consequences of advertising deception on consumers' beliefs, affect and behavioral intentions (Friestad and Wright, 1994; Simpson et al., 1998; Koslow, 2000; Mujtaba and Jue, 2005; Obermiller and Spangenberg, 2005; Darke and Ritchie, 2007; Darke et al., 2010). One issue that has been well documented in this prior literature is that, more than blatantly false claims, the most common and effective deceptive advertisements use subtle and implicit tactics that can misled consumers even when the literal claims are true (Burke et al., 1988; Aditya, 2001; Compeau et al., 2004; Xie and Boush, 2012). For instance, Burke et al. (1988) found that two types of questionable claims frequently used by advertisers (i.e., expansions of literally true claims and inconspicuously qualified claims) led consumers to acquire false beliefs of the product performance not by a literal interpretation

of such claims, but by implication. That is, although the statements made in such advertising claims were literally true or, at least, sufficiently subjective or ambiguous to be untestable, they implied a product performance that was above the actual performance of the advertised brand (e.g., superiority implication in an incomplete comparative claim). This stream of research has also identified some consumer variables that can help them to cope with advertising deceptive attempts. For example, Kenneth et al. (1997) found that to have prior accurate knowledge about the product and a more cognitive processing style (as compared to a more affective one) reduced consumer susceptibility to advertising deception. Other studies have analyzed the effectiveness of several consumers' defensive responses to advertising deception, such as persuasion knowledge (e.g., Friestad and Wright, 1994), skepticism (e.g., Obermiller and Spangenberg, 2005) and distrust (e.g., Darke and Ritchie, 2007; Darke et al., 2010).

With the increasingly penetration of new information and communication technologies in commerce-related activities, a more recent stream of research have begun to pay attention to the topic of deception in online retailing. Similarly to prior research on deception in traditional settings, studies in this online context have also focused on: 1) the identification and measurement of the specific types of deception tactics that may arise over the Internet (Grazioli and Jarvenpaa, 2001; 2003; Mavlanova et al., 2008), 2) analyzing the type of signals (e.g., online safety cues, trust mechanisms) that can lead consumers to make erroneous judgments, along with the conditions under which they may be more or less susceptible to online deception (Grazioli and Jarvenpaa, 2000; Langenderfer and Shimp, 2001; Grazioli, 2004; Riquelme and Kegeng, 2004; Mitra et al., 2008; Marett and Wright, 2009), and 3) the consequences of online deception on consumers' beliefs and relational variables (Pavlou and Gefen, 2005; Román, 2007; Román and Cuestas, 2008; Román, 2010; Limbu et al., 2011). Existing studies on the first research topic (Grazioli and Jarvenpaa, 2001; 2003; Mavlanova et al., 2008) have classified the different forms of deception found in online settings into two main categories according to their specific end purpose (see Table 1). For instance, online deceptive tactics collected in the first category (i.e.,

masking, dazzling and decoying) seek to prevent consumers from acquiring an accurate or correct impression of the core (i.e., the item or product) hindering their process of seeking information by blocking, removing or confusing the attributes of the core (without adding anything untrue). On the other hand, online deceptive tactics included into the second category (i.e., mimicking, inventing, relabeling and double play) seek to create an incorrect or false perception of the core disrupting the consumers' process of information assessment by modifying or misclassifying the labels of the core (adding false information as if it were true) (Mavlanova et al., 2008). Interestingly, findings from these previous studies also revealed that deceivers selected such online deceptive tactics (Table 1) based on the characteristics of their targets as well as their own purported identities (Grazioli and Jarvenpaa, 2003). Moreover, among the four possible contexts in which such deceptive tactics can be performed (i.e., B2C, B2B, C2B, and C2C), those by online businesses against consumers were found to be the most frequent (Grazioli and Jarvenpaa, 2003). Researchers in this field have also highlighted that although many deceptive practices identified in online settings (e.g., inventing, masking, dazzling, decoying, or re-labeling) are variations of well-known deception types already used in the traditional shopping context, the intrinsic nature of the Internet medium not only make the perpetration of online deception easier, but has also introduced new forms of deception that were previously virtually impossible to execute in traditional retail settings (Grazioli and Jarvenpaa, 2001; Marett and Wright, 2009; Román, 2010). For example, *phishing* – directing users to fraudulent websites for the purpose of obtaining personal information – is a common fraudulent scheme that does not have an obvious equivalent in traditional channels, but that led 3,6 million adults to lose more than 3 billion dollars in 2007 (Marett and Wright, 2009). Finally, about the consequences of online deception, results from this stream of research parallels those obtained by advertising researchers in that online deceptive practices have been found to engender consumer generalized distrust toward online sellers (Pavlou and Gefen, 2005), as well as to negatively impact customer satisfaction (Román, 2010; Limbu et al., 2011), trust (Román, 2007) and positive word of mouth (Román and Cuestas, 2008).

Table 1

Online deception tactics

Tactics that block the formation of correct representation of the core		
	Characteristics	Example
Masking	Deceiver skips or removes important information of the core	Failing to disclose that the retailer is receiving money to advertise the product more prominently
Dazzling	Deceiver hides or makes difficult to find or understand important information of the core	Using excessively technical terms to explain refund policies, warranty information, or cancellation terms
Decoying	Deceiver attracts user's attention away from relevant information of the core	Using flashy animations to distract consumers from processing non-vivid yet more useful and informative textual descriptions
Tactics that promote incorrect representation of the core		
	Characteristics	Example
Mimicking	Deceiver modifies the core by copying the features of a legitimate item	Presenting as authentic a counterfeit or imitation product
Inventing	Deceiver makes up information about the core while the core does not exist	Telling users of the existence of a product when in fact does not exist
Relabeling	Deceiver describes the information of the core in a questionable way	Overstating the product actual benefits or performance
Double play	Deceiver suggests that the victim is taking advantage of the fabricated situation against the deceiver's will	Convincing victim that an unintentional mistake has been made

Source: Riquelme and Kegeng (2004), Mavlanova et al. (2008).

Whether at one or another retail channel, deception practices cause consumers to have false beliefs about the nature of the products being offered, and thereby their purchasing decisions may differ from those that they would have had otherwise (Aditya, 2001; Román, 2010). Importantly, rather than on actual deceptive practices, this study particularly focuses on consumer's perceptions of *product-related* deceptive practices, one deceptive tactic that can be performed both in online and offline environments. Drawing from prior studies on deception in traditional retailing and advertising (Gardner, 1975; Burke et al., 1988; Aditya, 2001; Compeau et al., 2004), as well as recent work on Internet deception (Grazioli and Jarvenpaa, 2001; 2003; Grazioli, 2004; Mavlanova et al., 2008; Román, 2010), in this study we contend that perceived deception takes place when consumers believe that the seller has manipulated product information content and/or presentation so as to induce desired behavioral changes in their

decision-making – changes that may be to the detriment of the consumers (i.e., . purchasing an item based on misleading representations of its characteristics).

According to the previous review of the literature, retailers can manipulate the *information content* by withholding, equivocating, or falsifying the content of information presented to consumers in their physical store or website (Aditya, 2001; Grazioli and Jarvenpaa, 2003). Also, the *information presentation* can be manipulated in both the online (Grazioli and Jarvenpaa, 2003) and the offline (Aditya, 2001) contexts by: (1) altering individual features (like sales price displays or packaging in a traditional stores, or the size, color and interactivity on the Internet) to either inhibit correct product understanding or foster incorrect product understanding and/or (2) manipulating the level of presentation vividness so as to focus consumers' attention on irrelevant information or distract their attention from relevant information. For instance, an online retailer may choose a text-only presentation for a product with desirable functionalities but unappealing appearance, or might use flashy animations as a “decoy” to distract consumers from processing non-vivid yet more useful and informative textual descriptions (Grazioli and Jarvenpaa, 2001; Mavlanova et al., 2008).

2.2. The process by which consumers perceive and respond to deception

Prior research has pointed out that, in the same way that not all manipulation tactics have the same potential to deceive, not all consumers are equally susceptible to deception (Langenderfer and Shimp, 2001; Putrevu and Lord, 2003; Compeau et al., 2004; Grazioli, 2004; Xie and Boush, 2011). For instance, if consumers do not believe an information claim that is an obvious exaggeration or is too vague for them to rely upon and disregard it, then no deception has occurred because such deceptive attempt has failed to influence consumers' purchasing decision (Compeau et al., 2004). However, even if it is assumed that such deceptive claims offer enough information to alert consumers of these retailer's deceptive attempts, consumers can also fail to recognize the deception cues or not carefully

evaluate the deceptive offer and proceed without ever noticing or considering the possibility that they are being deceived (Langenderfer and Shimp, 2001). Thus, an understanding of how consumers respond differently to deceptive persuasion attempts often requires more than a simple main-effects explanation based on source or message variables (Putrevu and Lord, 2003).

The Elaboration Likelihood Model (ELM) of persuasion effects developed by Petty and Cacioppo (1986) provides an important framework for understanding such different responses to persuasive communications. This theory suggests that consumers become more susceptible to persuasion practices when they lack either the motivation to engage in effortful thinking or the capacity/ability for processing the message's core arguments (Petty and Cacioppo, 1986). The ELM further suggests that a variety of variables play a key role in the persuasion process (e.g., personal involvement, argument repetition, need for cognition, or mood) by either affecting a person's motivation or his/her ability to process persuasive communications (Petty and Cacioppo, 1986; Langenderfer and Shimp, 2001; Jones et al., 2003).

The present study focuses on two cognitive factors – Internet-based information search and perceived Internet usefulness – and one psychographic variable – consumer's shopping enjoyment – as antecedents of perceived deception. First, the extent of information search and product acquisition time has both been used to conceptualize and measure personal involvement (Michaelidou and Dibb, 2008). In this vein, as discussed earlier, Internet, as a source of product information, has been proposed as a potential way in which consumers can cope with retailers' deceptive attempts due to its possibilities to both offer highly objective information and a great number of alternatives (Rieh and Danielson, 2007; Kirmani and Campbell, 2009). Thus, we see this online information search effort as a form of personal involvement which influences perceived deception in our study. In addition, perceived Internet usefulness has been related to consumer's ability to effectively use the online channel as a source of information (Davis et al., 1989), and consequently, it is considered an ability-related consumer factor in

our framework. Finally, we see shopping enjoyment as a motivational antecedent since past research has linked this variable to product acquisition time and comparison of alternatives (Konus et al., 2008).

As shown in Figure 1, we also include two additional psychographic factors as antecedents to perceived deception: consumer's risk aversion and materialism. In particular, these two variables were added to our research model given their recognized importance as determinants of several consumer shopping behaviors highlighted in prior literature (Shimp and Bearden, 1982; Richins and Dawson, 1992; Mick, 1996; Bao et al., 2003). In addition, they have been related to consumers' need for cognitive closure (Chiu et al., 2000; Rindfleisch et al., 2007) and self-esteem (Mick, 1996; Wray and Stone, 2005), two factors that in turn have been found to increase consumers' susceptibility to marketers' deceptive attempts in prior studies (e.g., Bearden et al., 2001; Kardes et al., 2007; Boush et al., 2009).

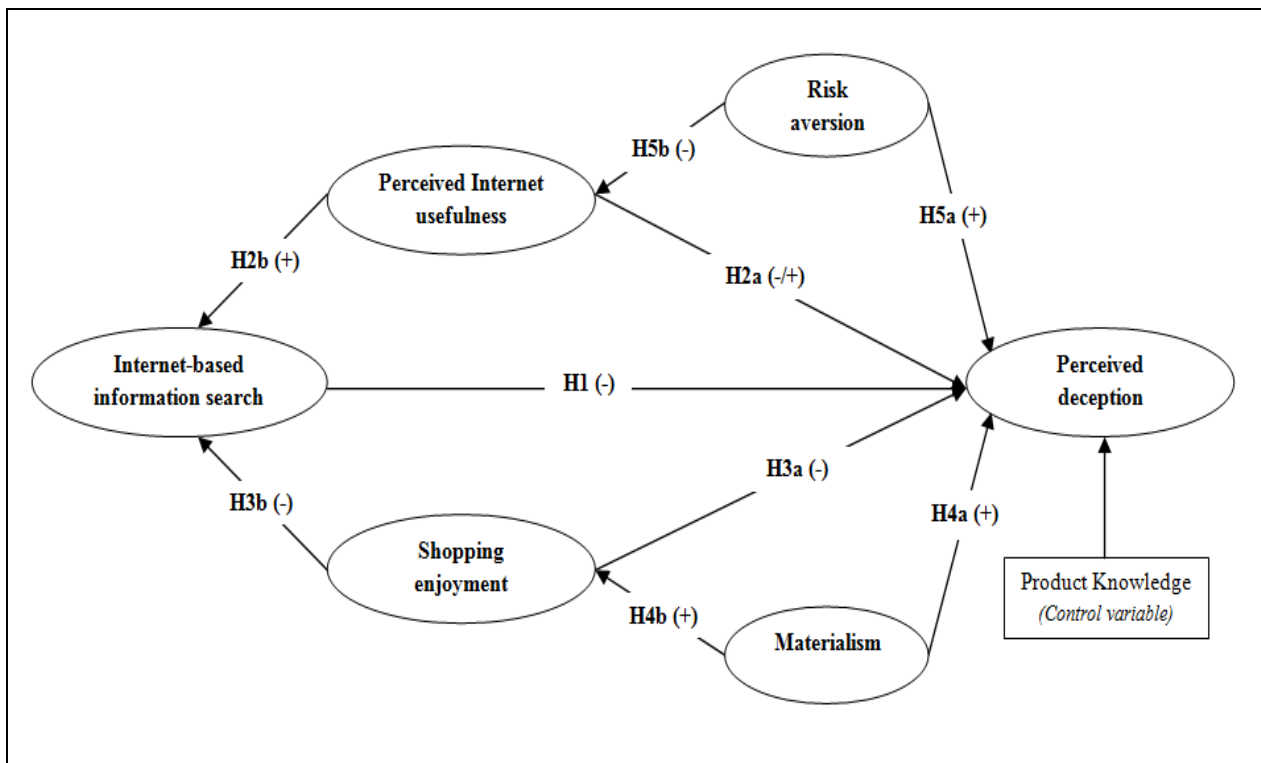
3. HYPOTHESES DEVELOPMENT

The model investigated in this research is presented in Figure 1. Based on previous assumptions from the ELM (Petty and Cacioppo, 1986), our framework proposes a set of individual factors that will influence perceived deception by either determining consumer motivation or ability to process persuasive communications. In particular, two cognitive factors (*Internet-based information search* and *perceived Internet usefulness*) and three psychographic variables (*shopping enjoyment*, *materialism* and *risk aversion*) are proposed as potential antecedents of individual differences in perceived deception. In addition, this study also examines whether the expected influence of these proposed antecedents of perceived deception will differ depending on the channel used, that is, their potential different effects associated with online versus in-store shopping. Specifically, through H1, H2a-H5a we will reason that whereas the proposed cognitive and psychographic factors will act as antecedents of perceived deception both in the online and the traditional channel, the strength and direction of the effects of such

antecedents will be different between these two shopping channels. The remaining hypotheses (H2b-H5b) are proposed to explain the relationships between these antecedents. Finally, Figure 1 also includes the effect of consumers' product knowledge on perceived deception as a control variable. In what follows, the rationale for each hypothesis is provided.

Figure 1

The research model



3.1. Consumer's cognitive traits and online/offline perceived deception

Internet-based information search

Internet-based information search refers to the extent to which product information has been gathered from the Internet, that is, the relative importance of Internet as a product information source compared

with alternative sources such as bricks-and-mortar stores (Jepsen, 2007; Cheema and Papatla, 2010). Prior research has shown that this online source of product information is increasingly used by consumers, both for those who shop online and for who do it at traditional stores (Verhoef et al., 2007). As predicted by the ELM (Petty and Cacioppo, 1986), the importance of the information gathered and used by consumers in their decision making process is a critical determinant of how they respond to persuasion attempts.

We expect that higher levels of Internet-based information search will lead to lower levels of consumers' perceived deception. First, compared to traditional bricks-and-mortar stores, Internet undoubtedly offers higher sources of product information, scoring highly in objectivity, accessibility, flexibility, and browsing possibilities (Castañeda et al., 2007; Rieh and Danielson, 2007). The wide availability of relevant information helps buyers to make more informed decisions (Chen and Dubinsky, 2003) and, as discussed earlier, to have a more accurate prior knowledge has been found to decrease consumer susceptibility to deceptive advertising (Kenneth et al., 1997). Second, since a competing offer is just a few clicks away on the Internet, online consumers can more easily compare different alternatives before buying with lower search cost than offline consumers (Shankar et al., 2003). In contrast, in-store consumers have already incurred travel costs. According to cognitive dissonance theory (Festinger, 1957), consumers may have a powerful motive (i.e., having incurred travel costs) to maintain cognitive consistency which ultimately can give rise to irrational and sometimes maladaptive behavior (i.e., being less receptive to deceptive tactics). In other words, consumers are more likely to be receptive to information confirming the fact of a "good deal", and are thereby more likely to accept information promoting a preexisting intention to buy, as compared to online consumers (Rieh and Danielson, 2007). The higher accessibility of online information allows such comparisons to be made prior to incurring travel costs. This stimulates comparative shopping and, consequently, it may contribute to greater skepticism toward online retailers' claims (Rieh and Danielson, 2007). This higher

skepticism or suspicion toward information provided by online retailers puts consumers in a better position to successfully detect an attempt at online deception (Grazioli, 2004).

In short, we believe that Internet-based information search, as compared to traditional product information sources (bricks-and-mortar stores), will have a negative effect on perceived deception, and this negative effect will be greater when consumers buy online as compared to traditional stores. Extant research has found online information search to be more accurate and complete among consumers who finally use the online channel to purchase a product, as compared to individuals who look for information online but end up purchasing in a traditional store (Lokken et al., 2003; Kim and Lee, 2008). In addition, online shoppers can put off transactions because of the lack of investment in travel time and possibly travel money, as well as the lack of pressure to buy from the salespeople. In other words, it is easier for them, as compared to consumers in traditional channels, to come back and complete a transaction at a later time, only when they feel they are absolutely ready to buy (Hoffman and Novak, 1996; Wolfinbarger and Gilly, 2001). Accordingly, the following hypothesis is proposed:

H1: Internet-based information search has a negative effect on consumers' perceived deception, and this effect will be stronger for consumers who shop online than for those who shop at traditional stores.

Perceived Internet usefulness

Perceived Internet usefulness is defined as the individuals' perceived utility offered by the Internet in a specific task-related context (Davis et al., 1989). We expect perceived Internet usefulness (PIU) to have a negative effect on perceived deception when consumers shop online. First, PIU is one of the most important antecedents of the use of Internet (Davis et al., 1989), and it is also positively related to consumers' online experience (Morahan-Martin and Schumacher, 2007). Moreover, perceived

usefulness of the online channel positively influences the frequency of online information search and online shopping (Bei et al., 2004; Muthitacharoen et al., 2006; Kim and Lee, 2008). Research suggests that this prior online experience make consumers more wary to deceptive practices (Andrews et al., 2000; Barone et al., 2004; Xie and Boush, 2011). Second, PIU is related to more positive attitudes toward the Internet in general (Davis et al., 1989), and online shopping in particular (Lee and Kwon, 2011). These more positive attitudes toward the online medium lead consumers to have more positive beliefs about the trustworthiness of the Internet and, thus, to feel more comfortable using it (George, 2002). Furthermore, consumers with a more positive attitude toward the Internet are less likely to expect deceptive practices from online retailers (Román, 2010). Given the positive relation of PIU to both online experience and attitudes toward the Internet, we expect that higher levels of PIU would decrease consumers' perceived deception when they shop online.

Nevertheless, we anticipate the opposite effect of PIU on perceived deception when consumers purchase in traditional stores. The rationale behind this contention arises from the potential presence of competitive effects between the two channels, that is, the potential negative effect of one channel assessment on the use and evaluations of the alternative channel. Specifically, prior research (Falk et al., 2008; Kwon and Lennon, 2009) has found that higher preferences for one shopping channel were negatively associated with alternative channel usage intentions, leading consumers to underestimate the perceived usefulness of such alternative shopping channel. Furthermore, findings from Lokken et al. (2003) reveal that higher levels of PIU decrease consumers' assessments of the utility and reliability of the information provided in bricks-and-mortar stores, and improve consumers' confidence in the accessibility, objectivity, and browsing possibilities of the Internet. In addition, following Wolfinbarger and Gilly (2001) and Rieh and Danielson (2007), it can be argued that consumers with higher levels of confidence in their ability to successfully use the Internet as a product information source have higher levels of skepticism toward bricks-and-mortar retailer's claims in general, and are more likely to

question the competence of salespeople and perceive them as deceitful. Based on these arguments, we hypothesize:

H2a: Perceived Internet usefulness has a negative effect on consumers' perceived deception for those who shop online, but a positive effect on consumers' perceived deception for those who shop at traditional stores.

As discussed before, extant research also reveals that both offline and online consumers use the Internet to search for product information (e.g., Lokken et al., 2003; Bei et al., 2004; Verhoef et al., 2007). The direct influence of perceived Internet usefulness on the use of Internet for information search has already been tested in the context of online shopping (Bei et al., 2004; Muthitacharoen et al., 2006), but we do not know of any academic research that has examined this relationship in the offline channel. However, given the importance of Internet as an information tool mentioned earlier, we also expect this influence to hold in the offline environment. Accordingly:

H2b: Perceived Internet usefulness has a positive effect on the amount of Internet-based information search, both for consumers who shop online and for those who shop at traditional stores.

3.2. Consumer's psychographic characteristics and online/offline perceived deception

Shopping enjoyment

Shopping enjoyment refers to the hedonic utility derived from shopping (Konus et al., 2008). Consumers who derive enjoyment from shopping intrinsically tend to like shopping, and they are not bothered by the extra time required to engage in extensive shopping search (Konus et al., 2008). These consumers can be regarded as experienced shoppers and, as accumulated experience with the shopping tasks and process increases, so do their personal knowledge about persuasion sellers' tactics, and about

how to skillfully cope with them (Friestad and Wright, 1994; Konus et al., 2008). Therefore, we contend that the higher experience and persuasion knowledge of consumers who enjoy shopping will help them to identify and successfully cope with sellers' persuasive attempts.

We also hypothesize that this negative effect of shopping enjoyment on perceived deception will be stronger in the offline than in the online context. This is based on the contention that in the traditional context shopping enjoyment leads to higher levels of consumers' purchase involvement and accumulated experience with the shopping tasks, in comparison to Internet shopping (Mathwick et al., 2002). In fact, research shows that the social setting, such as shopping with friends in traditional stores, enhances the positive evaluation of the shopping experiences and consumers' involvement (Mangleburg et al., 2004). Accordingly, we propose that:

H3a: Shopping enjoyment has a negative effect on consumers' perceived deception, and this effect will be stronger for consumers who shop at traditional stores than for those who shop online.

A review of past studies also suggests that shopping enjoyment is one of the antecedents of information search (Beatty and Smith, 1987; Hoffman and Novak, 1996). Some consumers consider information search in traditional stores as part of, or an excuse for, shopping (Jepsen, 2007). These consumers consider information search offline a positive activity because it gives them an opportunity to leave home and socialize with others (Mangleburg et al., 2004). As discussed earlier, the Internet is not able to provide the same social "side-effects" of information search, and consequently shopping enjoyment has been related to lower use of the Internet for information search (Jepsen, 2007). Accordingly, we expect that shopping enjoyment will increase the relative importance of offline information sources and, thus, will reduce the relative importance of online information ones. Hence, the following hypothesis is proposed:

H3b: Shopping enjoyment has a negative effect on the amount of Internet-based information search, both for consumers who shop online and for those who shop at traditional stores.

Materialism

Materialism can be defined as a value representing the individual's orientation toward the role of possessions in life, and one that guides people's choices and conduct in a variety of situations, including consumption arenas (Richins and Dawson, 1992).

Materialism is hypothesized to have a positive influence on perceived deception for several reasons. First, materialistic consumers' perception of acquisition as the pursuit of happiness increases the likelihood that products purchased fail to perform to their high (unrealistic) expectations, leading to greater post-purchase dissatisfaction (Wang and Wallendorf, 2006). Given the higher prevalence of negative (falling below expectations) versus positive (exceeding expectations) disconfirmation of the initial expectations of product performance among materialistic consumers, they are likely to feel deceived more often (Darke et al., 2010). In fact, a number of studies reveal that highly materialistic individuals display low self-esteem and considerable social anxiety (e.g., Mick, 1996; Burroughs and Rindfleisch, 2002), and research on persuasion shows that individuals low in self-esteem are easier to persuade as compared to high-self-esteem individuals (Bearden et al., 2001). Second, materialistic individuals are more prone to engage in impulse buying behavior (Mick, 1996). These spontaneously and unreflectively behaviors are likely to produce regret and anger responses because of post-purchase cognitive dissonance (Liao et al., 2009). In addition, greater propensity of materialistic consumers to engage in non-rational purchase behaviors are related to more heuristic information processing, in which the motivation to process (or elaborate) the issue-relevant arguments (product information) is low and more affectively dominated (focused on peripheral cues) (Petty and Cacioppo, 1986; Christandl et al., 2010). This is consistent with other studies which show that materialistic individuals have a high need for cognitive closure (Rindfleisch et al., 2007), which in turn leads these consumers to seize on information that helps them attain quick closure, and tend to neglect later, ambiguous, or difficult-to-process information (Kardes et al., 2007). Because marketers usually front-load their persuasion

attempts with content favorable to the product or service, delaying any mention of drawbacks to the end, consumers high in need for cognitive closure are more likely to be deceived (Boush et al., 2009).

We also expect that the negative effect of materialism on perceived deception will be lower in the online context than in the offline context, since online shopping has been found to decrease impulsiveness buying behavior (Wolfenbarger and Gilly, 2001). The general lack of impulsiveness during online shopping is due to the inability to take possession of goods immediately, which lowers consumers' pressure and motivation to buy online, whereas in the offline context they are disappointed if they come home empty-handed (Wolfenbarger and Gilly, 2001). Thus, we put forward the following hypothesis:

H4a: Materialism has a positive effect on consumers' perceived deception, and this effect will be stronger for consumers who shop at traditional stores than for those who shop online.

The consumer behavior literature provides extant support for a positive relationship between materialism and shopping enjoyment (Burroughs and Rindfleisch, 2002; Mokhtarian et al., 2006). Accordingly, we formulate the following:

H4b: Materialism has a positive effect on consumer shopping enjoyment, both for consumers who shop online and at traditional stores.

Risk aversion

Risk aversion represents an individual attitude toward taking risks that is relatively invariant across situations (Mandrick and Bao, 2005), and has been defined as a decision maker's "preference for a guaranteed outcome over a probabilistic one having an equal expected value" (Qualls and Puto, 1989; p. 180). As an individual difference or predisposition, this overall negative attitude toward risks has been

found to strongly affect consumers' shopping behaviors in both traditional (Shimp and Bearden, 1982; Bao et al., 2003) and online settings (Gupta et al., 2004; Brashear et al., 2009).

Risk aversion is hypothesized to increase consumer's perceived deception. First, high risk-averse consumers are more likely to experience information overload (Sproles and Kendall, 1986) and more prone than low risk ones toward ambivalence and feelings of being "confused by overchoice" when making product decisions (Bao et al., 2003). Indeed, high risk-averse consumers may feel less confident in their ability to distinguish "good" from "bad" information, and thus be less able to gather accurate product information (Simpson et al., 2008). Also, Bao et al. (2003) suggest that due to the inherent tendency of high risk-averse consumers to avoid uncertainty (either by avoiding trying new brands/products or by buying only the known brand or higher-priced brand), they also reduce their opportunities to accumulate consumption knowledge and experience, which ultimately can lead them to feel less confident in their product choices. Accordingly, risk-averse consumers may be less able to successfully identify and cope with sellers' manipulation attempts and, thus, be more likely to be deceived by them as compared to low risk-averse individuals (Friestad and Wright, 1994). In addition, research also shows that risk aversion is associated with lower levels of self-esteem (Wray and Stone, 2005) and higher levels of need for cognitive closure (Chiu et al., 2000), which in turn, as discussed earlier, increase consumers' susceptibility to marketers' deceptive attempts (Bearden et al., 2001; Kardes et al., 2007; Boush et al., 2009).

Furthermore, the negative effects of risk aversion on consumers' purchase decision process discussed above are especially significant in some transitional markets, where objective quality information is lacking and intrinsic product information is less credible (Bao et al., 2003). These characteristics match those associated with the Internet-specific attributes (e.g., the virtual environment, the impossibility of physically experiencing the product, the lack of opportunities for face-to-face interactions). In this vein, prior research has shown that consumers perceive more risks in online shopping than in the traditional retail environment (Biswas and Biswas, 2004). Thus, given the vast amount of product selection and

information offered on the Internet, it is reasonable to expect that risk-averse consumers tend to feel greater confusion by the overflowed information when they shop online than when they shop in the traditional channel. Hence, we anticipate that the expected negative effect of risk aversion on consumers' perceived deception will be stronger in the online channel as compared to the traditional channel. Accordingly, the following hypothesis is proposed:

H5a: Risk aversion has a positive effect on consumers' perceived deception, and this effect will be stronger for consumers who shop online than for those who shop at traditional stores.

In addition, we also expect that risk aversion will be negatively related to perceived Internet usefulness. Prior research has found that perceived risks in the use of Internet negatively influence both perceived easy to use and perceived usefulness of Internet (Jarvenpaa et al., 2000; Vijayasarathy and Jones, 2000; Li and Huang, 2009), and it also known that risk-adverse consumers are more worried about the potential risks of using the Internet (e.g., safety of personal and financial information, performance and fraud risks) than less risk-adverse ones (Reisenwitz et al., 2007; Brashear et al., 2009). Consequently, we propose that:

H5b: Risk aversion has a negative effect on perceived Internet usefulness, both for consumers who shop online and those who shop at traditional stores.

3.3. Control variable: Consumer's product knowledge

Finally, we have also incorporated the level of consumer's product knowledge as a control variable in our research model. It is known that consumers with higher levels of product knowledge have better-developed and more complex schemata with well-formulated decision criteria (Alba and Hutchinson, 1987), which makes them less susceptible to marketers' deceptive attempts (Andrews et al., 2000; Xie and Boush, 2011).

4. RESEARCH METHOD

4.1. Data collection and sample

To test our hypotheses, we collected data on online and offline consumers in the retail context of technological products (e.g., personal computers, electronic products). We selected this product category for several reasons. First, technological products are among the most heavily frequented physical-product category acquired through the Internet (Comscore Report, 2011), which facilitated data collection in the online retail environment. Second, they constitute pure *search goods* (Bart et al., 2005), that is, they are dominated by product attributes for which full information on dominant aspects can be gathered prior to purchase. As such, product-related attributes (e.g. physical attributes) are easier to be objectively evaluated than service-related attributes (e.g. credibility), which consumers cannot verify even after use (Bei et al., 2004). Finally, technological products are, in general, high-involvement items, and consumers in these product categories are typically engaged in a problem-solving task of moderate to high complexity (Bart et al., 2005). These tasks and buying processes, the technical complexity of computers and electronic specific features, as well as the rapid progress of their innovations, can encourage consumers to seek the assistance and advice of sellers, which in turns increases the importance of the sellers' communication tactics in the consumer's purchase-decision process.

A survey was selected as data collection instrument. A marketing research firm was hired to assist with the data collection. Trained interviewers randomly approached respondents among individuals who passed the data collection point located on the pedestrian walkway in three major metropolitan cities. A similar procedure can be seen in previous research (Frambach et al., 2007; Román, 2010). Screening questions were administered before the respondent was invited for an interview. An invitation only followed if the respondent proved to be eligible for the study (that is, he/she must be over eighteen years, and should have purchased, at least, one technological product -via online or offline- in the last six months). The latter condition was required in order to facilitate consumers' evaluations of the

retailers. Then, subjects were taken to the company office (conveniently located in the metropolitan area), where specialist interviewers surveyed respondents about the questions included in the questionnaire instrument. Interviews typically lasted 15 minutes. Quota sampling was applied to obtain evenly distributed numbers of respondents in the two shopping contexts (for a similar procedure see Frambach et al., 2007; p.30-31).

Table 2

Respondent characteristics (%).

Demographic variable	Whole sample (N=409)	Online sample (n=208)	Offline sample (n=201)	X ²
Gender				
Male	59,4	58,2	60,7	0,27
Female	40,6	41,8	39,3	
Age				
< 20	9,0	8,7	9,5	0,44
20-35	48,9	50,5	47,3	
36-50	33,3	32,2	34,3	
> 50	8,8	8,7	9,0	
Education				
Low (primary school)	12,0	7,7	16,4	7,52*
Middle (high school)	46,2	47,6	44,8	
High (University; polytechnic)	41,8	44,7	38,8	
Occupation				
Employed people	47,7	50,0	45,3	1,24
Self-employed workers	11,0	10,6	11,4	
Students	19,1	17,3	20,9	
Others (retired, homemaker, unemployed)	22,2	22,1	22,4	

* $p < .05$

The final sample consisted of data from 409 consumers (208 who shopped online and 201 who shopped at traditional store). A profile of the general sample and the two sub-samples is shown in Table 2. Collectively, the respondents were relatively young, generally highly educated and in work. According to whether the purchase was made through the Internet or in a traditional store, an additional check for demographic differences between the online and offline sub-samples revealed that both

groups only differ significantly in the education level of their members, with this being slightly higher among online than among offline shoppers (Table 2), which is consistent with previous multichannel studies (Lokken et al., 2003; Brashear et al., 2009).

4.2. Instrument development

In order to get a better understanding of the research variables, we interviewed 6 consumers who had recently purchased a technological product (e.g., smart phones, laptop computers, etc.). Based on these interviews and the literature review, a questionnaire comprising 7-point Likert-scales was prepared and a formal pretest was conducted prior to the main survey with 60 consumers to improve the measures. The respondents were asked to point out any scale items they found confusing, irrelevant, or repetitive. Following this pretest, a few refinements needed to be made to clarify the scale items and to adapt³ them to the context of the study (both online and offline). Final items are shown in Table 3. Online and offline perceived deception were measured with six items respectively from Román (2010). Items refer to the extent to which the consumer believes that the online/offline retailer uses deceptive or manipulative practices with the intent of persuading consumers to purchase the retailer's offerings. Importantly, both scales focus on consumer's perceptions of online/offline retailer's deceptive practices rather than on the act of deceiving itself (Román, 2010).

Internet-based information search captured the percentage of information gathered online versus offline (Levin et al., 2003; Jepsen, 2007). For both online and offline shoppers, respondents were asked to distribute one hundred points between these two information sources (Internet versus traditional store) according to how important they had been in their purchase choices and decisions. Perceived Internet usefulness was measured using a three-item scale adapted from Davis et al. (1989), which has

³ Minor adaptations (i.e., replacing the term "website" for "store") were needed to suit Roman's (2010) perceived online deception scale to the traditional channel. Also, three items from the original Richins and Dawson's (1992) materialism scale were eliminated, as they were found redundant.

been widely used in prior research (see Cheung et al. 2003 for a brief review). Individuals were asked to indicate their agreement or disagreement with three statements which refer to the extent to which consumers believe that the use of Internet would yield positive benefits for them.

Table 3

Measurement instrument

Construct	Measurement items ^a	Source
Perceived deception	PD1. This website/store exaggerates the benefits and characteristics of its offerings PD2. Information given on their products is unclear PD3. It uses misleading tactics to convince consumers to buy its products PD4. This website/store is much focused on product features that are not important to buy PD5. It misrepresents product characteristics PD6. This website/store takes advantage of less experienced consumers to make them purchase	Román (2010)
Product knowledge	PK1. Number of years that you have been using this kind of product PK2. Number of times that you have purchased this kind of product	Beatty and Smith (1987) Bei et al. (2004)
Perceived Internet usefulness	PIU1. Using the Internet is convenient for me PIU2. Using the Internet saves me time and effort PIU3. Using the Internet is useful	Davis et al. (1989)
Shopping enjoyment	SE1. Shopping is fun SE2. I get a real high from shopping SE3. Shopping helps me relax	Mokhtarian et al. (2006) Konus et al. (2008)
Materialism	M1. I admire people who own expensive homes, cars, and clothes M2. The things I own say a lot about how well I'm doing in life M3. Some of the most important achievements in life include acquiring material possessions	Richins and Dawson (1992) Keng et al. (2000)
Risk aversion	RA1. I do not feel comfortable about taking chances RA2. I prefer situations that have foreseeable outcomes. RA3. Before I make a decision, I like to be absolutely sure how things will turn out.	Mandrick and Bao (2005)

^aExcept product knowledge, all scales consisted of 7-point Likert questions, ranging from "1 = strongly disagree" to "7 = strongly agree."

Three items adapted from prior studies in multichannel research context (Mokhtarian et al., 2006; Konus et al., 2008) were used to measure shopping enjoyment. Importantly, this scale focuses on the entertainment and emotional benefits related to the hedonic value of shopping, such as consumers'

general feelings of fun and excitement gained from shopping (Jepsen, 2007). Materialism was measured based on the scale proposed by Richins and Dawson (1992). Following existing research (Keng et al., 2000), our measure of materialism focuses on the “success” items which relate to the individuals' disposition to judge one's own and others' success by the number and quality of possessions acquired. Shortened versions of Richins and Dawson's (1992) materialism scale have been used successfully in other studies (Richins, 2004; Mokhtarian et al., 2006).

Consumer's general risk aversion was assessed using a three-item scale adapted from Mandrick and Bao (2005). This adaptation is consistent with previous studies examining consumers' attitudes toward risk in both the traditional retail context and the online context (Bao et al., 2003; Brashear et al., 2009). Finally, in line with earlier research (e.g., Beatty and Smith, 1987; Bei et al., 2004), consumers' knowledge about technological products was measured by asking consumers how much time they had spent using this kind of products and how many times they had bought them. The use of the amount of purchasing and usage experience with the product as indicators of product knowledge is consistent with Alba and Hutchinson's (1987) conceptualization of product knowledge.

5. DATA ANALYSIS AND RESULTS

5.1. Instrument validation

The constructs were assessed for convergent and discriminant validity via confirmatory factor analysis (CFA) using linear structural relations (LISREL 8.80). We first checked the unidimensionality of each construct. Both online ($\chi^2(154) = 292.40$ $p < .01$; GFI=.88; AGFI=.83; NNFI=.95; CFI=.96; RMSEA=.07; RMSR=.07) and offline ($\chi^2(154) = 267.11$ $p < .01$; GFI=.88; AGFI=.84; NNFI=.96; CFI=.97; RMSEA=.06; RMSR=.06) measurement model had a reasonable good fit. In addition, the observed normed χ^2 for both online and offline model was 1.90 and 1.73 respectively, which is smaller

than the 3 recommended by Fornell and Larcker (1981), indicating a good model fit when we consider the sample size.

Table 4

Construct measurement summary: Results of convergent validity tests

Item	Online sample (n=208)			Offline sample (n=201)		
	SD loading (t-value)	AVE	CR	SD loading (t-value)	AVE	CR
PD1	0,78 (13,34)	0,74	0,94	0,79 (13,35)	0,75	0,95
PD2	0,86 (15,30)			0,87 (15,45)		
PD3	0,88 (15,99)			0,91 (16,59)		
PD4	0,83 (14,64)			0,91 (16,50)		
PD5	0,90 (16,43)			0,90 (16,34)		
PD6	0,92 (17,14)			0,81 (13,66)		
PK1	0,77 (7,75)	0,56	0,72	0,91 (7,09)	0,60	0,74
PK2	0,74 (7,61)			0,59 (5,59)		
PIU1	0,80 (13,34)	0,74	0,90	0,90 (16,12)	0,85	0,94
PIU2	0,99 (18,55)			0,97 (18,43)		
PIU3	0,78 (12,89)			0,90 (16,17)		
SE1	0,81 (13,68)	0,74	0,90	0,88 (14,94)	0,74	0,89
SE2	0,89 (15,60)			0,80 (13,15)		
SE3	0,88 (15,48)			0,90 (15,45)		
M1	0,50 (6,57)	0,54	0,77	0,80 (12,19)	0,53	0,75
M2	0,91 (12,64)			0,89 (13,85)		
M3	0,77 (10,80)			0,59 (5,59)		
RA1	0,78 (12,86)	0,71	0,88	0,70 (10,61)	0,63	0,84
RA2	0,88 (15,25)			0,77 (11,82)		
RA3	0,88 (15,14)			0,90 (14,51)		

AVE average variance extracted; CR scale composite reliability.

Following the procedures suggested by Fornell and Larcker (1981) and Bagozzi and Yi (1988), convergent validity was assessed by verifying the significance of the t values associated with the parameter estimates. As shown in Table 4, the standardized path loadings for all of the questions were

positive and statistically significant ($p < .01$) for both datasets. Reliability of the measures was also confirmed with the composite reliability index being higher than the recommended level of .60 (Bagozzi and Yi, 1988) and average variance extracted was higher than the recommended level of .50 (Bagozzi and Yi, 1988; p. 80) for all latent constructs in both subsamples (Table 4).

Finally, discriminant validity was tested by comparing the average variance extracted by each construct to the shared variance between the construct and all other variables (Fornell and Larcker, 1981). As shown in Table 5, for each comparison, the explained variance exceeded all combinations of shared variance, in both the online and the offline sample, thus confirming discriminant validity.

Table 5

Mean, SD, and correlations between latent variables

Construct	Online sample								Offline sample							
	Mean (S.D.)	PD	IBS	PK	PIU	SE	M	RA	Mean (S.D.)	PD	IBS	PK	PIU	SE	M	RA
PD	3,61 (1,27)	0,74	0,09	0,02	0,03	0,00	0,01	0,19	3,85 (1,34)	0,75	0,00	0,01	0,04	0,00	0,12	0,10
IBS	65,94 (19,29)	-0,30*	na	-	-	-	-	-	27,26 (23,19)	-0,06	na	-	-	-	-	-
PK	3,80 (3,01)	-0,14*	-0,14*	0,56	0,05	0,00	0,00	0,00	3,71 (3,08)	-0,08	-0,08	0,60	0,04	0,01	0,05	0,01
PIU	6,08 (0,79)	-0,17*	0,06	0,22*	0,74	0,02	0,00	0,01	5,60 (1,24)	0,20*	0,27*	0,21*	0,85	0,00	0,00	0,01
SE	4,57 (1,16)	0,09	-0,06	0,05	0,13	0,74	0,10	0,02	4,59 (1,12)	-0,04	0,04	-0,10	0,02	0,74	0,04	0,03
M	3,53 (1,24)	0,08	0,03	0,06	0,03	0,31*	0,54	0,00	3,83 (1,33)	0,35*	-0,04	-0,22*	0,06	0,21*	0,53	0,13
RA	4,93 (1,22)	0,44*	-0,22*	0,03	0,08	0,14*	0,06	0,71	5,02 (1,12)	0,32*	-0,04	-0,11	0,10	0,16*	0,36*	0,63

AVE is reported along the diagonal of the both matrix, *na* not applicable. Shared variances of multi-item measures are reported in the upper half of the both matrix. Correlations are reported in the lower half of the both matrix: * $p < .05$.

PD Perceived deception, *IBS* Internet-based information search, *PK* Product knowledge, *PIU* Perceived Internet usefulness, *SE* Shopping enjoyment, *M* Materialism, *RA* Risk aversion.

5.2. Multi-group analyses of invariance

To establish whether the hypothesized differences between the paths linking the individual characteristics to perceived deception in the two shopping context considered (online versus offline) were statistically different, various multi-group analyses were performed using LISREL 8.80.

Specifically, following prior literature (Vandenberg and Lance, 2000; Byrne, 2001; Teo et al., 2009) a series of nested models were examined to identify group difference.

First, as Vandenberg and Lance (2000) argued, the establishment of measurement or metric invariance across groups is a logical prerequisite to conducting substantive cross-group or cross-context comparisons. In particular, analyses of the differences between the structural relationships can only be meaningful when the items measure the same thing and to the same degree in both contexts. Thus, the first step is to determine that the measurement model was invariant across the two samples (online versus offline).

Before proceeding to test for invariance, the structural model fit for the separate samples for online and offline shoppers were tested (Teo et al., 2009). The results revealed evidence of a good fit of the models to the data (Table 6). Following this, measurement invariance was tested by evaluating the two samples nested in a hierarchical sequence with the less restrictive model⁴ used as a baseline for the evaluation of the more restrictive model (Vandenberg and Lance, 2000).

To test for metric invariance, one second model was estimated with all the factor loadings were constrained to be equal across the two samples (M_2). These constraints increased the χ^2 value from 652.10 to 710.98, gaining seventeen degrees of freedom. Because the metric invariance model (M_2) is nested within the baseline model (M_1), a χ^2 difference test was performed. Such χ^2 difference was statistically significant ($\Delta\chi^2_{17}=58.88$, $p < .01$), so full metric invariance was not supported (see Table 6). However, since full metric invariance is difficult to establish, several researchers have proposed to relax

⁴ The first model tested whether the base model structure (i.e. the pattern of fixed and nonfixed parameters) is invariant across groups (Teo et al., 2009). The creation of this baseline model involved testing all of the hypothesized relationships in the theoretical model (Figure 1) using our two distinct samples (online and offline) to calculate a joint structural equation model. This model is also known as the configural model and is evaluated based on its goodness-of-fit indices to determine if the model is a good representation of the hypothesized relationships (Steenkamp and Baumgartner, 1998; Teo et al., 2009). Our results, reported in Table 6, indicate that the baseline model (M_1) has 350 degrees of freedom (175 degrees of freedom for each individual baseline model) and showed reasonable fit indices ($\chi^2(350) = 652.10$ ($p < .01$), $\chi^2/df=1.86$, GFI=.87, CFI=.96, NNFI=.95, RMSEA=.07). The results show that full configural invariance was established.

it by establishing partial metric invariance (Steenkamp and Baumgartner, 1998; Byrne, 2001; Teo et al., 2009). They suggest that if the non-invariant items constitute a small proportion of the model, cross-group comparisons can still be made because the non-invariant items will not affect the comparisons to any meaningful degree⁵. Accordingly, we examined which factor loadings were not invariant. Only five out of seventeen estimated factor loadings⁶ appeared to be nonequivalent across contexts (M₃).

Table 6

Consecutive tests of invariance and fits indices

Models and test	χ^2	df	χ^2/df	GFI	NNFI	CFI	RMSEA
Online sample (n=208)	330,79	175	1,89	0,87	0,95	0,96	0,06
Offline sample (n=201)	306,75	175	1,75	0,87	0,96	0,96	0,06
M ₁ : Baseline model (Configural invariance)	652,10	350	1,86	0,87	0,95	0,96	0,07
M ₂ : Full metric invariance (All factor loadings equal)	710,98	367	1,94	0,86	0,94	0,95	0,07
M ₁ -M ₂ : χ^2 diff.(17) = 58.88; p < .01							
<i>Conclusion: Not all loadings are invariant</i>							
M ₃ : Partial metric invariance (Five factor loadings freed) ^a	669,95	362	1,85	0,87	0,95	0,96	0,07
M ₁ -M ₃ : χ^2 diff.(12) = 17.85; p = .16 (p > .05)							
<i>Conclusion: Non-invariant items constitute a small proportion of the model.</i>							

^aM₃ represents the model resulting from applying consecutive factor loadings invariance test.

Based on the statistical analyses, it can be concluded that configural and partial metric invariances were established. This was sufficient⁷ for testing for differences in structural coefficients between the online and offline context.

⁵ Steenkamp and Baumgartner (1998) and Teo et al. (2009) recommend that a full metric invariance test is not a necessary requirement for further tests of invariance and substantive analysis if at least one item (other than the one fixed at unity to define the scale of each latent construct) is invariant, which is the case in our study.

⁶ Consistent to prior research (Steenkamp and Baumgartner, 1998; Byrne, 2001; Teo et al., 2009), when performing the invariance tests of the structural relationships, these factor loadings were set free (partial measurement invariance).

⁷ Additionally, measurement invariance was also investigated from a practical approach. Due to chi square's extreme sensitivity to sample size and model complexity, several researchers have proposed a more practical approach by

5.3. Hypotheses testing

Finally, a comparison was performed to establish whether the hypothesized differences between the paths linking the individual characteristics to perceived deception in the two shopping context considered (online versus offline) were statistically different. A fourth structural model was then estimated with all parameters (structural path coefficients) constrained to being equal across the online-offline samples (M_4) and compared with the previous model obtained as a result of invariance test conducted earlier (M_3), in which all of these parameters were freed. The resulting χ^2 difference test with 10 degrees of freedom was significant ($\Delta\chi_{10}^2=42.95$, $p<.01$), indicating that the structural path coefficients were not invariant across contexts (see Table 7). Next, to further examine individual hypotheses, a series of one degree of freedom pair-wise comparisons of online and offline samples were conducted separately for each hypothesized path. In each case, the more restrictive model (M_4) was compared to a nested model where each specific parameter in turn was freed for estimation (Byrne, 2001). Any chi-square difference in the two models would come directly from the difference in fit attributed to the freed path – a significant chi-square difference for the two models would suggest the path estimates are significantly different (Teo et al., 2009). Except for H3a, the rest of paths related to the direct effects⁸ on perceived deception (H1, H2a, H4a, and H5a) proved different between online and offline context and all of them in the direction expected (Figure 2).

First, the strength of the relationship between Internet-based information search and perceived deception was found to be significantly different across contexts ($\Delta\chi^2 = 5.53$, $p < .05$). Parameter

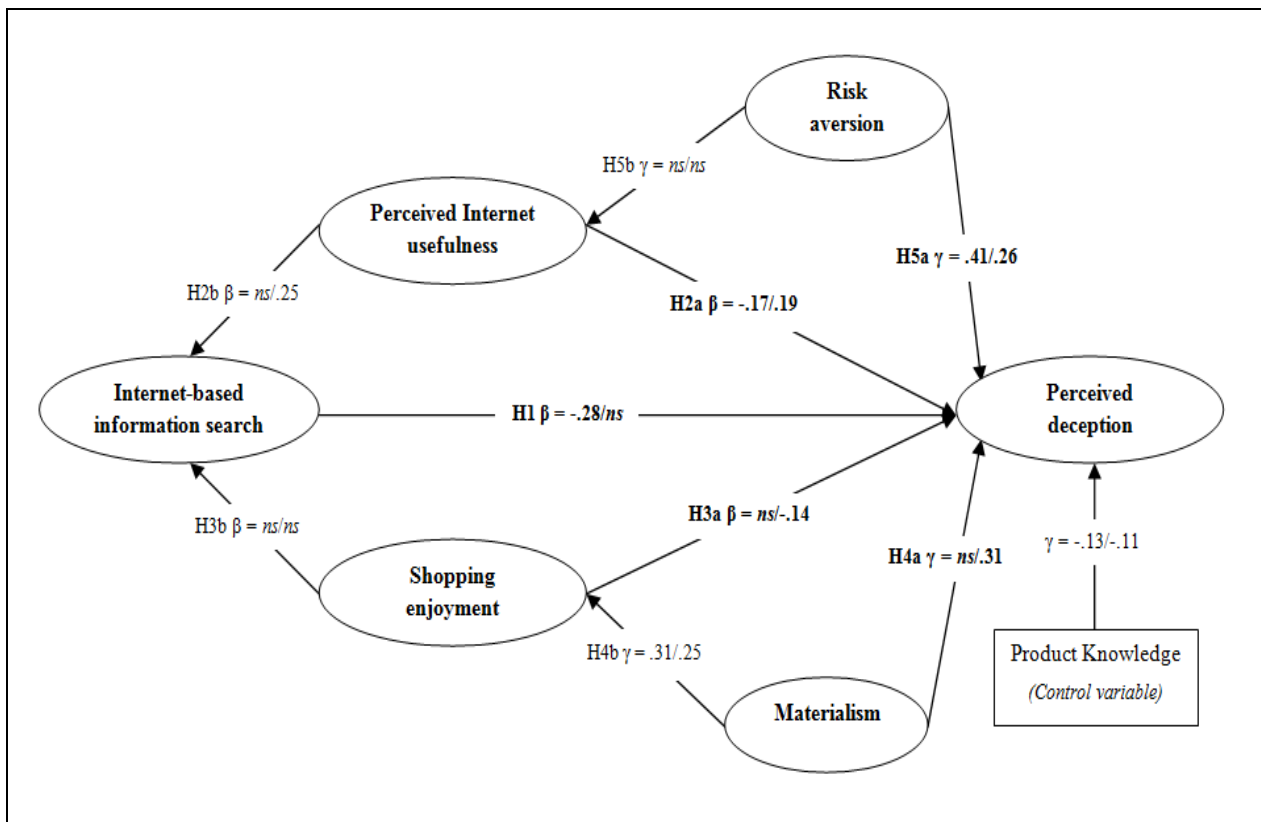
investigating the worsening of the fit indices by constraining parameters to be equal across contexts (Little, 1997; Steenkamp and Baumgartner, 1998). Little (1997) proposed that the equality of factor loadings is upheld when the NNFI decreases less than .05 after imposing equality constraints on all factor loadings. This happened to be our case, as the NNFI did not drop more than .01 after imposing the equality constraints.

⁸ In addition, an effort was made to control for the influence of previous purchase experience in the online channel on consumers' perceptions of deception practices in the offline channel. Accordingly, the structural model was estimated again including the control variable "consumers' online purchases in the last year" as a direct antecedent of perceived deception in the offline channel. Not only this relationship was not significant ($\beta = .08$; $t\text{-value} = 1.21$), but also all the other effects remained the same.

estimations, reported in Table 7, also confirmed the direction expected for the difference ($\beta_{\text{online}} = -.28, p < .01$; $\beta_{\text{offline}} = -.06, p > .05$), so our first hypothesis was supported. Regarding H2a, our results supported the expected different effects of perceived Internet usefulness on consumer's online and offline perceived deception ($\Delta\chi^2 = 12.93, p < .01$), showing a positive effect (decreasing) in online context ($\beta = -.17, p < .05$), and a negative effect (increasing) in the offline context ($\beta = .19, p < .05$).

Figure 2

Structural Model Estimated (Standardized coefficients for online/offline context)



Although shopping enjoyment was found to have a stronger effect on decreasing perceived deception in the offline context ($\beta = -.14, p < .05$) than in the online context ($\beta = -.02, p > .05$), these differences were not significant ($\Delta\chi^2 = 1.61, p > .05$), so H3a was only partially supported. As hypothesized in H4a,

the negative effect of materialism on increasing perceived deception was highly significant in the offline context ($\gamma = .31, p < .01$), but not in the online context ($\gamma = .03, p > .05$), which provided support for this hypothesis ($\Delta\chi^2 = 6.76, p < .01$). Similarly, H5a was also supported by confirming that the negative effect of risk aversion on perceived deception was significantly larger in the online context ($\gamma = .41, p < .01$) than in the offline context ($\gamma = .26, p < .01$).

Table 7

Model comparison and parameter estimates

Model	χ^2	df	p-value	GFI	NNFI	CFI	RMSEA
M ₃ : Unrestricted (All structural relationships freed)	669,95	362	0,00	0,88	0,94	0,95	0,07
M ₄ : Restricted (All structural relationships invariant)	712,90	372	0,00	0,85	0,94	0,94	0,07
M ₄ -M ₃ : χ^2 change	42,95	10	0,00	Conclusion: Not all structural paths are invariant			
ONE DEGREE-OF-FREEDOM TEST: Paths 1-10 compared with restricted model (M₄)							
Free path:	Chi-square difference (Δgl = 1)	SD path loadings parameter		Hypothesis supported			
		Online Context	Offline Context				
Dependent variable: Perceived deception							
H1: Internet-based information search	$\Delta\chi^2 = 5.53^*$	$\beta = -0.28$ ($t = -4.25$)	$\beta = -0.06$ ($t = -0.86$)	H1 supported			
H2a: Perceived Internet usefulness	$\Delta\chi^2 = 12.93^{**}$	$\beta = -0.17$ ($t = -2.65$)	$\beta = 0.19$ ($t = 2.86$)	H2a supported			
H3a: Shopping enjoyment	$\Delta\chi^2 = 1.61$ (ns)	$\beta = -0.02$ ($t = -0.27$)	$\beta = -0.14$ ($t = -1.99$)	H3a partially supported			
H4a: Materialism	$\Delta\chi^2 = 6.76^{**}$	$\gamma = 0.03$ ($t = 0.47$)	$\gamma = 0.31$ ($t = 4.14$)	H4a supported			
H5a: Risk aversion	$\Delta\chi^2 = 3.83^*$	$\gamma = 0.41$ ($t = 5.59$)	$\gamma = 0.26$ ($t = 3.63$)	H5a supported			
Dependent variable: Internet-based information search							
H2b: Perceived Internet usefulness	$\Delta\chi^2 = 3.38$ (ns)	$\beta = 0.05$ ($t = 0.71$)	$\beta = 0.25$ ($t = 3.49$)	H2b partially supported			
H3b: Shopping enjoyment	$\Delta\chi^2 = 2.52$ (ns)	$\beta = -0.07$ ($t = -1.03$)	$\beta = 0.04$ ($t = 0.57$)	H3b not supported			
Dependent variable: Shopping enjoyment							
H4b: Materialism	$\Delta\chi^2 = 0.24$ (ns)	$\gamma = 0.31$ ($t = 4.07$)	$\gamma = 0.25$ ($t = 3.14$)	H4b supported			
Dependent variable: Perceived Internet usefulness							
H5b: Risk aversion	$\Delta\chi^2 = 0.46$ (ns)	$\gamma = 0.12$ ($t = 1.59$)	$\gamma = 0.12$ ($t = 0.09$)	H5b not supported			
Control variable: Product Knowledge							
	$\Delta\chi^2 = 1.32$ (ns)	$\gamma = -0.13$ ($t = -2.19$)	$\gamma = -0.11$ ($t = -2.01$)				

* $p < .05$ ** $p < .01$, ns Not significant.

The remaining hypotheses regarding the expected relationships between the antecedents of perceived deception (H2b, H3b, H4b, and H5b) were established as invariant across the two sub-samples, and our results supported this overall assumption. As shown in Table 7, only two of these four hypotheses (H3b and H5b) were rejected, because their expected effects were found to be not significant in either the online or the offline context⁹. Finally, product knowledge has a significant effect both in the online ($\gamma = -.13, p < .05$) and the offline context ($\gamma = -.11, p < .05$). This indicates that the effects of the other main antecedents remain significant after including the effects of this variable (Stock and Hoyer, 2005; Hancock and Mueller, 2006).

6. DISCUSSION AND CONCLUSIONS

The main objective of this study is to investigate the impact of consumers' personal characteristics on their perceptions of deception, and how the intensity of the impact of these antecedents can differ between the online and the offline shopping channels. Overall, the empirical study confirms the majority of our research model hypotheses and the relevant theory from which these model's hypotheses were derived. In particular, the effects of individual's cognitive factors (Internet-based information search and perceived Internet usefulness) and risk aversion on perceived deception are more relevant when consumers shop online than when they purchase from traditional stores. Conversely, psychographic factors (shopping enjoyment and materialism) play a more important role in explaining perceived deception in the traditional shopping context as compared to the online channel.

Internet-based information search decreases perceived deception in the online channel, but not in the traditional context (H1). This suggests that the use of Internet-based information search as a potential

⁹ We also checked for differences in perceived deception due to consumers' demographic variables. Interestingly, these differences only occurred in the online sample. In particular, online perceived deception was significantly higher in less educated people, as compared to more educated people, and among consumers who were retired, homemakers, and unemployed, as compared to students and employed people. No significant gender differences were found either in the online or the offline shopping channel.

tool to effectively cope with retailers' deceptive attempts suggested in prior literature (Rieh and Danielson, 2007; Kirmani and Campbell, 2009) is less effective when consumers eventually end up purchasing in a traditional store than when they do it online. Another interesting finding arises from the different effect of perceived Internet usefulness (H2a) on perceived deception in each channel (reducing deception in the online channel and increasing it in the offline channel). This supports the expected opposite influence of PIU on the alternative channel (bricks-and-mortar stores), showing that consumers who perceive the use of Internet as a advantageous tool tend to exhibit more positive beliefs about the trustworthiness of online information, which in turns provokes higher skepticism toward traditional retailers' claims. This idea is also bolstered by the positive correlation between PIU and Internet-based information search, which was found to be especially strong among consumers who shop in traditional settings (H2b). These findings also parallel those obtained in prior studies about the existence of potential competitive effects between the online and the offline channel (Falk et al., 2008; Kwon and Lennon, 2009), suggesting that consumers who derive a higher utility from the use of Internet can be systematically biased in their alternative channel evaluations (traditional stores), leading them to underestimate the perceived usefulness of such alternative shopping channel.

Interestingly, among all the proposed variables, shopping enjoyment has been found to be the only factor that significantly decreases perceived deception in the traditional retail channel (H3a). However, contrary to our expectations, the relationship between shopping enjoyment and the amount of Internet-based information search is not significant in either of the two shopping contexts (H3b). At first sight, this appears to be inconsistent with previous research conducted in traditional channels which found that consumers who enjoy shopping are more prone to engage in an extensive shopping search (Hoffman and Novak, 1996). A plausible explanation is that we did not include in our study interpersonal non-commercial sources (e.g. information gathered from family, friends, etc.), whereas prior research has found that consumers who enjoy shopping show a higher preference for such sources (Beatty and Smith, 1987; Mangleburg et al., 2004).

Results from hypotheses H4a, H4b, H5a and H5b also provide important insights about the different role of materialism and risk aversion in each shopping channel. First, consistent to extant research (e.g., Burroughs and Rindfleisch, 2002; Mokhtarian et al., 2006), we found materialism to be positively correlated to shopping enjoyment in both the online and the offline channel (H4b). However, the positive impact of materialism on perceived deception is only found in the traditional channel (H4a). Moreover, among all proposed antecedents, materialism has the strongest influence in the traditional channel, whereas this effect is the weakest in the online channel. Overall, these findings underscore the relevance of materialistic-related buying behaviors (e.g. consumer's tendency to buy impulsively, spontaneously, unreflectively, immediately and kinetically) in explaining deception in the traditional shopping channel.

Finally, results from H5a reveal that risk aversion has the strongest effect on perceived deception in the online context. Extant research has shown that consumers perceive more risks in online shopping as compared to the traditional retail environment (Biswas and Biswas, 2004) and researchers have found that risk tolerance is a strong predictor of online shopping and repeat patronage (Brashear et al., 2009). Findings from this study suggest that due to the inherent tendency of risk-averse consumers to be later adopters of any novelty shopping situation (Bao et al., 2003), they can develop less knowledge and experience in online shopping settings, so they may be less able to gather accurate product information and, thus, have a greater likelihood of choice error when they shop online. In this vein, our results extend this stream of research by showing that risk aversion is the major antecedent of perceived deception in the online channel.

6.1. Managerial implications

From a managerial perspective, our study offers several implications for both traditional and online retailers. First, our findings suggest that consumers' confidence in the higher accessibility, objectivity,

and browsing possibilities of product information offered in the online channel lead to more negative assessments and attitudes toward bricks-and-mortar retailer's claims in general (higher levels of offline perceived deception). Therefore, traditional retailers may place special emphasis on their salespeople's capability to provide expert and useful information to potential buyers. This can be accomplished through training efforts (to provide salespeople with the necessary knowledge) and behavior-based supervision and control (to make sure that salespeople actually play this important role of information providers while interacting with buyers). In addition, the pay structure could be addressed to decrease perception of deception in the traditional channel. In particular, we encourage managers to reward their salespeople with a higher proportion of fixed compensation. We do not imply that companies should avoid incentive programs, rather they could use a combination of base salary plus incentive pay in the form of commissions, bonuses or both based not only on the sales performance, but on customer satisfaction.

Importantly, our results indicate that the hedonic value and enjoyment gained from shopping offers potential benefits to traditional retailers by decreasing perceived deception. Thus, traditional retailers need to think creatively about how they can exploit the hedonic value and enjoyment gained from the social benefits of shopping in the traditional versus the online channel, such as the possibility of shopping with friends or socialize with others, in order to establish a broad marketing strategy that will effectively help them to lower consumers' negative perceptions about the credibility of the bricks-and-mortar retailer's claims. For instance, "bring a friend with you" promotions, special events, and other techniques could be used to encourage consumers to shop with friends and to enhance the enjoyment gained from shopping. Furthermore, hedonistic consumers are also motivated by pleasure, enjoying life and being self-indulgent (Beatty and Smith, 1987; Arnold and Reynolds, 2003). Accordingly, marketers can also consider the employment of "new" and "novel" activities based on the self, wrapped up in a shopping experience. Not only may there be short-term gains in profitability by doing so, but also

retailers who actively provide consumers both entertainment and social shopping experiences may create long-term positive sentiments toward their traditional stores (Mangleburg et al., 2004).

Risk aversion had the strongest positive influence on perceived deception in the online channel. A key practical implication that can be derived from this is that online retailers may take away some of the mental stress from risk-averse consumers by providing a special part of the website to first-time or inexperienced buyers, including FAQs and an easy to follow step-by-step process. Customers will better understand what is expected from them (role clarity) in the online shopping process, which will stimulate trial. In addition, since peripheral signals (brand names, prices, seller reputation) have been found particularly important for risk-averse consumers (Bao et al., 2003), online sellers may reduce potential negative chances of choice error among these consumers by offering clear signals based on their experience and well-doing over time rather than simply increasing the amount or content of relevant product information. Additionally, as risk averse are usually motivated by such constructs as conformity and tradition (Forsyth et al., 2008), online marketers would also capitalize on such notions as the personal referrals, reliability, testimonials, guarantee policies and communicating similarities between the online and traditional channels.

6.2. Research limitations and suggestions for future research

This study represents an initial step into the analysis of the consumer characteristics as antecedents of perceived deception in online and offline shopping settings. As such, we included certain key antecedents, yet we did not consider others. Accordingly, further research is needed to extend the conceptual model. For instance, it would be interesting to examine other potential antecedents such as consumers' prior beliefs (e.g. skepticism or distrust toward marketers in general, consumers' commitment to a company, brand or product) which previous research has found to be related to perceived deception in the advertising and traditional retail context (Ingram et al., 2005; Darke et al.,

2010). Including other sources of product information search, such as interpersonal non-commercial sources, would also be an interesting direction for further research.

This study has focused on consumers' *perceptions* of retailers' deceptive practices. Additional research could analyze to what extent retailers provide different information (e.g., different levels of deception) to different segments of consumers (e.g., men versus women, older versus younger consumers). Finally, it would be interesting to analyze to what extent consumers' experience with deceptive traditional retailers may influence their perceptions of deceptive online practices and vice versa.

CHAPTER 3

**IS THE INFLUENCE OF PRIVACY AND SECURITY IN
ONLINE TRUST THE SAME FOR ALL TYPE OF
CONSUMERS? AN EXPLORATORY STUDY ABOUT
THE MODERATING ROLE OF CONSUMER'S
DEMOGRAPHICS AND EXTRAVERSION**

1. INTRODUCTION

Since the birth of the Internet, privacy and security have been recognized as critical elements that online businesses have needed to address in order to build consumer online trust, and they are the most often cited antecedents of online trust (Bart et al., 2005; Urban et al., 2009). In fact, although over time researchers in the field of e-commerce have identified a compelling list of Web attributes that can engender consumer online trust (e.g., safeguard assurances, retailer's reputation, ease of navigation of the website, robust order fulfillment, etc.) (Cheskin and SA, 1999; Cassell and Bickmore, 2000; Friedman et al., 2000; Urban et al., 2000), it is argued that, beyond capturing these important Web features, the "first and most necessary step" in establishing consumer trust is providing assurances that the consumers' personal information will be safeguarded (Cheskin and SA, 1999; p. 10). Many other scholars have reinforced this belief asserting that only after security and privacy concerns have been addressed will consumers consider other Web features (i.e. reputation, ease of navigation, transaction integrity) to determine the extent to which they can trust and/or feel comfortable transacting with the marketer (e.g., Cheskin and SA, 1999; Dayal et al., 1999; Hoffman et al., 1999; Belanger et al., 2002).

However, in spite of this general agreement among both practitioners and researchers that privacy and security are key determinants of online trust (e.g., Kini and Chobineh, 1998; Hoffman et al., 1999; Belanger et al., 2002; Gefen et al., 2003; Schoder and Haenlein, 2004; Casaló et al., 2007; Kim et al., 2008; Casaló et al., 2011), the academic literature still presents some confusion and inconsistent findings about the conceptualization of privacy and security and their effects on online trust. First, although several efforts have been made to address privacy and security issues on the Internet, the first studies in this regard were conceptual in nature (e.g., Caudill and Murphy, 2000; Stead and Gilbert, 2001; Charters, 2002; Maury and Kleiner, 2002; Sama and Shoaf, 2002; Beltramini, 2003; Siplor et al., 2004; Palmer, 2005; Pollach, 2005; Ashworth and Free, 2006). Among the empirical studies, a major problem includes the extent to which privacy and security issues are conceptualized as distinct variables, and the lack of understanding of how they are related to each other. To begin with this,

although privacy and security represent two clearly distinct constructs (Miyazaki and Fernandez, 2000; 2001; Belanger et al., 2002; Román, 2007; Román and Cuestas, 2008), many researchers tend to collapse them into one concept or dimension (Cheskin and SA, 1999; Culnan, 1999a,b; Lee and Turban, 2001; Wolfenbarger and Gilly, 2003; Zeithaml et al., 2002; Corbitt et al., 2003; Schlosser et al., 2006; Jin and Park, 2006; San Martín and Camarero, 2008; Chen and Dibb, 2010). Yet, some important distinctions can and should be drawn between security and privacy, as we will explain further in this study. According to this, some of the studies that have considered privacy and security as the same construct do not take into account all aspects covering privacy and security issues, and hence their conceptualization and measurement is limited (Belanger et al., 2002; Davison et al., 2003). Second, and despite the commented numerous efforts devoted to this subject over time, research still presents a pattern of inconsistent findings with regard to the effects of privacy and security on online consumer trust. For example, whereas some previous studies find significant and positive impacts of privacy and security on consumer trust, usually being the effect of security stronger than the effect of privacy (e.g., Kim, 2005; Kim et al., 2008; Dolatabadi and Ebrahimi, 2010; Hu et al., 2010; Ganguly et al., 2011), others do not find a significant impact of privacy (Cheung and Lee, 2006; Roca et al., 2009) or security (Lee y Turban, 2001; Belanger et al., 2002; Bart et al., 2005) on this online trust. Furthermore, findings from other studies also suggest that relationships between privacy, security and online trust differ depending on the type of commercial website (Koufaris and Hampton-Sosa, 2004; Lee et al., 2005; Bart et al., 2005).

Furthermore, beyond the problems related to the conceptualization of privacy and security argued earlier, another potential explanation for the inconsistent findings may be that most of the prior literature implicitly assumes that the impact of privacy and security on online trust are identical across customers. Yet, scholars have long argued that this assumption might be too simplistic, and recent evidence suggests that relationships among online trust and its antecedents may vary depending on the characteristics of consumers (e.g. Kim et al., 2004; Bart et al., 2005; Kim, 2005; Schlosser et al., 2006;

Jin and Park, 2006; Leonard and Riemenschneider, 2008; San Martín and Camarero, 2008; Hwang, 2009; Yang et al., 2009; Chen and Dibb, 2010; Ganguly et al., 2011; Liao et al., 2011; San Martín and Jiménez, 2011). In this vein, although extant research on privacy and security issues has shown that individual perceptions and concerns about such online issues significantly differ depending on the demographic and personal characteristics of consumers (Milberg et al., 1995; Sheenan, 1999; Dommeyer and Gross, 2003; Dutton and Shepherd, 2003; Lightner, 2003; Gauzente, 2004; Junglas and Spitzmüller, 2006; Barnes et al., 2007; Brunet and Schmidt, 2007; Wong et al., 2009; San Martín and Jiménez, 2011), scant attention has been devoted to analyzing the potential moderating role of these consumer variables in the relationships between online trust and its antecedents (Bart et al., 2005; Chen and Lee, 2008; Yang et al., 2009). However, given that there is general agreement that consumers' characteristics play an important role in marketing since they provide the opportunity to customize products, services, as well as communications to better meet consumer needs (Ranaweera et al., 2005), the analysis of the moderating effect of these demographic and personal variables in the relationships between privacy, security and online trust may provide online marketers a better and easier understanding of how they would effectively communicate their trustworthiness to different consumers.

Accordingly, in this research we adopt a more comprehensive approach toward the study of the relationships between perceived privacy, security and consumer trust in the online retailer by analyzing the moderating influence in such relationships of consumer's demographics (i.e., age, education and gender) and one consumer personality trait that has direct relevance to online shopping, namely, consumer's level of extraversion (Costa and McCrae, 1989; Kini and Chobineh, 1998; Barnes et al., 2007). Importantly, consumer's extraversion along with these demographic variables have been found to strongly affect consumer's attitudes, perceptions and behaviors towards privacy and security issues on the Internet (Milberg et al., 1995; Sheenan, 1999; Dommeyer and Gross, 2003; Dutton and Shepherd, 2003; Lightner, 2003; Gauzente, 2004; Junglas and Spitzmüller, 2006; Barnes et al., 2007; Brunet and Schmidt, 2007; Wong et al., 2009; San Martín and Jiménez, 2011), yet their moderating influence in the

privacy-security-trust link has been rarely studied and results are unclear or inconsistent, as shown in the Appendix.

The remainder of the study is organized as follows. First, we review the literature and define our key constructs. The following section introduces the research model and hypotheses of this study. After this, research methodology and results are described. Finally, the last section concludes with a discussion of the findings, implications, and suggestions for further research.

2. LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1. Consumer trust in online settings

The open nature of the Internet as a transaction infrastructure and its global constitution has made consumer trust a crucial element of e-commerce (Hoffman et al., 1999). Since consumers are reluctant to purchase from unfamiliar online retailers on account of worries (e.g., fraudulent charges, difficulties of returning defective or wrong product, etc.), developing trust in Internet retailers is thus considered a fundamental prerequisite for successful online commerce (Kim et al., 2009).

Research on trust has been conducted from a variety of disciplinary perspectives, and thus many definitions of trust have evolved. Prior research on traditional commerce focused primarily on interpersonal trust such as a customer's trust in a salesperson. Plank et al. (1999) recognized that consumer trust could have multiple referents – salesperson, product, and company – and accordingly defined trust as a global belief on the part of the buyer that the salesperson, product, and company will fulfill their obligations as understood by the buyer. Similarly, in the e-commerce context (Hoffman et al., 1999; McKnight and Chervany, 2001; Yoon, 2002; Anderson and Srinivasan, 2003; Gefen et al., 2003; Kim et al., 2004; Koufaris and Hampton-Sosa, 2004; Bart et al., 2005; Kim, 2005; Aiken and Boush, 2006; Mukherjee and Nath, 2007; Román, 2007; Kim et al., 2008, Hu et al., 2010), researchers

tend to describe trust as a subjective belief, a subjective probability, the willingness of an individual to be vulnerable, reliance on parties other than oneself, or a person's expectation. In our study, we will focus on the trust that a consumer has in an online retailer (Anderson and Srinivasan, 2003; Kim et al., 2008). Accordingly, in this study an online consumer's trust is defined as a consumer's subjective belief that the selling party (online retailer) will fulfill its transactional obligations as the consumer understands them (Kim et al., 2008).

Since trust is likely to play an essential role in online transactions, it is important to identify the antecedents of a consumer's trust in the context of an Internet transaction. As argued earlier, two main antecedents of online trust have been identified in prior research, namely, customer's perception of security and privacy. Nevertheless, due to a lack of understanding of their correlations, the literature has often reported on, and used privacy and security interchangeably. Yet, some important distinctions can and should be drawn between privacy and security as explained below.

2.2. Privacy and security issues in e-commerce

Privacy and security are two of the first and most important problems of e-commerce identified in prior literature (Westin, 1967; Tavani, 1999; Miyazaki and Fernandez, 2000; 2001; Kim et al., 2004; Subramanian, 2008; Hu et al., 2010; Küster and Vila, 2011). It has been argued that the technological environment in which online transactions are supported would "inevitably be the target of malicious attacks as well as subject to unintentional or incidental damage" (Liu, 2008; p. 121) and, although over time significant advancements have been made in improving online privacy and security, we continue to see viruses, worms, spy-ware, spam, identity theft, phishing and many other transgressions online (Subramanian, 2008; Urban et al., 2009; Hu et al., 2010; Reddy, 2012).

Given their highlighted importance, privacy and security issues have been object of innumerable studies in prior online literature (the Appendix provides a summary of their findings). However, as

discussed earlier, two problems with this existing online literature include the extent to which privacy and security issues are conceptualized as distinct variables, and the pattern of inconsistent findings with regard to their effects on online consumer trust. To begin with this, there are many studies that have considered privacy and security as the same construct, leading to a conceptual confusion about the conceptualization of these two concepts. For example, the different conceptual studies by Culnan (1999a and 1999b) suggest that security can be understood as a part of the privacy policies. In these contributions, online privacy policy is understood as the set of statements explaining how consumer privacy is dealt with and protected (or secured) by the web merchant. Nevertheless, we will contend that security pertaining to the privacy of personal data online is not the sole aspect of online security. Another common practice in the literature is the use of global terms such as structural assurances (e.g., seals of approval or third party certifications) to represent both privacy and security protections (Lee and Turban, 2001; Gefen et al., 2003; Aiken and Boush, 2006). However, from the perspective of the online institutional infrastructure, i.e., the Internet, structural assurances regarding privacy and security of a transaction are based on different mechanisms (Chellappa, 2001). While privacy protection is largely a function of legal mechanisms such as alliances with monitoring agencies (e.g., TRUSTe, WEBcpa, BBBonline), fines stipulated by the FTC and legal disclosure notices, security protection is largely a function of technological actions undertaken. This conceptual confusion is often followed by discussions of which type (privacy and/or security) of website features maximally reduce consumer fears, in addition to how to place and convey these features on the site (Dayal et al., 1999; Belanger et al., 2002).

Several scales used in to measure website characteristics, such as trustworthiness or online service quality, also tend to collapse privacy and security concepts into one dimension (Wolfenbarger and Gilly, 2003; Ranaweera et al., 2005; Schlosser et al., 2006; Jin and Park, 2006; San Martín and Camarero, 2008; Yang et al., 2009; Chen and Dibb, 2010; San Martín et al., 2011). For instance, many studies have considered privacy/security as one single dimension of the website quality construct, and use only three

items to measure such dimension as the security of credit card payments and privacy of shared information (Wolfenbarger and Gilly, 2003; Ranaweera et al., 2005; Jin and Park, 2006; Chen and Dibb, 2010). Similarly, in other studies privacy/security policies represent one single dimension of websites' trustworthiness signals (Schlosser et al., 2006; San Martín and Camarero, 2008; Yang et al., 2009; San Martín et al., 2011). As we argued earlier, these studies that have considered privacy and security as the same construct have not taken into account all aspects covering privacy and security issues, and hence their conceptualization and measurement is limited (Belanger et al., 2002; Davison et al., 2003).

Privacy refers to the uncertainty associated with providing personal information on a website and the risk of such information being exposed (Bart et al., 2005). Privacy issues on the Internet include "spam", usage tracking and data collection, choice, and the sharing of information with third parties (Belanger et al., 2002). For instance, the practice of collecting consumer information for one purpose and then using that information to make unsolicited contacts represents a privacy issue (Román and Cuestas, 2008). Another privacy concern is the degree to which consumer information is shared (i.e., rented or sold) to third parties that have marketing-related interests in such data (Miyazaki and Fernandez, 2000). Consumers' reassurance that the information shared will be subjected to personally delineated limits is the essence of privacy on the Internet (Belanger et al., 2002). Accordingly, in this study perceived privacy refers to consumers' perceptions about the protection of individually identifiable information on the Internet (Román, 2007).

Security, on the other hand, refers to the uncertainty of incurring monetary losses while interacting on a website (Biswas and Biswas, 2004). This may happen, for example, as a result of online credit card fraud (Miyazaki and Fernandez, 2000). To a minor extent, it also refers to the set of concerns involving a computer system's vulnerability to viruses, worms, and other "rogue" programs that can attack a system and its resources (Román, 2007). Perceived security, then, refers to consumers' perceptions about the security of the online transaction (i.e., the safety of the payment methods) along with the protection of financial information from unauthorized access (Román, 2007). Just as consumers may

have various beliefs regarding the privacy of their online transactions even if vendors provide assurance regarding all aspects of an individual's concern for privacy, consumers may also possess different beliefs regarding the security of their online transaction even if all security enforcements are in place (Chellappa, 2001).

2.3. The study of moderating effects

Importantly, some recent studies have begun to consider the role of several moderator variables, such as website categories or consumer variables, in the relationship between online trust and its antecedents (see Appendix). For instance, Koufaris and Hampton-Sosa (2004) found that the influence of perceived security on consumer trust in the website was more important for goods than for services. Similarly, findings from Bart et al. (2005) showed a more important role of perceived privacy in online trust in the case of travel websites. Regarding to consumers' characteristics, prior literature has analyzed the moderating role of several variables in the relationships between online trust and its antecedents, such as familiarity with the website (Teltzrow et al., 2007; Chen and Dibb, 2010), prior purchase experience (Kim et al., 2004; Jin and Park, 2006; Liao et al., 2011), online shopping involvement (San Martín et al., 2011) attitudes toward online shopping (San Martín and Camarero, 2008), shopping enjoyment (Ganguly et al., 2011), and demographics (Bart et al., 2005; Yang et al., 2009; Ganguly et al., 2011; San Martín and Jiménez, 2011). Overall, significant results found in these studies suggest that the positive influence of privacy and/or security assurances on consumer trust in the website tends to be stronger among individuals who: were more familiarized with the website versus those who had not previously visited such website (Chen and Dibb, 2010), were more involved with online shopping versus those who were less involved (San Martín et al., 2011), and had a more rational-based orientation toward shopping (*potential online shoppers*) versus those who had a more experiential-based one (*relational online shoppers*) (San Martín and Camarero, 2008). Prior research has also found empirical support for the moderating role of some consumer demographics, such as education (Bart et al., 2005; Yang et al.,

2009) or gender (Ganguly et al., 2011; San Martín and Jiménez, 2011) in the trust-antecedents link, but, as we will further explain in development of our research hypotheses, these previous findings are not consistent.

The moderating role of consumer personality traits in the relationship between online trust and its antecedents has received, however, little attention in prior literature, and only a very limited number of personality traits, such as consumer's trust propensity (Lee and Turban, 2001; Dolatabadi and Ebrahimi, 2010; Ganguly et al., 2011) or cultural values (Kim, 2005; Cheung and Chang, 2009), have been analyzed as moderator variables in the influence of privacy and security in online trust (see the Appendix). Dabholkar and Bagozzi (2002) argued, however, that whereas demographic studies offer insights to online marketers as to different possible consumer segments, they do not go far enough in understanding underlying consumer motivation or how it influences attitudes and behavior related to the use of Internet and technology-based self-services. According to these authors, the study of the variation in consumer differences arising from personality traits is extremely important because such variation is at the heart of consumer attitude formation and behavioral intentions. Numerous online related studies offer support for the relevance of considering such personality traits in consumers' cognitive and affective responses, both as direct antecedents of such responses (Kwak et al., 2002; Wang et al., 2006; Barnes et al., 2007; Landers and Lounsbury, 2006; Bosnjak et al., 2007; Huang and Yang, 2010), and as important moderator variables in other online relationships (Dabholkar and Bagozzi, 2002; Ranaweera et al., 2005; Chen and Lee, 2008; Cheung and Chang, 2009; Ganguly et al., 2011). In this study, we focus on one personality trait that has direct relevance to online shopping, namely, consumer extraversion (Costa and McCrae, 1989; Kini and Chobineh, 1998; Barnes et al., 2007). The relevance of considering this personality trait, which includes characteristics such as talkativeness, sociability, and a high confidence in one's ability to social relations with others (Kini and Chobineh, 1998), comes from a variety of discussions on consumer attitudes and behaviors in online shopping contexts (Dabholkar and

Bagozzi, 2002; Landers and Lounsbury, 2006; Bosnjak et al., 2007; Chen and Lee, 2008; San Martín and Camarero, 2008; Huang and Yang, 2010).

3. HYPOTHESES DEVELOPMENT

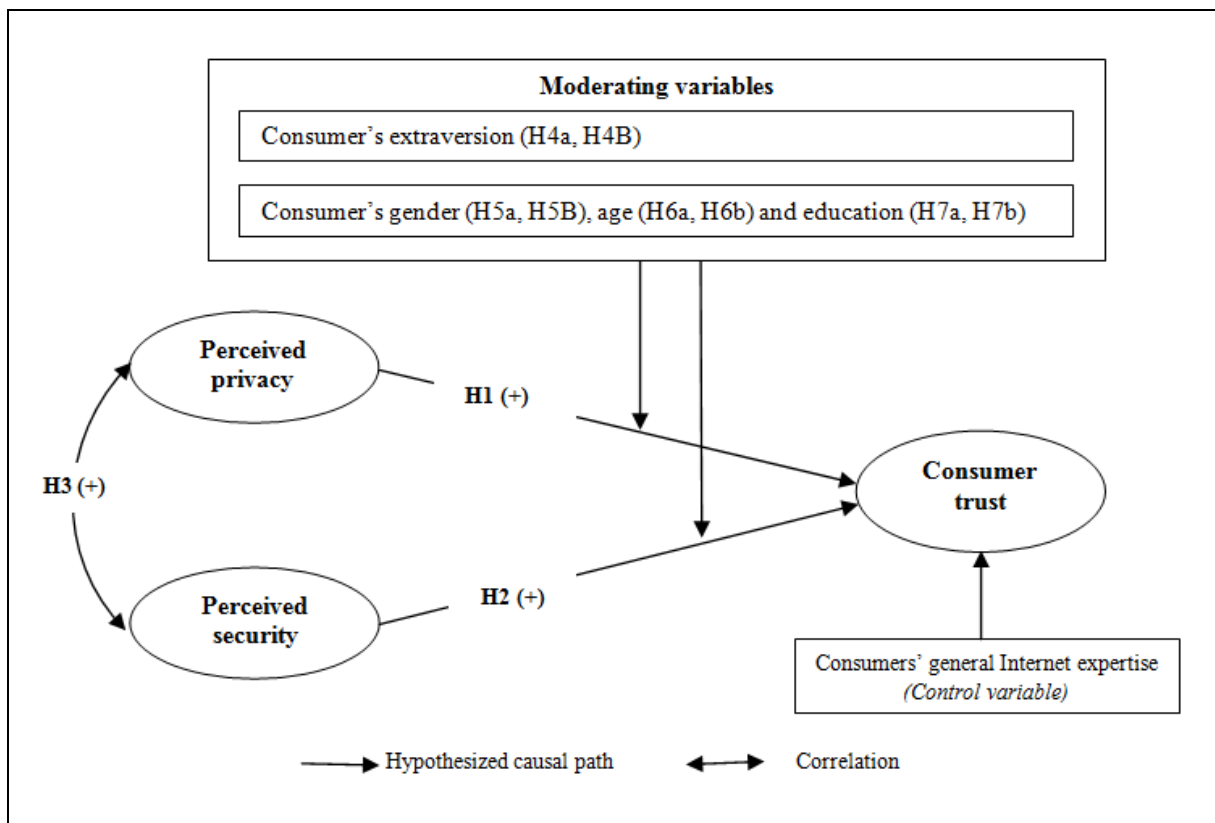
Prior research on trust provides a useful basis for investigating consumer trust and its antecedents in the context of electronic commerce but, as can be derived from the above discussion and the review of literature, the literature still presents a pattern of inconsistent findings with regard to the effects of privacy and security on online consumer trust. The remaining of this research aims to remove this confusion by proposing a simple yet parsimonious model of online trust, with strong support from the literature (see Figure 1). In this vein, while proposing their model of trust-antecedents, Mayer et al. (1995) suggested that a parsimonious model with a manageable number of factors should provide a solid foundation for the empirical study of trust on another party.

Accordingly, the research model proposed in this study, shown in Figure 1, focuses on analyzing the relationships between online trust and two of its most important antecedents identified in prior literature, that is, consumer's perceptions about privacy and security. Following previous contentions about the differences between these two main antecedents of online trust (e.g., Belanger et al., 2002; Román, 2007), we consider privacy and security as two clearly distinct construct that are expected to have their own contribution to online trust in our model (H1 and H2). Moreover, since the security and privacy concept may vary from person to person (Yousafzai et al., 2003), we focus on the terms *perceived security* and *perceived privacy* in order to determine how variation in these perceptions will affect the level of trust. We will also propose a positive relationship between these two antecedents in Hypothesis 3. Drawing from prior studies, we will further argue that, although both privacy and security perceptions are important antecedents of online trust, such importance may vary according to consumers' characteristics. More precisely, the direct effect of these security and privacy perceptions on

online trust is proposed to be moderated by consumer's level of extraversion (H4a-b), gender (H5a-b), age (H6a-b) and education (H7a-b). Finally, Figure 1 also includes the effect of consumers' general Internet expertise (in the box) on online trust as control variable. Importantly, prior research has already shown that online trust varies by customers' Internet usage patterns (Hoffman et al., 1999; Liu et al., 2002). Accordingly, including online expertise as an additional predictor of consumers trust in online shopping allows us to determine whether the hypothesized antecedents and moderating variables have a significant impact on such online trust after accounting for the variance explained by this control variable. The rationale for each hypothesis follows.

Figure 1

The research model



3.1. Antecedents of consumer trust in the online retailer

Perceived privacy

Contrary to traditional retail environments, online consumers perceive little control over information privacy and this has a striking influence on their willingness to engage in exchange relationships with online retailers (Hoffman et al., 1999). Due to the fall in cost of data transmission and emerging technologies, it is now easier to collect personal information from customers and share it with third parties (Tavani, 2010). Empirical studies have found that, with the continuous growth of the use of the Internet for e-commerce related activities, most consumers are becoming increasingly concerned about companies collecting their personal information because of the risk that companies might use and share their personal information inappropriately (Brustoloni and Villamarin, 2007; Mishra, 2008). There is thus a risk of loss of confidentiality, which is a significant factor in building trust (Culnan and Armstrong, 1999). These increasing consumer concerns have forced sellers to adopt online privacy enforcement principles, such as *privacy policy protections* and/or *third-party seals of approval* (e.g., TRUSTe, WEBcpa, BBBonline) that confirm their adequate privacy compliance (Caudill and Murphy, 2000). Online retailers' websites must communicate, therefore, that their procedures for handling information are performed within the framework of well-thought-out user/customer service policies in order to increase their perceived trustworthiness and thereby to encourage online transactions (Yousafzai et al., 2003; Kim et al., 2008). By disclosing such website's privacy practices, online retailers will significantly ease consumers' privacy concerns (Yousafzai et al., 2003). Positive perceptions about this privacy protection mechanisms on the website help to reduce consumers' perceptions of the risk that stems from online disclosure of personal information (Metzger, 2006), and thus encourage online transactions by increasing the perceived trustworthiness of the website (Kim et al., 2008). Numerous previous studies have already shown that perceived privacy positively influences consumer trust in online transactions (e.g., Friedman et al., 2000; Chellappa and Sin, 2005; Bart et al.,

2005; Casaló et al., 2007; Román, 2007; Van Dyke et al., 2007; Casaló et al., 2011; Ganguly et al., 2011). Accordingly, we propose the following:

H1: Perceived privacy positively influences consumer trust in the online retailer.

Perceived security

Consumers' concerns about the security of online transactions are, along with privacy concerns, the other main barrier preventing consumers from purchasing online (Miyazaki and Fernandez, 2000; 2001; Kim et al., 2004; Subramanian, 2008; Hu et al., 2010). There is strong evidence that many consumers fear entering their bank details into a website to complete a purchase transaction due to potential risks of credit card fraud, theft of information, data breaches or Internet-based attacks (Miyazaki and Fernandez, 2000; 2001; Subramanian, 2008; Tavani, 2010). These security concerns arise from the use of an open network, that is, customers are afraid that their personal financial information will become available to others via the Internet and can be used for fraudulent purposes (Yousafzai et al., 2003). Early evidence suggests that consumers need to be convinced about their concerns of security in online shopping, as they believe that the Internet payment channels are not secure and can actually be intercepted (Subramanian, 2008; Tavani, 2010).

Accordingly, and similar to the need of adopting privacy protection mechanism in order to address consumers' concerns about online information privacy, online retailers today are also required to employ online security enforcement principles, such as *encryption*, *protection*, *verification* and *authentication* (Chellappa and Pavlou, 2002). These mechanisms protect consumer data from being viewed or modified and ensure that only the appropriate entities (e.g., vendor, credit card authorizer – visa, bank) have access to consumer data. Consumer perceptions of these security enforcement principles positively contribute to their trust perceptions regarding online transactions (Chellappa and Pavlou, 2002). There is a significant body of research that has tested the positive influence of perceived security on consumer trust in online retailers (e.g., Belanger et al., 2002; Kim et al., 2004; Schoder and

Haenlein, 2004; Kim, 2005; Cheung and Lee, 2006; Mukherjee and Nath, 2007; Casaló et al., 2007; Román, 2007; Kim et al., 2008; Roca et al., 2009; Hu et al., 2010; Kim et al., 2010; Casaló et al., 2011).

Accordingly, we propose that:

H2: Perceived security positively influences consumer trust in the online retailer.

3.2. The relationship between privacy and security

Although privacy and security are accepted to be two clearly distinct constructs (Miyazaki and Fernandez, 2000; 2001; Belanger et al., 2002; Román, 2007; Román and Cuestas, 2008), there is strong evidence that they interactively influence each other (Belanger et al., 2002; Schlosser et al., 2006; Hu et al., 2010). For example, high concern for personal privacy would directly produce negative attitudes toward web security, and consumers who lack knowledge about online security and the third party security identification would worry about disclosing personal information during the process of online shopping. Accordingly, we propose that:

H3: Perceived privacy is positively correlated to perceived security.

3.3. The moderating role of consumer characteristics

Extraversion

Extraversion is a personality trait that relates to an individual's approach to dealing with their environment (Korzaan and Boswell, 2008). Individuals high in extraversion are usually characterized as sociable, assertive and talkative, whereas individuals low in extraversion are more introverted, reserved and quiet (Costa and McCrae, 1992). People high in extraversion are also excitement-seeking and have a higher need for stimulation and communication (McCrae and Costa, 2003). In the online context, these characteristics of extravert consumers are reflected in a greater interest in the social or experiential

aspects of online shopping (Cheung and Lee, 2008; Huang and Yang, 2010), such as the desire to be entertained, to socialize in the website and to enjoy with the shopping experience (Wolfinger and Gilly, 2001; Huang and Yang, 2010). Findings from Ganguly et al. (2011) reveal that this higher disposition toward hedonic or excitement value-seeking behavior (e.g., fun, playfulness) associated with extravert people positively moderates the influence of some interactivity website-related factors (e.g., communication exchange, social presence) on consumer trust in the website.

We believe that this personality trait will also moderate the influence of perceived privacy and security on trust in the online retailer. First, extant research has shown that the level of consumer extraversion is related to individual privacy concerns, risk and trust beliefs on the Internet (Tan and Sutherland, 2004; Wang and Yang, 2005; Junglas and Spitzmüller, 2006; Barnes et al., 2007; Brunet and Schmidt, 2007; Chen, 2011). For example, some studies have found that, since extraverted individuals are more likely to make efforts to be actively involved and interested in opportunities to socialize and communicate with others (McCrae and Costa, 2003; Chen, 2011), they are less likely to voice strong online privacy concerns (Junglas and Spitzmüller, 2006), and therefore they are also more willing to disclose personal information in the online environment, as compared to individuals who are less extraverted (Brunet and Schmidt, 2007). Accordingly, consumers high in extraversion can be expected to be less concerned about disclosing personal information online, and hence privacy perceptions will not be as important to them as they could be for individuals low in extraversion. Thus, the relationship between perceived privacy and trust will be attenuated for consumers with a highly extroverted personality (see Hypothesis 4a). In addition, Barnes et al. (2007), who identified three segments of online users based on their personality and behavioral differences, found that the group who scored high in extraversion (*open-minded online shoppers*) showed the lowest perceived risk when shopping online (a construct that included, among others, security-related transactions risks), as well as the highest trust in online vendors. Other studies have confirmed that the higher disposition toward excitement-seeking of extravert individuals is positively related to a more risk-taking propensity and a high disposition to

trust online retailers (Tan and Sutherland, 2004; Wang and Yang, 2005; Chen, 2011). Given that prior literature suggests that highly extraverted individuals tend to perceive fewer risks in online shopping than those less extraverted, we expect the influence of perceived security on online trust to be attenuated for consumers with a highly extroverted personality (see Hypothesis 4b). Specifically:

H4a: The positive influence of perceived privacy on consumer trust in the online retailer will be stronger for less extraverted consumers than for more extraverted consumers.

H4b: The positive influence of perceived security on consumer trust in the online retailer will be stronger for less extraverted consumers than for more extraverted consumers.

Gender

Privacy or security issues, as factors influencing online consumer behavior or perceptions about websites, have been widely analyzed from the perspective of gender differences (e.g., Milberg et al., 1995; Sheehan, 1999; Kolsaker and Payne, 2002; Dommeyer and Gross, 2003; Garbarino and Strahilevitz, 2004; Gauzente, 2004; Bart et al., 2005; Cyr and Bonanni, 2005; Wong et al., 2009; Ulbrich et al., 2011; Ye et al., 2011). Results from many of these studies indicate that women tend to be more concerned about online privacy and security issues than men (Milberg et al., 1995; Sheehan, 1999; Gauzente, 2004). At first sight, these findings seem to suggest that women might give more emphasis to privacy and security perceptions than men. However, the literature has also produced some contradictory findings. For example, some studies have not found significant gender-based differences regarding online privacy and/or security concerns (Kolsaker and Payne, 2002; Lightner, 2003; Cyr and Bonanni, 2005). Regarding to its moderating effects, whereas some previous findings suggest that privacy and security perceptions play a more important role in determining online trust for women than for men (Ganguly et al., 2011; San Martín and Jiménez, 2011), other studies do not find significant gender-based differences in such relationships (Bart et al., 2005; Yang et al., 2009). Furthermore, prior research reveals that some women-related online behaviors are contradictory with their alleged high

privacy concerns. For instance, results from Stern (2004) suggest that females are more likely to disclose personal information on the Internet. In line with this, scholars have argued that the relationship between consumers' privacy and security concerns and actual behavior neither is straightforward nor has any link been established incontrovertibly (Li and Sarathy, 2006; Joinson et al., 2010). Accordingly, although several studies have shown that women may voice strong privacy or security concerns than men, we believe that these concern-based differences are insufficient or even inadequate to sustain the moderating effect of gender in our research model.

A plausible explanation for this privacy or security paradox found among women is that users' privacy and security concerns can be affected by other factors, such as consumers' shopping preferences or orientations (Kim and Benbasat, 2003; Smith et al., 2011). In particular, researchers have found that some expected benefits, such as the desire of personalized service or social benefits, can override consumer's privacy concerns (Chellappa and Sin, 2005). For example, prior evidence indicates that, unlike men, women tend to view online shopping as a social activity (Smith and Whitlark, 2001; Van Slyke et al., 2002). Researchers have also showed that women give more importance than men to emotional appeals (such as community building activities in the online store) (Venkatesh and Agarwal, 2006) or interactivity features (social presence and communication with the website) (Ganguly et al., 2011) to generate online trust. These findings suggest that, in spite of their claimed privacy or security concerns, when shopping online, women seem to focus more on these social or communicative aspects of shopping than in privacy or security related aspects. Accordingly, the proposed positive influence of both privacy and security perceptions on online trust is expected to be attenuated for female consumers.

On the other hand, men are more goal-directed and more motivated by functional factors (e.g., economy, efficiency, usefulness) than women in their online shopping attitudes and behaviors (Swaminathan et al., 1999; Dittmar et al., 2004; Doong and Wang, 2011). Privacy and security issues on the website undoubtedly represent functional or utilitarian aspects of the online shopping process (Chen and Lee, 2008; San Martín et al., 2011), and previous research suggest that such functional website

features receive more attention and are perceived as more valuable in determining online trust among functional-oriented consumers than among experiential-oriented ones (Chen and Lee, 2008; San Martín and Camarero, 2008). Moreover, researchers have also argued that, while privacy and security concerns tend to be lessened as the consumer's experience and familiarity with online shopping increases (Miyazaki and Fernandez, 2001; Corbitt et al., 2003), such greater familiarity also improves consumer knowledge and understanding of these privacy and security issues (Dutton and Shepherd, 2003), which in turn, strengthen the role of perceived privacy and security website features on consumer's trust (Chen and Dibb, 2010). Given the more functional shopping orientation and also the greater familiarity of men compared to women with online shopping related activities (Bae and Lee, 2011), we expect the following:

H5a: The positive influence of perceived privacy on consumer trust in the online retailer will be stronger for male than for female consumers.

H5b: The positive influence of perceived security on consumer trust in the online retailer will be stronger male than for female consumers.

Age

The literature has also suggested that privacy and security concerns tend to be stronger as consumer's age increases (Gattiker and Kelly, 1995; Gauzente, 2004; Reisenwitz et al., 2007; Wong et al., 2009). However, similarly to women-related findings, prior research has yielded some contradictory findings that suggest perceived privacy and security to be more important for younger than for older consumers (Dommeyer and Gross, 2003; Lightner, 2003). For example, Lightner (2003) found that, as age of consumers increased, their preference for security features against other website characteristics (such as navigation and buying speed) diminished. Dommeyer and Gross (2003) investigated the effect of age on privacy protection use and privacy awareness, finding that the expected positive relationship between the two was contradicted by empirical results with younger people tending to use a protection strategy

more often than their elders. This evidence suggests a greater degree of awareness amongst younger users of the potential problems on the Internet. The older generation is also concerned about security and protection, but may be less aware of the operational issues (Dommeyer and Gross, 2003).

Accordingly, we propose that:

H6a: The positive influence of perceived privacy on consumer trust in the online retailer will be stronger for younger than for older consumers.

H6b: The positive influence of perceived security on consumer trust in the online retailer will be stronger younger than for older consumers.

Education

To a lesser extent, previous research has analyzed the effect of consumers' level of education on their online privacy and security concerns (Dutton and Shepherd, 2003; Lightner, 2003; Bart et al., 2005; Yang et al., 2009). Again, this stream of research has also produced some inconsistent results. For instance, whereas findings from Lightner (2003) and Bart et al. (2005) suggest that the importance of perceived privacy and security tend to be weaker for more educated than for less educated consumers, results from Dutton and Shepherd (2003) and Yang et al. (2009) indicate the opposite. In line with these latter studies, we believe that a higher level of education can improve consumers' knowledge and understanding of privacy and security issues on the Internet. Furthermore, prior evidence indicates that more educated consumers place a higher value on perceived website ethical performance than less educated consumers (Yang et al., 2009; Román, 2010). Accordingly, we expect that:

H7a: The positive influence of perceived privacy on consumer trust in the online retailer will be stronger for more educated than for less educated consumers.

H7b: The positive influence of perceived security on consumer trust in the online retailer will be stronger more educated than for less educated consumers.

3.4. Control variable: Consumers' general Internet expertise

Consumer's general Internet expertise refers to consumer's knowledge of, and experience with, the Internet (Montoya-Weiss et al., 2003). Several studies report that this general expertise reduces online shopping risk perceptions and positively contributes to consumer online trust (Miyazaki and Fernandez, 2001; Corbitt et al., 2003; Bart et al., 2005). Accordingly, including this construct as an additional predictor of consumers' trust in online shopping allows us to determine whether the hypothesized antecedents have a significant impact on online trust after accounting for the variance explained by consumer's Internet expertise.

4. RESEARCH METHOD

4.1. Data collection and sample

A survey instrument was administered to a sample of 398 consumers. A marketing research firm was hired to assist with the data collection. Trained interviewers randomly approached respondents among individuals who passed the data collection point located on the pedestrian walkway in three major metropolitan cities. A similar procedure can be seen in previous research (e.g. Frambach et al., 2007). Screening questions were administered before the respondent was invited for an interview. An invitation only followed if the respondent proved to be eligible for the study (that is, he/she should have purchased a product online in the last 6 months). The latter condition was required in order to facilitate consumers' evaluations of the online retailer's website. Then, subjects were taken to the company office (conveniently located in the metropolitan area). The procedure was to let subjects browse the website where they made their last online shopping. After a certain period of time (a maximum of 10 min), subjects were asked to complete the questionnaire corresponding to that site.

The respondents were representative of online consumers across numerous e-retailers, having purchased a variety of items (e.g., travel, books, CDs, and computers). A profile of the sample is shown

in Table 1. The respondents were balanced in terms of gender, relatively young, generally highly educated and experienced with the Internet. Prior research has found that these characteristics are common among Internet shoppers (Girard et al., 2003; Swinyard and Smith, 2003).

Table 1

Sample profile

Variable	Percentage
Gender	
Male	51,0
Female	49,0
Age	
< 20	10,5
20–35	65,2
36–50	18,1
> 50	6,3
Education	
Low (primary school)	3,5
Middle (high school)	28,3
High (University; polytechnic) ^a	68,2
Occupation	
Employed people	52,4
Self-employed workers	14,3
Students	29,3
Others (retired, homemaker, and unemployed)	4,4
Internet experience (years)	
< 2	6,3
2–5	33,4
6–8	35,3
> 8	25,0
Online purchases in the last year (€)	
< 120€	28,8
120€–599€	41,8
600€–1199€	15,3
> 1200€	14,2

^aThese individuals had completed their university studies.

4.2. Instrument development

Existing multi-item scales, adapted to suit the context of the study, were used for the measurement of the constructs (all items of the questionnaire are reported in Table 2). All scales consisted of 5-point Likert questions, ranging from “1 = strongly disagree” to “5 = strongly agree.” Three items from Anderson and Srinivasan (2003) were used to measure consumer trust in the online retailer. Both perceived privacy and security were measured with five items, respectively, developed by Román (2007). Consumer’s extraversion was measured with three items from the Big Five scale (Benet-Martinez and John, 1998; 1999). Shortened versions of such scale have been successfully used in other studies (Gosling et al., 2003; Chen and Lee, 2008). Finally, consumers’ general Internet expertise was approached using two items adapted from Montoya-Weiss et al. (2003) and Belch et al. (2005). Consumers were asked to characterize their level of expertise with the Internet (ranging from “1 = no expertise” to “5 = high expertise”), and their knowledge about Internet in general (ranging from “1 = very poor” to “5 = excellent”).

4.3. Confirmatory factor analyses: reliability, convergent, and discriminant validity

A confirmatory factor analysis (CFA) by means of LISREL 8.80 was conducted to assess measurement reliability, convergent, and discriminant validity. The measurement model had a good fit ($\chi^2(165) = 491.08$; $p < .01$; GFI = .89; CFI = .96; RMSEA = .07; RMSR = .04; TLI (NNFI) = .94). Reliability of the measures was confirmed with composite reliability index higher than the recommended level of .60 (Bagozzi and Yi, 1988) and average variance extracted was higher than the recommended level of .50 (Hair et al., 1998) as shown in Table 3. Following the procedures suggested by Fornell and Larcker (1981) and Bagozzi and Yi (1988), convergent validity was assessed by verifying the significance of the t values associated with the parameter estimates (Table 2). All t values were positive and significant ($p < .01$).

Table 2

Construct measurement summary: confirmatory factor analysis of multi-item measures

Item description ^a	SD loading (<i>t</i> -value)
Consumer trust in the online retailer	
I can trust the performance of this website to be good	0,95 (25,25)
This site is reliable for online shopping	0,95 (25,26)
This site is trustworthy	0,92 (23,72)
Perceived privacy	
The site clearly explains how user information is used	0,81 (18,91)
It is easy to have access the privacy policy	0,78 (18,07)
The site shows that it complies with the rules and regulations governing online data protection	0,87 (21,13)
Only the personal information necessary for the transaction to be completed needs to be provided	0,77 (17,63)
Information regarding the privacy policy is clearly presented	0,80 (18,54)
Perceived security	
The site displays the terms and conditions of the online transaction before the purchase has taken place	0,73 (16,42)
The site appears to offer secure payment methods	0,91 (22,94)
The security policy is easy to understand	0,84 (20,48)
You can confirm the details of the transaction before paying	0,81 (19,21)
This site has adequate security features	0,84 (20,37)
Extraversion	
I am outgoing, sociable	0,86 (19,60)
I have an assertive personality	0,77 (17,19)
I feel comfortable around people	0,82 (18,63)
Consumer's general Internet expertise	
How would you characterize your level of expertise with the Internet?	0,99 (28,14)
How would you characterize your knowledge about Internet in general?	0,88 (22,44)
$\chi^2(165) = 491,08; p < 0,01; GFI = 0,89; CFI = 0,96; RMSEA = 0,07; RMSR = 0,04; TLI (NNFI) = 0,94$	

^a All the scales consisted of 5-point Likert questions, ranging from "1 = strongly disagree" to "5 = strongly agree."

Discriminant validity was tested by comparing the average variance extracted by each construct to the shared variance between the construct and all other variables. For each comparison, the explained variance exceeded all combinations of shared variance (see Table 3). The analysis also revealed that Internet expertise was significantly and positively correlated with consumer's education level ($\sigma = .12, p$

< .05), and significantly and negatively correlated with gender ($\sigma = -.20$, $p < .01$) and age ($\sigma = -.15$, $p < .05$), which indicates that such Internet expertise is increased among male, younger and more educated consumers.

Table 3

Mean, SD, scale reliability, AVE, and correlations

Construct	Mean	SD	AVE	1	2	3	4	5	6	7	8
1. Consumer trust	3,98	0,83	0,88	0,96	0,30	0,35	0,08	0,07			
2. Perceived privacy	3,69	0,65	0,65	0,55	0,90	0,44	0,06	0,07			
3. Perceived security	3,90	0,62	0,69	0,59	0,66	0,92	0,04	0,07			
4. Extraversion	3,65	0,82	0,67	0,28	0,25	0,20	0,86	0,04			
5. Internet expertise	3,91	0,79	0,88	0,27	0,27	0,27	0,20	0,88			
6. Gender (0=women, 1=men)	na	na	na	0,00	-0,12	-0,08	-0,01	-0,20	na		
7. Education (0=low, 1=middle, 2=high)	na	na	na	0,04	-0,05	-0,02	-0,06	0,12	0,19	na	
8. Age (years)	30,29	9,76	na	0,00	-0,09	-0,02	-0,14	-0,15	0,01	0,04	na

AVE average variance extracted, na not applicable.

Scale composite reliability of multi-item measures is reported along the diagonal. Shared variances of multi-item measures are reported in the upper half of the matrix. Correlations are reported in the lower half of the matrix. Correlations higher than .09 significant at 95%.

5. RESULTS

5.1. Main effects

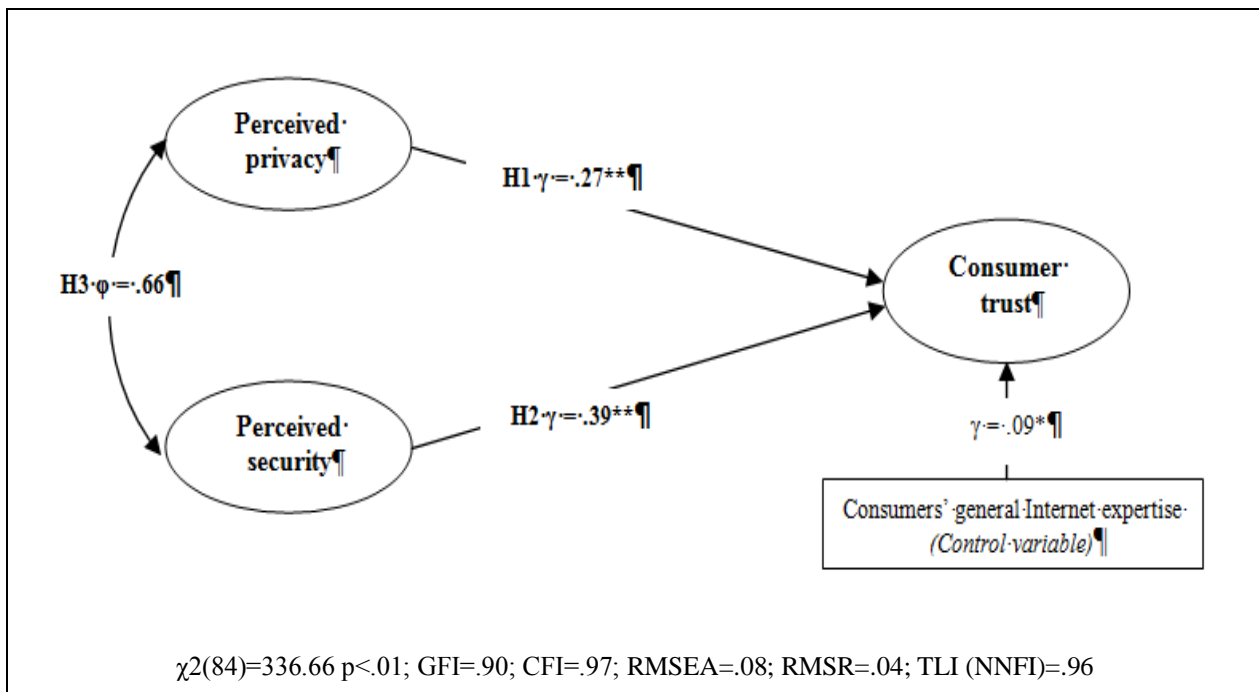
The hypothesized relationships were estimated via LISREL 8.80. The results indicated a good fit between the model and the observed data ($\chi^2(84)=336.66$ $p < .01$; GFI=.92; AGFI=.90; CFI=.97; RMSEA=.08; RMSR=.04; TLI (NNFI)=.96). The model explained 41% of the variance in consumer trust in the online retailer. Results of hypothesized relationships are reported in Figure 2.

After accounting for the variance explained by consumer's Internet expertise ($\gamma = .09$, t-value = 2.14), the analyses provided strong support for the direct positive influence of both perceived privacy ($\gamma = .27$, t-value = 4.34) and security ($\gamma = .39$, t-value = 6.40) on consumer trust. Thus, Hypotheses 1 and 2

were confirmed. In line with Hypothesis 3, perceived privacy and security were also found to be highly and positive correlated ($\varphi = .66$; t -value = 19.67).

Figure 2

The research model and results of direct effects (standardized coefficients)



* $p < .05$ ** $p < .01$

5.2. Moderating effects

Hypotheses 4a–b, 5a–b, 6a–b, and 7a–b examined the effects of the moderating variables. We tested moderating effects through multigroup LISREL analysis. The samples were splitted into subsamples according to whether consumers scored high or low on the moderating variables (as far as gender is concerned, males versus females was compared) to ensure within-group homogeneity and between-group heterogeneity (Stone and Hollenbeck 1989). The subgroup method is a commonly preferred technique for detecting moderating effects (cf. Stone and Hollenbeck, 1989), and has been extensively

used in the literature (e.g., DeWulf et al., 2001; Homburg and Giering, 2001; Brockman and Morgan, 2006).

Following the aforementioned procedures, for consumer extraversion and consumer's age, the sample was median split in two subgroups respectively (more extraverted versus less extraverted consumers and older versus younger consumers). For the remaining moderating variables, the sample was split into male and female consumers and more educated (college education or higher) versus less educated consumers (no college education). Then, a multiple-group LISREL analysis was performed comparing two subsamples. More specifically, two models that are different only with respect to the effect of the independent variable (either perceived privacy or security) on consumer trust were compared. One model restricts this parameter to be equal across groups (equal model), whereas the more general model allows this parameter to vary across groups. Because these are nested models, with the general model having one degree of freedom less than the restricted model, the chi-square value will always be lower for the general model than for the restricted model. The question is whether the improvement in chi-square when moving from the restricted to the more general is significant. Significance can be assessed on the basis of the chi-square difference between the two models with the use of a chi-square distribution with one degree of freedom.

The results of the multi-group LISREL analyses are shown in Table 4. As anticipated, the positive influence of both perceived privacy and security on consumer's trust in the online retailer was stronger among: less extraverted ($\gamma_{privacy} = .39, p < .01; \gamma_{security} = .49, p < .01$) versus more extraverted individuals ($\gamma_{privacy} = .14, p < .1; \gamma_{security} = .22, p < .05$), males ($\gamma_{privacy} = .35, p < .01; \gamma_{security} = .49, p < .01$) versus females ($\gamma_{privacy} = .17, p < .05; \gamma_{security} = .25, p < .01$), more educated ($\gamma_{privacy} = .43, p < .01; \gamma_{security} = .51, p < .01$) versus less educated consumers ($\gamma_{privacy} = .19, p < .05; \gamma_{security} = .18, p < .05$), and younger ($\gamma_{privacy} = .45, p < .01; \gamma_{security} = .50, p < .01$) versus older individuals ($\gamma_{privacy} = .21, p < .05; \gamma_{security} = .28, p < .01$). In all these cases, as reported in Table 4, the decrease in chi-square when moving from the restricted

(equal) model to the more general model was significant, providing support for Hypotheses 4a–b, 5a–b, 6a–b, and 7a–b, respectively.

Table 4

Results of moderating effects

Relationship	Moderator variable		Chi-Square Difference ($\Delta\chi^2=1$)	Hypothesis Supported
	Less extraverted consumers (n=219)	More extraverted consumers (n=179)		
Privacy→Trust	$\gamma=0,39$ ($t=5,30$)	$\gamma=0,14$ ($t=1,81$)	$\Delta\chi^2=8,1^{**}$	H4a supported
Security→Trust	$\gamma=0,49$ ($t=6,50$)	$\gamma=0,22$ ($t=2,84$)	$\Delta\chi^2=9,29^{**}$	H4b supported
	Women (195)	Men (n=203)		
Privacy→Trust	$\gamma=0,17$ ($t=2,46$)	$\gamma=0,35$ ($t=4,96$)	$\Delta\chi^2=4,05^*$	H5a supported
Security→Trust	$\gamma=0,25$ ($t=3,64$)	$\gamma=0,49$ ($t=6,82$)	$\Delta\chi^2=6,32^*$	H5b supported
	Less educated no university studies (n=127)	More educated university studies (n=271)		
Privacy→Trust	$\gamma=0,19$ ($t=2,50$)	$\gamma=0,43$ ($t=7,31$)	$\Delta\chi^2=7,84^{**}$	H6a supported
Security→Trust	$\gamma=0,18$ ($t=2,34$)	$\gamma=0,51$ ($t=8,33$)	$\Delta\chi^2=4,38^*$	H6b supported
	Younger (n=194)	Older (n=204)		
Privacy→Trust	$\gamma=0,45$ ($t=6,75$)	$\gamma=0,21$ ($t=2,96$)	$\Delta\chi^2=8,09^{**}$	H7a supported
Security→Trust	$\gamma=0,50$ ($t=7,61$)	$\gamma=0,28$ ($t=4,04$)	$\Delta\chi^2=5,33^*$	H7b supported

* $p < .05$ ** $p < .01$

6. DISCUSSION AND CONCLUSIONS

The main objective of this study was to expand understanding of the effect of perceived privacy and security on trust in online retailers, and how consumer's level of extraversion and demographic variables moderate the effect of these factors on trust. Overall, the empirical study confirms the hypothesized model and the relevant theory from which the model's hypotheses were derived. Specifically, our findings revealed that both perceived privacy and security are positively related to consumer trust in the online retailer after accounting for the variance explained by consumer's Internet expertise. Moreover, according to prior research (e.g., Kim, 2005; Kim et al., 2008; Dolatabadi and

Ebrahimi, 2010; Hu et al., 2010; Ganguly et al., 2011) our results suggest that perceived security has a slightly greater positive effect ($\gamma = .39$) than perceived privacy ($\gamma = .27$) on consumer trust, but these two antecedents were also found to be highly and positively correlated, which means that positive perceptions of one of them lead to positive perceptions of the other too. Consistent with prior findings from Belanger et al. (2002), these results highlight the importance of using security and privacy as two distinct concepts: although perceived privacy and security can be highly related to each other, they are however different constructs (measurement reliability, convergent, and discriminant validity) that have their own contribution to consumer trust.

The study of the moderating effects represents an initial effort in the process of identifying the conditions under which the influence of perceived privacy and security in the website are likely to have the greatest positive effects on consumer trust toward the online retailer. Importantly, most of previous studies on privacy and security online issues have tended to study *direct effects* of consumer factors (Milberg et al., 1995; Sheehan, 1999; Dommeyer and Gross, 2003; Lightner, 2003; Gauzente, 2004; Junglas and Spitzmüller, 2006; Barnes et al., 2007; Wong et al., 2009). However, as argued earlier, researchers have long pointed out that “hypothesizing direct effects may be somewhat redundant and obvious” (Dabholkar and Bagozzi, 2002; p.185), and it is much more meaningful to investigate the moderating effects of consumer personal traits and demographics (e.g. Dabholkar, 1996; Dabholkar and Bagozzi, 2002; San Martín and Jiménez, 2011). Our results revealed that the positive influence of both perceived privacy and security on consumer trust was stronger among individuals low in extraversion, males, younger and more educated consumers. These results contribute to prior literature in several ways.

First, among potential personality traits of the individual, prior research shows that the personality dimension extraversion is one of the primary determinants of consumer behavior on the Internet (Kini and Chobineh, 1998; Barnes et al., 2007), and it has been found to moderate other online trust-antecedents link (Chen and Lee, 2008). Chen and Lee (2008) found that extraversion positively

moderated the relationship between consumer's beliefs about several peripheral route website contents (e.g., reputation, product quality) and consumer's online trust. Importantly, our findings extend Chen and Lee's (2008) study since we show that this personality trait also moderates the influence of perceived privacy and security, which represent beliefs about central route website contents (San Martín et al., 2011), on consumer trust. Specifically, our findings suggest that consumers who are less extraverted judge privacy and security as stronger determinants of their trusting perceptions about the online retailer than more extraverted ones. This is also consistent with prior research that has shown that individuals who are low in extraversion have more privacy concerns (Junglas and Spitzmüller, 2006, Barnes et al., 2007; Chen, 2011). Accordingly, the present study extends this prior literature by showing that the higher concerns about privacy and security protections found among less extraverted individuals are indeed reflected in a higher influence of privacy and security perceptions on trust.

Second, findings about the moderating role of consumer demographics also provide important insights. For example, our results confirm that, although most previous studies suggest that women are more concerned than men about privacy and security issues on the Internet (Milberg et al., 1995; Sheehan, 1999; Gauzente, 2004; San Martín and Jiménez, 2011) in our study such alleged women's higher concerns do not translate into a stronger influence of perceived privacy and security on trust, but rather the opposite takes place. This finding confirms previous contentions about the limited relationship that often exists between individuals' stated privacy and security concerns and their actual online behavior (Li and Sarathy, 2006; Joinson et al., 2010). It also highlights the role that other consumer-related factors, such as their shopping preferences or orientations, may play in such context (Kim and Benbasat, 2003; Smith et al., 2011). In particular, our results seem to suggest that the high preference of women for a personalized, engaging interaction with the website (Venkatesh and Agarwal, 2006; Ganguly et al., 2011) may override their privacy or security concerns, and therefore such experiential or social value-seeking behavior can lead female consumers to rely more on the trusting beliefs that arise from the interactivity aspects of the website, than those which arise from the privacy or

security policy features. On the other hand, the stronger importance of both perceived privacy and security in determining trust by male consumers supports previous research that suggest greater familiarity with online shopping may improve the positive influence of perceived privacy and security assurances on online trust by increasing consumer knowledge and understanding of such privacy and security issues (Dutton and Shepherd, 2003; Chen and Dibb, 2010).

Finally, the influence of privacy and security on trust was stronger among younger and more educated consumers. This suggests that older consumers may be less aware than younger users of the potential problems on the Internet and the operational issues. It also implies that a higher level of education can improve consumers' knowledge and understanding of privacy and security issues on the Internet, and, hence, their potential positive role on the trusting perceptions of these consumers. Importantly, moderating effects of both age and education seem to indicate that the potential of websites' privacy and security policies to generate consumer trust may largely depend on the consumer-related abilities to fully understand such policies.

6.1. Managerial implications

There are a number of managerial implications derived from this study. First, although the effect of perceived security on trust in the online retailer's website were, in general, more important than the effect of perceived privacy, the high positive correlation between these two antecedents of trust indicate that requirements for one of these features on a Website lead to a desire for the other as well. Accordingly, online marketers who intend to include either strong privacy or security statements or features on their site should seriously consider including all of them.

Second, our results suggest that privacy and security perceptions are especially important in determining trust by less extroverted consumers. Less extroverted individuals are reserved and uncommunicative, and have little interest for socializing in the website (Barnes et al., 2007; Cheung and

Lee, 2008). Accordingly, for these consumers may be especially important to provide strong, clear and comprehensive information on security and privacy policies, also avoiding the use of excessively technical or legalistic terms that discourage consumers to read them or that do not help to fully understand their contents. Importantly, online marketers should consider that even the expected benefits of personalized service could not be an admissible reason for a privacy invasion by these less extraverted consumers. Thus, including some additional tools that allow consumers to choose and control the access and further use that the retailer can give to their personal information also could enhance privacy and security perceptions of less extraverted consumers, and consequently their trusting perceptions about the online retailer.

Finally, our results about the moderating role of consumer demographics provide online retailers a better understanding of how they can effectively communicate their trustworthiness to different consumers. In particular, for women, older and less educated consumers, who are usually concerned about privacy and security protection in online shopping, but also may be less aware of the operational issues or less motivated to understand them, we encourage online retailers to enhance or establish easy to access (and understand) privacy and security policies. Importantly, the weaker influence of both privacy and security perceptions on trust by older and less educated consumers may be due to the lack of usability of privacy and security policies themselves, as most of them currently require greater than high school education or more than average online user's knowledge to be comprehended (Joinson et al., 2010). Therefore we encourage online retailers to expend more educational and promotional efforts to clearly explain their privacy and security policies and seals, as well as to adapt their language and information content so that statements can be easily recognizable and understood by all kind of consumers, regardless of their prior knowledge or experience. In addition, when targeting female customers, online retailers could provide more web-enabled communication along with their privacy and security policies to enhance trust by including features that facilitate the information exchange, such as virtual sales agents, online message boards or third party evaluations.

On the other hand, when targeting male, younger and more educated consumers, who are found in this study to be more experienced with the use of Internet in general than their counterparts (see Table 3), we suggest online retailers to provide more detailed or in-depth information about their privacy and security protection mechanisms. For example, online retailers should not place cookies on the user's computer without his or her knowledge. This is an important issue, since younger and more educated consumers are more likely to be more aware of these issues (Dommeyer and Gross, 2003; Yang et al., 2009), and hence these segments may be willing to pay a premium for those websites that made readily available this kind of information (Joinson et al., 2010).

6.2. Research limitations and suggestions for future research

Substantively, building on the findings of this study, several suggestions can be offered to future researchers. One inherent limitation and a need for further research concerns the causality suggested in our findings. The research design is cross-sectional in nature, and purely causal inferences remain difficult to make. Hence, evidence of causality through longitudinal studies is recommended.

This study represents an initial step into the analysis of the moderating effects of consumers' personality and demographic variables on the relationship between online trust and two of the most important antecedents, perceived privacy and security. Further research is needed to examine a more comprehensive set of online trust antecedents, such as the potential role that individuals' personal knowledge about privacy and security issues on the Internet would play in their trust beliefs. In addition, as it can be derived from our results and their discussion, the role of other moderator variables such as shopping orientations (e.g., goal-directed or utilitarian, social or experiential, etc.), could also be considered in further studies. For example, it would be interesting to analyze to what extent the different knowledge or shopping motivations of the various moderating groups (men versus women, younger versus older, high education versus low education) may be causing some of the differences found between these groups in our research. Finally, since prior research has found that individual differences

in need for cognition and cognitive thinking style play an important role in online information processing strategies of consumers (Bosnjak et al., 2007; Vinitzky and Mazursky, 2011), future studies may also analyze the extent to which such variables moderate the influence of privacy and security perceptions on the consumers' trust in the online retailer.

Appendix

A summary of prior empirical studies examining privacy and/or security as antecedents of online trust

Authors	Privacy and Security	Items	Moderators	Focus	Main findings
Cheskin and SA (1999)	Seals of Approval: Symbols, like VeriSign and Visa, designed to re-assure the visitor that security has been established.	-		Trust in e-commerce sites	The first and most necessary step in establishing consumer trust is providing assurance that the consumers' personal information will be safeguarded.
Culnan and Armstrong (1999)	Information privacy concerns: inability of an individual to control the use of personal information.	3		Impersonal trust	When customers are explicitly told that fair information practices are employed, privacy concerns do not distinguish consumers who are willing to be profiled from those who are unwilling to have their personal information used in this way. Procedural fairness serves as an intermediary to build trust.
Hoffman et al. (1999)	Perceived privacy: consumers' perceived ability to control the use of their personal information for other purposes subsequent to the transaction during which the information is collected.	1		Online trust	Lack of environmental control and control over the use of secondary information leads to the development of negative perception about security and privacy concerns respectively.
	Perceived security: consumer concerns with sharing credit card information online, including fear of hackers and informational theft.	1			
Lee and Turban (2001)	Perceived effectiveness of third-party certification: represents both perceived privacy and security.	3	Individual trust propensity	Trust in online shopping	No empirical support was found for the effect of third-party certification on consumer trust on Internet shopping. Trust propensity only moderates (positively) the relationship between the perceived integrity of Internet merchants and consumer trust on Internet shopping.
Belanger et al. (2002)	Privacy: consumers' ability to manage information about oneself.	2		Website trustworthy-ness	The presence of security features is more important to the consumer than the presence of a privacy seal. However, privacy and security seals and statements all are highly correlated, and requirements for one of these features on a website lead to a desire for the others as well. The relationship between privacy and security statements and seals on perceived trustworthiness was not supported.
	Security: consumer concerns with sharing information online, including fear of hackers and informational theft.	2			
Chellappa and Pavlou (2002)	Perceived information security: the subjective probability with which consumers believe that their personal information will not be viewed, stored or manipulated during transit or storage by inappropriate parties, in a manner consistent with their confident expectations.	5		Trust in e-commerce transactions (EC)	There is a significant relationship between consumers' perceived information security and trust in EC transactions. Explores the role of limited financial liability as a surrogate for perceived security. However, the findings show that there is a minimal effect of financial liability on consumers' trust in EC.
Yoon (2002)	Transactional security: online company's institutional status on its payment system and consumer's perceived extent of risk involved.	4		Trust in the website	Transaction security on a website and consumer personal variables (familiarity with electronic commerce, previous satisfaction with e-commerce, and receptivity to new technological innovation) significantly and positively affect both website satisfaction and trust. Website trust and satisfaction are highly correlating with each other.

Appendix

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Authors	Privacy and Security	Items	Moderators	Focus	Main findings
Corbitt et al. (2003)	Perceived technical trustworthiness: reliability (2 items), security (4) and privacy (2) of e-commerce systems	8		Trust in e-commerce	There is a positive and significant relationship between technical trustworthiness and trust, but a higher level of trust in technology is not correlated to a reduced level of risk.
Gefen et al. (2003)	Structural assurance: assessment of success due to safety nets such as legal recourse, guarantees, and regulations that exist in a specific context.	3		Trust in an online retailer	Institution-based beliefs of structural assurances have by far the most positive effect on trust.
Kim et al. (2004)	Structural assurances: perceived safety of the Internet transaction environment.	4	Purchase experience with an Internet store	Trust in an e-vendor	Structural assurance is found to be insignificant to trust for potential and repeat customers. Reputation and information quality are the main antecedents of trust for potential customers, whereas that for repeat customers the main antecedents are the service quality and satisfaction
Koufaris and Hampton-Sosa (2004)	Perceived security control: the perception of security associated with transactions with a particular website.	4	Website categories	Initial trust in an online retailer	Perceived security control is one of the most important antecedents of initial trust in the online retailer. There is a significant but small difference between the websites of laptops and travels when it comes to the effect of the independent variables on initial trust. Specifically, among the other antecedents, the effect of perceived security control on trust is stronger for websites of goods than for services.
Bart et al. (2005)	Privacy: protection of individually identifiable information on the Internet.	3	Website categories; Consumer demographics	Trust in the website	Perceived privacy is significant and positively related to online trust. No significant effects on trust were found for security. The relative importance of privacy on online trust differs depending on: (1) the type of commercial website, being more important for travel websites, and (2) the level of education and income of consumers, being less important for highly educated, high-income consumers.
	Security: safety of the computer and credit card or financial information.	3			
Kim (2005)	Privacy: rights of individuals and organizations to determine for themselves how, when, and to what extent information about them is to be given to others.	5	Individualism-Collectivism Cultural Dimension	Trust in an e-vendor	There are significant differences in the effect of privacy on trust between the online consumer in an individualist culture and those in a collectivist culture: whereas for individualistic consumers privacy has a significant and positive effect on consumer's trust in e-vendor, for collectivistic this effect is not significant. Security protection has a significant and positive effect on consumer's trust in e-vendor for both collectivistic and individualistic consumers.
	Perceived security protection: consumer's perception that the e-vendor will fulfill security requirements, such as authentication, integrity, encryption, and non-repudiation.	4			
Aiken and Boush (2006)	Presence of a Third-Party certification (trustmark): any third-party mark, logo, picture, or symbol that is presented in an effort to dispel consumers' concerns about Internet security and privacy and, therefore, to increase firm specific trust levels.	-		Trust in an online retailer	Compared to other potential signals of trust in an online retailer (i.e., an objective-source rating or an implication of investment in advertising), the trustmark had the greatest effect on perceived trustworthiness, influencing respondents' beliefs about security and privacy, general beliefs about firm trustworthiness, and willingness to provide personal information.

Appendix

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Authors	Privacy and Security	Items	Moderators	Focus	Main findings
Cheung and Lee (2006)	Perceived privacy control: perception of Internet merchants' ability to protect consumers' personal information from unauthorized use.	3		Trust in online shopping	Among the four proposed antecedents, with the exception of perceived privacy control, the remaining constructs (perceived security control, third-party recognition and legal framework) significantly and positively affect consumer trust in Internet shopping. Both legal framework and third party recognition produce a substantially large effect on consumer trust in Internet shopping, which in both cases is higher than the effect produced by perceived security control.
	Perceived security control: perception of Internet merchants' ability to fulfill security requirements.	3			
	Legal framework: perceived effectiveness of the law and code of practice established to protect Internet shoppers during electronic transactions.	3			
	Third-party recognition: perception of effectiveness of third-party recognition bodies in assuring the trustworthiness of online merchants.	3			
Flavián and Guinalú (2006)	Privacy: an individual's ability to control the terms by which his personal information is acquired and used.	7		Trust in the website	Develop a new construct called perceived security in the handling of private data (SHPD) that comprises privacy and security as two dimensions of this single construct. SHPD represents, thus, the consumer's perception of practices regarding personal data protection carried out by the website, and the security of the information system in which these practices are to be found. Trust in the website is particularly influenced by the security perceived by consumers regarding the handling of their private data.
	Security: the subjective probability with which consumers believe that their personal information (private and monetary) will not be viewed, stored, and manipulated during transit and storage by inappropriate parties in a manner consistent with their confident expectations.	8			
Li and Sarathy (2006)	Privacy concern: reflects a person's general disposition to privacy invasion.	3		Trust in the website	For an unfamiliar website, a holistic shopping experience triggers various emotions. These emotions (likings and frustration) then act as the primary determinants of privacy belief. Privacy concern is a less important factor in shaping privacy beliefs. Privacy belief has a positive impact on trust belief, and both privacy belief and trust belief serve as primary antecedents of intention to give out personal information.
	Privacy belief: the subjective probability that consumers believe that their private information is protected as expected.	6			

Appendix

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Authors	Privacy and Security	Items	Moderators	Focus	Main findings
Schlosser et al. (2006)	Security/privacy statements: signals of the firm's benevolence and integrity.	-	Consumers' purpose for visiting the website (search or browse); Perceived risk in online shopping.	Trusting beliefs; Trusting intentions	The presence and strength of privacy/security statements significantly and positively affect both benevolence and integrity trusting beliefs: such beliefs are significantly higher for consumers who received a strong statement than for those who received weak or no statement. Moderating variables are only analyzed in the relationships between trusting beliefs and trusting intentions: both searchers and browsers interpreted privacy/security statements as a signal of benevolence/integrity, but such privacy/security statements affected significantly the online purchase intentions (trusting intentions) of browsers. Similarly, although searchers and browsers and those perceiving high and low risk interpreted website investment as a signal of ability, website investment significantly affected only the online purchase intentions of searchers and for those perceiving high risk.
Casaló et al. (2007)	Privacy: a set of legal requirements and good practices with regard to the handling of personal data.	7		Trust in an online banking context	Website security and privacy, as two dimensions of the single construct perceived security in the handling of private data (SHPD), have a direct and significant effect on consumer trust in a financial services website.
	Security: technical guarantees that ensure that the legal requirements and good practices with regard to privacy will be met effectively	8			
Mukherjee and Nath (2007)	Privacy: protection of individually identifiable information on the Internet.	2		Trust in an online retailer	Privacy and security features of the website along with shared values are the key antecedents of trust, which in turn positively influences relationship commitment.
	Security: safety of the computer and credit card or financial information.	4			
Román (2007)	Perceived privacy: consumers' perceptions about the protection of individually identifiable information on the Internet.	4		Trust in an online retailer	Both privacy and security have a significant and positive impact on trust.
	Perceived security: consumers' perceptions about the security of the online transaction (i.e., the safety of the payment methods) along with the protection of financial information from unauthorized access.	6			
Teltzrow et al. (2007)	Perceived privacy: the anticipation of how personal data is collected and used by an e-shop.	3	Familiarity with the retailer's website	Trust in a multi-channel retailer	The study identifies perceived privacy concerns as the strongest influence on trust in the e-shop. Trust increases over familiarity with the retailer whereas the influence of perceived privacy has the same importance over different levels of familiarity.

Appendix

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Authors	Privacy and Security	Items	Moderators	Focus	Main findings
Jin and Park (2008)	Security/Privacy: a dimension of online store attributes.	3	Online Purchase Experience	Trust in the website	Merchandising was the most important attribute in enhancing both trust and satisfaction, followed by security/privacy and order fulfillment. Online purchase experience does not significantly moderate the relationship between security/privacy and trust: this attribute is found to be important in increasing trust for both groups.
Kim et al. (2008)	Perceived Privacy Protection: consumer's perception of the likelihood that the Internet vendor will try to protect consumer's confidential information collected during electronic transactions from unauthorized use or disclosure.	6		Trust in the website	Perceptions of privacy protection (PPP) and security protection (PSP) both strongly increases consumer's trust and strongly decreases consumer's perceived risk in completing an e-commerce transaction. The presence of third-party seals (TPS), although significantly reduces consumer's perceived risk, has no significant effect on consumer's trust.
	Perceived Security Protection: consumer's perception that the Internet vendor will fulfill security requirements such as authentication, integrity, encryption, and non-repudiation.	6			
	Third-Party Seal: <i>trustmarks</i> on websites that informs consumers that the owners have openly agreed to disclose their information gathering and dissemination practices.	4			
San Martín and Camarero (2008)	Security and privacy polices	6	Attitudes toward online shopping	Trust in the website	Among other antecedents (service quality, warranty), security and privacy policies have the strongest positive effect on trust. The motives and inhibitors the individuals perceive when buying online moderate the relationship between privacy/security policies and trust: whereas potential users are the group that more importance give to security and privacy policies as determinants for trust, for relational users such privacy and security policies are not significant determinants for their trust.
Cheung and Chang (2009)	Privacy: the right of an individual to be left alone and to be able to control the flow of personal information and providing reasonable assurance that personal information is kept secure.	4	Individualism-Collectivism Cultural Dimension	Trust in online shopping	Privacy does not have a significant effect on trust, but security does have a positive effect on trust. Comparing to individualists, the perceived risk has a stronger effect on trust of online shopping for collectivists.
	Security: online institutional status on its payment system and the consumer's perceived extent of risk involved.	4			

Appendix

Continues

Authors	Privacy and Security	Items	Moderators	Focus	Main findings
Roca et al. (2009)	Perceived privacy: the possibility that online companies collect data about individuals and use them inappropriately.	4		Perceived trust in online trading systems	Perceptions of high security of the online trading system facilitate the trust in the online financial dealer and stockbroker, but perceived privacy is not a determinant of perceived trust.
	Perceived security: threat that creates a circumstance or event with the potential to cause economic hardship to data or network resources in the form of destruction, disclosures, modification of data, denial of service, and/or fraud, waste and abuse.	5			
Chen and Dibb (2010)	Security and privacy assurances: extent to which the website guarantees the safety of customers' financial and personal information.	5	Familiarity with the site	Trust in the website	Security and privacy assurances have a positive and significant impact on trust. Security and privacy assurances have a greater influence on trust when people are familiar with the site.
Dolatabadi and Ebrahimi (2010)	Perceived privacy protection	5	Propensity to trust	Trust in online shopping	Both perceived privacy and security protections have a significant and positive effect on trust in online shopping. Respondents with high propensity to trust consider perceived risks and perceived reputation as the significant predictors of their trust in online shopping; while perceived risks, perceived security protection and perceived reputation were the factors considered by respondents with low propensity to trust.
	Perceived security protection	5			
Hu et al. (2010)	Consumer privacy assurance: function used to alleviate online consumers' perceived risk of leaking personal identification information.	-		Initial trust in an online retailer.	There is an interaction between the privacy and security assurance functions such that the effect of either function on enhancing consumers' initial online trust is weakened by the presence of the other. Essentially, the privacy assurance function does not mix well with the security assurance function: the former function has a significant positive impact on enhancing consumers' initial trust under only one condition – the absences of the security assurance function. In contrast, the security assurance function has a significant positive impact on consumers' initial trust as long as the privacy assurance function is absent.
	Transaction security assurance: function used to reassure online consumers that the online vendor uses a special protocol to secure online transactions and a secured database to protect their personal information.	-			
Kim et al. (2010)	Privacy-protection: technical mechanism that assures consumers that their personal information, such as names, addresses, and contact details, will not be released to other parties.	6		Perceived trust in e-payment systems (EPS)	Both privacy protections and security statements are significant factors for improving consumers' perceived security. Consumers' perceived security is positively related to consumers' perceived trust and EPS use.
	Perceived security in e-payment systems: customer's subjective evaluation of the e-payment system's security.	4			

Appendix

Continues

Authors	Privacy and Security	Items	Moderators	Focus	Main findings
Casaló et al. (2011)	Privacy: include aspects such as the obtaining, distribution or the non-authorized use of personal information.	6		Trust in a website	Website security and privacy, as two dimensions of the single construct perceived security in the handling of private data (SHPD), have a direct and significant effect on consumer trust in a website in the Spanish e-commerce context.
	Security: perceptions regarding the reliability of the means of payment used and the mechanisms of data transmission and storage.	8			
Ganguly et al. (2011)	Privacy: the ability to control what information one reveals about oneself over the Internet, and to control who can access that information.	4	Enjoyment of online shopping; Trust Propensity; Age; Gender	Trust in an online travel portal	Security and Privacy are found to be the most significant predictors of trust in online portals. Customers who are low on trust propensity give more stress on security of the website in order to generate trust with the travel portals. The relationship between privacy and trust is moderated by consumer gender, being more important for women than for men, but age does not a significant moderate effect.
	Security: confidentiality, integrity, and authentication or availability	4			
Liao et al. (2011)	Privacy concerns: concerns about possible loss of privacy as a result of a voluntary or surreptitious information disclosure to a website.	4	Shopping experience	Trust in e-commerce sites	The effect of Internet literacy, social awareness and disposition to trust on privacy concern and trust was weaker for experienced shoppers. Privacy concern, trust and risk assessment played a lesser role on the two activity variables (intention to transact and intention to retrieve privileged information) for those who were more experienced. Perceived privacy risk stood out as a strong antecedent for respondents in both experience groups.
San Martín and Jiménez (2011)	Security and privacy policies: refers to the company security regarding data protection, information provided on security and the existence of reliable data transmission mechanisms.	6	Gender	Trust in an online retailer	Privacy and security policies positively influence online trust. Privacy and security concerns are more important for women than for men.
San Martín et al. (2011)	Privacy and security polices: cognitive signals that an online store send to assist customer decision making.	6	Consumer involvement in online shopping	Trust in a website	Privacy and security policies, as cognitive signals, positively influence satisfaction and trust through a central route of persuasion. Overall, the central route of persuasion is more relevant explaining the formation of online trust in the case of high-involvement buyers. However, contrary to authors' expectations, the influence of privacy and security policies on both online trust and satisfaction were found to be higher among low-involvement buyers.

Source: Own elaboration.

CONCLUSIONS

The main objective of this research was to contribute to a better understanding of several consumers' concerns, perceptions and beliefs about ethical issues in e-commerce. These consumers' concerns or beliefs are at the core of the most important barriers related to e-commerce adoption, so they represent critical elements that online businesses need to address in order to promote a greater acceptance of Internet as a shopping channel. This, ultimately, is needed for e-commerce to reach its full potential. Previous research has already shown the importance of these consumer ethical concerns in online shopping contexts and, accordingly, several efforts have been devoted over time to analyze the antecedents and consequences of such ethical concerns. Most of this stream of research, however, has been devoted to examine the influence of online retailer- or Internet-related variables (e.g., website characteristics, privacy/security policies or structural assurances), neglecting the importance of studying how consumers' characteristics may influence their ethical beliefs or expectations in this online shopping context. Accordingly, the current research studies several ethical issues related to e-commerce adoption from a consumer perspective, that is, analyzing the influence of consumer-related variables on their ethical beliefs and expectations in online shopping.

In particular, our research has analyzed the influence of important consumer-related variables (i.e., ethical ideology and risk aversion) on their ethically-based distrust towards online retailers, considering the moderating role of individuals' need for personal interaction in the relationships between these antecedents and online distrust. In doing so, it makes important clarifications about the differences between online trust and online distrust along with the different potential sources of distrust in online settings (i.e., competence- or ethically-based sources). Moreover, this research has also examined how individual differences in cognitive factors (Internet-based information search and perceived Internet usefulness) and psychographic variables (shopping enjoyment, materialism and risk aversion) influence their ethical perceptions about deception in both the online and the traditional shopping channels, i.e., the potential different effects of these antecedents of perceived deception associated with online versus in-store shopping. This side-by-side comparison contributes to a better understanding of channel

evaluation, as it does not only determine the importance of the antecedents of perceived deception *within* each channel, but also *across* channels. Finally, our third study has addressed some important gaps related to previous research findings about the relationships between ethical perceptions of privacy, security and trust in the online retailer. Specifically, the third study has adopted a more comprehensive approach toward the study of these relationships by analyzing the moderating influence of consumer's demographics (i.e., age, education and gender) and one consumer personality trait that has direct relevance to online shopping, namely, consumer's level of extraversion. By controlling the effects of consumer's general Internet expertise on the dependent variable (i.e., online trust), it also provides a more powerful understanding of these online issues, since most of the previous related studies have not considered the effects of this important explanatory variable. Overall, all of these ethical concerns about e-commerce (i.e., ethically-based distrust, perceived deception and privacy/security issues) have been analyzed in this dissertation, which has been structured along three main chapters.

Overall, our findings indicate that both relativist-based ethical ideology and risk aversion significantly increases consumer's ethically-based distrust toward online retailers. By contrast, this online distrust is not related to consumer's level of idealism, which parallels prior conceptual contentions about the different nature of online trust/distrust and their potential antecedents (Lewicki et al., 1998; McKnight and Chervany, 2001). Accordingly, one plausible and logical explanation derived from our results for the distrust of consumers in online retailers' ethical behavior may be just their potential general lack of confidence in any standardized ethical code or universal moral rules of standards. Contrary to our expectations, results also show a positive relationship between risk aversion and relativism. This means that, although from a conceptual standpoint to be risk-averse provides a basis for a non-relativistic ethical ideology, the actual socio-economic situation, characterized by a deep recession, may have led risk-adverse individuals to "lose their faith" in the existence of a solid and fundamental moral value system that could effectively help them to reduce unpredictability in ethical

dilemmas, and thus to a shift from moral absolutism to moral relativism. Taken together, these findings suggest that consumer's ethically-based distrust toward online retailers is positively related to the lack of cognitive faith in moral principles, norms, or laws as guiding principles of ethical behavior. Therefore, several widely used trust-building strategies by online retailers, which are based on signaling their ethical behavior, may backfire with consumers with a high disposition to ethical skepticism. Our research also shows that positive effects of relativism and risk aversion on consumer's ethically-based distrust of online retailers are moderated by consumers' need for personal interaction, being more pronounced for those consumers with a high need for personal interaction with retail salespeople than for those with a low need for such personal interaction. In fact, the effects of risk aversion, which had the strongest positive influence on consumer's ethically-based distrust, become insignificant for consumers with a low need for such personal interaction. For the latter, only relativism has a significant influence on their ethically-based online distrust, although this influence is significantly lower than for consumers with a high need for personal interaction. Thus, the lack of opportunities for personal interaction with retail salespeople in online shopping context has found to be an important factor in explaining consumer distrust of online settings.

With regard to the impact of consumers' personal characteristics on their perceptions of deception and their potential different effects associated with online versus in-store shopping, the empirical study carried out in this thesis confirms the majority of our research model hypotheses. In particular, the effects of individual's cognitive factors (Internet-based information search and perceived Internet usefulness) and risk aversion on perceived deception were found to be more relevant when consumers shop online than when they purchase from traditional stores. Conversely, psychographic factors (shopping enjoyment and materialism) were found to play a more important role in explaining perceived deception in the traditional shopping context as compared to the online channel. Moreover, the findings also suggest that consumers' confidence in the higher accessibility, objectivity, and browsing possibilities of product information offered in the online channel lead to more negative

assessments and attitudes toward bricks-and-mortar retailer's claims in general (higher levels of offline perceived deception). These results indicate that, whereas in the online channel the most important factor related to higher levels of perceived deception is risk aversion, in the traditional shopping channel this factor is materialism. Factors that can help to reduce deceptive perceptions also differ between channels: whereas a higher use of Internet as a source of product information along with the perceived utility of this channel lead to lower levels of online perceived deception, the hedonic value and enjoyment gained from shopping offers potential benefits to traditional retailers by decreasing perceived deception in this channel.

Finally, the study of the moderating effects in the relationships between privacy, security and online trust contributes to our understanding of the conditions under which the influence of perceived privacy and security in the website are likely to have the greatest positive effects on consumer trust toward the online retailer. Consistent to previous evidence, our research confirms that both privacy and security perceptions are important antecedents of consumer trust in the online retailer, yet our findings also reveal that such importance differs among consumers. Specifically, the results indicate that privacy and security perceptions are especially important in determining trust by less extroverted consumers, males, younger and more educated consumers. In the case of extraversion, this research extends prior literature by showing that the higher concerns about privacy and security protections found among less extraverted individuals are indeed reflected in a higher influence of privacy and security perceptions on trust. On the other hand, in the case of consumer demographics, the findings confirm previous contentions about the limited relationship that often exists between individuals' stated privacy and security concerns and their actual online behavior (Li and Sarathy, 2006; Joinson et al., 2010), highlighting the role that other consumer-related factors, such as their shopping preferences or orientations, may play in such context (Kim and Benbasat, 2003; Smith et al., 2011). Moreover, the moderating effects of both age and education found in this study seem to indicate that the potential of

websites' privacy and security policies to generate consumer trust may largely depend on the consumer-related abilities to fully understand such policies.

Overall, findings from the three studies described in this thesis highlight the importance of considering consumer variables in determining ethical perceptions and beliefs in both traditional and online settings. It has been argued that since the term "ethics" refers to personal values of conduct, "each individual can have a different view of what is ethical or unethical" (Fraedrich and Ferrell, 1992; p. 246), which effectively prevent the discovery of individual differences in ethical beliefs or expectations about sellers' ethical behavior on the Internet. Our results about the direct influence and moderating effects of consumer personal variables improve our understanding of ethical issues in online retailing from the consumers' point of view, and also provide online retailers with a better understanding of how they can effectively communicate their trustworthiness to different consumers, which ultimately could help them to take advantage of the current positive tendencies in the marketplace (i.e., the recent explosive consumer adoption of new mobile technologies) and hence to reach a higher future growth.

SUMMARY IN SPANISH
(RESUMEN EN ESPAÑOL)

El comercio electrónico entre empresas y consumidores representa uno de los canales de distribución con mayores perspectivas de crecimiento futuro (Nelson y Leon, 2012). Esta compra-venta a través de Internet ha generado un nuevo mercado global (Cohan, 2000) donde tanto las empresas como los consumidores ya no están limitados por fronteras físicas, geográficas o temporales (Guo y Sun, 2004). De hecho, hoy en día el comercio online está reformulando tanto el mercado en general como el sector minorista en particular (Nelson y Leon, 2012).

Animado por los propios minoristas en sí que ven en este canal online una oportunidad para reducir sus costes de funcionamiento, el comercio electrónico ha crecido rápidamente en los últimos años a pesar de la crisis económica sufrida a nivel global (Hu et al., 2010). En Europa, las ventas a través de Internet alcanzaron los 96.706 millones de euros en 2011, y se espera que crezcan hasta 171.957 millones en 2016 (Gill, 2012), lo que supone una tasa de crecimiento anual del 12,2%. De hecho, la intención de incrementar las compras online es muy alta entre los internautas europeos: hasta el 79% tienen en mente adquirir productos y servicios a través de Internet en el corto plazo, cifra que no difiere mucho de la española: el 72% (Nielsen, 2010). En España, el volumen de negocio generado por el comercio electrónico minorista en 2011 se situó en 10.917 millones de euros, lo que supuso un incremento del 19,8% respecto a 2010 (ONTSI, 2012). Además, se espera que crezca a este ritmo del 19% anual hasta 2016, por encima de países hasta ahora líderes en Europa como Alemania o el Reino Unido, con ritmos de crecimiento esperados del 12 y del 11% anual (Gill, 2012). Este crecimiento es comúnmente atribuido a la penetración cada vez mayor del comercio electrónico entre diferentes grupos de población y segmentos minoristas (Nelson y Leon, 2012), y se espera que continúe a un ritmo incluso mayor en los próximos años debido al profundo y acelerado cambio observado en la velocidad a la que hoy en día los consumidores adoptan lo que se ha dado a conocer como nuevos “dispositivos móviles de compra” (teléfonos inteligentes o tabletas) (Hale, 2012; Mulpuru et al., 2012; Nelson y Leon, 2012; yStats, 2013). De hecho, de acuerdo con recientes informes de mercado sobre el comercio electrónico, ya sea a través de estos nuevos dispositivos móviles como de otros formatos tecnológicos,

hoy en día los usuarios online representan un tercio de la población mundial (yStats, 2013), y se espera que, para 2016, 1,3 billones de personas compren a través de Internet (eMarketer, 2013).

Sin embargo, a pesar de esta creciente importancia del comercio electrónico, es importante señalar que todavía supone una cuota de mercado discreta en el volumen de negocio minorista total (Hu et al., 2010; Nelson y Leon, 2012). Estimaciones a nivel europeo sitúan las ventas minoristas a través de Internet en torno a un 5% del total de las ventas en este sector en 2012 y, a pesar de las positivas previsiones para los próximos años, se espera que se mantengan en torno a un 10% en 2016 (Hale, 2012; Mulpuru et al., 2012; Nelson y Leon, 2012). De este modo, si bien con los recientes cambios observados en la velocidad a la que los consumidores adoptan hoy en día las nuevas tecnologías móviles diversos estudios han señalado que el comercio electrónico disfruta hoy de una situación sin precedentes para un crecimiento explosivo (Nelson y Leon, 2012), también es cierto que para alcanzar este potencial crecimiento ha de superar importantes desafíos. Específicamente, dicho crecimiento puede ser muy difícil de lograr si los obstáculos que actualmente prevalecen para una mayor aceptación de Internet como canal de compras no son superados con éxito, para lo cual diversos factores que hoy en día favorecen o impiden el crecimiento del comercio electrónico deben ser mejor comprendidos.

Las preocupaciones, creencias y/o percepciones del consumidor sobre los temas éticos que subyacen a la compra a través de Internet están entre estos factores, dado que dichas preocupaciones constituyen elementos centrales de las barreras más importantes relacionadas con la adopción del comercio electrónico (Miyazaki y Fernandez, 2000; 2001; Román, 2007; Román y Cuestas, 2008; Yang et al., 2009; Clarke, 2008; Román, 2010; Reddy, 2012). En Internet, los consumidores están situados en un entorno único en el que abunda la información asimétrica y las decisiones se toman en base a representaciones de la realidad (Grazioli, 2006; Aiken y Boush, 2006). A diferencia de las compras en el canal tradicional, las transacciones online implican depender de vendedores virtuales y a menudo desconocidos, así como también interactuar a través de la Web, lo que puede exponer a los compradores al riesgo adicional de un comportamiento oportunista por parte de los vendedores (McKnight et al.,

2003; Pavlou y Gefen, 2004). Debido a que ni las características del producto ni la identidad del vendedor pueden comprobarse completamente durante la transacción, dichos compradores deben confiar en que el vendedor online proporcionará una información veraz y no engañosa sobre sus productos y ofertas (Yang et al., 2009; Román, 2010). También, dado que las transacciones online no son instantáneas en la mayoría de los casos (la entrega del producto puede ocurrir días o semanas después de haber realizado el pago del mismo), deben asumir que el vendedor cumplirá con sus obligaciones y compromisos de venta (Kim et al., 2008). Añadido a esto, en Internet las transacciones se llevan a cabo en un dominio público, donde la información personal y financiera requerida para la compra puede ser fácilmente almacenada, copiada, compartida e incluso robada (Bush et al., 2000). Por consiguiente, los compradores online también deben confiar en que la protección de dicha información personal será asegurada y que su privacidad será respetada (Aiken y Boush, 2006). En conjunto, creer en todas estas suposiciones sobre el comportamiento ético de los vendedores online (veracidad de la información, cumplimiento, seguridad y privacidad de los datos personales), es un requisito fundamental para la compra online, ya que los consumidores no harán esa compra a menos que confíen en el vendedor con el que pretenden interactuar (Kim et al., 2008). De forma similar, tampoco volverían a comprar en el sitio web de un vendedor o a través de Internet en general si, tras hacer una compra, se sienten engañados de uno u otro modo por dicho vendedor (Pavlou y Gefen, 2005). Por todo ello, entender los factores que determinan estas creencias o percepciones del consumidor acerca del comportamiento ético de los vendedores en Internet puede suponer una información clave a la hora de abordar los actuales desafíos a los que se enfrenta el comercio electrónico para su esperado crecimiento futuro.

En línea con esto, recientes investigaciones han identificado la desconfianza online como un constructo que está relacionado pero que difiere cualitativamente de la confianza online, mostrando que estos dos conceptos tienen distintos antecedentes y diferentes consecuencias en el comportamiento del consumidor (McKnight y Chervany, 2001; McKnight et al., 2003; 2004; Pavlou y Gefen, 2004; 2005;

Cho, 2006; McKnight y Choudhury, 2006; Chang, 2012). Más aún, entre las potenciales fuentes de esta desconfianza (basada en la competencia técnica o en el comportamiento ético), las preocupaciones del consumidor en torno al comportamiento ético de los vendedores en Internet ha sido identificada como una de las más persistentes y difíciles de invalidar fuentes de la desconfianza hacia la compra online (Hsiao, 2003; Clarke, 2008). Por ejemplo, la literatura ha puesto de manifiesto que la creciente incorporación de mecanismos de confianza online así como la mejora de la tecnología necesaria han ayudado de forma efectiva a generar la confianza del consumidor en el proceso de compra online (Grabner-Kraeuter, 2002; Mukherjee and Nath, 2007), así como también a reducir la desconfianza basada en la competencia técnica de los vendedores online (Hsiao, 2003). Sin embargo, estos mecanismos técnicos o legales para generar la confianza del consumidor en los entornos de venta online no sólo se han hallado insuficientes a la hora de combatir la desconfianza hacia el comportamiento ético de los vendedores, sino incluso contraproducentes (Sitkin y Roth, 1993; Hsiao, 2003; Clarke, 2008). Tal y como argumentan Sitkin y Roth (1993), el uso cada vez mayor de estos remedios técnicos o legales puede mejorar la confianza del consumidor en el entorno online, pero también puede generar suspicacias en torno al comportamiento ético a través de la inferencia de que tales protecciones técnicas y medidas de seguridad existen debido a comportamientos cuestionables de los vendedores en el pasado. Por tanto, comparado con temas sobre el cumplimiento o la competencia técnica entre dichos vendedores en Internet, las creencias negativas del consumidor sobre la integridad del comportamiento ético de los mismos han sido consideradas como una de las más persistentes y difíciles de invalidar fuentes de desconfianza en Internet (Hsiao, 2003; Clarke, 2008). Dadas estas subrayadas limitaciones de los mecanismos tradicionales de construcción de confianza online a la hora de hacer frente a la desconfianza del consumidor en los comportamientos éticos de venta, se hace necesario investigar cómo esta dimensión ética de la desconfianza online puede ser explicada por factores diferentes y que van más allá de las acciones de los vendedores en Internet y que pueden estar ligados a diferencias individuales de los consumidores.

Asimismo, aunque en los últimos años se han hecho significativos avances en la lucha contra el engaño y el fraude en Internet, el continuo aumento en el número de reclamaciones relacionadas con prácticas engañosas de venta (publicidad engañosa, información falsa o insuficiente, etc.) (Yang et al., 2009; Román, 2010) también ha contribuido a incrementar la conciencia de los consumidores sobre los riesgos que se derivan del potencial comportamiento oportunista de los vendedores en Internet (McKnight et al., 2003; Pavlou y Gefen, 2004; Yang et al., 2009). Los efectos más generalizados de la desconfianza generados por estas actividades engañosas pueden operar a través de un mecanismo de estereotipación defensiva, donde el engaño genera un estereotipo negativo de la credibilidad de los vendedores como conjunto, tanto en el entorno tradicional de ventas (Darke y Ritchie, 2007), como en el electrónico (Pavlou y Gefen, 2005). Estas reacciones del consumidor pueden minar seriamente la efectividad general de las estrategias de comunicación y marketing, pudiendo suponer importantes problemas para los vendedores (disminución de las ventas o pérdida de reputación). Sin embargo, investigaciones previas han señalado que, del mismo modo que no todas las prácticas de venta engañosas tienen el mismo potencial para engañar al consumidor, no todos los consumidores son igualmente susceptibles al engaño (Langenderfer y Shimp, 2001; Putrevu y Lord, 2003; Compeau et al., 2004; Grazioli, 2004; Xie y Boush, 2011), subrayando en este sentido la importancia de analizar las características del consumidor como potenciales factores explicativos de su diferente susceptibilidad al engaño, tanto en Internet (Langenderfer y Shimp, 2001; Grazioli, 2004; Román, 2010), como en el entorno de ventas tradicional (Aditya, 2001; Kenneth et al., 2007; Ramsey et al., 2007). A pesar de ello, ninguna investigación previa ha analizado el papel que juegan las variables cognitivas y psicográficas del consumidor en sus diferentes percepciones de las técnicas engañosas de venta online y/o tradicionales.

Por último, otra importante barrera a la adopción del comercio electrónico sigue siendo la preocupación del consumidor por la privacidad y la seguridad de las transacciones online (Subramanian, 2008; Hu et al., 2010; Reddy, 2012). Dichas preocupaciones han constituido desde los mismos inicios

de Internet elementos críticos que los vendedores online han necesitado solventar para poder fomentar la confianza del consumidor, representando, de hecho, dos de los antecedentes más comúnmente citados de dicha confianza online (Bart et al. 2005; Urban et al. 2009). Sin embargo, a pesar de los numerosos estudios dedicados al respecto y del común acuerdo que existe sobre el papel determinante de la privacidad y la seguridad en la confianza online (Kini y Chobineh, 1998; Hoffman et al., 1999; Tavani, 1999; Belanger et al. 2002; Gefen et al. 2003; Schoder y Haenlein, 2004; Kim et al., 2008), la literatura académica aún presenta algunas confusiones y hallazgos inconsistentes en torno a la conceptualización de la privacidad y la seguridad online, así como sobre sus efectos en la confianza del consumidor. Además de algunos problemas relacionados con la conceptualización de estos dos antecedentes de la confianza online, una posible explicación a la inconsistencia de resultados observada en dicha literatura previa es que la mayor parte de los estudios han asumido implícitamente que el impacto de la privacidad y la seguridad sobre la confianza online debía ser el mismo para todos los consumidores. Sin embargo, algunos investigadores han argumentado desde hace tiempo que esta suposición podría ser demasiado simplista, y recientes investigaciones sugieren que las relaciones entre la confianza online y sus antecedentes puede variar dependiendo de las características de los consumidores (Kim et al., 2004; Bart et al., 2005; Kim, 2005; Schlosser et al., 2006; Jin y Park, 2008; Leonard y Riemenschneider 2008; San Martín y Camarero 2008; Hwang 2009; Yang et al., 2009; Chen y Dibb 2010; Ganguly et al. 2011; Liao et al. 2011; San Martín y Jiménez 2011). En este sentido, aunque la investigación existente ha mostrado que las percepciones y preocupaciones sobre la privacidad y la seguridad en Internet difieren según las características demográficas y personales del consumidor (Milberg et al. 1995; Sheenan, 1999; Dommeyer y Gross 2003; Dutton y Shepherd 2003; Lightner 2003; Gauzente et al. 2004; Junglas y Spitzmüller 2006; Barnes et al. 2007; Brunet y Schmidt 2007; Wong et al. 2009; San Martín y Jiménez 2011), el potencial papel moderador que dichas variables puede jugar en las relaciones entre dichas percepciones y la confianza online ha sido escasamente estudiado (Bart et al., 2005; Chen y Lee, 2008; Yang et al., 2009) y los resultados obtenidos por estos estudios también arrojan hallazgos inconsistentes. Dado la comúnmente aceptada importancia del estudio de las características del

consumidor en los entornos de marketing, donde proporcionan la oportunidad de personalizar productos, servicios e información de manera que se adapten a las necesidades del consumidor (Ranaweera et al., 2005), el análisis de los efectos moderadores de estas variables demográficas y personales en las relaciones entre privacidad, seguridad y confianza online puede proporcionar a los vendedores online una mayor y más sencilla comprensión sobre cómo transmitir su fiabilidad y/o credibilidad a diferentes tipos de consumidores.

A la luz de todo lo comentado hasta ahora, el presente trabajo de investigación persigue los siguientes objetivos principales:

1. Analizar la influencia de las características personales del consumidor (ideología ética y aversión al riesgo) en su desconfianza hacia el comportamiento ético de los vendedores online.
2. Analizar la influencia de los factores cognitivos (búsqueda de información online y utilidad percibida de Internet) y psicográficos (placer por ir de compras, materialismo y aversión al riesgo) del consumidor en el engaño percibido tanto en la venta online como en la tradicional.
3. Analizar el papel moderador de las características demográficas (género, edad y educación) y de personalidad (extroversión) del consumidor en las relaciones entre la confianza online y dos de sus más importantes antecedentes, la privacidad y seguridad percibidas.

En los tres capítulos que constituyen esta Tesis Doctoral se aborda la consecución de tales objetivos. El primer capítulo analiza los antecedentes de la desconfianza del consumidor hacia el comportamiento ético de las empresas, y contribuye a la literatura previa en varios aspectos importantes. En primer lugar, se llevan a cabo importantes clarificaciones sobre las diferencias entre la confianza y la desconfianza online, así como también sobre las potenciales fuentes de esta última (basada en la competencia técnica o en el comportamiento ético de venta). Centrándonos en el aspecto ético de dicha desconfianza online, el estudio llevado a cabo demuestra que ésta está positivamente relacionada con el nivel de relativismo ético y de aversión al riesgo del consumidor, mostrando que una de las razones lógicas para la persistencia de este tipo de desconfianza en los entornos de venta online es precisamente

la falta de fe en los estándares morales como guías para el comportamiento ético, creencia que puede estar viéndose acentuada por los recientes escándalos económicos y financieros que han caracterizado la crisis global de los últimos años. En segundo lugar, este primer estudio también demuestra que ambos efectos del relativismo ético y la aversión al riesgo del consumidor sobre su desconfianza hacia el comportamiento ético de venta en Internet están moderados por la necesidad de contacto físico con los vendedores, una importante variable en este entorno de venta. En concreto, tanto los efectos del relativismo ético y, especialmente, los de la aversión al riesgo, en la desconfianza online son especialmente importantes entre aquellos consumidores con una mayor necesidad de contacto físico en las transacciones de compra, hallazgo que resulta de mucha utilidad para que los vendedores en Internet puedan diseñar estrategias de marketing que aborden de forma efectiva este tipo de desconfianza ética tan persistente en este entorno de venta.

El segundo capítulo aborda el estudio de cómo las variables cognitivas y psicográficas del consumidor inciden en su mayor o menor propensión a percibir engaño en las actividades de venta, así como el diferente efecto que dichas variables pueden tener en función del canal de compra utilizado, es decir, Internet o el comercio tradicional. Los resultados ponen de manifiesto que, si bien en la compra online son las variables cognitivas (búsqueda de información online y utilidad percibida de Internet) las que más ayudan a reducir el engaño percibido en este entorno de venta, en el canal tradicional es el placer por ir de compras el único factor hallado con una contribución significativamente positiva (que disminuye) en el engaño percibido en este entorno. Por otro lado, los principales antecedentes negativos (que incrementan) de dicho engaño percibido también difieren en función del canal de compras: mientras que en Internet es el nivel de aversión al riesgo el factor que más contribuye a las percepciones de engaño en la venta, en el canal tradicional es el nivel de materialismo del consumidor el que más le predispone a sentirse engañado. En conjunto, estos resultados evidencian cómo el engaño percibido puede explicarse no sólo a través de las actividades de venta, sino del comportamiento y características de los consumidores que, tanto de forma positiva como negativa y dependiendo del canal de compra que

utilicen, contribuyen de forma decisiva a explicar cómo éste percibe y reacciona ante los estímulos del entorno de venta.

Finalmente, el estudio llevado a cabo en el último capítulo de esta Tesis Doctoral sobre los efectos moderadores de las características demográficas y personales del consumidor en las relaciones entre privacidad, seguridad y confianza online contribuye a un mayor entendimiento sobre las condiciones bajo las cuáles la privacidad y seguridad percibidas en un sitio web pueden tener un efecto positivo mayor en la confianza del consumidor hacia el vendedor online. De forma consistente con los hallazgos de la literatura previa, los resultados de este estudio demuestran que tanto las percepciones de privacidad como de seguridad actúan como importantes antecedentes de la confianza online. No obstante, los resultados también revelan que dicha importancia difiere según las características del consumidor, mostrando que tanto las percepciones de privacidad como de seguridad son especialmente importantes para la confianza online de los individuos menos extrovertidos, los hombres, los consumidores jóvenes y aquellos con mayor nivel de formación académica. Estos hallazgos arrojan dos importantes contribuciones a la literatura previa. En primer lugar, corroboran que las mayores preocupaciones de los individuos menos extrovertidos por la privacidad y la seguridad halladas en los estudios previos se traducen efectivamente en una mayor importancia de las políticas percibidas en torno a estos dos aspectos para la confianza de estos individuos en el vendedor online. En segundo lugar, los resultados empíricos en torno al efecto moderador de las variables demográficas también ponen de manifiesto la limitada asociación que a veces existe entre lo que un consumidor afirma que le preocupa y lo que luego esa preocupación realmente supone en su comportamiento y percepciones. Así, aunque en la literatura previa diversos estudios han encontrado que las preocupaciones sobre la privacidad y la seguridad online tienden a ser mayores entre las mujeres y los consumidores de mayor edad que entre sus opuestos, el estudio llevado a cabo en esta Tesis Doctoral revela que dichas mayores preocupaciones halladas entre estos grupos de consumidores no se traducen en una mayor importancia de las políticas percibidas al respecto para su confianza en el vendedor online. Esto pone de manifiesto,

a su vez, el rol que otro tipo de factores tales como la orientación hacia la compra (utilitaria o hedónica) puede jugar en las relaciones entre la confianza online y sus antecedentes. Además, los efectos moderadores hallados en relación a la edad y educación de los consumidores también parecen indicar que el potencial de las políticas de privacidad y seguridad online para generar la confianza del consumidor puede depender en gran medida de las habilidades de éste para comprender adecuadamente tales políticas y acciones.

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