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Understanding online customer repurchasing intention and the mediating role of trust – an empirical investigation in two developed countries

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Abstract
Although e-commerce adoption and customers' initial purchasing behavior have been well studied in the literature, repeat purchase intention and its antecedents remain understudied. This study proposes a model to understand the extent to which trust mediates the effects of vendor-specific factors on customers' intention to repurchase from an online vendor. The model was tested and validated in two different country settings. We found that trust fully mediates the relationships between perceived reputation, perceived capability of order fulfillment, and repurchasing intention, and partially mediates the relationship between perceived website quality and repurchasing intention in both countries. Moreover, multi-group analysis reveals no significant between-country differences of the model with regards to the antecedents and outcomes of trust, except the effect of reputation on trust. Academic and practical implications and future research are discussed.
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Introduction

Online retailing has become commonplace due to the rapid proliferation of the Internet. Yet despite constant growth in the past decade, the e-commerce market is still small, and how to entice customer repurchase remains a concern for e-commerce vendors (Johnson & Hult, 2008). It is reported that only a small minority of website visitors (about 1%) returns to make purchases (i.e., hereafter named as repurchase) (Gupta & Kim, 2007). However, repurchase is extremely desirable given the comparatively high cost of acquiring new customers and the economic value of loyal customers (Reichheld & Schefter, 2000). Acquiring new customers – searching for them and initiating transactions – may cost up to five times as much as retaining existing ones (Parthasarathy & Bhattacherjee, 1998). Increasing the number of loyal customers by as little as 5% can increase profitability by 30–85%, depending upon the industry (Reichheld & Schefter, 2000). We believe it is more important than ever to identify the main drivers of online customer repurchase, given the fickle nature of customer behavior, the growth in global web-stores, the increasing product and service availability and the relatively low switching costs that all these promote.

Customer repurchase behavior is widely recognized as a major behavioral manifestation, as well as an important measure, of customer loyalty (e.g. Bloemer *et al*., 1999; Oliver, 1999; Otim & Grover, 2006). While the literature also recognizes other dimensions of customer loyalty such as the attitudinal dimension (e.g., Srinivasana *et al*., 2002), we focus on the behavioral dimension because it has direct profit implications to online vendors. Repurchase behavior, also termed as repeat purchase, is conceptually different from initial (or first-time) purchase (e.g. Harris & Goode, 2004; Balabanis *et al*., 2006). Yet, most e-commerce studies have focused on understanding the initial purchase behavior (or behavioral intention) of online customers, including willingness to buy (e.g. Jarvenpaa & Tractinsky, 1999); intended inquiry (e.g. Pavlou and Gefen, 2004); purchase intention (e.g. McKnight *et al*., 2002); willingness to transact/transaction intention (e.g. Bhattacherjee, 2001); and behavioral intention to use (e.g. Suh & Han, 2003). By contrast, research on online customer repurchase is scant. Gupta & Kim (2007) provide a summary of 33 studies of electronic commerce in leading information systems journals by 2006 and, with the exception of Tsai *et al*. (2006) and Koo (2006) none focused on online repurchase behavior. In our review of more recent literature, we found that only a few other articles focused on online repurchase behavior (e.g. Otim & Grover, 2006; Khalifa & Liu, 2007; Tsai & Huang, 2007). Our study thus aims to add to the limited research on online repurchase behavior, by focusing on one important, yet understudied relationship, specifically the *mediating* role of perceived *trust* between customer online repurchase intention and online vendor-specific factors.

The importance of trust as a significant factor in reducing the social complexity of e-commerce is generally well studied in the literature (e.g. McKnight *et al*., 2002; Pratim & Chatterjee, 2008). Trust is found to lead to, among other things, initial purchase intention and actual purchase, both in the online and offline world (e.g. Doney & Cannon, 1997; Jarvenpaa & Tractinsky, 1999; Jarvenpaa *et al*., 2000; Gefen *et al*., 2003b). However we cannot assume that trust also leads to repurchase intention – particularly in an online context where trust dynamics have been shown to be different from trust in an offline one (e.g. Wirtz & Lihotzky, 2003). Only a few studies have examined the role of trust in repurchasing behavior (e.g., Gefen, 2002a; Flavian *et al*., 2006). Most studies of customer retention have focused on various other direct effects such as web services (Otim & Grover, 2006), usefulness (Khalifa & Liu, 2007), perceived value (Gupta & Kim, 2007), online store characteristics (Koo, 2006); switching costs (Tsai *et al*., 2006; Tsai & Huang, 2007), and satisfaction (Balabanis *et al*., 2006; Khalifa & Liu, 2007; Tsai & Huang, 2007). It is therefore important to address the omission regarding the role of trust in the context of online repurchase behavior. We do so by examining the extent to which trust mediates the effects of previously recognized direct vendor-specific factors on customer online repurchase intention.

By drawing upon existing e-commerce research and the trust literature, we develop a research model to empirically test the mediating role of trust between selected vendor-specific factors and repurchasing intention in an online context, using a survey across two Commonwealth country settings that have received relatively less attention in e-commerce research: New Zealand and Northern Ireland. Most prior work has been conducted in the United States (with a few exceptions such as Israel, Australia, and Greece – for example, Jarvenpaa & Tractinsky, 1999; Gefen & Heart, 2006). Little research on e-commerce and trust has, to our knowledge, been conducted in these two countries and yet generalization demands replication across different populations.

Theoretical background

The nature of trust and its importance in online purchase

Trust has previously been defined in terms of 'integrity (trustee honesty and promise keeping), benevolence (trustee caring and motivation to act in the trustor's interests), competence (ability of the trustee to do what the trustor needs), and predictability (consistency of trustee behaviour)' (McKnight *et al*., 2002, p. 303). In essence, trust is a belief held by actors about one another that in an exchange, neither will act opportunistically by taking advantage of the situation, and each will behave in a dependable, ethical, and socially appropriate manner (Kumar *et al*., 1995). Similarly, Gundlach & Murphy (1993, p. 41) state 'The variable most universally accepted as a basis for any human interaction or exchange is trust – a faith or confidence that the other party will fulfil obligations set forth in an exchange.' Trust is an important mechanism governing exchange relationships characterized by uncertainty, vulnerability, and dependence (Bradach & Eccles, 1989). Thus it becomes crucial in many relationship-based activities in general and economic activities in particular due to the potential presence of undesirable opportunistic behavior (Granovetter, 1985).

It is well established that trust only comes into play in conditions involving risk (Mayer *et al*., 1995), as is the case in e-commerce (Jarvenpaa & Tractinsky, 1999). Because of the risks associated with online purchasing, Wirtz & Lihotzky (2003) argue that achieving initial trust in an e-commerce environment is more complicated than it is in a traditional (physical) business environment. In a potential online purchasing situation there are particular difficulties attributed to: (1) the lack of information available to the online buyer to assess the trustworthiness of the seller (e.g. interpersonal interaction/dynamics); (2) the lack of guidance on how to assess the economic viability or credentials of the online seller (e.g. tangible-related factors); and (3) the fact that usually the online customer has to pay upfront before exchange takes

place. Therefore, trust as a mechanism to mitigate these additional risks is particularly important in the online purchase relative to an offline environment (Harris & Goode, 2004).

While numerous studies have established the strong relationship between trust and initial purchase (e.g., Jarvenpaa & Tractinsky, 1999; Jarvenpaa *et al*., 2000; Gefen *et al*., 2003b), empirical research that examines the importance of customer retention and trust in e-commerce remains in its infancy. Moreover, some studies even seem to challenge the role of trust on customer loyalty in the online B2C literature (Harris & Goode, 2004). For instance, Ribbink *et al*. (2004) found that e-trust directly affects customer loyalty but in a much less significant manner '… which may imply that trust is not the anticipated major contributor to loyalty in an online environment …' (p. 452). Ball *et al*. (2006) presented similar findings. Furthermore, recent research by van der Heijden *et al*. (2003) suggests that trust may be a threshold variable or hygiene factor, meaning that 'once a certain evaluation level is reached, the variable no longer contributes to a favorable attitude' (pp. 45–46) and/or that '… trust … negatively influences an unfavorable attitude towards online purchasing, but … [does] *not* [emphasis added] positively influence a favorable attitude towards online purchasing' (p. 46). Shankar *et al*. (2003) report similar conclusions.

Other research in the literature, however, stresses the temporary nature of trust over a relationship. In this regard, there are several studies dedicated to the development and evolution of trust which seem particularly relevant to our research and which also 'warn' of the dangers of regarding trust in a complacent manner. Wirtz & Lihotzky (2003, p. 519) suggest that '… trust is subject to a so-called echo effect, meaning that trust leads to more trust unless misused, making trust itself a major driver of relationship stability.' Jones & George (1998, p. 1938) state 'Moods and emotions interact with values and attitudes to determine the experience of trust' meaning that assessing the trustworthiness of an actor is dependent on the human condition which is subject to change and temporal boundaries. This in turn reinforces the importance of assessing and re-evaluating trustworthiness in ongoing episodes (e.g. repurchase situations) in either an explicit or implicit manner. Similarly, Jones & George (1998) propose that the most common form of trust in organizational settings is conditional trust, defined as 'a state of trust in which both parties are willing to transact with each other, as long as each behaves appropriately' (p. 536). According to Jones and George's theory, in B2C electronic commerce there always exists the suspended belief that '… the other may not be trustworthy' (p. 535). Trust in ongoing business relationships therefore needs to be maintained and continually evaluated, and hence the importance of identifying 'trust-maintaining levers': they may serve as a cue for customers to continually assess the *trustworthiness* of an online vendor.

'Trust-maintaining levers' in the online repurchase context

A number of vendor-specific factors have been identified in the e-commerce context (see Gupta & Kim (2007) for a literature summary), particularly in the initial purchase situation (e.g., McKnight *et al*., 2002; Gefen *et al*., 2003b). We build primarily on the works by McKnight *et al*. (2002) and Otim & Grover (2006) to identify the trust-maintaining levers for our study. McKnight *et al*. (2002) examine two specific trust-building levers: website quality and perceived reputation, and their influence on initial purchase intentions. They also emphasized a variety of institutional arrangements, such as structural assurances and perceived web risk. We do not include these, as we are primarily interested in the vendor-specific factors that may influence trust. We do, however, control for perceived security and privacy concerns, which reflects on these institutional factors. Otim & Grover (2006) take a services orientation to the subject of repeat purchase intention, and examine the pre-purchase, transaction-related and post-purchase drivers that influence repeat purchase intentions. Our measure of website quality incorporates the two elements of pre-purchase intention (aesthetics, support of product search). We also added the lever 'perceived capability of order fulfillment' which is consistent with Otim and Grover's delivery-related elements. We did not separate these elements into transaction-related and post-purchase-related factors, as we were focused more on the trust-building notion of perceived capability (competence) to carry out the service as a whole. Thus, our model incorporates the key drivers from prior studies of online repurchase intention (Otim & Grover, 2006) and of trust-building and initial purchase intention (McKnight *et al*., 2002). These factors are elaborated below.

Reputation has long been cited as a critical factor evoking a prospective customer's initial trust in an offline vendor (Doney & Cannon, 1997). It has lately been introduced to e-commerce research as a key factor determining initial trust in the online context (e.g., Jarvenpaa *et al*., 2000; Koufaris & Hampton-Sosa, 2004). In particular, it was found that reputation influences initial online purchase behavior through partial mediation of trust (Jarvenpaa *et al*., 2000; McKnight *et al*., 2002). However, its influence on continuing trust and repurchase intention has not been studied. Thus, we include reputation as a potential 'trust-maintaining lever' and examine the mediating role of trust in online repurchase.

Website quality is unique to the online context and is unanimously seen as important during the online initial purchase stage (Yoon, 2002; Koufaris & Hampton-Sosa, 2004). In a study of 6831 consumers across 25 sites from eight website categories Bart *et al*. (2005, p. 148) found that 'Collectively, navigation and presentation [i.e. website quality] … and brand strength [i.e. reputation] are more influential predictors of online trust … .' Similar to reputation, website quality has been found as a

trust-building lever in the first-time online purchase context (e.g., McKnight *et al*., 2002). Moreover, other research also reports that website characteristics have direct effects on initial purchase (e.g., Liu & Arnett, 2000; Koufaris, 2002). However, in the online repurchase context, only the direct effect of web characteristics has been examined (e.g., Otim & Grover, 2006). Its role as a 'trust-maintaining lever' has not been established.

Finally, *order fulfillment* represents a fundamental vendor-specific factor unique to the repurchase context (Thomas & Housden, 2002; Zeithaml *et al*., 2002). Order fulfillment is a prerequisite to successful transactions of any kind and is the most indispensable factor among all the post-purchase service functions (Otim & Grover, 2006). The same study found that order fulfillment had a strong direct effect on repurchase intention. However, order fulfillment is an act conducted by vendors that is not under control of the customers and is usually carried out as the last step of a purchase (i.e., after payment), therefore from a customer's perspective order fulfillment has some degree of risk and uncertainty. Thus, we investigate whether trust plays a key role in this process.

Hypotheses development

A model depicting the mediating effects of trust between returning customers' perceptions of these vendor-specific factors and their repurchasing intention is provided in Figure 1. A strong correlation between behavioral intentions and actual behavior has been confirmed in existing research (e.g., Ajzen & Fishbein, 1974; Kim & Hunter, 1993), thus supporting the use of behavioral intention as a proxy for actual behavior. This proxy is common in information systems research (Agarwal & Prasad, 1998). We therefore use repurchase intention as a proxy for repurchase behavior.

Consequences of trust: repurchase intention

We know that trust is important in initial purchase situations in an e-commerce context. But as discussed earlier, the literature is equivocal on the potential role of trust in repurchase. On one hand, there are arguments that trust judgments are continuously revised based on experience and thus might continue to affect behavior (e.g. Gefen, 2002a; Wirtz & Lihotzky, 2003). On the other hand, there are arguments that trust may be a threshold or hygiene factor, which loses power to influence behavior after initial use (van der Heijden *et al*., 2003). Our own theorizing is more in line with the first position, and thus we hypothesize

H1: *A returning customer's trust in an online vendor is positively related to his/her intention to repurchase from the online vendor.*

Perceived reputation on trust The reputation of a vendor is the perception a customer has about an organization (Doney *et al*., 1998). It includes the vendor's public image regarding its commitment to customer satisfaction; innovativeness in customer service; the quality of market offerings; and issues relating to corporate social responsibility (Ba & Pavlou, 2002; Yoon, 2002; Koufaris & Hampton-Sosa, 2004). In the offline world, reputation is a valuable asset that requires a long-term investment of resources, effort, and attention to customer relationships, and indicates past forbearance from opportunism (Buckley & Casson, 1988) which in turn generates trust.

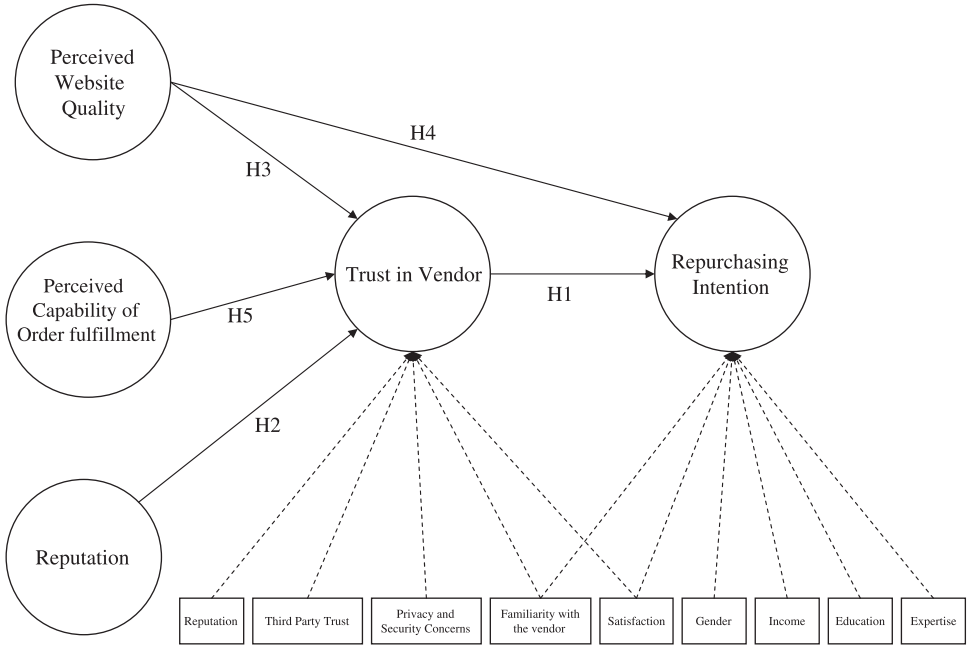


Figure 1 Research model.

This trust emerges from the belief that firms with a good reputation are reluctant to risk their goodwill by acting opportunistically (Granovetter, 1985; Kramer, 1999) as the costs of untrustworthy behavior are perceived to be higher for firms that already have a good reputation. In e-commerce, a company's reputation is perhaps even more critical to the customer's evaluation of the company's credibility because there are fewer visible signals of credibility and greater risks in a virtual environment (Wirtz & Lihotzky, 2003). Jarvenpaa and her colleagues (1999, 2000) and Yoon (2002) showed that reputation leads to trust in initial purchase contexts. We contend that reputation remains instrumental in assessments of the continued trustworthiness (or not) of an online vendor in repurchase contexts.

H2: *A returning customer's perception of the reputation of an online vendor is positively related to his/her trust in the online vendor.*

Perceived website quality on trust Perceived website quality is a multi-dimensional latent construct that includes dimensions of playfulness, usefulness, user friendliness, informativeness, technology, organization, and navigability (Chakraborty *et al*., 2002; Chung & Tan, 2004). An online vendor's web presence is the main source upon which a customer can judge its trustworthiness in the absence of other 'real world' tangible cues. A well-designed and organized user interface can reduce customers' cost of searching and the time required for information processing. This can increase the customer's belief that the vendor running the website has high integrity, and will behave in a competent, benevolent and therefore trustworthy manner (Flavian *et al*., 2006). Similarly, research has identified that the accuracy of product descriptions on websites leads to initial customer trust in the online vendor (Yoon, 2002). Furthermore, user-friendly search and navigation functions provide users with a better sense of control over their online shopping experience which in turn may translate into positive feelings about the competence of the vendor, its overall operational efficiency and the speed with which navigation is conducted online. These characteristics have been shown to enhance initial trust in the online vendor (Gefen *et al*., 2003a; van der Heijden & Verhagen, 2004) and could be expected to influence continuing trust in repurchasing contexts.

H3: *A returning customer's perception of the website quality of an online vendor is positively related to his/her trust in the online vendor.*

Direct effects of website quality on repurchase intention

As well as an indirect path, we propose a direct relationship between website quality and repurchase intention. The literature on information systems success has long established system quality as an important precursor to system use (DeLone & McLean, 1992). In the e-commerce context, previous research has generally supported the link between high perceived online system quality and system usage. If a customer perceives a vendor's website to be of high quality he will be more likely to generate a favorable attitude towards it, demonstrate behavioral control over it, which in turn, translates into a higher intention to reuse it (Pavlou & Fygenson, 2006; Jahng *et al*., 2007). Van der Heijden & Verhagen (2004) found a direct link between perceived website quality and initial purchase intentions, and recent research has begun to examine this relationship in the context of customer retention (e.g., Otim & Grover, 2006). Thus, we hypothesize

H4: *A returning customer's perception of the website quality of an online vendor is positively related to his/her intention to repurchase from the online vendor.*

Perceived capability of order fulfillment Bart *et al*. (2005, p. 136) state 'Order fulfilment refers to the delivery of a product or service relative to orders placed by consumers, and it is an essential aspect of Web sites with transactional ability.' They found that order fulfillment is one of the most important drivers of trust '… for sites in which both information risk and involvement are high, such as travel sites' (p. 133). The perceived ability of a vendor to fulfil orders includes delivering exactly what, when, how and how much is ordered; possessing knowledge and expertize in distribution (delivery); efficiently integrating departments/systems for coordinated response to orders; meeting the expectations regarding delivery; and ensuring a good order processing and order-tracking system is in place (Thomas & Housden, 2002). It reflects a vendor's expertize in fulfilling orders and keeping commitments (Thomas & Housden, 2002) concerning market offerings (products and/or services) bought online by consumers. As a product must be delivered in order to complete an online transaction, order fulfillment is a critical factor directly influencing the success of the transaction (Otim & Grover, 2006). However, we argue that order fulfillment will affect repurchase intention indirectly through the effect of trust in the vendor. Bart *et al*. (2005, p. 136) state 'When consumers deeply care about the products they buy on a Web site and are unsure about trusting that Web site, they may rely on the order fulfilment track record of that Web site.' Order fulfillment is not under the control of the customer and often takes place only after the customer completes payment (Wirtz & Lihotzky, 2003). This puts the customer in a vulnerable position in that he has to rely on the vendor to deliver products on promise. It is important that the customer perceives the vendor to be capable of delivering because such a positive perception could reinforce the customer's willingness to remain in this vulnerable position for future transactions, hence

strengthened customer trust in the vendor (Trocchia & Janda, 2003).

H5: *A returning customer's perception of an online vendor's capability of order fulfillment is positively related to his/her trust in the online vendor.*

Control variables

We include several variables in our model to ensure that the empirical results are not due to covariance with other variables. Although our focus was on perceived organizational factors which might influence trust, we recognize the important role of individual differences and thus control for these factors. Previous literature suggests that gender may affect perceptions of trust in an online vendor and subsequent purchasing behavior (Van Slyke *et al*., 2002). Also, shoppers' levels of income and education and their expertize in using the Internet may affect intention to purchase on the Internet (Pavlou & Fygenson, 2006). Moreover, online customers' privacy and security concerns about internet transactions may affect their trust in an online vendor (Belanger *et al*., 2002; Liu *et al*., 2005). Finally, online customers' familiarity with the vendor and their satisfaction with previous transactions are also included as control variables (Gefen, 2002b; Flavian *et al*., 2006).

Methodology

To test the model a survey was conducted. We collected primary data because the perceptual data sought for this research are not available from public sources or archival resources. Survey research is best adapted to obtaining personal and social facts, beliefs, and attitudes and it also enjoys the merit of enhancing the generalizability of research findings (Kerlinger, 1973).

Questionnaire development

Most constructs in this study have been established in the existing literature and we drew on these measures for our study to enhance validity (Stone, 1978). Appendix presents the items used in the study together with the sources from which the questions were drawn When adapting or developing new items for constructs in the questionnaire we followed the advice of de Vaus (1995, pp. 83–86), Moore & Benbasat (1991) and Straub (1989). In order to ensure content validity, we asked subject matter experts to review the questionnaire. The reviewed questionnaire was then piloted among staff and students in a large university before being accepted as the final version.

Sampling frame

Data were collected from samples of university personnel in New Zealand and Northern Ireland. Respondents in both jurisdictions were instructed to complete the questionnaire only if: (1) they had prior real purchasing experience from an online website; and (2) the product or service bought was for personal use. This overcame the problem of respondents answering questions relating to purchases they made online on behalf of the university. To ensure that respondents were able to recall an example they were familiar with (and hence bear it in mind as they filled out the questionnaire), we asked respondents at the beginning of the questionnaire to *please think of a vendor you have purchased from recently via the Internet*. They were then asked to write down the vendor's name and website address before answering the survey questions.

New Zealand sample The sampling frame consisted of 4500 university personnel selected from contact addresses on the university website. A random sample of 1500 was generated from this sampling frame (choosing every third person). A total of 99 questionnaires were returned due to lack of experience and a further 85 were returned as the addressee no longer worked at the university. A total of 383 completed (and useable) questionnaires were returned, representing a 30% overall response rate.

Northern Ireland sample Prior to administration of the survey instrument in Northern Ireland, country-specific changes were made to accommodate questions associated with currency (£ as opposed to $). The data were collected from a purposive/convenience sample of staff and students within a regional university. A total of 865 questionnaires were distributed. There were 362 useable responses, representing a 42% response rate.

Results

The model was tested using covariance-based structural equation modeling as implemented in AMOS. We began with an assessment of the measurement model, to ensure the reliability, convergent and discriminant validity of our measures (Straub, 1989). Once the measurement model was deemed adequate we assessed the hypotheses, and the mediating effect of trust, by reviewing the parameters in the structural model. Finally, for the purpose of enhancing our confidence on the generalizability of the model, we conducted between-group analysis (Qureshi & Compeau, 2009) to assess the extent to which the results of the hypothesized relationships were generally consistent across the two countries.

Measurement model

First-order constructs All constructs except Perceived Website Quality were treated as first-order latent constructs. Perceived Website Quality is, as noted earlier, a multi-dimensional construct and it was thus modeled differently. Confirmatory factor analysis (CFA) was performed for each data set (New Zealand (NZ) and Northern Ireland (NI)) separately. We followed the standard procedure of dropping one item at a time (Schumacker & Lomax, 2004) to reassess model quality.

Irrespective of order of description in the text, the item with least loading in the model was dropped first and the model was estimated again. This stepwise process was adopted until remaining items in the model had acceptable loading values of close to 0.7 or more (loadings presented in Appendix). To ensure that the measurement models across the two groups (i.e. New Zealand and Northern Ireland) were similar, we retained some loadings that were close to 0.7 for one group but were less than 0.7 (but greater than 0.6) for the other group. Most of the items that were dropped were negatively worded. Negatively worded items are known to cause problems to reliability and validity of constructs (Benson & Hocevar, 1985; Marsh, 1996), as the differently worded items do not provide consistent information (Wright & Masters, 1982).

Internal consistency reliabilities (ICR), average variance extracted (AVE) and construct correlations for Perceived Capability of Order Fulfillment, Perceived Reputation, Trust in Vendor, and Repurchase Intention are presented in Table 1. All the ICR are greater than 0.87 (in both data sets) well above the standard threshold of 0.70 (Carmines & Zeller, 1979). AVE is greater than 0.50, indicating that items for each construct in both data sets explain at least 50% of variance in the respective constructs. To assess discriminant validity, the AVE and matrix of loadings and cross loadings were examined (Fornell & Larcker, 1981). The square-root of AVE for all the constructs in this study exceeds the correlations of those constructs with other constructs (Table 1). None of the cross-loadings exceeds the loading of items onto their own constructs; hence all the constructs pass the criteria of discriminant validity (Fornell & Larcker, 1981). This test of discriminant validity also provides evidence that common method bias (Hanisch *et al*., 1998) is not involved and there is also limited threat of multi-collinearity (Jagpal, 1982). We also tested for common method bias as recommended by Podsakoff *et al*. (2003) and found that inclusion of a common variance factor had no substantial effect on the structural paths.

The control variables: Privacy and Security Concerns, Satisfaction with the Past Purchases from the Same Vendor, Satisfaction with Past Purchases via the Internet and Expertize in Using Internet to Conduct Transactions, were all measured with multiple indicators. The above method of construct validation was followed for these constructs as well. The other control variables: Gender, Education, Income and Familiarity with the Vendor were single item constructs. Familiarity with the Vendor was measured on a 7-point Likert scale, where 1 is very unfamiliar and 7 is very familiar. Gender was coded 0 = Male and 1 = Female. Income was measured as an ordinal variable (1 = < 20,000 and 8 > 100,000). Education was also measured as an ordinal variable.

Website characteristics – establishing the second-order construct The extant literature suggests that website characteristics is a multi-dimensional second-order latent construct involving first-order constructs of playfulness, usefulness, user friendliness etc. (Chakraborty *et al*., 2002; Chung & Tan, 2004; Bart *et al*., 2005). Law *et al*. (1998) classified multi-dimensional construct into latent, profile and aggregate types based on relational level and relational form. A latent multi-dimensional construct exists at a deeper level than its components and gives rise to them. In this case, the dimensions are simply different forms manifested by the construct and the multi-dimensional construct represents the commonality among its dimensions. We believe that in order to perceive a website as good quality, all the individual dimensions should have high value. Thus, Perceived Website Quality represents a second-order latent construct (Law *et al*., 1998).

A split sample approach was followed to identify the factors (Schumacker & Lomax, 2004). A random sample of 150 cases was chosen from the New Zealand data set with the remaining 233 kept as hold out cases. Principal Component Factor Analysis, with Direct Oblimin rotation was performed to identify the factors. Oblimin rotation was chosen as there was no reason to assume that the factors (dimensions of the second-order construct) would be orthogonal. Based on a cut-off point of 1.0 for Eigen values and 0.5 for factor loadings, three factors were identified: (1) Navigability, which includes organization and ease of use (n1–n5); (2) Functionality of the Technology (f1–f4); and (3) Playfulness (p1–p4).

CFA was conducted on the hold out sample of 233. Once CFA replicated the factor structure obtained using Exploratory Factor Analysis (EFA), a first-order and second-order operationalization of Perceived Website Quality was performed using the total sample. The results are presented in Figure 2. All the fit indices indicate that second-order operationalization of Perceived Website Quality fits the data well in both samples (NZ and NI) and the same was used in the structural models.

Structural models

The structural model presented in Figure 1 was tested separately for each country. Fit indices for the New Zealand ($\chi^2 = 2101.32$, df = 1305; CFI = 0.931, TLI = 0.921, RMSEA = 0.040) and Northern Ireland ($\chi^2 = 2512.16$, df = 1305; CFI = 0.904, TLI = 0.90, RMSEA = 0.051) data sets were acceptable (Schumacker & Lomax, 2004).

Path coefficients are summarized in Figure 3. H1 was supported for both groups (New Zealand: 0.149, $P < 0.05$; Northern Ireland: 0.265, $P < 0.001$). Thus, Trust in Vendor positively predicted Repurchase Intention. H2 was supported: Perceived Reputation positively predicted Trust in Vendor (New Zealand: 0.468, $P < 0.001$; Northern Ireland: 0.215, $P < 0.001$). H3 was supported: Perceived Website Quality positively predicted Trust in Vendor (New Zealand: 0.099, $P < 0.05$; Northern Ireland: 0.183, $P < 0.01$). H4, which stated that Perceived Website Quality would positively predict Repurchase Intention, was not significant for New Zealand (0.118, $P < 0.1$) but was

Table 1 Construct correlations, internal consistency reliability, and average variance extracted*

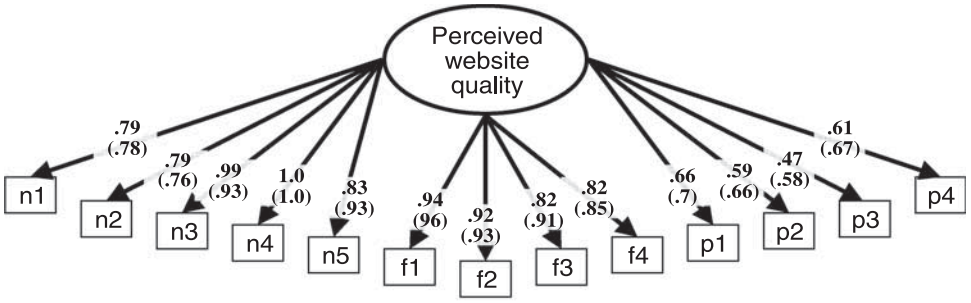
		ICR	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1)	Repurchasing intention	0.91[b] (0.94)	0.77[a] (0.81)											
(2)	Trust	0.93 (0.94)	0.32 (0.59)	0.79 (0.80)										
(3)	Perceived website quality[c]	0.92 (0.94)	0.30 (0.62)	0.45 (0.62)	0.78 (0.80)									
(4)	Perceived capability of order fulfillment	0.92 (0.96)	0.26 (0.52)	0.55 (0.71)	0.39 (0.59)	0.78 (0.83)								
(5)	Perceived vendor reputation	0.87 (0.92)	0.27 (0.42)	0.64 (0.61)	0.49 (0.51)	0.44 (0.52)	0.73 (0.78)							
(6)	Expertize	0.97 (0.96)	0.26 (0.24)	0.16 (0.19)	0.25 (0.29)	0.08 (0.21)	0.29 (0.28)	85 (0.84)						
(7)	Privacy & security concerns	0.88 (0.86)	−0.11 (−0.01)	−0.17 (−0.11)	−0.15 (−0.06)	(−0.09)	−0.15 (−0.09)	−0.46 (−0.33)	0.73 (0.72)					
(8)	Satisfaction with vendor	0.90 (0.94)	0.26 (0.55)	0.42 (0.52)	0.38 (0.53)	0.37 (0.44)	0.61 (0.64)	0.20 (0.35)	−0.13 (−0.11)	0.75 (0.79)				
(9)	Satisfaction with Internet	88 (0.96)	0.28 (0.46)	0.37 (0.47)	0.31 (0.53)	0.23 (0.41)	0.46 (0.42)	0.36 (0.42)	−0.32 (−0.22)	0.45 (0.60)	0. 73 (0.83)			
(10)	Education level	NA	0.07 (0.09)	−0.02 (−0.04)	0.06 (0.05)	0.01 (−0.03)	0.05 (0.02)	0.09 (0.01)	−0.06 (−0.04)	−0.10 (0.02)	−0.01 (0.01)	—		
(11)	Familiarity with vendor	NA	0.41 (0.31)	0.17 (0.32)	0.17 (0.33)	0.16 (0.29)	0.22 (0.30)	0.31 (0.41)	−0.18 (−0.14)	0.25 (0.33)	0.18 (0.34)	0.02 (−0.05)	—	
(12)	Gender	NA	0.05 (0.09)	0.02 (0.05)	0.03 (0.16)	0.00 (0.06)	0.03 (−0.07)	−0.04 (0.04)	−0.06 (−0.02)	0.11 (0.14)	0.12 (0.01)	−0.18 (−0.01)	0.10 (0.04)	—
(13)	Income level	NA	0.16 (0.13)	0.17 (0.09)	0.11 (0.14)	0.08 (0.06)	0.13 (0.12)	−0.03 (0.12)	−0.07 (−0.09)	0.01 (0.10)	0.02 (0.11)	0.30 (0.07)	0.02 (0.11)	−0.14 (−0.05)

[a]Diagonal elements show square root of the average variance extracted (AVE) – not applicable for single item constructs.

[b]ICR-Internal Consistency Reliability. Not applicable for single item constructs.

[c]AVE and ICR for perceived website quality were calculated using the standardized regression weights of first order constructs (navigation, functionality and playfulness).AVE and ICR for individual dimension were: navigation AVE 0.77 (0.79), ICR 0.91 (93); functionality 0.76 (0.78), 0.91 (0.92); and playfulness 0.76 (0.80), 0.91 (0.94).

*Information for Northern Ireland is in parenthesis.



Model Fit Summary						
	CFI	TLI	NFI	RMSEA	Chi-square	df
First Order	.859 (.863)	.78 (.786)	.846 (.851)	.149 (.154)	472.45 (477.05)	50
Second Order	.991 (.989)	.985 (.982)	.976 (.975)	.039 (.045)	72.16 (79.78)	46

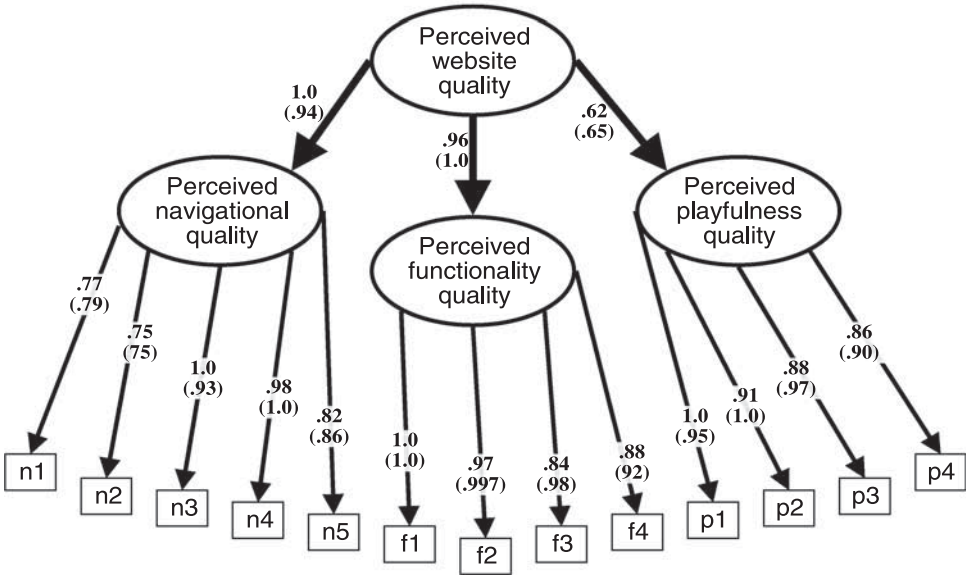


Figure 2 Comparison of first-order and second-order operationalization for perceived website quality New Zealand and Northern Ireland (in parenthesis) sample.

significant for Northern Ireland (0.286, $P<0.001$). H5 was supported: Perceived Capability of Order Fulfillment positively predicted Trust in Vendor (New Zealand: 0.314, $P<0.001$; Northern Ireland: 0.471, $P<0.001$). Squared multiple correlations for Repurchase Intention were 0.31 for Northern Ireland and 0.23 for New Zealand. Squared multiple correlations for Trust in Vendor were 0.47 for Northern Ireland and 0.54 for New Zealand.

None of the control variables had a significant relationship with Trust in Vendor. Two of the control variables, Familiarity with Vendor ($P<0.001$) and Income ($P<0.05$) had a significant positive relationship with Repurchase Intention in the New Zealand sample only. Satisfaction with Vendor ($P<0.05$) had a positive relationship with Repurchase Intention in the Northern Ireland sample only.

Tests of mediation

To establish the mediating role of trust between online vendor characteristics and intention to repurchase we used nested model comparisons (Table 2). We compared the fits statistics for a full model (base) to three constrained models as described below. For statistical conclusion validity we also used significance of indirect effects (MacKinnon *et al.*, 2004; James *et al.*, 2006).

We used asymmetric confidence intervals (Shrout & Bolger, 2002) with a biased-corrected bootstrap, which is

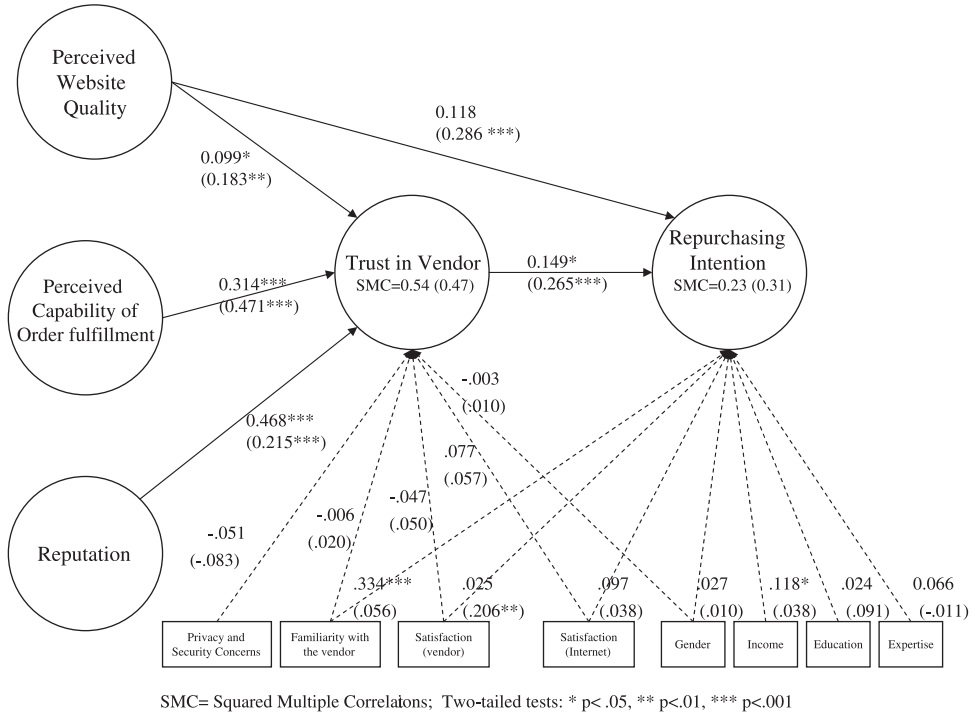


Figure 3 Structural model results: New Zealand and Northern Ireland (in parentheses).

Table 2 Test of mediation: nested model comparison

	New Zealand (N = 383)				*Northern Ireland (N = 362)*			
	Base model	*Model-1*	*Model-2*	*Model-3*	*Base model*	*Model-1*	*Model-2*	*Model-3*
Trust → Repurchasing intention (*b1*)	0.149	0.167*	0.180*	0.118	0.251**	0.322***	0.315***	0.208*
Perceived web quality → Trust (*b2*)	0.099	0.101*	0.098	0.099	0.183**	0.195**	0.182**	0.188**
Perceived web quality → Repurchasing intention (*b3*)	0.116	@	0.128	0.106	0.283***	@	0.311***	0.265***
Perceived capability of order fulfillment → Trust (*b4*)	0.314***	0.315***	0.315***	0.314***	0.469***	0.464***	0.470***	0.467***
Perceived reputation → Trust (*b5*)	0.466***	0.468***	0.467***	0.468***	0.216***	0.215***	0.214***	0.214***
Perceived capability of order fulfillment → Repurchasing intention (*b6*)	0.07	0.085	@	0.072	0.119	0.195*	@	0.101
Perceived reputation → Repurchasing intention (*b7*)	−0.076	−0.054	−0.073	@	−0.095	−0.071	−0.083	@
χ^2	2099.15	2101.95	2100.48	2099.94	2489.18	2501.00	2491.11	2491.29
df	1303	1304	1304	1304	1303	1304	1304	1304
CFI	0.931	0.931	0.931	0.931	0.905	0.904	0.905	0.905
TLI	0.921	0.921	0.921	0.921	0.9	0.9	0.9	0.9
IFI	0.932	0.932	0.932	0.932	0.906	0.906	0.906	0.906
RMSEA	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05
$\Delta\chi^2$	—	2.79	1.33	0.78	—	11.83	1.937	2.1
P-value	—	0.09	0.25	0.38	—	<0.001	0.16	0.11

@ signifies path was constrained to 'zero'; *$P<0.05$, **$P<0.01$, ***$P<0.001$.
Note: b3, b6 and b7 were constrained to zero in Model-1, 2 and 3, respectively.
All the control variables were included in each model but not shown in this table for sake of space.

a more reliable technique than normal distribution assumed by the Sobel test (MacKinnon *et al*., 2004).

We created a base model including all the direct as well as indirect paths. In other words our base model included all the paths in our research model and additionally the direct path from (i) Perceived Capability of Order Fulfillment to Repurchase Intention; and (ii) Reputation to Repurchase Intention. To test the mediating effect of

trust on Perceived Website Quality → Repurchase Intention, Model-1 was created by constraining the coefficient between Perceived Website Quality and Repurchase Intention to 'zero.' This model was then compared to the base model. Although the fit indices for model 1 were acceptable (NZ: CFI = 0.931, TLI = 0.921, RMSEA = 0.040; NI: CFI = 0.904, TLI = 0.9, RMSEA = 0.050), the nested model comparison indicated that the addition of this constraint significantly deteriorated the model (NZ: $\Delta\chi^2 = 2.8$, df = 1, $P = 0.09$; NI: $\Delta\chi^2 = 11.82$, df = 1, $P < 0.001$) compared to the base model. The analysis thus supported the partial mediation model. The asymmetrical confidence intervals (NZ: 90%L = 0.04, 90%U = 0.079; NI: 0.05, 0.15) indicated that the indirect effects were significant, suggesting the presence of mediation (Shrout & Bolger, 2002; MacKinnon *et al*., 2004). Therefore partial mediation, as predicted in H4 (direct path) and H3 (indirect path) was supported in the Northern Ireland sample, as the indirect effects are significant and the direct path between Perceived Website Quality and Repurchase Intention remained significant even in the presence of the mediator. Complete mediation was found in the New Zealand sample as the indirect effects were significant but the direct effect became insignificant in the presence of the mediator (James *et al*., 2006).

To test the mediating effect of Trust in Vendor on Perceived Capability of Order Fulfillment → Repurchase Intention, Model-2 was created by constraining the coefficient between Perceived Capability of Order Fulfillment → Repurchase Intention to 'zero.' Model-2 shows acceptable fit (NZ: CFI = 0.931, TLI = 0.021, RMSEA = 0.040; NI: CFI = 0.905, TLI = 0.9, RMSEA = 0.050). The nested model comparison indicated that the addition of this constraint did not significantly deteriorate the model (NZ: $\Delta\chi^2 = 1.36$, df = 1, $P = 0.25$; NI: $\Delta\chi^2 = 1.94$, df = 1, $P = 0.16$) compared to the base model, meaning that the presence of the Perceived Capability of Order Fulfillment → Repurchase Intention path did not provide any additional information; hence trust fully mediates the relationship between Perceived Capability of Order Fulfillment and Repurchase Intention as predicted by our hypotheses. The asymmetrical confidence intervals (NZ: 90%L = 0.015, 90%U = 0.125; NI: 0.055, 0.222) indicated that the indirect effects were significant.

To test the mediating effect of Trust in Vendor on Perceived Reputation → Repurchase Intention, Model-3 was created by constraining the coefficient between Perceived Reputation → Repurchase Intention to 'zero.' Once again, the model fit indices were acceptable (NZ: CFI = 0.933, TLI = 0.23, RMSEA = 0.04; NI: CFI = 0.905, TLI = 0.9, RMSEA = 0.050). Nested model comparison indicated that the addition of this constraint did not significantly deteriorate the model (NZ: $\Delta\chi^2 = 0.78$, df = 1, $P = 0.38$; NI: $\Delta\chi^2 = 0.2.1$, df = 1, $P = 0.11$) compared to the base model. The nested model comparison and model fit indices thus supported the complete mediation model we hypothesized. The asymmetrical confidence intervals (NZ: 90%L = 0.066, 90%U = 0.327; NI: 0.024, 0.109) indicated that the indirect effects were significant.

Between-country comparison

To enhance the generalizability of our research model, we compared the results of the hypothesized relationships across the two countries using between-group analysis (Qureshi & Compeau, 2009). The invariance of the structural parameters across the samples was tested using the multi-group analyses module of AMOS. A two-group CFA baseline model was estimated, in which all parameters were free to vary across the two groups. This was followed by an analysis where a series of equality constraints were imposed to test the degree of measurement equivalence, including configural invariance, construct level metric invariance and item level metric invariance (Cheung & Rensvold, 2002; Schumacker & Lomax, 2004). The baseline model showed an adequate fit, supporting the generalizability of the factor pattern across the groups. Subsequent models where the factor loadings were invariant demonstrated only small changes in model fit – CFI (Bentler, 1990) and NNFI (Browne & Cudeck, 1993) values changed by less than 0.01. This indicated that the CFA model was equivalent across the two groups (Cheung & Rensvold, 2002).

This was followed by between-group structural equation model analyses. The default model (model presented in Figure 1) was estimated, in which all the structural parameters were allowed to vary freely across the two groups, while measurement model equivalence constraints were imposed (Schumacker & Lomax, 2004). The default model fit the data well (Table 3). Subsequently, equality constraints were imposed on the path coefficients. In model A, the structural path from Trust in Vendor → Repurchase Intention across the groups was constrained to equality. The $\Delta\chi^2$ value did not show any deterioration in model fit indicating that we do not lose information by assuming the path to be equal in the two groups (Cheung & Rensvold, 2002; Schumacker & Lomax, 2004). Similarly, assessment of models B, C, and D indicated that there were no differences between Perceived Website Quality → Trust in Vendor, Perceived Website Quality → Repurchase Intention or Perceived Capability of Order Fulfillment → Trust in Vendor in the two groups. These results indicated that the strengths of these relationships do not vary significantly across the two country settings.

We found one exception: $\Delta\chi^2$ for model E was significant ($\Delta\chi^2 = 8.983$, df = 1, $P = 0.003$) (Table 3). The equality constraint on Perceived Reputation → Trust in Vendor across the two groups worsens the model fit: This relationship was much stronger in the New Zealand (0.468) sample than it was in the Northern Irish (0.215) one.

The New Zealand sample consisted of university staff, whereas the Northern Ireland sample was a mix of students and university staff. For this paper, we treated the Northern Ireland sample as a single group as we

Table 3 Between the groups comparison

Model[a]	*Constraint*	χ^2	*DF*	$\Delta\chi^2$	*P*	*RMSEA*
Default model	(No structural constraint)	5517.52	2771			0.037
Model A	Trust → Repurchasing intention[b]	5517.53	2772	0.01	0.918	0.037
Model B	Perceived web quality → Trust	5518.43	2772	0.916	0.338	0.037
Model C	Perceived web quality → Repurchasing intention	5517.78	2772	0.259	0.611	0.037
Model D	Perceived capability of order fulfillment → Trust	5517.56	2772	0.039	0.843	0.037
Model E	Perceived reputation → Trust	5526.50	2272	8.983	0.003**	0.037

[a]Measurement model was constrained to be equal across the groups (NZ and NI) in all the models.

[b]Path coefficient between trust and repurchase intention was constrained to be equal for NZ and NI. Compared to default model, constrained Model E had significantly (**) poor fit and hence, path coefficients for Perceived reputation → Trust are different across NZ and NI.

assumed that for the purpose of this study, university students are a legitimate target group, as they routinely resort to online shopping. However, to make sure that our assumption is correct we re-analyzed the Northern Ireland sample by splitting it into student (sample size 156) and university staff (sample size 206). The overall results were comparable with the NZ data set. Also, results for two sub-samples, that is university staff and students, were similar, except for effects of perceived website quality. Perceived Website Quality had a stronger direct effect on repurchasing intentions in the student sample compared to university staff sample. In addition, Perceived Website Quality was not significantly related to Trust in Vendor for the university staff sample but it was significantly related to Trust in Vendor for the student sample.

Discussion

Although many studies have confirmed the importance of trust in explaining first-time purchase (or intention) in e-commerce, our review of the literature shows that trust in repurchase contexts has not been well studied. Our study develops a research model examining the role of trust between selected vendor-specific antecedents and *repurchase* intention, and establishes its generalizability through empirical replication and validation across two understudied country settings. Our findings suggest that vendor-specific factors alone might not be enough to encourage repurchase intention. Rather, we find that trust is a key mediating variable between vendor-specific factors and repurchasing intention in our model. This is critical, because it explains at least one of the mechanisms in the consumer's decision-making process through which vendor actions influence repurchase intention. Understanding these mechanisms provides valuable information for vendors on which to base decisions about where/how to invest resources in trying to drive repurchase behavior.

Specifically, our study reveals that Trust in Vendor is strongly influenced by Perceived Website Quality, Perceived Capability of Order Fulfillment and Perceived Reputation. More importantly the study reveals that Trust in Vendor fully mediates the relationship between Perceived Capability of Order Fulfillment and Repurchase Intention and between Perceived Reputation and Repurchase Intention. Trust also partially mediates the effect of Perceived Website Quality on Repurchase Intention. These results are consistent across the two countries studied thus validating the mediating effect of trust, to varying degrees, between vendor-specific factors and customer repurchasing intention.

We can theorize about the reasons for the full mediating role of Trust in Vendor between Perceived Capability of Order Fulfillment and Repurchase Intention and Perceived Reputation and Repurchase Intention. Trust in Vendor captures the extent to which a customer considers the online vendor to be competent, benevolent and have high integrity with regards to the commercial relationship between them, as well as their willingness to stay vulnerable to the online vendor in future transactions. Perceived Capability of Order Fulfillment is a critical post-purchase process. However, customers have little control of the order fulfillment process and therefore must believe or trust that the vendor will fulfil the order in a competent (able to deliver), and benevolent (act in the customer's interest) manner before a repurchase decision is made. Similarly, the mediating effect of Trust in Vendor between Perceived Reputation and Repurchase Intention is mainly associated with assurances of a vendor's ability, integrity, and goodwill (Jarvenpaa & Tractinsky, 1999). Assurances help to increase and/or maintain trust. Unlike in the initial purchase situation where the effect of reputation on trust is calculative-based (Jarvenpaa & Tractinsky, 1999), the same effect of reputation is knowledge-based in the repurchase situation (Lewicki & Bunker, 1996). Once knowledge-based trust in an online vendor is established, assurances regarding the vendor's ability, integrity, and goodwill become fully embedded in future exchanges, hence a full mediation through trust.

We observed both a direct and indirect (via Trust in Vendor) relationship from Perceived Website Quality to Repurchase Intention (see also McKnight *et al*., 2002, pp. 312–313). We believe Perceived Website Quality is similar to structural assurance and situational normality when a decision to (re)purchase from a particular website is being considered. Situational normality is the extent to which a transaction appears to be occurring in a normal

or customary situation, while structural assurances refer to the various safety features of the online marketplace (see also McKnight *et al*., 1998, 2002; Gefen *et al*., 2003 b). In a repurchase situation one is usually able to get a feeling very quickly whether or not everything seems to be in order. Should 'suspicion' arise during a (re)visit to a vendor's website regarding the navigational, functional and/or playfulness quality of it, cognitive-based trust assessments are likely to play a larger part in determining whether or not a purchase takes place. Even if suspicion doesn't arise, website quality might still affect repurchase intention, through other mechanisms such as inducing customers' positive affect or shopping enjoyment (Liu & Arnett, 2000; Koufaris, 2002).

Contributions to research

This research makes three contributions to research. First, our findings strengthen the case for the central role of trust in models of vendor-specific factors and online repurchase intention. Thus, in addition to being a critical factor for initial online purchase, we find that trust remains a crucial mediator in the online repurchase situation. We thus extend the work of, for instance, Otim & Grover (2006) by demonstrating that the impact of order fulfillment on repurchase intention is fully mediated through the presence of trust in the online vendor. In other words, customers' post-purchase evaluation of order fulfillment provides a basis for maintaining trust in the online vendor, and it is the level of trust that eventually determines repurchasing intention. Likewise, while McKnight *et al*. (2002) suggested when testing for the mediating effects of trust in their model that trust does not completely mediate '… vendor reputation to willingness to *purchase* …' (p. 312), we find that in a *repurchasing* situation trust is so central that it fully mediates the relationship between a vendor's reputation and a customer's repurchase intention. This finding reinforces the idea that although vendor-specific factors remain important in the online repurchasing situation, the role of trust as a mediating factor in this relationship is crucial.

Second, our results do not support the view of trust as a threshold variable or hygiene factor, meaning that 'once a certain evaluation level is reached, the variable no longer contributes to a favourable attitude' (van der Heijden *et al*. (2003, pp. 45–46). If this was the case then we would expect to see a direct relationship from all vendor-specific factors to repurchase intention, given that a certain threshold or level of trust had been reached in the past (previous purchase). We thus concur with Jones & George (1998) and Wirtz & Lihotzky (2003) that trust is a dynamic construct that ebbs and flows with the human condition in that it is subject to change and has temporal boundaries. Hence the importance of vendor-specific factors in assessing and re-evaluating trustworthiness in ongoing episodes (e.g. repurchase situations) in either an explicit or implicit manner. They serve as a cue for customers to continually assess the trustworthiness of a vendor.

Third, our findings suggest that trust cannot be taken for granted. We refer to the well-established adage: 'trust is hard to gain, easy to lose' (unknown). We add to this; it is also essential to maintain because as Jones & George (1998) reminds us, without established cues to assess trustworthiness, conditional trust can turn to distrust and hence exit from a commercial relationship. Is it possible then to have high scores on vendor-specific factors, but that a repurchase still might not take place? Our findings suggest that this would not be the case unless trust is contaminated by other factors. For instance, a customer who rates vendor-specific factors positively may not go back to that vendor only if his trust has been undermined via other means such as privacy and security concerns, or negative word of mouth from other customers/media. This implies that these vendor-specific factors are necessary, but not sufficient conditions to ensure repurchase behavior. An online customer who has positive perceptions on the vendor-specific factors might still not repurchase if his trust is undermined by other factors. Conversely, a customer who has negative perceptions on these vendor-specific factors will definitely not repurchase because of the low trust caused by the negative perceptions.

Furthermore, the between-group analysis conducted across these two country settings suggests that the research model is generalizeable and stable across these two countries: the strengths of all the relationships are similar in the two county settings, except for the link between perceived reputation and trust. The difference in the strength of the hypothesized relationships between reputation and trust in the two countries is particularly enlightening and should be the subject of future research. For instance, a culture lens might be used to investigate whether cultural difference might moderate the relationship between perceived reputation and trust. Finally, we also make a methodological contribution by using covariance-based structural equation modeling for multiple-group analysis. This analysis method has been widely applied in other fields but is newer to the IS field (Qureshi & Compeau, 2009). To our best knowledge, this study is the first in the Information Systems (IS) literature to examine between-group differences using this method.

Contributions to practice

Our results also provide managerial implications, particularly for online vendors. Online vendors cannot overemphasize the criticality of trust. As trust has a direct and significant effect on repurchase intention and is a key factor in customer retention, online vendors must stay focused on a set of key 'trust-building/maintaining levers' that they can control, such as reputation, order fulfillment service, and website characteristics. These factors individually and collectively contribute to the building of trust, which in turn leads to repurchase intention and enhances customer loyalty. In particular, online vendors

should focus on strengthening their order fulfillment capability, because such a capability significantly affects customer trust. Hence, online vendors should not only maintain their user interface (e.g., the website) but also improve their backend capabilities (e.g., order fulfillment). Furthermore, online vendors should be aware that although the relationship between reputation and trust has been established across the two country settings, the *strength* of this relationship might differ across countries. In countries where reputation has not been established and/or is weak, trust should be enhanced through alternative means such as order fulfillment capabilities and/or an easy-to-use website interface.

Future research

Future research may focus on addressing the role of culture in online purchase behavior. Although we found between-country variance in the effect of reputation on trust-maintaining processes, it is premature to say if culture plays a role. We chose two countries, which were similar in culture so the relative lack of differences is not surprising. Future research may extend the current model by incorporating specific cultural dimensions, and testing the model in countries that exhibit more salient cultural differences.

Another area for research involves the product category that is bought online. The suitability of the Internet as a shopping medium depends to a large extent on the characteristics of the product sought. Some products are more conveniently bought in traditional shopping environments whereas others such as software, airline tickets, and hotel reservations are easier to buy online. Thus, product category may act as moderating variable and should be investigated in future research.

While we acknowledge that repurchase intention is only one, although very important, dimension of customer loyalty (Oliver, 1999), future research could widen the dependent variable to include attitudinal components or other behavioral dimensions of loyalty (e.g., willingness to pay more or word-of-mouth behavior) (Srinivasana *et al*., 2002). There also exists an opportunity to substitute the current dependent variable with longitudinal data and track actual repeat purchase as a measure of customer loyalty (Otim & Grover, 2006, p. 537).

A final avenue for further research might be to consider the results of the current study with those of Otim & Grover (2006). Specifically, an examination of the key mediating role of trust between pre-purchase, transaction-related and post-purchase services and various dimensions of customer loyalty would seem to represent a potentially fruitful area of research for academics in the fields of information systems and Internet buying behavior.

Conclusions

The study adds to the understudied area of online customer retention by examining the effects of online vendor characteristics, the key mediating role of trust, and customer repurchase intentions in two country settings. We found that trust fully mediates the relationships between perceived reputation and repurchase and perceived capability of order fulfillment and repurchase in both countries, and partially mediates the relationship between perceived website quality and the repurchase decision. Moreover, we establish that such mediating effects are generalizable across two non-North American country settings, yet find a between-country difference in the *strength* of the hypothesized relationship between reputation and trust. This study contributes to the literature by highlighting the central, mediating role of trust in online customer repurchasing behavior and validating its role in multiple understudied international settings.

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Appendix

See Table A1.

Table A1 Measure and item loadings for retained items

Satisfaction with past purchases via the Internet (semantic differential 1–7) (Crosby & Stevens, 1987; Oliver & Swan, 1989; Gabarino & Johnson, 1999) Please circle the number best describes how satisfied you are with previous transactions via the Internet:	NZ	NI
(a) Overall extremely satisfied	0.80	0.93
(b) Overall, extremely pleased	0.73	0.85
(c) My expectations were exceeded	0.65	0.70
Perceived vendor reputation (semantic differential 1–7) (Spencer, 1999) Please circle the number that best describes your perception of the vendor you now have in mind on each of the attribute below		
(a) Excellent public image	0.74	0.75
(b) Extremely committed to customer satisfaction	0.74	0.77
(g) Product and services are excellent	0.79	0.83
(h) Has an excellent reputation	0.82	0.83
(k) Extremely reliable	0.69	0.73
Repurchasing intention (1-Strongly disagree, 7-Strongly agree) (Jarvenpaa & Tractinsky, 1999) Please indicate the degree to which you agree with the following statements concerning your likelihood probability of buying online again from the vendor you had in mind as you filled our this questionnaire:		
(b) In the medium team?	0.65	0.89
(c) In the long team?	0.87	0.89
Perceived website quality (1-7 semantic differential) (Balanabis & Reynolds, 2001; Chakraborthy *et al*., 2002; Yoon, 2002)		
(a) Extremely easy to use.	0.70	0.72
(c) Extremely well organized.	0.72	0.72
(f) Extremely easy to navigate.	0.86	0.86
(g) Extremely easy to find information that I want.	0.84	0.86
(r) Extremely clear layout.	0.69	0.78
(h) Extremely easy to conduct online shopping.	0.87	0.89
(i) Extremely fast in transmitting words and images.	0.74	0.74
(j) Extremely good in terms of operational efficiency (i.e. working links etc.).	0.72	0.76
(k) Useful search help functions.	0.70	0.70
(o) Extremely interesting.	0.86	0.88
(p) Extremely exciting.	0.79	0.83
(q) Extremely entertaining.	0.68	0.73
(s) High attention grabbing ability.	0.71	0.74

Table A1 Continued

Trust in vendor (1-Strongly disagree, 7-Strongly agree)		
Items b–d from Einweiller *et al.* (2003). Items g and h adapted from Janvenpaa *et al.* (1999). Items i–k are new and based on literature (e.g. McKnight *et al.*, 1998, 2002)		
(b) I believe that this vendor is consistent in quality and service	0.71	0.77
(c) I believe that this vendor is keen to fulfill my needs and wants	0.71	0.75
(d) I believe that this vendor is honest	0.79	0.80
(g) I believe that this vendor wants to be known as one that keeps promise and commitments	0.70	0.76
(h) I believe that this vendor has my best interests in mind	0.71	0.69
(i) I believe that this vendor is trustworthy	0.86	0.85
(j) I believe that this vendor has high integrity	0.89	0.87
(k) I believe that this vendor is dependable	0.89	0.90
Satisfaction with past purchase from the same vendor (semantic differential 1–7)		
(Crosby & Stevens, 1987; Oliver & Swan, 1989; Gabarino & Johnson, 1999)		
If you have purchased from the vendor you now have in mind in the past continue …		
Please circle the number that best describes how satisfied you are with previous experiences with the vendor:		
(a) Overall extremely satisfied	0.79	0.88
(b) Overall, extremely pleased	0.83	0.82
(c) My expectations were exceeded	0.68	0.75
(d) I would recommend this vendor to a friend	0.69	0.72
Privacy and security concern (1-Strongly disagree – 7 Strongly agree)		
(Korgaonkar & Wolin, 1999; Pavlou & Chellappa, 2001)		
(a) I am concerned over the security of personal information exchange via the Internet.	0.70	0.78
(b) I am concerned that my personal information may be shared with business without my consent as a result of purchasing via the Internet.	0.75	0.69
(c) I believe inappropriate parties may store the information I provide during a transaction via the Internet.	0.74	0.75
(e) I am uncomfortable conducting personal transactions via the Internet.	0.71	0.68
(f) When sending a message or transmitting information via the Internet, I am concerned bothered that it may be read or stored by some other person/entity/company without my knowledge.	0.75	0.68
(g) I am worried about the security of financial transactions carried out via the Internet	0.76	0.75
(h) I am uncomfortable giving my credit card number via the Internet.	0.71	0.67
Perceived capability of order fulfilment (1-Strongly disagree–7 Strongly agree)		
(New items based on Butler, 1991; Torkzadeh & Dhillon, 2002).		
(b) I believe that this vendor has knowledge and expertise in distribution (i.e. how to deliver products/services).	0.66	0.76
(c) I believe that this vendor has efficiency integrated all necessary departments/systems that are needed to deliver products or services.	0.88	0.88
(h) I believe that this vendor has an efficient system for processing orders received.	0.79	0.84
Expertise (1-Strongly disagree–7 Strongly agree)		
(Jamal & Naser, 2002)		
I know a lot about conducting purchases via the Internet	0.89	0.89
I am experienced in conducting purchases via the Internet	0.90	0.91
I am informed about conducting purchases via the Internet	0.78	0.84
I am an expert buyer of products/services via the Internet	0.81	0.72