European Journal of Information Systems (2014) 23, 185–204

www.palgrave-journals.com/ejis/

RESEARCH ARTICLE

Understanding online customers' ties to merchants: the moderating influence of trust on the relationship between switching costs and e-loyalty

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Received: 15 January 2012
Revised: 2 June 2012
2nd Revision: 24 October 2012
Accepted: 7 November 2012

Abstract

Fostering customer loyalty is a key objective for online businesses. Initial transactions with new customers are less profitable than transactions with existing customers, making loyalty an important strategy. Drawing on research examining online customer loyalty (termed e-loyalty), switching costs, and trust, this study provides an empirical test of the relative influence of trust *vs* switching costs on e-loyalty for e-service providers. We further examine whether trust moderates the relationship between switching costs and e-loyalty. We propose that in the presence of high customer trust, e-service providers should have less need to rely on switching costs as a driver of e-loyalty. We test the hypothesized relationships using data collected from 299 repeat users of online travel services. Our results confirm that trust is a more important predictor of e-loyalty than switching costs. In addition, we find that the impact of switching costs on e-loyalty depends on the level of trust felt by customers. This study extends our understanding of customer loyalty, switching costs, and trust in e-commerce environments and provides practical, theory-driven guidelines to e-businesses seeking to develop customer loyalty programmes.
European Journal of Information Systems **(2014) 23,** 185–204. doi:10.1057/ejis.2012.55; published online 25 December 2012

Keywords: electronic commerce; customer loyalty; trust; switching costs; electronic business strategies

Introduction

Fostering customer loyalty remains a key objective for online businesses (Cyr, 2008). Customer loyalty is important because the cost of attracting new customers is high relative to the cost of retaining one's existing base (Oliver, 1999). In the online environment, customer loyalty, termed *e-loyalty*, refers to 'an enduring psychological attachment by a customer to a particular online vendor or service provider' (Cyr *et al*, 2007, p. 44). Loyal online customers are more likely to disregard information about offers from other providers and tend to decline invitations to switch (Thatcher & George, 2004). As a result, in online settings where alternate providers' offers are 'only a few mouse clicks away' (Srinivasan *et al*, 2002, p. 41), fostering e-loyalty constitutes an essential strategy for vendors and/or service providers.

Online providers often employ two strategies to foster e-loyalty, namely (i) building customer trust (Luarn & Lin, 2003; Cyr, 2008), and (ii) creating costs that dissuade customers from switching providers (Shapiro & Varian, 1999; Lin *et al*, 2006; Ray *et al*, 2012), called switching costs. Both strategies

foster e-loyalty by engendering a customer's commitment to the ongoing buyer-seller relationship. However, because building trust gives rise to a different form of commitment than switching costs, conceptually (and practically) the strategies are distinct (Zins, 2001; Fullerton, 2003; Evanschitzky *et al*, 2006).

Trust building strategies promote *affective* (or willing) commitment – referred to as the 'desire to maintain a relationship that the customer perceives to be of value' (Evanschitzky *et al*, 2006, p. 1208) – based on assurances that customers will receive promised services. Through creating positive perceptions of its ability and willingness to deliver on promises, an online provider fosters trusting beliefs that positive outcomes are likely and that such outcomes will continue in the future (Doney & Cannon, 1997). In this way, trust exerts a pervasive influence on individual decision-making in e-commerce environments (Gefen *et al*, 2003b), ranging from the initial purchase decision to e-loyalty (Chow & Holden, 1997; Luarn & Lin, 2003; Cyr *et al*, 2007; Cyr, 2008; Kim *et al*, 2009; Qureshi *et al*, 2009). In contrast, switching costs give rise to continuance (or *unwilling*) commitment – defined as the intent to remain in a relationship that a customer feels dependent upon or trapped in (Evanschitzky *et al*, 2006). Here, one forces customers to remain loyal as long as the 'one-time costs that customers associate with … switching from one provider to another' (Burnham *et al*, 2003, p. 110) exceed the expected benefits resulting from the change (Shapiro & Varian, 1999; Zins, 2001). By underscoring customers' prior investment in a relationship, switching costs foster perceptions of negatives, or barriers, to changing providers, even in the case of dissatisfied customers (Lam *et al*, 2004). Conceptually, the key difference between the two strategies is that trust produces positive attitudes toward a relationship based on emotional attachment, while switching costs result in dependence on a relationship based on economic circumstances.

From a practical standpoint, given the focus on engendering different types of commitment (i.e., the *desire to maintain vs* the *intent to remain* (Evanschitzky *et al*, 2006)), initiatives aimed at building trust differ from those used to create switching costs. Trust-building measures include being responsive to customer needs and providing consistent service, whereas measures used to create switching costs include increasing the perceived complexity of product offerings and encouraging customers to use more services (Burnham *et al*, 2003; Ray *et al*, 2012). For example, by bundling products and services, online providers may sensitize customers to potential costs involved in searching for and evaluating information about new providers, as well as in learning to use different web-based interfaces. While prior work has suggested switching costs as a primary means of building customer loyalty in traditional brick and mortar settings (Jones *et al*, 2000; Burnham *et al*, 2003; Lam *et al*, 2004; Lin *et al*, 2006; Chang & Chen, 2008), implementing such a strategy in an online environment characterised by large numbers of viable substitutes may prove challenging (Bendapudi & Berry, 1997; Chow & Holden, 1997). Hence, the importance of extending understanding of factors influencing customers' intentions to remain with incumbent online sellers or service providers. Moreover, given differences in the cognitive processes and online interventions suggested by trust and switching costs, the nature of the relationship between these strategic approaches warrants consideration. This leads to our research question, *how do trust, switching costs, and the relationship between them influence e-loyalty in online environments?*

In this research paper, we investigate relationships among trust, switching costs, and loyalty within the context of e-service providers – specifically online travel service organizations. E-service providers pursue businesses models where core products/services can be digitized and distributed electronically, usually resulting in substantial cost savings (Luarn & Lin, 2003). For firms operating in such markets, long-term success necessitates building loyalty; repeat business helps predict sales, provides a steady cash flow, and should subsequently lead to improved profits (Chow & Holden, 1997; Butcher *et al*, 2001).

The results of our investigation find trust a more important predictor of e-loyalty than switching costs. In addition, we demonstrate that the impact of switching costs on e-loyalty depends on the level of trust felt by customers. Based on these results, we offer implications for practice and research. From a practice perspective, exploring trust and switching costs in relation to each other should extend our understanding of these important e-business strategies. Accordingly, e-service providers might better allocate resources and foster e-loyalty. From a research perspective, the model and empirical approach proposed by this study will further e-loyalty research by explicating the relationship between trust and switching costs.

Theoretical background

There is growing interest in understanding the drivers of e-loyalty – defined as an online customer's 'intention to visit a web site again or to consider purchasing from it in the future' (Cyr *et al*, 2007, p. 44) – due to costs associated with acquiring new customers and the ease with which existing online customers can switch to competing products and services (Jones *et al*, 2000; Srinivasan *et al*, 2002). To that end, Oliver's (1999) loyalty framework identifies four sequential phases of loyalty development (i.e., *cognitive*, *attitudinal, conative,* and *behavioural*), all helpful in this endeavour. In this framework, each subsequent phase represents a deeper level of commitment on behalf of the customer. In the context of e-service providers, *cognitive*-based commitment simply refers to a customer's preference for one e-service provider over alternatives based on available brand attribute information. *Attitudinal*-based commitment (i.e., affective and continuance) reflects a person's attitude toward an

e-service provider based on a history of prior experiences. This phase incorporates cognition *and* emotion, since attitude includes customers' evaluative (e.g., 'I think this e-service provider conducts its customer transactions fairly') and emotional (e.g., 'I like talking to the people where I get my service') responses to a provider (Benamati *et al*, 2010). *Conative* commitment refers to a customer's behavioural intention or motivation to repurchase. Finally, *behavioural commitment* refers to the act of repurchasing (see Oliver (1999) for an in-depth review). Contemporary research finds affective and continuance commitment to be key drivers of conative commitment (Fullerton, 2003; Evanschitzky *et al*, 2006). Accordingly, our study focuses on salient perceptions (i.e., attitudinal factors) that shape customers' repurchase intention through engendering these forms of commitment.

Understanding relationships between drivers of e-loyalty represents an important opportunity to advance e-commerce research. While contemporary work has found trust and switching costs dominant drivers of e-loyalty (Jones *et al*, 2000; Cyr, 2008; Ray *et al*, 2012), to our knowledge, studies have yet to explore the relationship between trust and switching costs and their relative influence on e-loyalty in the presence of one another. Further, few works examine switching costs in online contexts (Chen & Hitt, 2002; Ray *et al*, 2012). Thus, to advance e-loyalty research, our study develops and proposes an empirical test of the relative effects of trust *vs* switching costs. Moreover, we answer calls for researchers to consider the 'moderating effects of trust' in the context of online purchasing (Kim *et al*, 2009, p. 253). In particular, how trust moderates the relationship between other factors and customer loyalty (Chow & Holden, 1997). Specifically, we probe whether trust interacts with switching costs when influencing e-loyalty. We posit a stronger relationship between switching costs and e-loyalty when customers express higher trust in a provider. Evaluating this proposition will provide greater insight into the nature of online customer loyalty. Such an understanding is necessary to develop practical, theory-driven guidelines for e-businesses seeking to develop customer loyalty programmes.

E-services in the context of the travel industry

In this research paper, we investigate relationships among trust, switching costs, and e-loyalty within the context of online travel service providers. As outlined in Table 1, information technologies have transformed the travel industry. With the advent of global distribution systems (GDS) and the expansion of e-commerce, brick and mortar travel agents (once essential to travel services provision) have become increasingly squeezed out of this highly competitive marketplace (Gasson, 2003). Low overhead costs, the ability to offer multiple travel products/services, and widespread use of the Internet have resulted in an industry dominated by airlines and online travel agents (OTAs). Because airlines and OTAs offer some distinct benefits to customers (e.g., airlines' value-added services) or due to OTAs' access to multiple carriers' GDS (Mead, 2002; Granados *et al*, 2012), these e-service providers compete directly with one another for the repeat business of price-sensitive customers armed with excellent information regarding alternatives (Gasson, 2003). Given readily available alternatives, the online travel marketplace offers a particularly rich context for investigating the impacts of trust and switching costs on customers' loyalty to e-service providers.

Trust and e-loyalty

While trust definitions abound, we follow the work of McKnight and colleagues (e.g., McKnight & Chervany, 2001; McKnight *et al*, 2002) in defining trust as 'the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party' (Mayer *et al*, 1995, p. 712). From this perspective, a higher level of trust in another party, or the trustee, increases an individual's, or the trustor's, willingness to be vulnerable to that party's actions.

Given inherent geographical dispersion and an absence of face-to-face contact (Kim *et al*, 2009), trust emerges as particularly salient in e-commerce transactions, characterized by uncertainty and risk. Within the information systems (IS) literature, empirical studies have found that trust in specific Internet vendors directly influences Web customers' attitudes (Gefen *et al*, 2003b; Kim, 2008), purchase intentions (McKnight *et al*, 2002), actual purchase behaviours (Lim *et al*, 2006), and future purchase intentions with a respective vendor (Luarn & Lin, 2003; Cyr *et al*, 2007; Cyr, 2008; Qureshi *et al*, 2009). Additionally, trust exhibits a strong association with affective commitment, an important antecedent of repeat purchase intentions (Morgan & Hunt, 1994; Zins, 2001; Fullerton, 2003; Evanschitzky *et al*, 2006).

We conceptualize trust as a second-order concept reflecting an individual's cognitive beliefs about another party's ability, benevolence, and integrity (Mayer *et al*, 1995; McKnight & Chervany, 2001; McKnight *et al*, 2002). Consistent with commitment research (Zins, 2001; e.g. Evanschitzky *et al*, 2006; Fullerton, 2003), we view trust formation as part of the attitudinal phase of loyalty development. Specifically, a high level of trust fosters affective commitment by engendering a positive attitude such that a trustor develops an emotional attachment to the trustee (Whitten & Leidner, 2006). Consequently, trust serves as an antecedent of conative loyalty, or e-loyalty. With respect to e-services, a high level of trust in an e-service provider should increase the likelihood that the individual will develop an intention to repurchase from that provider (Cyr *et al*, 2007; Thatcher *et al*, 2011). Table 2 details all three trust dimensions in the context of online travel services.

Trust has been identified as an important strategy for encouraging individuals to purchase travel services online, due to the risks involved in divulging personal and

Table 1 The evolution of the travel industry (adapted from Gasson, 2003)

Evolution	*Airlines*	*Traditional (brick/mortar) travel agents*	*Online travel agents*	*Individual customers*	
				Competitive analysis	*Implications for customer loyalty*
1960s – Before computerization	Highly regulated, mostly serving corporate market	Served individual customers Asynchronous transactions. Flights confirmed via telephone by airline-booking agents.		Travel agents compete on local knowledge of airlines' schedules and prices, as well as personal service. Travel agents essential to airlines' flight booking process for individual customers. Individual customers uninformed and weak.	Customers' trust in travel agents local knowledge and service is an important part of travel agents achieving continued business.
1970s – Direct Reservation Systems (DRS)	Airlines began offering travel agents access to direct reservation systems (e.g., SABRE). Deregulation created more price and service competition between airlines. DRS allowed dynamic pricing of airline tickets.	Travel agents still essential to airlines' flight booking process. DRS gave travel agents the ability to make flight bookings in real time. Usually used only one DRS. Began targeting corporate customers.		Investment in training required to use DRS was high, raising barriers to entry for travel agents who were late adopters of the systems. Travel agents' local knowledge less important due to airlines' ability to offer dynamic pricing. Large airlines, with highest penetration of DRS, most powerful. Individual customers still uninformed and weak.	DRS lock customers in to relationship with incumbent travel agents.
1980s – Global Distribution Systems (GDS)	Evolution of DRS into GDS, offering hotels, car rental, rail travel, and cruise line bookings, as well as airline tickets.	With ability to sell multiple products in real time, travel agents became intermediaries.		Barriers to entry lowered by GDS. Emergence of consolidators ('bucket-shops') that bought blocks of unsold seats from airlines and sold direct to customers at lower prices than traditional travel agents. Travel agents diversified into selling multiple products/services. Individual customers more price-sensitive.	As individual customers become more price-sensitive, building trust and switching costs become important strategic approaches for traditional travel agents to avert the threat posed by consolidators.
2000s – Internet Technologies	Airlines could serve individual customers because of low cost of processing transactions. Direct selling to customers allowed airlines to offer prices and value-added services not available through traditional travel agents.		Emergence of OTAs (e.g., Travolocity, Expedia, and Orbitz). Low overhead costs. OTAs provide access to multiple GDS in real time – allowing for coordination of flights, car hire, hotels, etc.	Disintermediation by airlines and competition by OTAs increasingly threatens traditional travel agents and consolidators. OTAs offer individual customers with convenience not available from airlines. Individual customers increasingly familiar with using internet technologies.	Building trust and switching costs are important strategies for both airlines and OTAs seeking to foster loyalty in the online environment. Creating switching costs is challenging in an online environment characterized by large numbers of viable substitutes.
Current structure of travel industry	Direct selling to companies and price-sensitive individuals.		Serving companies and price-sensitive individuals.	*Airlines and OTAs directly compete for the business of price-sensitive individuals.*	

Table 2 The impact of interventions on trusting beliefs

	Definition	*Trust building interventions*	*Impact on trusting beliefs*
Ability	Refers to trustor perceptions about a trustee's capacity to conduct transactions effectively and reliably (Doney & Cannon, 1997). Focuses on providers' competence in providing goods and services (McKnight & Chervany, 2001). Perceptions may be based on prior experience or institutional endorsements (Gefen *et al*, 2003a; McKnight *et al*, 2002; Kim & Benbasat, 2006; Pavlou, 2002; Pennington *et al*, 2003).	Quick and secure transaction processing (Kim, 2008) can foster perceptions of competence. *Institutional endorsements* or *links with other reputable service providers* reinforce perceptions of a provider's ability to conduct transactions (McKnight & Chervany, 2001).	Customers who believe that an e-service provider has the capabilities necessary to complete transactions are more likely to form repurchase intentions. In the context of online travel services, an absence of errors in completing transactions, together with immediate confirmation of reservations are likely to be important indicators of a provider's ability to conduct transactions.
Benevolence	Extent to which the trustee is genuinely interested in the trustor's welfare and motivated to act in the trustor's best interests, beyond trustee profit motives (Bhattacherjee, 2002; Doney & Cannon, 1997; Mayer *et al*, 1995).	*Service quality* can be manifested through *website attributes*, such as navigational structure (Vance *et al*, 2008), as well as offering excellent customer service. Through these interventions providers (i) demonstrate openness and empathy toward customer needs and concerns, and (ii) proactively make good-faith efforts to alleviate customer concerns (Bhattacherjee, 2002; McKnight & Chervany, 2001).	Customers who perceive their e-service providers as benevolent are less inclined to guard against opportunistic behaviours and more likely to form repurchase intentions. Travel websites are information intensive. Online travel service providers can demonstrate benevolence toward price-sensitive customers by minimizing time/effort involved in searching, providing customer advice/support, as well as links to online check-in services, etc.
Integrity	Implies volitional will on the part of the trustee and refers to customer perceptions that the provider can be relied upon to act honestly, keep commitments, and adhere to an acceptable set of principles or exchange policies during and after the transaction (Mayer *et al*, 1995; Crosby *et al*, 1990; Jarvenpaa *et al*, 2000).	*Self-reported policies*, such as customer service standards and terms of use relating to exchange of private customer information or *third-party seals* (e.g., TRUSTe), can be used to convey integrity (Bhattacherjee, 2002; McKnight & Chervany, 2001).	Self-reported policies and provision of third-party seals help build trust by reducing customer perceptions of uncertainty and transaction risk within the online environment (Gefen, 2002). Because providing personal information is frequently required to make travel reservations, online travel service providers can foster beliefs about their integrity through displaying detailed privacy statements about the information they collect, what information is shared, and with whom, as well as how customers can access the information they have provided.

financial information during the reservation process (Bart *et al*, 2005). To that end, trust building interventions – such as quick and secure transaction processing (Kim, 2008), customer advice, and privacy policies (McKnight & Chervany, 2001; Bhattacherjee, 2002; Bart *et al*, 2005) – help foster trust in an online provider that reflects cognitive beliefs about the provider's ability, benevolence, and integrity (see Table 2). Trust engenders affective commitment, which, in turn, may cause a customer to report an intention to visit the provider's website again and to consider future purchases of services from that provider. On this basis, we propose that a customer who has formed requisite trusting beliefs in a specific online provider should be less likely to switch due to difficulties associated with establishing new trusting relationships in a context characterized by uncertainty and risk (Kim *et al*, 2009).

Hypothesis 1: *Trust will positively influence e-loyalty toward an incumbent e-service provider.*

Switching costs and e-loyalty

Switching costs, which induce continuance commitment, are also viewed as a key driver of e-loyalty (Lam *et al*, 2004; Lin *et al*, 2006; Chang & Chen, 2008; Ray *et al*, 2012). Burnham *et al* (2003) identified three switching costs that collectively dissuade customers from changing providers, specifically financial, procedural, and relational costs. In Table 3, we review each of in greater detail, providing examples in the context of online travel services. Given that switching costs incorporate emotional as well as financial barriers to changing providers, previous studies have considered switching costs as an attitudinal phase construct within Oliver's (1999) loyalty development framework (Chang & Chen, 2008).

Financial costs relate to loss of accrued benefits and/or financial charges, or consequences, resulting from switching providers. With regard to online travel services, these costs include loss of frequent flier miles, loss of access to executive lounges, imposition of membership fees, and/or loss of membership reward coupons. Procedural costs focus attention on switching activities (Burnham *et al*, 2003) and include costs incurred in searching for, and evaluating, information about providers together with the time and effort involved in acquiring the skills necessary to use a new service or product (e.g., learning to create travel itineraries using a different Web-based interface). Relational costs consist of personal- and brand-relationship loss costs (Burnham *et al*, 2003). In contrast to trust, which promotes positive emotional attachment (Whitten & Leidner, 2006) and increases a customer's willingness to revisit a website (Cyr *et al*, 2007; Thatcher *et al*, 2011), relational switching costs emphasize the loss of provider-based or brand-based relational bonds as a result of not revisiting, (e.g. a loss of comfort from breaking personal bonds with a provider or with a brand or corporate public image; Burnham *et al*, 2003). For some customers, the loss of identification with a familiar brand may outweigh any potential price benefits of making the switch from an airline to an OTA with multiple pricing offers.

In sum, we conceptualize switching costs as an aggregate of the one-time financial, procedural, and relational costs that the customer associates with the process of changing service providers. Hence, switching cost types are, in turn, multifaceted. Customers will not switch providers given prohibitively high one-time, as distinct from ongoing, costs associated with the change (Burnham *et al*, 2003). Thus, in the following hypothesis we propose that customers who perceive higher switching costs tend to stay with an incumbent e-service provider.

Hypothesis 2: *Switching costs will positively influence e-loyalty toward an incumbent e-service provider.*

The relative strength of trust *vs* switching costs on e-loyalty

Loyalty research has identified two types of customer commitment influencing repurchase intentions, namely, *affective* and *continuance* (Bendapudi & Berry, 1997; Zins, 2001; Fullerton, 2003; Evanschitzky *et al*, 2006). Affective commitment produces an enduring positive attitude toward a brand, service, or provider, based on emotional attachment. By contrast, continuance commitment, based on cost-benefit calculations, results in the customer perceiving the cost of switching as too high and demonstrating a preference for maintaining the long-term relationship. While continuance commitment can also result in positive affect (e.g., perceptions of relational switching costs), such bonds rely more on perceived dependence than on positive emotional ties (Bendapudi & Berry, 1997).

Prior research supports the view that not all forms of customer commitment create equal value for organizations. Studies examining the relative influence of affective and continuance commitment on loyalty find commitment based on free-will and choice a stronger predictor of repurchase intentions and behaviours than commitment based on inducement (Fullerton, 2003; Evanschitzky *et al*, 2006). Moreover, these studies provide evidence that with readily available alternate products and services, measures to promote continuance commitment (e.g., switching costs) may prove less effective at fostering loyalty than those designed to engender emotional attachment (e.g., trust) to a particular brand or provider (Dowlling & Uncles, 1997; Fullerton, 2003; Evanschitzky *et al*, 2006).

Given (i) trust and switching costs as strategies for building affective commitment and continuance commitment, respectively, and (ii) readily available comparable alternatives in an online environment, we posit trust and switching costs exert different effects on e-loyalty. In particular, we propose that because trust fosters affective commitment, it will have a stronger impact on e-loyalty than switching costs, as stated.

Table 3 The impact of interventions on perceptions of switching costs

	Definition	*Switching costs interventions*	*Impact on perceptions of switching costs*
Financial	Relate to loss of accrued benefits (i.e. benefit loss costs) and/or financial charges or consequences (i.e. monetary loss costs) resulting from switching providers. 1. Benefit loss costs arise when customers lose accumulated points, benefits, or discounts by switching to an alternative provider. 2. Monetary loss costs are 'one-time financial outlays that are incurred in switching providers other than those used to purchase the new product itself' (Burnham *et al*, 2003, p. 111).	*Loyalty programmes* that 'confer special benefits to customers who have achieved a certain "status" based on their cumulative or annual patronage levels' (Fullerton, 2003, p. 342)	Benefit loss costs associated with online travel include loss of loyalty programme benefits such as frequent flier miles, access to executive lounges, fast check-in, and upgrade certificates. Monetary loss costs can also be incurred if a customer has paid membership fees associated with the programme.
Procedural	Time and effort costs involved in switching providers (Burnham *et al*, 2003). Includes four distinct facets of procedural switching costs, which are relevant to e-service providers: 1. Economic risk costs are associated with the financial, performance, and/or convenience risks incurred when switching providers. 2. Evaluation costs include costs associated with searching for, and evaluating, information about alternative providers. 3. Set-up costs are associated with initiating a relationship with a new provider (e.g. creating a user profile and configuring software or smart phone applications). 4. Learning costs comprise the costs involved in acquiring the skills necessary to use a new service or product (e.g. learning to create travel itineraries using a different Web-based interface).	*Increased product complexity* (Burnham *et al*, 2003): the extent to which a customer perceives that a product/service is difficult to understand or use.	Making online travel arrangements potentially involves specifying a large number of attributes (e.g., flight date/time, seating, meals, luggage, car rental, and/or hotel preferences). The more travel services a provider can bundle together, the greater customers' perceptions of the time and effort involved in evaluating and learning to use alternate services.
Relational	'Involves psychological or emotional discomfort due to the loss of identity and breaking of bonds'. Consist of personal- and brand-relationship loss costs (Burnham *et al*, 2003, p. 111). 1. Personal relationship loss costs: The comfort of interacting with a familiar provider services may be lost when switching. 2. Brand-relationship loss costs occur when customers break bonds with a provider whose brand, or corporate public image, they identify with.	*Breadth of use (*Burnham *et al*, 2003): the extent to which a customer uses a broad range of products/services offered by a provider. *Personalization* (Burnham *et al*, 2003): the extent to which a product/service can be adapted to meet the individual needs of a customer.	Using a broader range of the travel services (e.g. flights, car rental, hotels, credit cards, and insurance) offered by an incumbent provider promotes identification with the brand/service, which manifests as habit, inertia, and dependence on the relationship (Dowlling & Uncles, 1997). When a travel website offers personalized recommendations based on previously selected preferences, it results in increased feelings of personal and brand identification (Burnham *et al*, 2003)

Hypothesis 3: *The relationship between trust and e-loyalty will be stronger than the relationship between switching costs and e-loyalty.*

The relationships between trust, switching costs, and e-loyalty

Owing to differences in the cognitive processes and online interventions suggested by trust and switching costs, the nature of their relationship warrants consideration. In particular, understanding whether an interactive or causal relationship exists between the two strategies constitutes an important line of inquiry. To our knowledge, no empirical studies have explicitly examined the relationship between trust and switching costs in the online context. However, evidence suggests these strategies interact to produce combined effects on e-loyalty that differ from the sum of their separate effects. Fullerton's (2003) examination of different forms of commitment found a significant interaction between customers' affective and continuance commitment. Similarly, two studies investigating customer loyalty in offline contexts – that is, mobile phone (Aydin *et al*, 2005) and financial planning services (Sharma & Patterson, 2000) industries – reported a significant interaction between trust and switching costs. Finally, in the context of relationship marketing, Joshi & Arnold (1997) proposed and found that relational norms, in terms of what constituted appropriate behaviour in buyer-supplier relationships, moderated the relationship between dependence on the relationship and actual switching behaviours.

Consistent with these studies, we evaluate whether trust and switching costs interact to influence customers' loyalty to e-service providers. Given research finding positive emotional ties a stronger determinant of behaviour than dependence or economic incentives (Dowlling & Uncles, 1997; Gwinner *et al*, 1998), we focus on whether trust suppresses or amplifies the relationship between switching costs and e-loyalty. As hypothesized, customers expressing high trust in an incumbent online travel services provider (i.e., airline or OTA) should exhibit a higher degree of affective commitment to the relationship, particularly given perceived risks associated with divulging personal and financial information during the reservation process (Bart *et al*, 2005). Affective commitment, in turn, should make comparable alternative providers appear less attractive (Oliver, 1999). For example, even while OTAs provide customers with access to multiple airlines' pricing via access to their Global Distribution Systems – underscoring the interchangeability of airlines and OTAs with respect to pricing (Gasson, 2003; Granados *et al*, 2012) – a customer with strong emotional ties to a particular airline may view purchasing services from an unfamiliar OTA as riskier, thereby, *amplifying the natural effects of switching costs* on e-loyalty. Thus, for the same level of switching costs, individuals expressing greater trust in their e-service provider should report a higher degree of e-loyalty than individuals who do not trust their provider. This implies that e-service providers may bolster e-loyalty by employing trust-building strategies, such as responsiveness to customers' individual preferences, in addition to fostering brand identification or to providing economic incentives. On this basis, we propose in the following that switching costs' influence on e-loyalty is contingent upon the trust felt by a customer.

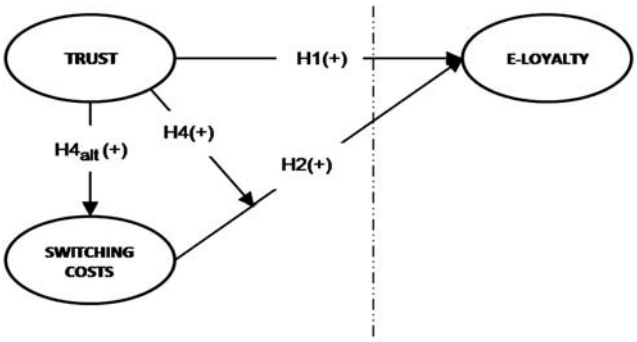

Figure 1 Research model.

Hypothesis 4: *The relationship between switching costs and e-loyalty will be stronger (weaker) when trust is high (low).*

An alternative line of reasoning suggests that rather than moderating switching costs' influence, strategies aimed at building trust may give rise to perceptions of switching costs (Saparito *et al*, 2004). In a study examining relationships between trust, loyalty-building strategies, and switching in the context of small business patronage of banks, Saparito *et al* (2004) found that trust reduced the likelihood that a firm would switch banks. Applied to online travel services, this suggests greater cost sensitivity (e.g., to the loss of frequent flier miles) for individuals who express higher trust in an airline or OTA when purchasing travel services from an alternative provider. Accordingly, a competing hypothesis posits that trust strengthens an individual's resolve to stay in a relationship with an incumbent provider by increasing perceived costs associated with change.

Hypothesis 4_{alt}: *Trust will positively influence perceptions of switching costs.*

We present our research model in Figure 1.

Research Method

To evaluate e-loyalty in the changed marketplace of online travel services, in 2009 we collected data using a web-based survey from a population of experienced online consumers. Our panel was recruited by a marketing firm that drew a representative sample of travellers

Table 4 Sample characteristics

	Count	*Percentage*
Gender		
Male	175	58.5
Female	122	40.8
No response	2	0.7
Age		
<25	2	0.7
25–29	36	12.0
30–34	32	10.7
35–50	115	38.5
50+	112	37.5
No response	2	0.7
Education		
High school	87	29.1
Associates	74	24.7
Bachelors	82	27.4
Masters	36	12.0
Higher than Masters	17	5.7
No response	3	1.0
Ethnicity		
Caucasian/non-Hispanic	251	83.9
Hispanic	9	3.0
African American	17	5.7
Asian	7	2.3
Other	12	4.0
No response	3	1.0
Preference		
Online travel website	136	45.0
Air carrier's website	163	55.0
Purpose		
Personal only	32	11.0
Business and personal	261	87.0
Business only	6	2.0
Total subjects	299	

who used OTAs (e.g., Expedia.com, Orbitz.com, Priceline.com, and Hotwire.com) and/or airline carriers' websites (e.g., Delta Airlines and American Airlines) to book flights from a panel of 2.5 million Internet users. Potential subjects confirmed having travelled in the past year. Of those answering 'yes' to this screening question, 299 completed the survey for a response rate of 82%. The survey asked subjects to state their preferred method of buying airline tickets online (i.e., OTA or airline carrier). Based on this information, subjects answered questions related to their preferred purchasing method. Table 4 reports sample characteristics, including age, gender, ethnicity, education, preference for online interaction, and purpose of travel.

As our research model incorporates second (i.e., trust) and third (i.e., switching costs) order constructs, we examined literature on multidimensional constructs for guidance on how to estimate our measurement model (Polites *et al*, 2012; Wright *et al*, 2012). Edwards (2001) as well as Law & Wong (1999) prescribe three primary approaches to modelling higher-order factors, namely, (i) superordinate, (ii) aggregate, and (iii) a mixture of superordinate and aggregate modelling. The relationships between dimensions and the respective latent variables distinguish these approaches from one another (Law & Wong, 1999; Edwards, 2001; Polites *et al*, 2012). Specifically, causality differentiates two distinct types of higher-order modelling (i.e., superordinate and aggregate). The superordinate approach refers to the presence of constructs reflected in the lower order dimensions (i.e., Latent Variable (LV)→Dimensions), while the reverse causality applies in the case of the aggregate model (i.e., LV←Dimensions). Mixed model higher order constructs include both reflective and formative dimensions (e.g., elements of superordinate and aggregate). In this study, we follow prescriptions offered by Polites *et al* (2012) and conceptualize high-order trust as superordinate and switching costs as aggregate constructs, respectively.

Trust

Consistent with trust theories (Mayer *et al*, 1995; McKnight & Chervany, 2001; McKnight *et al*, 2002), many studies conceptualize trust as manifest in customers' beliefs about e-service provider characteristics, namely, ability, benevolence, and integrity (Bhattacherjee, 2002; Lowry *et al*, 2008; Vance *et al*, 2008; Wang & Benbasat, 2008; Klein & Rai, 2009; Thatcher *et al*, 2011). Serva *et al* (2005) argued that trust's form (e.g., first-order aggregate or second-order superordinate) depends on the specific research context. In an online setting, Serva *et al* (2005) further suggest, 'the second-order model is a consumer's composite belief (i.e., superordinate) that an online vendor will act in a beneficial manner, where changes in trustworthiness are reflected in all three sub dimensions' (p. 102). Hence, we operationalize trust as a superordinate construct, with consumer trust in the OTA reflected in each of its dimensions (i.e., LV → Dimensions).

Switching costs

In contrast, switching costs dimensions should not co-vary. Based on prior literature, interviews, and focus groups, Burnham *et al* (2003) identified eight separate indicators of switching costs that make up three distinct second-order dimensions, namely financial, procedural, and relational switching costs (see Figure 2). These distinct second-order dimensions aggregate to shape consumer perceptions of the overall one-time costs associated with switching providers (i.e., LV←Dimensions) (Burnham *et al*, 2003). For this reason, we model switching costs as a third-order aggregate construct.

Model testing

Structural equation modelling (SEM) techniques can evaluate higher-order models, with models that incorporate

multi-dimensional constructs often employing covariance-based SEM tools. However, issues related to model complexity, distribution of data, and identification, preclude use of such techniques to estimate our measurement and structural models (Wold, 1985). Specifically, since the switching costs construct relates to only one endogenous variable, covariance-based methods potentially fail to identify our nomological network (Jöreskog & Goldberger, 1975; MacCallum & Browne, 1993; Diamantopoulos, 2008). As an alternative, we evaluated our research model using partial least squares (PLS) – a component-based SEM technique (Chin *et al*, 2003; Ringle *et al*, 2005; Wetzels *et al*, 2009). We further conducted common method bias analyses, reporting these results in Appendix B. We used XLStat 2012 to execute all PLS structural and measurement models.

We employed a multi-step process to evaluate the measurement model (see Wetzels *et al* (2009) and Wright *et al* (2012) for detailed explanations of higher-order construct modelling using PLS). In our initial step, we estimated a model with no structural relationships between constructs to assess the validity of our construct measures. In this step, the average variance extracted (AVE), internal composite reliability (ICR), and Cronbach's alphas for each of the first-order dimensions all met, or fell close to, recommended heuristics (i.e., AVE > 0.50, ICR > 0.8, and $\alpha > 0.70$; see Appendix A) for discriminant and convergent validity as well as reliability (Fornell & Larcker, 1981; Chin, 1998). As depicted in Table 5, the square roots of the AVEs for latent variables exceed all off-diagonal elements, further supporting discriminant validity (Chin, 1998). Additionally, all item loadings exceeded 0.707 (significant at $P < 0.01$), supporting the conclusion that construct measures exhibited discriminant and convergent validity (Hair *et al*, 1998). Finally, we calculated variance inflation factors (VIF) and tolerance for all the higher-order factors using the latent variable scores, with all falling in acceptable ranges (Kutner, 2005). Collectively, these analyses provide evidence of the soundness of our first-order measurement model.

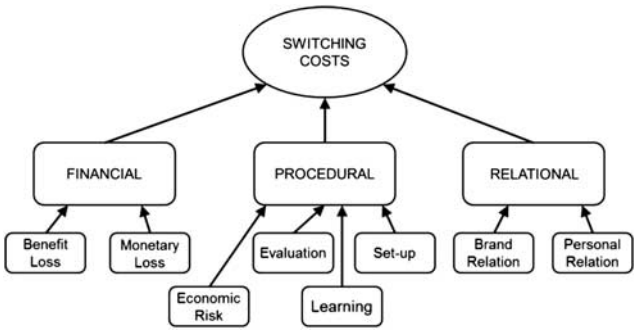

Figure 2 Switching costs (Burnham *et al*, 2003).

In our next step, we evaluated the second-order measurement model. The two main ways of modelling higher-order constructs in PLS include hierarchical re-use of items or the superblock approach (Wright *et al*, 2012). We adopted the superblock approach described by Chin (2010) and Wright *et al* (2012). A first-order model extracted latent variable scores, while a subsequent model used the second-order latent variable scores from the first. We then executed the third-order model. We calculated higher-order blocks (called superblocks) using the lower-order latent variable scores. For example, latent variable scores were calculated for the first-order trust components (e.g., ability, benevolence and integrity). We subsequently used these three latent variable scores to model the second-order trust construct.

As a superordinate second-order construct, trust should shape the value of its first-order dimensions (i.e., ability, benevolence, and integrity should co-vary) (Edwards, 2001). The interpretation and analysis of the second-order, superordinate measurement model is, therefore, comparable to a first-order reflective measurement model. Hence, we evaluated each dimension's loadings on the second-order factor. Ability ($\beta = 0.96$), benevolence ($\beta = 0.95$), and integrity ($\beta = 0.97$) loaded highly on the

Table 5 Inter-correlations of latent variables for first-order constructs

Constructs	*M*	*SD*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*
1. e-loyalty	3.66	1.01	**0.96**											
2. Benevolence	3.02	0.67	0.37	**0.90**										
3. Integrity	3.10	0.82	0.40	0.74	**0.87**									
4. Ability	3.07	0.79	0.40	0.68	0.78	**0.91**								
5. Personal Rel. Loss	3.13	0.88	0.08	0.22	0.13	0.10	**0.79**							
6. Brand Relationship	2.67	0.94	0.17	0.28	0.19	0.16	0.59	**0.85**						
7. Set-up Costs	2.91	0.98	0.06	0.06	0.05	0.02	0.35	0.13	**0.85**					
8. Learning	2.92	0.91	0.10	0.10	0.09	0.08	0.26	0.11	0.60	**0.82**				
9. Evaluation	3.67	0.96	0.06	0.08	0.07	0.05	0.27	0.10	0.45	0.45	**0.67**			
10. Economic Risk	3.74	0.81	0.19	0.21	0.17	0.15	0.37	0.24	0.39	0.39	0.54	**0.71**		
11. Monetary Loss	3.54	0.88	0.02	0.03	0.02	0.01	0.35	0.15	0.38	0.22	0.20	0.27	**0.74**	
12. Benefit Loss	3.66	0.82	0.10	0.06	0.09	0.07	0.21	0.18	0.25	0.23	0.14	0.24	0.41	**0.72**

AVE along diagonal is bold. All correlations are squared. All construct correlations are significant at $P < 0.01$.

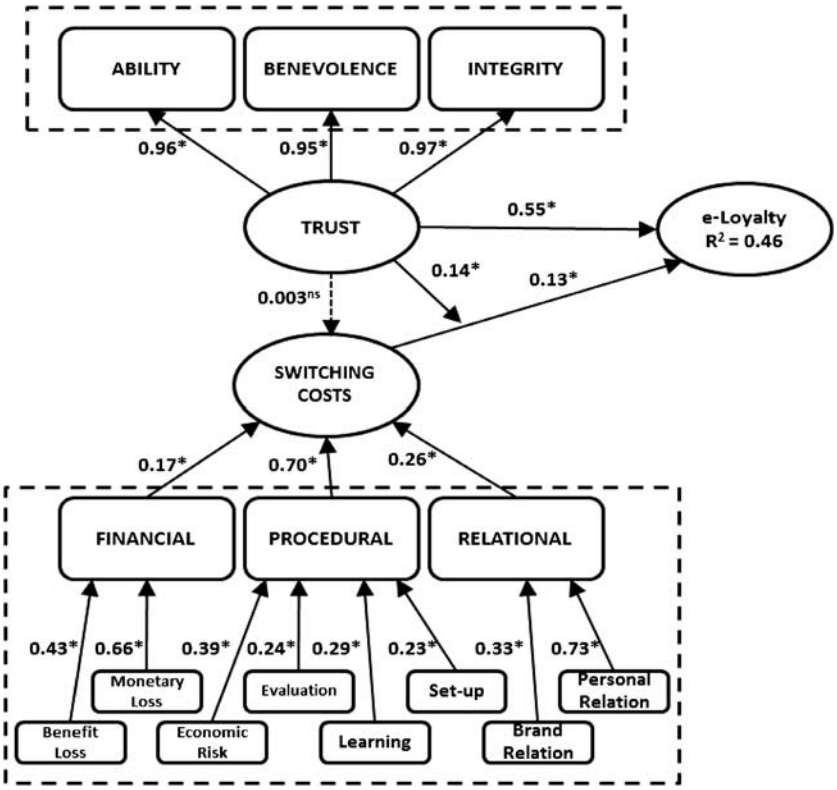

Figure 3 Structural model.
Note: The dashed lines represent lower order factors, the paths from the lower order factors to the high order factors are denoted with the respective beta weights and * indicates $P<0.01$.

superordinate trust construct. Further, trust's AVE (0.80) and ICR (0.98) exceeded recommended cut-off values of 0.5 and 0.8, respectively (Fornell & Larcker, 1981; Chin, 1998). This cumulatively suggests integrating trust as a second-order construct in our research model.

In contrast, as a third-order aggregate construct, financial, procedural, and relational costs dimensions should form switching costs (Polites *et al*, 2012). Analogous to evaluating indicators of formative constructs, the dimension weights and their significance serve as indicators of the strength of each dimension's relationship to the higher-order switching costs construct (Petter *et al*, 2007; Wetzels *et al*, 2009). By way of an illustration, examining procedural switching costs, one dimension of the switching costs construct (see Figure 3 for the path model), which has a significant path weight equal to 0.70. When controlling for financial and relational costs, this weight suggests that procedural costs directly influence the variance in switching costs (Edwards, 2001). When evaluating procedural costs, economic risk costs equal 0.36, representing the 'partialized effect of the indicator on its intended construct controlling for the effect of all other indicators of that construct' (Cenfetelli & Bassellier, 2009).

We calculated the indirect effect of economic risk costs on the third-order switching costs construct using the beta weight of the direct path from economic risk to procedural costs and, subsequently, multiplying this path by the direct path of procedural costs to overall switching costs (i.e., $\beta = 0.36 \times 0.57 = 0.21$). Cohen (1988) categorizes such a result as a medium effect, where a small effect falls between 0.02 and 0.15, medium between 0.15 and 0.35, and large exceeds 0.35. Given significant weights, a medium to large amount of explained variance in the higher order construct, as well as discriminant and convergent validity at the first-order level (Wetzels *et al*, 2009), we deem our third-order conceptualization appropriate.

Our structural model explained substantial variance in e-loyalty ($R^2 = 0.46$) (see Figure 3). Trust exhibited a positive relationship with e-loyalty (H1: $\beta = 0.55$, $P<0.01$), as did switching costs (H2: $\beta = 0.13$, $P<0.01$). Hypothesis 3 posited a stronger relationship between trust and e-loyalty than between switching costs and e-loyalty. Accordingly, we compared the R^2 for e-loyalty with, and without, each of the independent variables included in our model (Chin, 1998; Cyr, 2008), where the

effect size of each independent variable (f^2) is calculated as follows:

$$f^2 = [(R^2_{\text{included}} - R^2_{\text{excluded}})/1 - R^2_{\text{included}}],$$

$$f^2\text{TRUST} = [(0.46 - 0.23)/0.54] = 0.43,$$

$$f^2\,\text{SWITCHING COSTS} = [(0.46 - 0.44)/0.54] = 0.04.$$

Using Cohen's (1988) interpretation of effect size (i.e., f^2 between 0.02 and 0.15 for a small effect size; between 0.15 and 0.35 for medium; and greater than 0.35 for large), results support our third hypothesis – with the effect for trust on e-loyalty (i.e., a large effect with $f^2 = 0.43$) greater than the effect of switching costs on e-loyalty (i.e., a small effect with $f^2 = 0.04$). Further, in accordance with Hair *et al* (2011), we tested for predictive relevance using Stone-Geisser's Q^2. We employed a blindfolding procedure to determine whether the model could reproduce data points that were explicitly excluded (e.g., every 8th data point) with much greater accuracy than simple missing data techniques, such as mean replacement. In this step, communalities and redundancies for e-loyalty equalled 0.963 and 0.441 respectively, supporting their predictive relevance.

The positive moderation path coefficient ($\beta = 0.14$, $P < 0.01$) provides initial support for Hypothesis 4, which posits that trust positively moderates the relationship between switching costs and e-loyalty. In essence, the moderation path coefficient represents the effects of an interaction variable (i.e., the product of trust and switching costs) on e-loyalty, holding the independent variables (i.e., trust and switching costs) constant at the mean. This result implies that, at average levels of trust and switching costs, these strategic approaches exert joint effects on e-loyalty greater than the sum of each construct's individual effects. Further, we conducted a Wald coefficient test to check if the two main effects had different magnitudes. The results indicated rejecting the null hypothesis ($F_{\text{diff}} = 113.67$, $P < 0.01$) for the same effect size. Thus, the data support concluding trust has stronger impact than switching costs.[1]

However, to appropriately characterize the nature of the interaction between trust and switching costs, as articulated in our hypothesis, we sought to determine if the effect of switching costs on e-loyalty changes depending on the level of trust felt by a customer. To assess this, we first standardized the trust, e-loyalty, and switching costs variables. Next, we regressed switching costs, trust, and their interaction on e-loyalty. The regression model and interaction term were again significant ($\alpha = 0.01$), consistent with our PLS model.

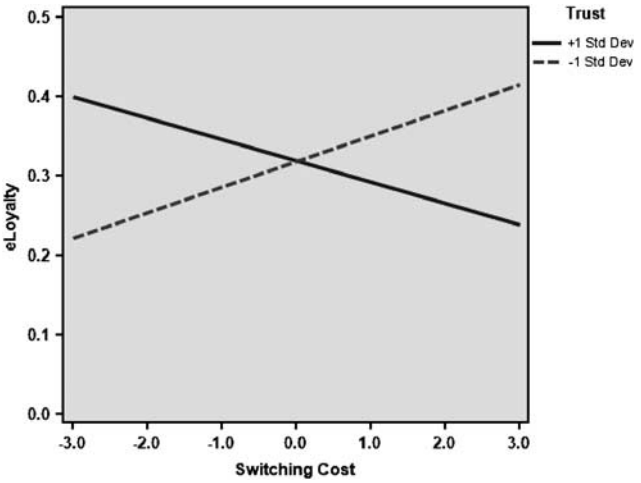

Figure 4 Interaction graph.

Then, we categorized trust by customer into groups plus, or minus, one standard deviation from the mean (see Figure 4). The categorization found 51 subjects to be high trust individuals and 22 subjects to be low trust individuals. Employing the standardized data, we plotted the high (i.e., +1 std. dev.) and low (i.e., −1 std. dev.) trust groups using switching costs and e-loyalty as axes.

Figure 4 depicts the simple effects of switching costs and trust. We found higher e-loyalty associated with either (i) the combination of high trust and low switching costs or (ii) the combination of low trust and high switching costs. The graph shows lower e-loyalty in the presence of the combination of either (i) high levels of both trust and switching costs or (ii) low levels of both trust and switching costs. Our examination of the simple effects finds switching costs and trust are compensatory, rather than supplementary, strategies for fostering e-loyalty, except at average levels of both constructs. Since we posited that trust would positively moderate the relationship between switching costs and e-loyalty at *all* levels of switching costs, these results only partially support our fourth hypothesis.

To test whether trust primes perceptions of switching costs, we proposed Hypothesis 4_{alt}, which stated that trust positively influences switching costs. Our analysis does not find a significant path coefficient for the relationship between trust and switching costs in our structural model, Thus, Hypothesis 4_{alt} was not supported. Table 6 presents a summary of hypotheses and results.

Post-hoc testing

With PLS, the model's power to detect the probability of rejecting a false null hypothesis, or a type II error (Marcoulides & Saunders, 2006), constitutes a reasonable concern. Hence, methodological studies strongly recommend a power analysis when using PLS for non-significant relationships (Wetzels *et al*, 2009). Moreover,

[1]We thank our anonymous reviewer for helping us clarify this analysis through the use of a Wald test.

Table 6 Summary of hypotheses and results

Hypothesis	*Supported?*
1. Trust will positively influence e-loyalty toward an incumbent e-service provider.	Yes
2. Switching costs will positively influence e-loyalty toward the incumbent e-service provider.	Yes
3. The relationship between trust and e-loyalty will be stronger than the relationship between switching costs and e-loyalty.	Yes
4. The relationship between switching costs and e-loyalty will be stronger (weaker) when trust is high (low).	Partial
4_{alt}. Trust positively influences switching costs	No

given an interaction as our model's main element, understanding the model's power $(1-\beta)$ is critical (Chin *et al*, 2003). We calculated power using a *post-hoc* method, which employs (i) sample size, (ii) the alpha level, and (iii) the effect size (Kline, 2004). The effect size measures the relationship between independent and dependent variables for each hypothesis with the output as a correlation coefficient. Pearson's product-moment power table can then determine the probably of a type II error. Considering Hypothesis 4, Pearson's correlation between trust and switching cost equals 0.393, with a sample size of 299 and alpha of 0.05. Using the G*Power (Erdfelder *et al*, 1996), we found the power of this test equal to 0.913. Social science research traditionally accepts a power value of 0.80 or greater (Cohen, 1988).

In prior research, the notion of experience, when operationalized as satisfaction with a system (Cyr, 2008) or quality of service (Gefen, 2002), has demonstrated a significant relationship with e-loyalty. In our model, we operationalized experience through a quantitative measure of user interactions, namely, transaction frequency. Beliefs about trust and switching costs form over time; hence, one would associate trust with greater transaction frequency with a respective e-service provider (Mayer *et al*, 1995; McKnight & Chervany, 2001; McKnight *et al*, 2002; Vance *et al*, 2008; Wang & Benbasat, 2008). As expected, transaction frequency significantly relates to trust ($\beta = 0.13$, $P < 0.01$) and switching costs ($\beta = 0.27$, $P < 0.01$). However, the construct does not significantly influence e-loyalty. Consistent with control variables, transaction frequency added relatively little explained variance to our overall model (i.e., $[R^2_{\text{Original Model}} - R^2_{\text{Model with Transactional Frequency}}]$ by $[1 - R^2_{\text{Original Model}}]$, or $[0.460–0.457]/[1–0.460] = 0.006$). Using ANOVA, we tested for differences in e-loyalty between subjects that purchased tickets from an OTA as opposed to those using an airline carrier's website. We similarly found no significant difference between OTA and airline carrier customers with respect to e-loyalty ($F = 0.510$; $P > 0.50$). Finally, we tested if the travel purpose (e.g., personal *vs* business) influenced the dependent variable, again finding no significance difference ($F = 0.94$; $P > 0.90$).

Discussion

By investigating the interplay of trust and switching costs, this study extends e-loyalty research in two ways. First, trust and switching costs foster different types of commitment on the part of customers (Zins, 2001); therefore, teasing out their relative effects on e-loyalty helps to explain which type of commitment – affective or continuance – exerts a greater influence on e-loyalty development. This study provides evidence that, although both can improve e-loyalty, trust and switching costs are not equally beneficial strategies for e-service providers. Our results show that trust has a stronger effect on e-loyalty than switching costs, offering empirical support for the view that willing commitment is a more salient predictor of conative (i.e., intention-based) loyalty in online settings (Chow & Holden, 1997; Zins, 2001; Fullerton, 2003; Evanschitzky *et al*, 2006). Second, by illuminating the interaction between the two strategies, this study identifies how switching costs and trust act as boundary conditions with respect to each other's influence on e-loyalty. Specifically, the impact of switching costs on e-loyalty depends on the level of trust felt by customers – and vice versa. For example, absent trust, switching costs do positively impact customers' repurchase intentions. However, when customers express higher trust in e-service providers, they relay that building high switching costs into the relationship has a harmful effect on e-loyalty. This finding mirrors research suggesting that a high level of continuance commitment undermines the positive impact of affective commitment on customer retention (Fullerton, 2003; Aydin *et al*, 2005). The implication being, trust and switching costs are compensatory, and ultimately incompatible, strategies for fostering e-loyalty. These findings have important implications for e-service providers aiming to foster such loyalty.

E-service providers should welcome the finding that trust has a greater effect on e-loyalty than switching costs. Given that trust contributes to customers' willingness and desire to engage in long-term relationships (Bendapudi & Berry, 1997; Fullerton, 2003; Evanschitzky *et al*, 2006), trust constitutes a more positive strategy than switching costs. Moreover, while previous research has recommended switching costs as a primary means of building customer loyalty (Lin *et al*, 2006), difficulties arise with such a strategy in an online environment characterized by large numbers of viable substitutes (Bendapudi & Berry, 1997; Chow & Holden, 1997). To this end, interventions that improve the quality of customers' interactions with an e-service provider's website offer a cost-effective alternative aimed at promoting trusting beliefs about the ability, benevolence, and integrity of a specific e-service provider.

Trust research suggests actionable interventions that e-service providers can employ to enhance customers' e-service experiences and promote loyalty. First, e-service providers can promote trusting beliefs of competence through advanced search and comparison features (Vance *et al*, 2008) as well as quick and secure transaction processing (Kim, 2008). Displaying institutional endorsements and providing links to partner organizations can further reinforce perceptions that a provider's website has the capabilities and features necessary to conduct transactions in a timely and convenient manner (McKnight & Chervany, 2001). Second, e-service providers can foster trusting beliefs about their integrity by ensuring the provision of full contact details, as well as accurate, timely, and complete information (Butcher *et al*, 2001). This encourages stronger commitment on the part of the customer as information contributes to trust by signalling the company's commitment to the customer-service provider relationship.

Third, e-service providers can engender positive perceptions about their commitment to maintaining customer relationships by delivering support via multiple contact channels. For example, live online chat, 24-h support, blogs, and/or message boards (Evanschitzky *et al*, 2006). Live chat and 24-h support positively influence beliefs about the provider's benevolence by bringing a sense of immediacy into the transaction process. These services also provide reassurances with respect to timely problem resolution, influencing beliefs relating to the provider's ability to complete transactions (Bart *et al*, 2005). Additionally, interactive tutorials, blogs, and/or message boards promote rapid acquisition of skills needed to use a website efficiently. These measures make it possible for customers to easily explore deeper features of a site providing greater visibility and accessibility of information, thereby influencing trusting beliefs about provider integrity.

This study's finding that trust does not positively moderate the influence of switching costs on e-loyalty at all levels of switching costs paints a complex picture for e-service providers seeking to foster e-loyalty. Except at average levels of both, we found switching costs and trust compensatory, rather than supplementary strategies for fostering e-loyalty. Indeed, our results suggest that creating high switching costs may undermine the positive effects of trust. This is consistent with prior work finding that a high level of continuance commitment undermines affective commitment (Fullerton, 2003), as well as marketing research, which indicates that raising the perceived complexity of services may actually erode the effects of trust on e-loyalty (Burnham *et al*, 2003). Since trust also has a greater effect on e-loyalty than switching costs, some might take this to mean that e-service providers should abandon attempts to use switching costs in favour of building trust as a means to foster e-loyalty.

However, our evidence also indicates that trust increases the effect of switching costs on e-loyalty when switching costs are relatively low. In fact, research suggests that because some switching costs interventions do promote relational bonds, e-service providers may incorporate certain types of switching costs as a 'side-bet' alongside trust-building measures (Fullerton, 2003). For instance, e-service providers offering live chat and/or 24-h support can build feelings of collective identity and shared values, giving rise to personal relationship loss costs. Personalizing e-services by providing recommendations based on customers' prior selections (e.g. seat and meal preferences) offers another opportunity to create relational switching costs without damaging the effects of trust. Importantly, given work suggesting that economic incentives and entrapment may not be sufficient to secure loyal customers (Dowlling & Uncles, 1997; Gwinner *et al*, 1998), creating switching costs based on knowledge of a customer's preferences, responsiveness to their specific needs, and service quality may constitute more effective customer retention strategies (Fullerton, 2003; Evanschitzky *et al*, 2006).

Limitations and future research

A primary limitation is our research context. We employed one type of e-service, online travel services, to examine the influence of trust, switching costs, and their interaction on e-loyalty. Future research should explore the extent to which the findings presented here transfer to other types of e-services, which are not as commoditized. Further, this study did not directly examine the impacts of affective and continuance commitment on e-loyalty. However, our focus on the strategies that give rise to different forms of commitment provides a basis for future research to develop the requisite nomological network surrounding e-loyalty. In the future, researchers may wish to examine the extent to which affective and continuance commitment mediate the effects of trust and switching costs. Additionally, some researchers might question why we did not capture data relating to actual purchases. This study operationalized e-loyalty consistent with existing loyalty frameworks (Oliver, 1999; Butcher *et al*, 2001) as well as prior information systems research (see, e.g., Cyr *et al*, 2007; Cyr, 2008). By conceptualizing e-loyalty as conative, or intention-based, we contribute to the literature by deepening our understanding of cognitive and affective perceptions that motivate repurchase intentions. Future research should extend this study longitudinally to explore the interaction and influence of trust, switching costs, and e-loyalty on behavioural, or action-based, loyalty.

Despite this study's finding that trust does not prime a person's overall perceptions of switching costs, one might argue that trust is not necessarily distinct from the first-order relational facets of switching costs. For example, trust might have a direct effect on perceived costs associated with ending a relationship with an e-service provider (i.e., trust increases the emotional discomfort associated with switching). Nevertheless, consistent with research on relationship marketing (Joshi & Arnold, 1997) and commitment (Bendapudi & Berry, 1997;

Zins, 2001; Fullerton, 2003; Evanschitzky *et al*, 2006), this study's theory of e-loyalty clearly suggests that while trust and switching costs have relational components, their underlying cognitive processes and the online interventions that give rise to them, differentiate these components. Further, our analysis demonstrated discriminant validity among the first-order dimensions of trust and first- and second-order dimensions of switching costs. Consequently, our theory and associated analyses support the notion that trust and switching costs represent distinct concepts. Future research should examine whether trust and switching costs remain discriminant in the context of behavioural loyalty.

Finally, this study does not explicitly consider perceptions of risk relating to the broader transaction environment. Online trust research examines how trusting beliefs help consumers overcome perceived risk to complete transactions with unfamiliar e-service providers (McKnight & Chervany, 2001; McKnight *et al*, 2002). Because we examined intentions to revisit, we see risk as just one of many switching costs (e.g., economic risk costs, benefit loss costs, and monetary loss costs) salient to understanding consumer relationships with known e-service providers. To extend our understanding of trust and risk's influence, future researchers may investigate how a broader definition of risk shapes specific risks embedded in switching costs, as well as the influence of risk definition on trust's relationship with e-loyalty.

Conclusion

A desire to understand the relative influence of e-loyalty building strategies employed by e-service providers motivated this study. Specifically, we compared the direct and interaction effects of trust and switching costs on customer loyalty to online travel service providers. Although we found that trust and switching costs directly, and positively, impact e-loyalty, our analyses suggest that trust exerts the stronger influence. Further, our results show that trust and switching costs serve as compensatory, not supplementary, strategies. For the practicing professional, these findings direct attention to the power of strategies that foster affective commitment grounded in positive beliefs about e-service providers. Given evidence of trust's high impact in the presence of low switching costs, our study suggests that building high switching costs into a trusting relationship has a harmful effect on e-loyalty. Conversely, our findings also indicate that e-service providers who have historically created cost barriers to switching likely fail to realize expected benefits from building trusting relationships alongside high switching costs. In the future, researchers may extend our study to examine trust's influence on additional post-adoption contexts including relationships with diverse types of Internet-based service providers (e.g., online banking or electronic health records) or decisions to continue to use of workplace technologies or mobile-commerce.

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Appendix A

Table A1 Psychometric properties for first-order factors

Item	*Item description*	*Loading*	*CR*	*AVE*	*α*
Customer loyalty (Gefen, 2002)					
Loy1	I would consider the online service provider as first choice when buying airline tickets	0.90			0.95
Loy2	I am inclined to do more business with the online service provider	0.92			
Switching costs (Burnham *et al*, 2003)					
(1) Procedural Switching Costs:					
(a) Economic Risk Costs:					
S1	I would worry that the service offered by other service providers won't work as well as expected	0.79	0.93	0.70	0.91
S2	If I try to switch service providers, I might end up with bad service for a while	0.85			
S3	Switching to a new service provider will probably involve hidden costs/charges	0.83			
S4	I am likely to end up with a bad deal financially if I switch to a new service provider	0.82			
S5	Switching to a new service provider will probably result in some unexpected hassle	0.89			
S6	I don't know what I'll end up having to deal with while switching to a new service provider	0.83			
(b) Evaluation costs					
S7	I cannot afford the time to get the information to fully evaluate other service providers	0.80	0.89	0.66	0.83
S8	How much time/effort does it take to get the information you need to feel comfortable evaluating service providers?	0.89			
S9	Comparing the benefits of my service provider with the benefits of other service providers takes too much time/effort even when I have the information	0.86			
S10	It is tough to compare the other service providers	0.69			
(c) Learning costs					
S11	Learning to use the features offered by a new service provider as well as I use my service will take time	0.90	0.95	0.82	0.93
S12	There is not much involved in understanding a new service provider well (R)	0.89			
S13	Even after switching, it would take effort to get up to speed with a new service	0.92			
S14	Getting used to how another service provider works would be easy (R)	0.90			
(d) Set-up costs					
S15	It takes time to go through the steps of switching to a new service provider	0.90	0.94	0.84	0.91
S16	Switching service providers involves an unpleasant sales process	0.92			
S17	There are a lot of formalities involved in switching to a new service provider	0.94			
(2) Financial switching costs:					
(a) *Benefit loss costs*					
S18	Switching to a new service provider would mean losing or replacing points, credits, services, and so on that I have accumulated with my service provider	0.91	0.89	0.72	0.81
S10	How much would you lose in credits, accumulated points, services you have already paid for, and so on if you switched to a new service provider? (*nothing… a lot)*	0.91			
S20	I will lose benefits of being a long-term customer if I leave my service provider.	0.72			
(b) Monetary loss costs					
S21	Switching to a new service provider would involve some up-front costs (set-up fees, membership fees, deposits, etc.)	0.89	0.85	0.74	0.66
S22	How much money would it take to pay for all of the costs associated with switching service providers?	0.83			
(3) Relational switching costs:					
(a) Personal relationship loss costs					
S23	I would miss the community of users I associate with at my current service provider if I switched providers	0.79	0.94	0.78	0.91
S24	I am more comfortable interacting with the people working for my service provider than I would be if I switched providers	0.89			
S25	The people where I currently get my service matter to me	0.93			
S26	I like talking to the people where I get my service	0.92			
(b) Brand relationship loss costs					
S27	I like the public image my service provider has	0.91	0.92	0.85	0.82
S28	I support my service provider as a firm	0.94			

Table A1 Continued

Item	*Item description*	*Loading*	*CR*	*AVE*	*α*
Trust (Bhattacherjee, 2002)					
(1) Ability					
T1	The online service provider has the skills and expertise to perform transactions in an expected manner	0.95	0.97	0.91	0.95
T2	The online service provider has access to the information needed to handle transactions appropriately	0.97			
T3	The online service provider has the ability to meet most customer needs	0.94			
(2) Integrity					
T4	The online service provider is fair in its conduct of customer transactions	0.94	0.95	0.87	0.92
T5	The online service provider is fair in its use of private customer data collected during a transaction	0.95			
T6	The online service provider is fair in its customer service policies following a transaction	0.90			
(3) Benevolence					
T7	The online service provider is open and receptive to customer needs	0.93	0.96	0.89	0.94
T8	The online service provider keeps its customers' best interests in mind during most transactions	0.96			
T9	The online service provider makes good-faith efforts to address most customer concerns	0.94			
Control: Transactional frequency					
C1	On average, how many times have you used the online service provider to purchase airline tickets? (Very Infreq …. Very Freq.)	0.94	0.95	0.90	0.89
C2	On average, how many times have you purchased tickets from an online vendor? (Not very often …. Very Often)	0.95			

Appendix B

Table B1 Common method variance

Factor/adjusted	*eLOY*	*Trust*	*SC*
SC	0.40*		
eBun adj. SC	0.36*		
TRUST	0.69*		
eBun adj. Trust	0.67*		
SC		0.40*	
eBun adj. SC		0.41*	
INFO		0.76*	
eBun adj. INFO		0.76*	
FinCost			0.70*
eBun adj. FinCost			0.69*
ProcCost			0.96*
eBun adj. ProcCost			0.96*
RelCost			0.78*
eBun adj. RelCost			0.77*
eBun	0.06	−0.02	0.05

* Correlation significant at $P<0.01$.
eBun – e-Bundling, SC-Switching Cost, INFO – Information Transparency, FinCost – Financial Costs, ProcCost – Procedural Cost, RelCost – Relative Costs.

Common method analysis

Common method bias is always a concern when designing and executing survey research. This is especially true when capturing consumers' perceptions of the endogenous and exogenous variables. For this reason, we follow past literature on common method bias partialling to test if this study has been affected by method bias. Podsakoff & Organ (1986) propose a two-step approach in testing for common method variance. First, as they suggest, we executed a one-factor extraction test on the constructs in the nomological network as per Harman (1967). This analysis, although exploratory, shows if a single factor can explain a majority of the variance. Sixteen factors were extracted with eigen values of one or greater. The total explained variance for these extracted factors was 69% with the first factor accounting for only 11% of the variance. Although Harmon's one-factor test does provide evidence if there is a common method issue, there is no guideline as to the cut-off value for the variance of the first variable. The reason for this is that the first variable in the extraction would account for both the method effect and its actual trait value (Jayachandran *et al*, 2005). Therefore a second step is needed.

Drawing from Lindell & Whitney (2001), we analysed the correlations between constructs. This is typically done through an *a priori* marker variable that theoretically should not be correlated with the dependent variable of interest. If a method analysis is undertaken after data collection, as in this case, Lindell and Whitney suggest you choose a latent variable that is not in the nomological network and again theoretically unrelated to the dependent variable. In our

case we use e-bundling, or the 'aggregation of information goods by an online vendor' (Bakos & Brynjolfsson, 2000, p. 63). Table B1 presents the adjusted correlations of the related variables. In each instance the adjusted correlations remained significant at $P<0.01$. Considering the e-bundling marker, all variables represent the legitimate correlation between the constructs as well as any covariance caused by the method effect; hence it is rational to determine that the nomological relationships presented are strongly supported by the data.