

Transfer Effect of Trust, Satisfaction and Loyalty Link: Building Loyalty Relationships
through an E-Contact Center

A Thesis

Presented to

the Faculty of the Department of Human Development and Consumer Sciences

University of Houston

In Partial Fulfillment

of the Requirements for the Degree

Master of Science

Global Retailing

By

Sami F. Elestwani

May, 2015

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Abstract

With the recent advancements in information and communications technology, e-contact centers have taken on a new role in the retail world. They have become an essential gateway to retailers' relationship with their customers. The use of consumer-trusted advanced communication technologies in e-contact centers has been found to play an important role in the creation of customer loyalty. The purpose of this study was to investigate the effect of consumer trust in information and communication technology on the trust, satisfaction, and loyalty that customers develop with e-contact centers and to provide an integrated model to assess the effect of a trust-satisfaction-loyalty link to e-contact centers on the formation process of their loyalty to retailers. The results suggest that trust in communication technology plays an important role in the formation process of customer trust, satisfaction and loyalty within e-contact centers, and that customer trust, satisfaction, and loyalty to e-contact centers are linked to their loyalty to retailers.

Keywords – Trust, Satisfaction, Loyalty, E-contact center, Information and communication technology.

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Introduction

With the help of new information and communication technology (ICT), advanced contact centers, referred to as e-contact centers, have taken on a new role in the world of e-commerce. E-contact centers have become the gateway to retailers' relationship with consumers. They connect customers to retailers through the use of consumer-trusted technologies such as text-chatting, e-mail, web-call, and social media, which can provide customers with a feeling of familiarity and trust during the communication process. This feeling of trust afforded by e-contact centers is important since trust is generally associated with customer satisfaction and customer loyalty. Trust in e-contact centers, which stems from the consumer's trust in ICT, can lead to trust in retailers. Research has shown that customer loyalty is based on customer trust (Gefen, 2002). Drawing on the work of Morgan and Hunt (1994) on trust theory, Bowen and Shoemaker (1998) concluded that trust is one of the most important antecedents to loyalty. In e-contact centers, consumers' acceptance of new ICT is triggered by their trust in the technologies used. Research in the information technology domain has shown that trust is an essential predictor of technology acceptance and usage (Li, Hess, & Valacich, 2008). Trust in new communication technology also predicts the initial trust in e-contact centers. Therefore, it is meaningful to examine the influence of consumer trust in new ICT on customer satisfaction and loyalty to e-contact centers and on consumer trust, satisfaction, and loyalty to retailers.

Traditionally, customer loyalty has been the ultimate goal for retailers because research has shown that customer loyalty is directly linked to increased profitability (Hallowell, 1996). Customer satisfaction is linked to profitability through the satisfaction-loyalty-profitability relationship that stems from the fact that satisfied customers are more likely to be loyal and tend to repurchase (Park et al., 2011). Park et al. (2011) also concluded that e-contact centers play a

pivotal role in e-loyalty. While many studies (Frank et al., 2014; Human & Naude, 2014; Gallarza, Saura, & Moreno, 2013) have focused on the customer-loyalty generation process by adapting the quality-satisfaction-loyalty chain, the direct link between trust in new ICT and customer loyalty to e-contact centers and retailers remains relatively unexplored. The purpose of the present study is to do the following: (a) to investigate the effect of trust in communication technology on the trust-loyalty and satisfaction-loyalty relations in e-contact centers, and (b) to provide an integrated model to assess the effect of trust in technology on the loyalty formation process in e-contact centers and retailers.

Background

New communication technology. The past two decades have witnessed exponential growth in the advancement of ICT. The integration of new technology into the infrastructure of e-contact centers has been successful and has been met with great enthusiasm by consumers, especially by the Millennials, who represent the first generation to grow up in a multi-channel communication environment (Kundanis, 2003).

Acceptance of and trust in new ICT has also been the subject of numerous research projects (Lee & Song, 2013; Park et al., 2011; Park et al., 2015). Researchers have shown that trust and perceived risk are critical factors in explaining users' acceptance of ICT in the e-business environment (Featherman & Pavlou, 2003). Keen (1999) asserted that trust forms the basis of e-commerce. Cassel and Bickmore (2000) argued that although consumers' trust is influenced by the actions of e-merchants, the role of trust in the interface infrastructure (computer technology) cannot be discounted. Based on this research, studying the effect of trust in ICT in forming the initial trust in e-contact centers may be helpful in explaining the role of trust in the context of forming loyalty to e-contact centers.

Contact centers. The innovation of toll-free numbers in the late 1980s, supported by Fornell and Wenerfelt's (1987) work which asserted that encouraging customers to complain could increase customer loyalty, helped spark the establishment of national call centers as one of the primary methods of customer loyalty maintenance. A traditional call center or contact center consisted of a centralized location in which customers' questions and complaints were handled. Initially, telephone and face-to-face interactions formed the main communication tools used by traditional contact centers (Park et al., 2011). However, advancements in communication technology were quickly adopted by contact centers. Internet protocol (IP) technology emerged in the mid 1990's and radically reshaped the environment of communications within contact centers. Downey (2001) stated that advanced technology contact centers offer organizations numerous competitive advantages, including substantial innovations in customer service opportunities.

The introduction of new IP technology has revolutionized the way contact centers operate. Distance barriers have been eliminated by the creation of "virtual contact centers," which are now known as "e-contact centers" (Park et al., 2015). Additionally, IP technology has opened new communication channels, such as e-mail and live web chats (Downey, 2001). E-contact centers are similar in their basic functions to traditional contact centers in that agents interact with customers' questions and complaints. However, E-contact center agents achieve maximum efficiency by their ability to "spread" themselves across multiple locations, allowing for the maximum utilization of contact center staff. Customer calls, text and web-chats, and emails, called traffic, to e-contact centers can be evenly shared by staff members, regardless of the geographic origination of the traffic, resulting in lower wait times for customers, which then decreases caller negativity and raises customer satisfaction (Kowarsky, 2007). According to Park

et al. (2011), e-contact centers play an essential role in forming loyalty to retailers because customer satisfaction with e-contact centers can influence customer loyalty to retailers. Thus, examining the influence of customer trust in new ICT on customer trust, satisfaction, and loyalty to e-contact centers may have useful managerial implications when e-contact centers managers evaluate communication technology implementation in e-contact centers.

Customer loyalty. The value of customer loyalty is indisputable. Oliver (1997) considered customer loyalty the key to retailing success. Many researchers have placed great emphasis on the increased profits that customer loyalty brings to retailers (Hallowell, 1996; Reinartz & Kumar, 2002; Kumar & Shah, 2004). The monetary importance of customer loyalty resulted in research focused on effective methodology to enhance customers' loyalty, including loyalty programs (Lach, 2000). Numerous research projects focused on determining the drivers of customer loyalty to retailers. Many theories, including the theory of reasoned action (TRA) and the theory of planned behavior (TPB) were deployed to study and explain consumers' loyalty to retailers (Lin & Wang, 2006). Some researchers focused their attention on the effect of trust beliefs on the consumers' intention to purchase (Becerra & Korgaonkar, 2011), while others focused on the perceived positive relationship between trust and brand loyalty (Laroche, Habibi, & Richard, 2013). However, Saba (2000) and Dugan (2000) reported on the failure of such programs to truly capture customers' loyalty. The present study focuses on trust and satisfaction factors in achieving customer loyalty.

Conceptual Development

Trust and trust transfer process

McKnight and Chervany (2001) listed the five aspects of trust as: “disposition to trust, institutional-based trust, trusting beliefs, trusting intentions, and trust-related behavior.”

Institutional-based trust and trust-related behavior are of specific value to this work. In the context of this work, e-contact centers and retailers are the institutions, and institutional-based trust is the consumers’ trust in the institutions’ ICT infrastructure. Trusting beliefs and trusting intentions are both antecedents to trust-related behavior (McKnight & Chervany, 2006). Trusting beliefs rise from strong faith that the other party possesses positive characteristics, such as integrity and competence, which lead to the creation of trusting intentions. Trusting intentions mean strong committed acceptance of becoming vulnerable to the other party, an acceptance that is strong enough to create trusting behavior (McKnight, 2005). Trust-related behavior describes the social and psychological behavior of consumers which is related to their adoption behavior, such as loyalty manifested by their intentions to purchase (McKnight & Chervany, 2001). In the context of e-contact centers, which use new communication technology, the customers’ beliefs that they will have satisfying experiences can strengthen their trusting beliefs and may lead to strong trusting intentions, resulting in trust-related behavior exhibited by repeat patronage.

Many researchers have focused on the trust formation mechanism. Wang et al. (2013) listed three major mechanisms for trust building: the knowledge-based mechanism, the institution-based mechanism, and the trust-transfer mechanism. The knowledge-based mechanism refers to the process of building trust in an entity or object based on information gained through prior experience with that entity or object. This process usually follows the initial trust formation. The institution-based process refers to an individual’s perception of institutional

characteristics. These perceptions can influence trusting beliefs and trusting intentions toward a specific institution. Trust transfer is a process whereby trust in a known object or entity influences trust in an unknown object or entity, as long as the one who trusts perceives an association between two objects or entities. In this research, the trust transfer mechanism is suitable to explain the initial trust placed by consumers in the e-contact centers based on their trust in the technology used by the center.

The initial trust process takes place when the truster places trust in an unfamiliar trustee. This trust relationship can take place between the two parties without any previous credible experience between them. After the involved parties share some experiences, the truster gains reliable information. These new experiences may encourage the truster to confirm their initial trust in e-contact centers, and, therefore, strengthen their trust beliefs and, in turn, their trusting intentions. McKnight et al. (2002) proposed that institution-based trust is positively related to trusting beliefs and trusting intentions. Thus, a customer who feels comfortable with the structure of e-contact centers will probably have strong trusting beliefs in the owners of the e-contact centers, the retailers. In the context of this study, the initial trust established between customers and e-contact centers is viewed as predicted by the consumers' trust in new technology. This initial trust is strengthened by knowledge gained through experience, which leads to stronger trusting beliefs and behaviors toward the contact center and eventually toward the retailer as well through a smooth trust transfer process.

Trust in technology

The tremendous growth of ICT over the past two decades and its fast assimilation into the e-contact centers' infrastructure created a familiar multi-channel communication environment for

most customers, especially the Millennials, who are the first generation to grow up in such an environment (Kundanis, 2003).

Acceptance of, and trust in, new ICT have also been the subject of numerous research projects (Lee & Song, 2013; Gundlach & Murphy, 1993; Urban et al., 2000; Featherman & Pavlou, 2003). Gundlach and Murphy (1993) claimed that trust is the most widely accepted variable as the foundation of any human interaction. Urban et al. (2000) asserted that trust is of extreme importance in online environments because the customer has limited material cues regarding the service provider's intentions. Featherman and Pavlou (2003) stated that trust and perceived risk are critical factors in explaining users' acceptance of ICT in the e-business environment. Therefore, it is important to consider trust in new communication technology as an important factor when examining consumers' acceptance of new ICT integration into e-contact centers.

Kirs and Bagchi (2012) stated that research on trust in non-living objects has resulted in some contention between researchers. Some researchers asserted that social relationships do not form between human users and computers (Friedman & Millett, 1997), while Kynsilehto and Olsson (2009) stated that other researchers have presented arguments supporting the thought that users of technology may perceive some human qualities in the technology with which they interact. A study by Jian, Bisantz & Drury (2000) indicated that components of human trust in other humans did not significantly differ from the components of their trust in technology objects. Additionally, Johnson and Grayson (2005) asserted that trust in technology is a direct result of cognitive assessment of performance beliefs attained from direct contact with technology. Wang and Benbasat (2005) concluded that, in general, people interact with technology in a social manner and assign human attributes to technology. Considering that

research has shown that trust is an important factor in determining consumers' acceptance of new ICT and that trust is not an exclusive human-to-human relationship, but is instead one that can exist between humans and inanimate objects, then the theories of trust and trust transfer process may be utilized to study the trust relationship between consumers and new ICT and the transfer of trust to the entities deploying that technology, such as e-contact centers.

Trust in e-contact centers. Strub and Priest (1976) stated that "trust can be transferred from the source of trust to the target if the truster has little or no experience" and the truster perceives a certain relationship between the object and the target. Stewart (2003) indicated that when a perceived association exists between two parties, trust can be transferred from one party to another. That is to say, as long as an associative relationship can be established between a source and a target, consumers evaluating an unfamiliar object or entity (the target) are likely to rely on the trust associated with the source and connect its image to the unknown target. Thus, e-contact center users may participate in the trust transfer process by associating ICT's trusted image with that of the e-contact centers (Lee et al., 2014). Based on the trust transfer theory, and the work of Stewart (2003), Lu et al. (2011) and Lee et al. (2014) consumers' trust in technology may influence their initial trust in an entity deploying the trusted technology, leading to the following hypothesis:

H1: Consumers' trust in new ICT has a direct positive influence on consumers' trust in e-contact centers.

Satisfaction with e-contact centers. Customer satisfaction has been proven to be a critical and significant factor for the strategic success of any organization (Anderson & Mittal, 2000). Current customer satisfaction literature distinguishes between transaction-specific customer satisfaction and aggregate, overall consumer satisfaction. Transaction-specific

satisfaction refers to customer satisfaction with the most recent contact with the retailer, regardless of the mode of contact, whereas aggregate customer satisfaction refers to the overall total consumer experience (Anderson, Fornell, & Lehmann, 1994).

Customer satisfaction is directly influenced by trust. Trust in ICT plays an important role in electronic channel consumer relationships. Past technology acceptance research based on the technology acceptance models (Davis, 1989), the theory of reasoned action (Ajzen & Fishbein, 1980), and the theory of planned behavior (Ajzen, 1991) focused on exploring the consumers' initial acceptance of technology. Later Chiou (2004) asserted that consumers' trust in technology (used by Internet service providers) will positively influence their perceived value of the service provider, as well as their overall satisfaction. Similarly, consumers' trust in ICT used by e-contact centers can influence their transaction-specific satisfaction with the e-contact centers and therefore positively influence their overall satisfaction with e-contact centers. Based on the work of Chiou (2004) on trust in technology and based on the work of Johnson, Bardhi, and Dunn (2008), who concluded that trust in self-service technology, in the context of consumer beliefs about electronic channel's abilities and performance, is positively related to customer satisfaction, the following is proposed:

H2: Consumers' trust in new ICT has a positive influence on consumers' satisfaction with e-contact centers.

Loyalty to e-contact centers. Consumer loyalty literature conceptualizes loyalty as an integrated and dynamic model of attitude and behavior. Rowley and Dawes (1999) defined customer loyalty as a positive attitude reflected in intention to repurchase, to repeat patronage, and to recommend. Javenpaa et al. (2000) also stated that loyalty behavior, manifested by consumers' purchase intention, is directly influenced by trust. Many other researchers have

followed the same path in connecting behavioral intentions with trust in the person or entity toward which the behavioral intentions are directed. Keen (1999) asserted that trust forms the basis of e-commerce. Trust literature also indicates that trust can exist between a person and an inanimate object such as ICT. This trust may also be transferred to an entity which is closely associated with the trusted ICT, such as an e-contact center. Since trust in ICT and customer loyalty are directly linked to the success of e-business, it is important to study the direct relationship between trust in ICT and customer loyalty within the context of business services in e-contact centers deploying the trusted ICT. The work of Javenpaa et al. (2000), the direct influence of trust on loyalty, and the definition of loyalty by Rowley and Dawes (1999) as a positive attitude leading to repurchase intentions yields the following hypothesis:

H3: Consumers' trust in new ICT has a direct positive influence on consumers' loyalty to e-contact centers.

E-contact centers

The e-contact center is similar in its basic function to a traditional contact center in which agents interact with customers. However, e-contact centers are not geographically bound to one specific location. E-contact center agents are spread in multiple geographic locations, but managed as a single unit. This format allows for the maximum utilization of staff, leading to maximum efficiency in call management. Traffic in e-contact centers is evenly shared across various locations, regardless of geographic origination, resulting in lower wait times, which decreases caller negativity and raises customer satisfaction (Kowarsky, 2007). E-contact centers also offer expanded services such as live web-chats, product demonstrations, and remote troubleshooting, when compared to traditional contact centers (Park et al., 2015). The value added by an e-contact center, compared to a traditional contact center, stems from (a) the use of advanced

ICT to create efficient service within a human-touch environment, and (b) the influence on the initial purchase process versus the post purchase process of a traditional contact center (Ming & Yi, 2011).

Trust – loyalty and satisfaction – loyalty relationship. The success of e-contact centers depends on customers' loyalty. Researchers have distinguished between three types of loyalty: situational, behavioral and attitudinal loyalty (Mascarenhas, Kesavan, & Bernacchi, 2006). While situational loyalty is based on the convenience and availability of the services and products, behavioral loyalty is expressed by repeat usage of the service and is often based on consumers' satisfaction with that service or product, Although these two types of loyalty are important, this work will refer to the attitudinal aspect of loyalty, which stems from trust and satisfaction and leads to behavioral aspects of loyalty.

Attitudinal loyalty is based on trust. Gefen, Karahanna, and Straub (2003) stated that trust exerts significant influence on online purchase intentions. Other researchers also agree with Gefen's findings. McKnight et al. (2006) concluded that trusting beliefs impact trusting intentions, which lead to consumers' inclination to purchase or use a service. Hsu et al. (2015) concluded that the two main predictors of customer loyalty are trust and satisfaction. Casaló, Flavián, & Guinalú (2007) showed the direct positive effect of trust on loyalty from a marketing prospective. Chu, Lee, & Chao (2012) concluded that there is a direct link between customer trust and e-loyalty in the e-banking industry.

Customer loyalty plays a pivotal role in an organization's success. Loyalty is of prime importance for the survival of any business, especially in an online environment. Customer satisfaction has been reported to have significant influence on customer brand-loyalty (Pratminingsih, Lipuringtyas, & Rimenta, 2103). Measuring customer satisfaction in a multi-

attributive way, and measuring customer loyalty using the German Customer Satisfaction Index after adapting it to the field of customer care center, Kantsperger and Kunz (2005) found that customer satisfaction influences customer loyalty.

Based on the work discussed above, hypotheses follow that consumer trust and customer satisfaction exert positive influences on customer loyalty, especially in the context of e-contact centers:

H4: Consumers' trust in e-contact centers is likely to have a direct positive influence on consumers' loyalty to e-contact centers.

H5: Consumers' satisfaction with e-contact centers is likely to have a direct positive influence on consumers' loyalty to e-contact centers.

Retailer trust-satisfaction-loyalty (TSL)

The trust transfer process is generally defined as a rational process in which trust in one object influences attitudes toward another object. The trust transfer process defines two types of transfer: intra-channel, trust in one object that influences attitudes toward other objects within the same channel, and inter-channel, in which trust in one channel exerts influence on attitudes in other channels (Lu et al., 2011). The following discussion is based on the inter-channel aspect of the trust transfer theory.

Transfer of TSL from e-contact centers to retailer. According to Kang and Hustvedt (2014), trust forms the foundation of consumer-company relationships. Trust transfer theory is useful in explaining the process. The relationship between the source of trust and the target has been the subject of many studies. Some of these studies have identified certain conditions that help the transfer process. Stewart (2003) included congruence, common fate, and similarity of the entities among these conditions. Stewart also showed that a high level of perceived similarity

between the physical entity and the online entity influences higher tendency to trust the unknown entity. Thus, congruence between a physical entity and its online presence enhances the trust transfer from the trusted entity to the lesser-known format.

Previous research treated transaction-specific customer satisfaction and overall customer satisfaction as two separate concepts; these two concepts were rarely linked together. Jones and Suh (2000) changed that with a study that examined the relationship between transaction-specific satisfaction, overall satisfaction, and intention to re-patronize. Jiang and Rosenbloom (2005) found that after-delivery satisfaction (a transaction-specific satisfaction) has a strong influence on overall satisfaction and intention to return. Much of the research on the relationship between customer satisfaction and loyalty is centered on hospitality and tourism (Golder, Mitra, & Moorman, 2012). Most of the studies in that arena are focused on transactional satisfaction in specific areas within that industry, such as food and beverage services, hotel services, casino service ...etc., thus measuring the overall satisfaction and loyalty as an aggregate satisfaction loyalty relationship (Gao & Lai, 2015). The same concept can be applied in examining customer loyalty in e-contact centers and the aggregate effect on overall customer loyalty to retailers. Because an e-contact center experience is a major component of the overall customer experience with the retailer, loyalty to an e-contact center may lead directly to loyalty to retailers. Additionally, loyalty to an e-contact center may have an indirect relationship with loyalty to a retailer through its effect on customer trust in and satisfaction with the retailer. Based on the previous discussion, the following hypotheses are proposed:

H6: Consumers' trust in e-contact centers is likely to have a direct positive influence on consumers' trust in retailers.

H7: Consumers' satisfaction with e-contact centers is likely to have a direct positive influence on consumers' satisfaction with retailers.

H8: Consumers' loyalty to e-contact centers is likely to have a direct positive influence on consumers' loyalty to retailers.

H9: Consumers' loyalty to e-contact centers is likely to influence trust in retailers.

H10: Consumers' loyalty to e-contact centers is likely to influence satisfaction with retailers.

TSL relationship within a retailer. Within the context of retail, many researchers, including Willmott (2003), Erdem and Swait (2004), and Chaudhuri et al. (2001), asserted that trust is a primary predictor of purchase intention, customer retention, and loyalty. Trust can indirectly increase customer loyalty (Willmott, 2003). Chaudhuri et al. (2001) reported that trust, along with emotion, are the most important predictors of customer loyalty. Erdem and Swait (2004) compared customers' brand trust to consumers' perceived company expertise; they reported that trust has a greater influence on customer loyalty than perceived expertise.

Bitner and Hubbert (1994), Oliver (2010), and many others have defined consumer satisfaction as an evaluation process of retailers' performance that customers experience after the purchase of goods or services. Heung et al. (2002), Petrick (2002), and Hui et al. (2007) have reported that customers' intentions to repurchase are strongest when customers are satisfied. Additionally, Oliver (1997) and Meyer et al. (1997), among others, have shown that satisfied customers more frequently use services offered by providers and exhibit strong loyalty to those providers. Also Bodet (2008) found that overall satisfaction exerts positive influence on

intentions to repurchase (an attribute of loyalty). Thus customer satisfaction can be viewed as directly related to loyalty to retailers.

Knowledge of the customer satisfaction and customer loyalty relationship continues to emerge. It is possible that this relationship differs in various contexts such as service, retail, and business-to-business industries. It is also possible that loyalty and satisfaction can have a bidirectional relationship (Flint, Blocker, & Boutin Jr., 2011). One of the focus areas of the present study is the unidirectional link from customer satisfaction to customer loyalty within the retail context. Drawing on the work cited above and focusing on the relationships within the retailers, both trust in retailers and customer satisfaction are hypothesized to have positive influences on loyalty to retailers.

H11: Consumers' trust in retailers has a direct positive influence on consumers' loyalty to retailers.

H12: Consumers' satisfaction with retailers has a direct positive influence on consumers' loyalty to retailers.

The proposed conceptual model integrating the hypotheses is presented in Figure 1.

Methodology

The ultimate purpose of this study was to investigate the effect of consumers' trust in ICT on the process of building loyalty to retailers.

Research methodology

Data was collected through an online survey. Robson (1993) defined surveys as a research methodology intended to collect data from a defined population using a questionnaire or an interview as the survey instrument. According to Rossi et al. (2013) surveys are an important and widely accepted tool among social science researchers to collect and analyze data from selected individuals. Leary (1995) claimed that there are distinct advantages for the use of questionnaires in surveys over the use of interviews. According to Leary (1995), personal interviews are costly and time consuming when compared to questionnaires. Thus online surveys utilizing questionnaires are efficient and mostly cost effective.

Sample

For this study, the sample population consists of a two thousand randomly selected national (USA) sample purchased from an independent online research company. Random sampling is of prime importance to achieve unbiased results in a study. Random sampling includes choosing subjects from a population through unpredictable means. In its simplest form, all subjects have an equal chance of being selected from the total population being researched.

The usable sample in this study was limited to consumers who had contacted at least one e-contact center operated by a retailer within the three-month period leading up to the survey. The final sample consisted of 343 respondents. The sample characteristics are presented in Table1.

Data collection

Data was collected using an online questionnaire. Questionnaire items were measured using a 7-point Likert scale (1 = Strongly Disagree to 7 = Strongly Agree). Of the 2000 respondents who participated in the survey, 343 respondents met the requirement of having had at least one contact with an e-contact center operated by a retailer within the three months leading to the survey. The questionnaire followed the general guidelines recommended by Leary (1995) by containing precise language and terminology, simple wording of questions, specific and clear questions, and an appropriate answer format.

Measurement

The measures in this study were adopted from previous studies. The questionnaire measures consisted of trust in technology, trust in e-contact centers, trust in retailers, satisfaction with e-contact centers, satisfaction with retailers, loyalty to e-contact centers, and loyalty to retailers. The measurements of trust were adapted from a study by Ramsey and Sohi (1997). The measurement of satisfaction with retailers and with e-contact centers was adapted from a study by Eroglu and Machleit (1990) and measured three items in each construct. The measurement of customer loyalty to e-contact centers and retailers was based on a study by Atcharyachanvanich et al. (2007). All items were measured using a 7-point Likert scale (1 = Strongly Disagree to 7 = Strongly Agree).

Analysis and results

Measurement model

The data analysis consisted of two steps.

- 1- In the first step, a confirmatory factor analysis was performed to make sure the validity and reliability of each construct were sustainable. Table 2 shows details of the validity and reliability test.
- 2- In the second step, structural equation modeling analysis of the proposed model was performed to examine the relationships among the constructs (Anderson & Gerbing, 1988).

Confirmatory factor analysis (CFA) was performed using AMOS 22 with maximum likelihood estimation to analyze the constructs' underlying structures. The research model was tested using structural equation modeling (SEM). SEM is concerned with relationships among observed and latent variables. It is a comprehensive confirmatory statistical methodology that incorporates path analysis, factor analysis, and linear regression into a theoretical causal model. The postulated model is then tested statistically to determine the extent to which it is consistent with the data. According to Byrne (2013) the two most important aspects of SEM are the following: (a) a series of structural (regression) equations that represent the causal process under study, and (b) the structural relations that are presented graphically to enable clearer understanding of the theory under study.

Relevant measurement properties are presented in Table 2. The construct alphas exceed the suggested minimum of 0.70 for good fit (Nunnally, 1978). The average variance extracted (AVE) of the constructs with multiple items are all above 0.50 (Fornell & Larcker, 1981) (Table 2). The factor loadings of each construct are statistically significant. The goodness-of-fit from

confirmatory factor analysis shows a good fit of data, goodness-of-fit: $\chi^2_{113}=301.52$, $p<0.00$; GFI=0.91; NFI=0.96; CFI=0.97; RFI=0.94; IFI=0.97; TLI=0.96; RMR=0.07; RMSEA=0.07.

Hypotheses testing

The correlation coefficient of each construct is shown in [Table 3](#). The normed chi-square (chi-square to degree of freedom ratio) is 2.66, which is within the generally desired value of 3.0 or smaller (Segars & Grover, 1993). The goodness of fit index (GFI = 0.91), comparative fit index (CFI = 0.96) and normalized fit index (NFI = 0.93) are above the required criteria of 0.9 (Hair et al., 2010). With regard to RMSEA, the fit index is 0.07, which is below the recommended cut-off level of 0.08 (Hair et al., 2010). With these multiple fit indices indicating a reasonable fit for this model, the results indicate that the data fits the model fairly well (Figure 2).

The summarized results for the hypotheses tests are presented in [Table 4](#). The results of path coefficients support all of the hypotheses, except H8, which proposes a direct causal relationship between loyalty to e-contact centers and loyalty to retailers. The trust in ICT relationship with the three constructs of e-contact centers: H1, H2 and H3 ($\gamma = 0.31$, $t = 7.88$, $p < 0.001$; $\gamma = 0.60$, $t = 17.11$, $p < 0.001$; $\gamma = 0.16$, $t = 2.95$, $p < 0.01$, respectively) are supported. As for the intra-channel causal relationships within an e-contact center, H4 and H5 ($\gamma = 0.16$, $t = 2.5$, $p < 0.1$; $\gamma = 0.36$, $t = 4.39$, $p < 0.001$, respectively) are supported. Inter-channel direct and indirect causal relationships H6, H7, H9, and H10 are also supported ($\gamma = 0.27$, $t = 5.01$, $p < 0.001$; $\gamma = 0.25$, $t = 7.16$, $p < 0.001$; $\gamma = 0.12$, $t = 2.54$, $p < 0.1$; $\gamma = 0.70$, $t = 18.26$, $p < 0.001$, respectively). Finally, the intra-channel relationships between trust in retailers and loyalty to retailers, H11 ($\gamma = 0.56$, $t = 9.26$, $p < 0.001$), and satisfaction with retailers causal relationship with loyalty to retailers, H12 ($\gamma = 0.26$, $t = 3.04$, $p < 0.01$) are supported.

Discussion

The main purpose of the present study was to investigate the following: (a) the effect of trust in ICT on the trust-loyalty and satisfaction-loyalty relations in e-contact centers, and (b) to provide an integrated model to assess the effect of trust in technology on the loyalty formation process in e-contact centers and retailers. The current study contributes to the extant literature by identifying the importance of consumers' trust in ICT in the loyalty-building process in e-contact centers and its implications for loyalty to retailers.

The results indicate that trust in ICT positively influences trust in, satisfaction with, and loyalty to e-contact centers. The use of consumer-trusted ICT in an e-contact center may positively influence the process of establishing initial trust in the e-contact center through the trust-transfer process. This conclusion is supported by the work of Stewart (2003) who argued that trust can be transferred from an object to a target provided that a perceived relationship can be established between the object and the target and that the subject has little or no experience with the target. This initial trust can then be cultivated and strengthened by the e-contact center's operator through the information, influence, and control process. This process is supported by Zand's spiral reinforcement model of trust (Zand, 1997). According to this model, initial trust leads to open exchange of information, acceptance of influence, and reduced control, which are perceived as positive signs of trustworthiness and which, in turn, lead to higher levels of trust. Additionally, the causal relationship between trust in an e-contact center and loyalty to the e-contact center is supported, thus creating a chain that links trust in ICT to trust in e-contact centers to loyalty to e-contact centers. This relationship satisfies the first half of the first purpose of this study. The data obtained also supports the hypothesized relationships between trust in ICT and satisfaction with an e-contact center and between satisfaction and loyalty within an e-contact

center. These findings, supported by the work of Chiuo (2004) on the positive relationship between trust and satisfaction, and the work of Kantsberger and Kunz (2005) and Park et al. (2011) on the influence of customer satisfaction on loyalty, support a positive indirect causal relationship between trust in ICT and loyalty to an e-contact center mediated by satisfaction. In addition to this indirect relationship, the data also supports a direct positive connection between trust in ICT and loyalty to an e-contact center.

Within the retailer domain, the study confirms the hypothesized direct relationship between trust in a retailer and loyalty to a retailer; this relationship is also supported by a Chaudhuri et al. (2001) study which reported that trust, along with emotion, are the most important predictors of customer loyalty. There is also evidence to support the postulated satisfaction-loyalty relationship within the retailer domain.

It is interesting to note that there seems to be a recognized relationship between trust and loyalty and between satisfaction and loyalty within the electronic channel (e-contact center) mirrored within the physical retail channel.

The second purpose of this study was to provide an integrated model to assess the effect of trust in technology on the loyalty-formation process in e-contact centers and retailers. For that, the study focuses on the direct inter-channel transfer of trust, satisfaction and loyalty, and on the indirect inter-channel relationship between loyalty to an e-contact center and trust in and satisfaction with a retailer. This study supports the direct causal relationship between trust in e-contact centers and trust in retailers, thus supporting the trust transfer process from ICT to e-contact centers to retailers and eventually leading to loyalty to retailers. This study also supports the direct causal relationship between trust in ICT, satisfaction with e-contact centers and satisfaction with retailers, which, in turn, leads to loyalty to retailers. Additionally, the current

study indicates that there may be an overall holistic transfer of trust-satisfaction-loyalty (TSL) from e-contact centers to retailers. This suggested holistic transfer may require a slightly modified model.

A particularly interesting result of this research is that the originally proposed direct relationship between loyalty to an e-contact center and loyalty to a retailer is not supported. However, this study indicates an indirect path from loyalty to e-contact centers to loyalty to retailers through trust in retailers on one hand and satisfaction with retailers on another. Thus, it may be suggested that the path to loyalty to retailers, regardless of its trajectory, must include trust in or satisfaction with retailers. This finding may imply that, although previous studies have concluded that e-contact centers play an important role in forming loyalty to the retailers (Scullin, 2003; Ming & Yi, 2011; Park et al., 2015), it is also important to consider the mediating effect of trust and satisfaction within the retailer domain on the relationships leading to customer loyalty to retailers. Retailers must also be aware that, when considering e-contact center's trust, satisfaction and loyalty metrics, trust and satisfaction constructs have an indirect effect on loyalty to retailers.

Practical implications

Customer loyalty is one of the most sought-after goals in the retail industry. It has been positively associated with profitability (Hallowell, 1996; Reinartz & Kumar, 2002; Kumar & Shah, 2004). Therefore, retailers place a high value on the process of building and maintaining customer loyalty. The current study proposes several interesting findings in this area. First, consumers' trust in new communication technology exerts direct and indirect positive influence on the loyalty-building process within an e-contact center and at the retailer level. Second, since there is an indirect positive correlation between loyalty to an e-contact center and loyalty to a

retailer, this study provides an integrated model connecting consumers' trust in ICT to loyalty to a retailer through a technology driven e-contact center. Therefore, it is very important for a retailer to (a) examine the technological anatomy of its e-contact center, (b) continuously monitor and evaluate new communication technology, and (c) make conscious decisions to use scalable and upgradable communication technology when designing the information technology infrastructure of its e-contact center.

This study also found that although there are multiple paths that lead to customer loyalty to a retailer, all these paths seem to eventually pass through either trust in retailers or satisfaction with retailers. Therefore, it is very important for retailers to include these two constructs in their customer-loyalty metrics.

Study limitations and future research

This study is subject to some limitations. First, this study is based on a general retail market and is not focused on a specific retail sector. Although the general principles followed are sound, the results of a sector targeted study may vary to reflect more specific findings that are unique to the sector under study. The degree of the effect of an e-contact center's satisfaction and trust factors may vary by sector. Further, studies in various sectors may highlight possible differences.

Second, the measures used in the current study were adapted from previous research. Changes in communication technology and how consumers use it and interact with it may require some adjustments in the measures to be more in line with the new social dimension of new communication technology.

Last, further data analysis on the direct and indirect influences within the research model's constructs may be helpful in suggesting future targeted research in this area.

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Table 1: Demographic characteristics of respondents (n = 343)

Variables	Frequency	(%)
<u>Gender</u>		
Male	139	40.5%
Female	204	59.5%
Total	343	100.0%
<u>Education</u>		
High school graduate	2	0.6%
Vocational/Technical (2 yr)	19	5.5%
Some School	91	26.5%
College Graduate	123	35.9%
Master Degree	107	31.2%
Doctorate Degree	1	0.3%
Total	343	100.0%
<u>Income Level</u>		
\$200,000 to \$249,999	5	1.5%
\$150,000 to \$199,999	14	4.1%
\$100,000 to \$149,999	53	15.5%
\$75,000 to \$99,999	56	16.3%
\$50,000 to \$74,999	74	21.6%
\$25,000 to \$49,999	79	23.0%
Less Than \$25,000	30	8.7%
Prefer Not to Answer	32	9.3%
Total	343	100.0%

Table 2: Validity and reliability summary

Construct	Cronbach-α	AVE	C.R.
Trust in contact center's new technology	0.97	0.94	0.92
Trust in contact center	0.90	0.76	0.84
Satisfaction with contact center	0.93	0.87	0.89
Loyalty to contact center	0.94	0.77	0.87
Trust in retailer	0.89	0.80	0.81
Satisfaction with retailer	0.97	0.65	0.60
Loyalty to retailer	0.76	0.97	0.95

Goodness-of-fit: $\chi^2_{113}=301.52$, $p<0.00$; GFI=0.91; NFI=0.96; CFI=0.97; RFI=0.94; IFI=0.97; TLI=0.96; RMR=0.07; RMSEA=0.07

Table 3: Measurement scales

Construct	Measure	AVE	Cronbach's alpha
Trust in ICT	I believe new technology is reliable.	0.94	0.97
	Overall the information received via electronic channels is trustworthy.		
	Overall the risks are minimal when using new technology.		
Trust in e-contact center	I believe this e-contact center is reliable.	0.76	0.90
	Overall the information received from this e-contact center is trustworthy.		
	Overall the risks are minimal when dealing with this e-contact center.		
Satisfaction with e-contact center	Overall this e-contact center experience was satisfactory.	0.87	0.93
	Overall this e-contact center experience was pleasant.		
	Overall I liked this e-contact center experience.		
Loyalty to e-contact center	I would recommend the e-contact center to others.	0.77	0.94
	I would encourage others to contact this e-contact center.		
	I would consider this e-contact center as my first choice when I contact the retailer.		
Trust in retailer	I believe this retailer is reliable.	0.80	0.89
	Overall the information received from this retailer is trustworthy.		
	Overall the risks are minimal when dealing with this retailer.		
Satisfaction with retailer	Overall this shopping experience was satisfactory.	0.65	0.97
	Overall this shopping experience was pleasant.		
	Overall I like this shopping experience.		

Construct	Measure	AVE	Cronbach's alpha
Loyalty to retailer	I would recommend the retailer to others. I would encourage others to purchase from this retailer. I would consider this retailer as my first choice when I want to buy a product.	0.97	0.76
Goodness-of-fit: $\chi^2_{113}=301.52$, $p<0.00$; GFI=0.91; NFI=0.96; CFI=0.97; RFI=0.94; IFI=0.97; TLI=0.96; RMR=0.07; RMSEA=0.07			

Table 4: Structural model results

Structural Path	Coefficient	t-Value	
H1: Trust in contact center's new technology → Trust in e-contact center	0.31	7.88***	Accepted
H2: Trust in contact center's new technology → Satisfaction with e-contact center	0.60	17.11***	Accepted
H3: Trust in contact center's new technology → Loyalty to e-contact center	0.16	2.95**	Accepted
H4: Trust in contact center → Loyalty to e-contact center	0.16	2.50*	Accepted
H5: Satisfaction with contact center → Loyalty to e-contact center	0.36	4.39***	Accepted
H6: Trust in contact center → Trust in retailer	0.27	5.01***	Accepted
H7: Satisfaction with contact center → Satisfaction with retailer	0.25	7.16***	Accepted
H8: Loyalty to contact center → Loyalty to retailer	-0.04	-0.52	Rejected
H9: Loyalty to contact center → Trust in retailer	0.12	2.54*	Accepted
H10: Loyalty to contact center → Satisfaction with retailer	0.70	18.26***	Accepted
H11: Trust in retailer → Loyalty to retailer	0.56	9.26***	Accepted
H12: Satisfaction with retailer → Loyalty to retailer	0.26	3.04**	Accepted
Goodness-of-fit: $\chi^2_{119}=402.27$, $p<0.00$; GFI=0.89; NFI=0.93; CFI=0.96; IFI=0.96; TLI=0.95; RMR=0.09; RMSEA=0.08			

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

Figure 1: Study model

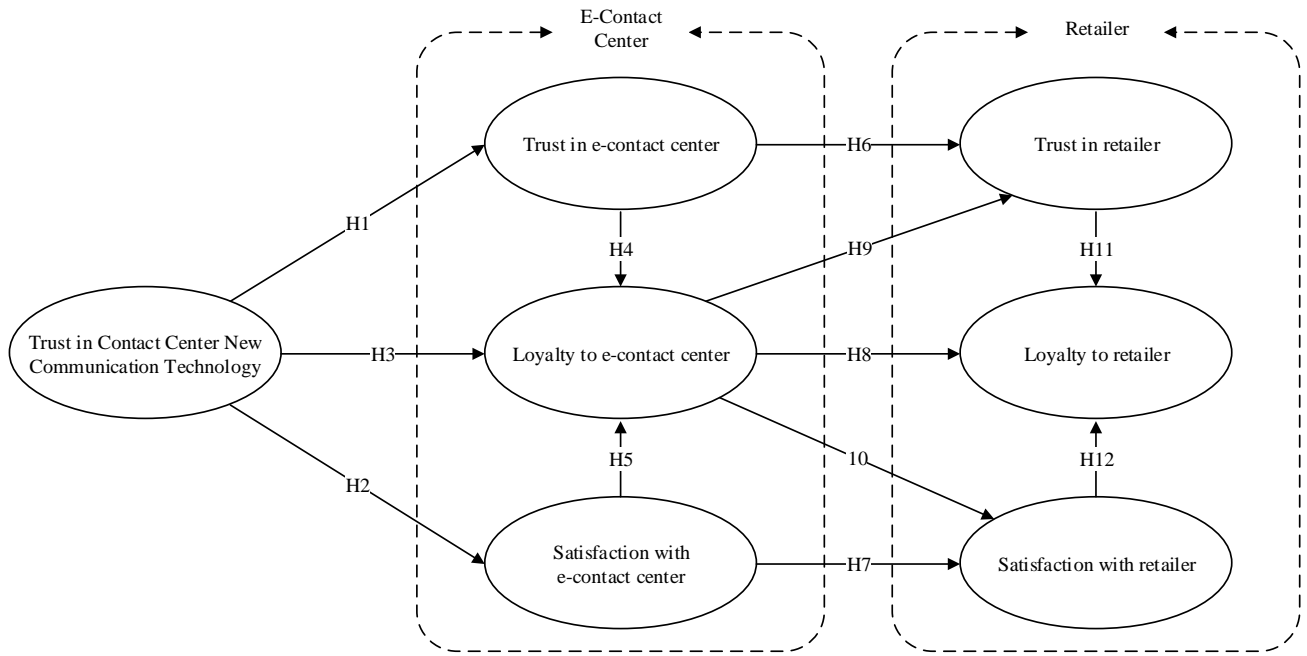
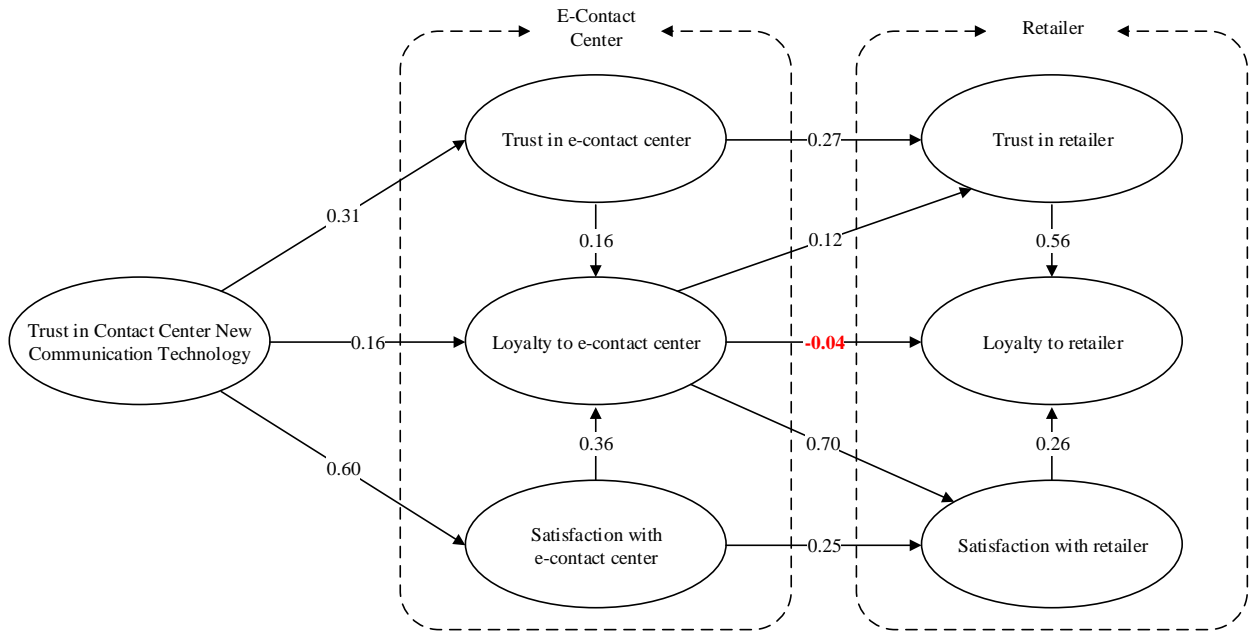


Figure 2: Measurement Model



Goodness-of-fit: $\chi^2_{119}=402.27, p<0.00$; GFI=0.89; NFI=0.93; CFI=0.96;
 IFI=0.96; TLI=0.95; RMR=0.09; RMSEA=0.08