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Article

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MARKETING | RESEARCH ARTICLE

Effect of employee empathy on customer satisfaction and loyalty during employee–customer interactions: The mediating role of customer affective commitment and perceived service quality

Waseem Bahadur^{1,2*}, Saira Aziz^{1,2} and Salman Zulfiqar^{3,2}

Abstract: This study investigates the indirect effect of employee empathy (EE) on customer loyalty (CL) and loyalty outcomes through intervening variables, i.e. customer affective commitment, perceived service quality, and customer satisfaction (CS). Associations between the constructs of the proposed model are examined in the context of employee–customer interactions. Data were collected through the online survey from 360 useable responses collected from active users of telecommunication services from the province of Anhui, China. To test the model, structural equation modeling was applied by using AMOS 21. The findings confirm the positive and indirect effect of EE on CL and loyalty outcomes (i.e. positive word-of-mouth and repurchase intentions). Results of the present study provide insights for the service sector, specifically telecommunication sector in order to increase CS and loyalty toward the services.

Subjects: Consumer Behavior; Services Marketing; Relationship Marketing

Keywords: employee empathy; customer satisfaction; customer loyalty; positive word-of-mouth; repurchase intentions

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PUBLIC INTEREST STATEMENT

This study examines the indirect effect of employee empathy on customer loyalty during employee–customer interactions in the telecommunication service settings. This study examines the Chinese telecommunication sector and focuses on how the empathic behavior of service employees affects customer's behavior toward the service brands. Employee's empathic behavior during interactions with customers augments satisfaction and loyalty with the service brand resulting into positive word-of-mouth and repurchase intentions. Understanding service interactions and its effect on customer satisfaction and loyalty increases firm's performance and improve employee–customer interactions.

1. Introduction

The service sector has experienced an extraordinary evolution over the past few decades which has fostered consumerism by making customers more active and demanding, which means that the concept of loyalty is even more central to marketing scholarship (Toufaily, Ricard, & Perrien, 2013; Van Lierop & El-Geneidy, 2016). Academic researchers and managers firmly believe that customer satisfaction (CS) is an essential predictor of lasting customer behavior (Vera & Trujillo, 2017; Wieseke, Geigenmüller, & Kraus, 2012). Due to this evolution of today's competitive service sector, companies are striving hard to retain and hold their customers (Aksoy, 2013; Giovanis & Athanasopoulou, 2018; Tsoukatos & Rand, 2006).

Service settings such as bank, hotel, restaurant, or leasing services include frontline service employee and customer interactions. If concentration, politeness, and empathy are depicted in these interactions, then such interactions will probably lead toward pleasing service outcomes, and in case these interactions are unable to create expected association then such interactions result in customers' dissatisfaction (Wieseke et al., 2012). These interactions between frontline service employees and customers are crucial in service settings because the nature of services requires a significant number of communications to complete the service procedures (Chakrabarty, Brown, & Widing, 2012; Lee, Comer, Dubinsky, & Scafer, 2011). Service employees are mainly held liable for these communications because they have the ability to build and damage the brands (Huang, 2011).

Studies in frontline employee and customer interactions assert that customer-oriented behavior of service employees is important for the success of service encounters and to increase CS and loyalty (Drollinger & Comer, 2013; Guenzi, De Luca, & Troilo, 2011; Stock, 2016; Wieseke et al., 2012). Job Demand-Control Theory and JDR Theory propose that salespeople/frontline service employees may use empathic behavior toward customers during service interactions (Itani & Inyang, 2015) for successful service encounters. Researchers also suggest that empathy, care, and attentiveness shown by frontline service employee to customer lead to CS (e.g. Gorry & Westbrook, 2011; Lee et al., 2011). On the contrary, lack of empathy or an inability to understand the other's perspective damages any service encounter and results in customer dissatisfaction (Abbasi and Alvi 2013; Agnihotri & Krush, 2015).

Moreover, studies have examined the role of first-line employees in mapping customers' service assessments (e.g. satisfaction and loyalty) due to the employee–customer direct contact in service settings (e.g. Itani & Inyang, 2015; Wieseke et al., 2012). In the sales and marketing and promotional literature, a social emotion, namely empathy, has been found to be of crucial importance to understand the nature of employee–customer interactions within the business context (e.g. Daniels, Glover, & Mellor, 2014; Markovic, Iglesias, Singh, & Sierra, 2015; Meneses & Larkin, 2012). These studies provide practical support of a positive association between employee empathy (EE) and employee–customer interactional procedures and the effect of EE on CS. CS, as an essential parameter of organizational success, has an influential impact on service brand loyalty (Kasiri, Cheng, Sambasivan, & Sidin, 2017) that ultimately results in the customers' positive word-of-mouth (PWOM) and repurchase intentions (RI) toward the service brands (Barnes, Collier, Howe, & Douglas Hoffman, 2016; Barnes, Leonidou, Siu, & Leonido, 2015; Nyadzayo & Khajehzadeh, 2016).

Since EE concerns customers, therefore in today's service settings, empathy has gained the attention of both service and marketing researchers (Agnihotri & Krush, 2015; Bagozzi, 2006). In the service literature, notably missing are empirical investigations of the effect of EE on loyalty outcomes such as customer PWOM and RI (Itani & Inyang, 2015). Only limited studies have been conducted to identify the direct or indirect impact of empathy on satisfaction, loyalty, and loyalty outcomes (e.g. Markovic et al., 2015; Wieseke et al., 2012).

This study intends to contribute to the service literature by examining the indirect impact of EE on loyalty outcomes (i.e. PWOM and RI) in the telecommunication service settings (Van Doorn

et al., 2010; Verhoef, Reinartz, & Krafft, 2010). First, the empirical model probes the mechanism to determine how much EE influences customer loyalty (CL) by considering CS, customer affective commitment (CAC) and perceived service quality (PSQ) among EE and CL (Markovic et al., 2015; Wieseke et al., 2012). Then, this study extends the model by investigating the effect of CL on PWOM and RI separately (Harwood & Garry, 2015) and the interrelationship between PWOM and RI is studied, as empirical research in this domain is limited (Kassim & Abdullah, 2010).

The rest of the paper includes a literature review and hypothesis development, methodology, analysis, and discussion and conclusion sections.

2. Literature review and hypotheses development

2.1. EE

As a well-thought-out notion in the relationship marketing literature, empathy is considered as a significant variable for individual consideration among persons (Jones & Shandiz, 2015; Lee et al., 2011; Markovic et al., 2015). Particularly in the literature concerning service, empathy is regarded as an essential element for fruitful employee and customer communications that commonly lead to altruistic motivation and pro-social and altruistic behavior (Aksoy, 2013; Daniels et al., 2014; Itani & Inyang, 2015). Empathy is defined as “a person’s ability to sense another’s thoughts, feelings, and experiences, to share other’s emotional experience, and to react to the observed experiences of another person” (Wieseke et al., 2012, p. 317). Research confirms that empathy involves cognitive as well as emotional dimensions (Jones & Shandiz, 2015; Smith, 2006; Wieseke et al., 2012). From a cognitive perspective, empathy is the service employee’s potential to take the customer’s view through understanding their mind, thoughts, and intentions (Daniels et al., 2014). Regarding the emotional viewpoint, empathy relates to employees’ capability to involve in helpful actions toward customers, such as interpersonal concern and emotional contagion (Mayshak, Sharman, Zinkiewicz, & Hayley, 2017).

As a form of social or mutual perspective, empathy relates to the gaining of particular insight into the experience of others, while distinguishing it as another person’s experience instead of one’s own (Itani & Inyang, 2015; Meneses & Larkin, 2012; Ratcliffe, 2012). For better service quality (SQ), it is crucial for employees to recognize and deal with customer needs (Puccinelli, Andrzejewski, Markos, Noga, & Motyka, 2013). Hence, this study considers EE as an independent variable and studies its indirect effect on CS, CL, and loyalty outcomes.

2.2. EE and CAC, PSQ and CS

Empathy is related to the employee’s aptitude in understanding customer perspective and feelings during service interactions (Hwang & kim, 2016; Markovic et al., 2015), resulting in positive customer emotions toward the service brand (Lee et al., 2011). Affective commitment is one of three types of organizational commitment (the others being continuance and normative) as suggested by Meyer and Allen (1991). CAC associates to the customers’ emotional connection to a particular brand established in their recognition of that brand (Iglesias, Singh, & Batista-Foguet, 2011). Committed customers attach less significance to price variations relative to competitors due to the relational aspect of the brand and attribute service failures to extrinsic reasons instead to brand deficiency (Drollinger & Comer, 2013; Story & Hess, 2010).

Additionally, EE toward customers acts crucially in linking the service experience of customers and the evaluation of SQ (Parasuraman, Zeithaml, & Berry, 1988; Rust, 1994). PSQ has been acknowledged as an essential variable affecting the customer’s adoption of services as it sways the customer’s perceptions and intentions about the service brand or company (Nyadzayo & Khajezadeh, 2016; Zeithaml, Berry, & Parasuraman, 1996). Puccinelli et al. (2013) in their study reasoned that SQ depends on the employee’s capability to recognize and deal with customers’

needs. Wieseke et al. (2012) mentioned that EE toward customers is most probably positively evaluated by the customers, which radically influences the PSQ of the service brand.

Moreover, for the recognition and satisfaction of customer requirements, EE is vital during employee–customer communications (Markovic et al., 2015). Employee ability to understand customer emotions, sense their expectations, and react accordingly affect the improvement and coordination of appropriate interactive behaviors upon which customers value such developments and increase overall satisfaction (Jones & Shandiz, 2015). Empathic employees with general recognition of customer requirements adjust their behaviors toward specific customers, rendering to each customer personalized assistance (Wieseke et al., 2012) resulting in higher CS. Furthermore, the empathic behavior of employees increases satisfaction and develops a long-lasting relationship with the service brand (Agnihotri & Krush, 2015; Itani & Inyang, 2015). Hence, in view of the above literature review, it is asserted that

H1a. EE positively impacts CAC with the service brand.

H1b. EE positively impacts PSQ of the service brand.

H1c. EE positively impacts CS with the service brand.

2.3. CAC, PSQ, and CS

A focus on AC in a customer–employee relationship is indispensable because CS creates a fabrication of connection and belonging and achieves loyalty which is far greater than other kinds of commitment can achieve (Hur, Kim, & Park, 2013). Higher CAC is achieved by those service brands that provide their customers with superior service experiences (Iglesias et al., 2011). CAC plays a central role in service brand satisfaction, and loyalty since a relationship with the brand depends on the customer's choice (Singh et al. 2012). A weak effect has been designated in marketing studies amid CS and CAC (Bansal, Irving, & Taylor, 2004; Chomvilailuk & Butcher, 2014; Choudhury, 2014).

Current study considered the path analysis conducted in a study by Johnson, Sivadas, and Garbarino (2008) where they measured the effect of CAC on CS. Herein, CS with the service brand is based on CAC developed during service interactions from employee's empathic behavior. Following Oliver (1997, 1999), CS is a judgment of customer's satisfied service experience regarding the enjoyable level of attainment to the desires, needs, and goals from the service brand (Hur et al., 2013). Numerous advantages for instance, social, psychological, economic, and individual treatment advantages are received by the relational customer from service experiences that have a positive effect on CS with the service provider (Gordon, Zainuddin, & Magee, 2016; Johnson et al., 2008; Kurniati, Suharyono, & Arifin, 2015). Based on the above literature it is theorized that

H2a. CAC developed during service interactions positively affects CS.

In the marketing literature, the role of PSQ leading toward CS is well recognized (Bernardo, Llach, Marimon, & Alonso-Almeida, 2013). Quality of service delivered to customers affects satisfaction and positive behavior toward the service firm or brand (Meesala & Paul, 2018). SQ relates to the delivery of services while satisfaction is associated with the customers' experiences of services (Malik, 2012). As a cognitive assessment of the customer, perceived quality has been proven to impact satisfaction (Kassim & Abdullah, 2010). Based on expectations disconfirmation theory in services settings, customer develops satisfaction as a response to his/her confidence that the expectations toward the service are met during interactions with the service (Iqbal, UI Hassan, & Habibah, 2018).

The existing literature offers conflicting evidence concerning the association of SQ and CS (He & Li, 2011). From one perspective, SQ is a precursor to CS (Anderson & Sullivan, 1993; De

Ruyter, Bloemer, & Peeters, 1997; see Cronin, Brady, & Hult, 2000; Hu, Kandampully, & Juwaheer, 2009; Rust, 1994), whereas, from another aspect, CS leads toward brand PSQ (Bolton & Drew, 1991; Parasuraman et al., 1988; see Bitner, 1990; Carman, 1990). Considering the former view in this disagreement, this study proposes that PSQ of a service brand leads to CS during employee–customer interactions (Bernardo et al., 2013). We reason that PSQ relates to cognitive knowledge acquired through direct contact with the service provider (i.e. employee–customer interactions), word-of-mouth (WOM), promotion, and company’s marketing activities (Chen & Hu, 2013). Recently, perceived quality has been proven to positively impact CS (Kim & Kim, 2016; Srivastava & Rai, 2014; Su, Swanson, Chinchanchokchai, Hsu, & Chen, 2016). Thus, it is hypothesized that

H2b. The PSQ of a service brand positively impacts CS.

2.4. CS and CL

Oliver (1999, p. 34) described loyalty as “a deeply held commitment to repurchase or repatronize a preferred product/service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause switching behavior.” A CS developed from an assessment of the customer’s experience with a service brand affects loyalty with the service brand (Baumann, Hoadley, Hamin, & Nugraha, 2017; Nyadzayo & Khajehzadeh, 2016).

Within relationship marketing and service studies, satisfaction is considered to be an essential construct for building and keeping lasting associations and strengthening CL toward service brands (Kim & Kim, 2016; Marakanon & Panjakajornsak, 2017; Srivastava, Dash, & Mookerjee, 2016). Studies have considered the relationship between CS and loyalty toward a service provider and have contended that CS commonly leads to CL (e.g. Casidy & Wymer, 2015; Srivastava & Kaul, 2016; Su et al., 2016). Based on literature review, it is hypothesized that

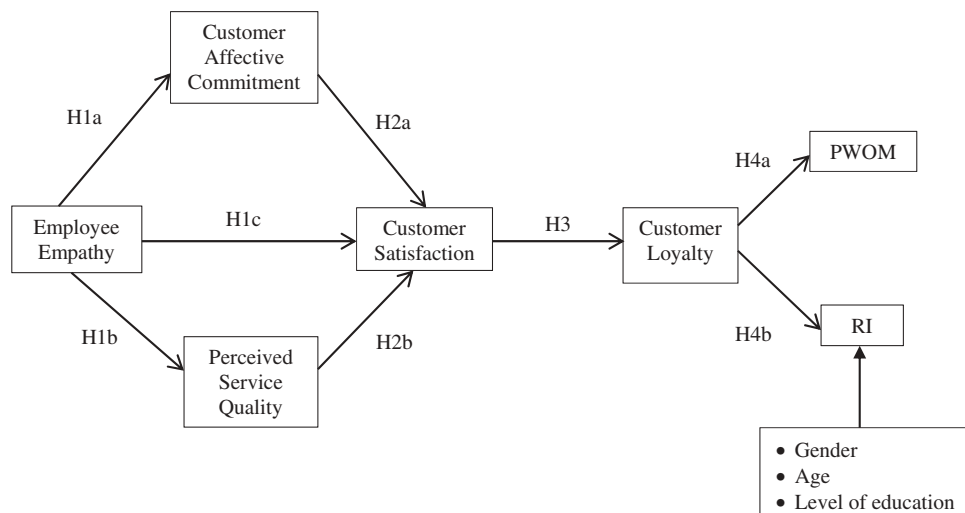
H3. CS developed during service interactions positively affects CL.

2.5. CL and loyalty outcomes

Recent literature provided the support where loyalty dimensions, i.e. attitudinal and behavioral loyalty were used to measure CL toward the service brand (Jiang & Zhang, 2016; Kim, Wong, Chang, & Park, 2016; Nyadzayo & Khajehzadeh, 2016). WOM referrals are viewed as a crucial attribute of the utterly loyal customer, a real antecedent, and an impartial source of information (Qu, Kim, & Im, 2011) and are considered essential for the assessment of a service brand (Srivastava & Kaul, 2016; Srivastava & Rai, 2014). Moreover, customers with attitudinal loyalty (i.e. PWOM) are less inclined toward accepting negative information about the service brand than disloyal customers (Donio’, Massari, & Passiante, 2006).

Also, attitude toward positive information is considered as a critical predictor of RI (Donio’ et al., 2006) and is regarded as the behavioral component of loyalty (Kassim & Abdullah, 2010). From the marketing and psychological literature, an individual’s decision to repurchase the service and to engage in future activity with the service brand, as well as the shape that the action will take, is depicted as RI (Chitty, Ward, & Chua, 2007; Jones & Shandiz, 2015; Jones & Taylor, 2007). Customers return to the service brand upon fulfillment of their expectations during service interactions (Su, Swanson, & Chen, 2015). Subsequently, customers will adopt attitudinal and behavioral loyalty, explicitly giving PWOM to individuals and eventually sway RI toward the service provider (Kassim & Abdullah, 2010). Keeping existing customers and increasing their loyalty seems to be vital for telecommunication service providers to achieve a competitive advantage (Deng, Lu, Wei, & Zhang, 2010). Based on the above literature, it is hypothesized that (see Figure 1).

Figure 1. Hypothesized model.



H4a. CL to the service brand positively affects customer PWOM.

H4b. CL to the service brand positively affects customer RI toward the brand.

3. Methodology

3.1. Sample and data collection

This study is purely quantitative, and data for this study were collected through a self-administered survey questionnaire. The survey questionnaire technique was chosen due to the advantages it offers, such as the respondents' control of time, low cost, no geographical boundary, no bias of interviewer, and secrecy in responses (Shiu, Hair, Bush, & Ortinao, 2009). Online survey questionnaire responses were collected from the active users of three state-owned Chinese telecommunication services brands (China Mobile Ltd., China Unicom Ltd., and China Telecom Corporation Ltd.) in Anhui province of China. The Chinese telecommunication service sector was selected due to the following reasons.

First, it is one of the essential service sectors ignored by most studies (Wang, Lo, & Yang, 2004). Customers interact with service employees through a customer service helpline or service centers involving face-to-face interactions (for SQ concerns and information gathering about products and services). Further, with China's population of over 1.3 billion, more than 1.5 billion mobile and fixed-line connections, and with over more than 2 trillion RMB business volumes annually, its telecom sector is one of the fastest growing service sectors in the country (China Statistical Yearbook, 2016). That growth has resulted in 92.5% popularization of telecommunication services among Chinese people (China Statistical Yearbook, 2016). Besides, with such a large customer base and competitive local market, it has become imperative for service brands to focus on SQ, CS, and loyalty for the acquisition and retention of customers (Deng et al., 2010).

Another aspect of this paper is the investigation of the indirect effect of EE on CL and loyalty outcomes (i.e. PWOM and RI). Moreover, the focus of the current research is on employee-customer interactions during which employee's service level is crucial in the development of CAC, satisfaction, and loyalty (Agnihotri & Krush, 2015; Markovic et al., 2015; Wieseke et al., 2012). Concerning our knowledge, the effect of EE on satisfaction and loyalty outcomes has not been extensively researched in the context of telecommunication services and the Chinese market. Finally, young consumers were chosen as the target population due to their higher knowledge

base, adoption of technology and various other telecom services, and previous experience with the service brands.

This study used systematic random sampling method (Walonick, 1997) that is often used instead of random sampling. It is also called an *N*th name selection technique. After the required sample size has been calculated, every *N*th record is selected from a list of population members. As long as the list does not contain any hidden order, this sampling method is as good as the random sampling method. Its only advantage over the random sampling technique is simplicity. Systematic sampling is frequently used to select a specified number of records from a computer file. Data collection was completed in two rounds. In the first round, an online survey questionnaire link was shared with *n* = 600 university students using Survey on WeChat (a social networking application in China). The data collection process lasted over 6 weeks. Two reminders were sent with an interval of 1 week. In the second round, within a range of 1 week, respondents were reminded to share the survey link with their friends. A total of 425 responses were obtained: 143 responses from China Mobile Ltd., 153 from China Unicom Ltd., and 129 from China Telecom Corporation Ltd. Out of these, 65 responses were unusable due to a high proportion of missing information. Data analysis was conducted on the 360 valid questionnaires, resulting in a response rate of 60%. Table 1 elaborates sample characteristics of the respondents.

3.2. Measures

3.2.1. Central constructs

The measurement items scale came from previous literature, adapted to fit the service setting. All constructs incorporated in the model were quantified using multi-item scales devised to tap all related domains of the construct (see Appendix). Four items to measure EE were based on Markovic et al. (2015) and Parasuraman, Zeithaml, and Berry (1994). The three items for CL and four items for PWOM were adapted from Dagger, David, and Ng (2011). CS was conceptualized using five item adapted from Grace and O’Cass (2005). A relevant four-item scale for RI was adapted from Mandhachitara and Poolthong (2011). PSQ measurement was done with a five-item scale based on Hightower, Brady, and Baker (2002). The three-item scale used to measure CAC was adapted from Mende and Bolton (2011). A seven-point, Likert-type, multiple-item scale was used to measure the constructs as it results in stronger

Table 1. Sample characteristics					
Measures	Frequency	Percentage	Measures	Frequency	Percentage
Gender			Level of education completed		
Male	134	37.2			
Female	226	62.8	High school	19	5.3
			Bachelor’s	150	41.7
			Master’s	159	44.2
			Doctorate	32	8.9
Age in years			Monthly income (RMB)		
25–29	285	79.2	Below 2,000	42	11.7
30–34	49	13.6	2,000–2,999	143	39.7
35–39	25	6.9	3,000–3,999	163	45.3
Above 40	1	.3	4,000–4,999	12	3.3

correlations with t-test results as well as improving the reliability and validity of the results (Lewis, 1993). The scale ranged from (1) “strongly disagree”, to (7) “strongly agree.”

3.2.2. *Covariates*

In this study, we controlled three measures related to respondents in the proposed model to confirm that the findings of the study are free from covariance among the constructs. Past studies suggest that customer gender, age, and level of education potentially correlate with CL (Oh & Kim, 2017; Wieseke et al., 2012).

3.3. *Survey design*

All the construct items of the instrument were initially developed in English. Due to the Chinese sample population, the translation committee approach (Van de Vijver & Leung, 1997) was employed to translate the questionnaire from English to Chinese. Three native Chinese students, with fluent English, participated in the translation of the survey instrument. Then the questionnaire was translated back into English by three professionals who were not aware of the primary English questionnaire. No semantic inconsistencies were noticed among the original and translated English version (Brislin, 1980). An expert’s review and pilot study of the questionnaire was conducted among marketing and consumer behavior experts and students. Thirty useful responses were returned and analyzed before the final survey was distributed among the targeted sample.

4. *Data analysis and results*

In the study, the authors used AMOS 21 (software) to conduct the data analysis. Structural equation modeling (SEM) was used to evaluate the measurement model and structural model. Principle component analysis and regression tests were used simultaneously to assess the measurement model and structural model. The benefit of using SEM is that it allows us to conduct a simultaneous analysis of a complete arrangement of variables in a hypothesized model (Byrne, 1994), and this technique is a powerful tool to perform these tests (Anderson & Gerbing, 1988).

4.1. *Assessment of bias*

The data were collected through self-administered survey questionnaires; therefore, common method variance might have biased the results. Common method bias becomes a concern when respondents are asked to respond to items including both dependent and independent variables (Olander, Vanhala, Hurmelinna-Laukkanen, & Blomqvist, 2016). Harman’s single-factor test (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003) was used to look for common method bias concerns. The findings revealed that all items were classified into seven factors and the initial factor explained only 14.715% of the variance. Therefore, there was no severe concern regarding common method bias.

4.2. *Measurement model*

Confirmatory factor analysis (CFA) was used to measure the scale validity. As per CFA analysis, overall measurement model fitness indices were satisfactory ($\chi^2/df = 1.734$, RMSEA = .045, GFI = .901, AGFI = .876, CFI = .955, IFI = .955, and TLI = .947) as all values are above the benchmark index values (Arbuckle, 2003; Bearden, Sharma, & Teel, 1982; Hair, Black, Babin, Anderson, & Tatham, 1998; Marsh & Hocevar, 1988). Likewise, factor loadings, Cronbach’s alpha, composite reliability (CR), and AVE values were calculated to measure validity (see Table 2). Benchmark values for factor loadings, CR, and AVE are .7, .7, and .5, respectively (Hair et al., 1998). The values for standardized loadings ranged from .720 to .900. Cronbach’s alpha coefficient of the latent constructs varied in an acceptable range from .778 to .933 (Fornell & Larcker, 1981). All constructs attained an acceptable degree of reliability with CR scores greater than .70. The AVE values varied between .512 and .776. Two items each for CS and PSQ and one item for RI were not included due to lower factor loading values than the standard benchmarks. The convergent validity of all the constructs included in the proposed model is satisfied (Anderson & Gerbing, 1988).

Table 2. Reliability and confirmatory analysis

Constructs	Items	Factor loading	Cronbach's alpha	CR	AVE
PSQ	PSQ1	.844	.789	.796	.568
	PSQ2	.760			
	PSQ3	.791			
PWOM	PWOM1	.900	.932	.933	.776
	PWOM2	.861			
	PWOM3	.866			
	PWOM4	.885			
EE	EE1	.761	.804	.807	.512
	EE2	.826			
	EE3	.771			
	EE4	.801			
CS	CS1	.856	.885	.886	.722
	CS2	.801			
	CS3	.823			
CL	CL1	.805	.823	.825	.612
	CL2	.762			
	CL3	.794			
RI	RI1	.772	.778	.784	.554
	RI2	.827			
	RI3	.720			
CAC	CAC1	.815	.794	.795	.565
	CAC2	.768			
	CAC3	.733			

Note: PSQ: Perceived service quality; PWOM: positive word-of-mouth; EE: employee empathy; CS: customer satisfaction; CL: customer loyalty; RI: repurchase intentions; CAC: customer-affective commitment; CR: composite reliability; AVE: average variance extracted. All factor loadings are significant at the $p < .001$ level.

As seen in Table 3, the discriminant validity test requirement was satisfied as the square root of AVE of all constructs was higher than the correlation between the constructs, which indicates good discriminant validity (Fornell & Larcker, 1981).

4.3. Structural model

Structural path model results regarding the fitting indices are as follows: $\chi^2 = 578.304$, $df = 262$ ($\chi^2/df = 2.207$), $RMSEA = .058$, $GFI = .890$, $AGFI .863$, $IFI = .927$, $TLI = .916$, and $CFI = .927$. The overall fitness of the proposed model is acceptable in comparison to the benchmark values (Arbuckle, 2003; Bearden et al., 1982; Hair et al., 1998; Marsh & Hocevar, 1988) so it is suitable to evaluate the hypothesized paths. Results of structural equation model are shown in Figure 2.

The structural equation model was used to test the hypotheses. Table 4 presents the structured results for the full sample and each of the three subsamples concerning the three telecommunication services brands. The findings demonstrate that H1a is partially supported; EE is positively associated with CAC for China Mobile ($\beta = .368$, $p < .001$) and China Telecom ($\beta = .399$, $p < .001$), but

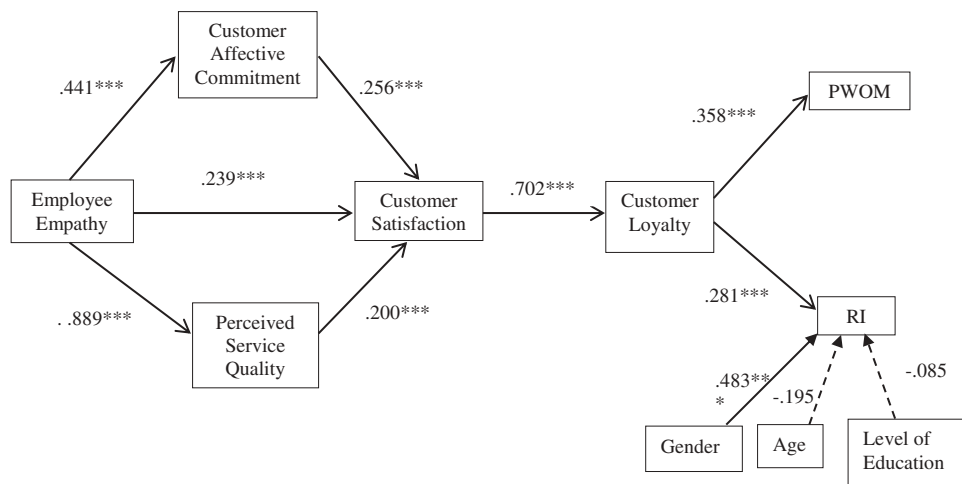
Table 3. Correlation matrix, reliability, and AVE square root

Constructs	M (SD)	CR	AVE	1	2	3	4	5	6	7
1 PSQ	4.4 (1.01)	.796	.568	.754						
2 PWOM	4.3 (1.22)	.933	.776	.201	.881					
3 EE	4.6 (1.25)	.807	.512	.144	.089	.715				
4 CS	4.4 (1.21)	.886	.722	.483	.338	.269	.850			
5 CL	4.6 (1.29)	.825	.612	.424	.487	.002	.482	.782		
6 RI	4.2 (1.45)	.784	.554	.378	.283	.105	.513	.489	.744	
7 CAC	5.1 (1.49)	.795	.565	.402	.483	.137	.455	.459	.546	.752

Note: M: Mean; SD: standard deviation; CR: composite reliability; AVE: square root of average variance extracted is on the diagonal of matrix; below the diagonal are inter-construct correlations.

Figure 2. SEM analysis results.

Note: PWOM: Positive word-of-mouth; RI: repurchase intentions.



insignificant for China Unicom ($\beta = .219, p > .05$). The full sample analysis showed significant results ($\beta = .441, p < .001$).

H1b is fully supported in the full sample test ($\beta = .889, p < .001$) and for each brand, i.e. China Mobile ($\beta = .524, p < .001$), China Unicom ($\beta = .681, p < .001$), and China Telecom ($\beta = .439, p < .001$). H1c is supported in the full sample ($\beta = .239, p < .001$) and for each brand, i.e. China Mobile ($\beta = .417, p < .001$), China Unicom ($\beta = .403, p < .001$), and China Telecom ($\beta = .334, p < .001$).

However, it is notable that H2a is fully supported by overall sample results ($\beta = .256, p < .001$) and is partially supported by the service brand results, i.e. supported by data for China Mobile ($\beta = .325, p < .001$) and China Telecom ($\beta = .423, p < .001$), whereas the relationship is not supported in the case of China Unicom ($\beta = -.011, p > .05$). H2b is fully supported ($\beta = .200, p < .001$) in the full sample and partially supported in the case of China Unicom ($\beta = .331, p < .001$) and China Telecom ($\beta = .142, p < .001$), but the relationship is not supported in the case of China Mobile ($\beta = .184, p > .05$).

Relating to H3, CS positively affected CL for the three service brands, i.e. China Mobile ($\beta = .338, p < .001$), China Unicom ($\beta = .612, p < .001$), and China Telecom ($\beta = .319, p < .001$) and in full sample analysis ($\beta = .702, p < .001$). H4a is supported for the full sample ($\beta = .358, p < .001$) and all brands, i.e. China Mobile ($\beta = .757, p < .001$), China Unicom ($\beta = .620, p < .001$), and China Telecom ($\beta = .907, p < .001$). In H4b, CL positively affects RI in full sample analysis ($\beta = .281, p < .001$) and brand wise, namely China Mobile ($\beta = .480, p < .001$), China Unicom ($\beta = .513, p < .001$) and China Telecom and ($\beta = .554, p < .001$). An R^2 value (see Table 4) of each variable is above the adequate level of .10 (Falk & Miller, 1992). The R^2 illustrates the amount of variance explained by the exogenous variables. Moreover, control variables, age, and level of education were not significantly related to loyalty outcome (RI); however, gender significantly affected service loyalty outcome (RI).

4.4. Mediation analysis

In this research, a bootstrapping approach (bootstrap sample size = 5000) is used to test the mediation effect (Preacher & Hayes, 2008) to produce asymmetric confidence intervals (CIs) for indirect relationships. The bootstrap CI method generates a comparatively correct inference as it generates asymmetric CIs for indirect relationships by employing the respective distributions of two regression coefficients that include a product term (Mackinnon, Lockwood, & Williams, 2004). Table 5 shows the indirect impact of EE on CS through CAC and PSQ, and indirect effect of EE on CL through CS revealing that the effect is significant with a 95% confidence level. The paths of EE to CAC and, in turn, to CS were significant (CI .95 = .036, .130) suggesting a mediating role of CAC.

Table 4. Structural results

	Paths		Full sample (n = 360)	China Mobile (n = 116)	China Unicom (n = 129)	China Telecom (n = 115)	Hypotheses
	↑						
EE		CAC	.441 (5.483)***	.368 (2.861)**	.219 (1.700)ns	.399 (3.299)***	H1a: Partially supported
EE		PSQ	.889 (15.538)***	.524 (4.481)***	.618 (4.008)***	.439 (3.999)***	H1b: Supported
EE		CS	.239 (4.173)***	.417 (3.928)***	.403 (3.293)***	.334 (3.002)**	H1c: Supported
CAC		CS	.256 (4.281)***	.325 (3.322)***	-.011 (.906)ns	.423 (3.877)***	H2a: Partially supported
PSQ		CS	.200 (5.310)***	.184 (-102) ns	.331 (3.781)***	.142 (1.128)***	H2b: Partially supported
CS		CL	.702 (12.369)***	.388 (5.493)***	.612 (6.629)***	.319 (4.447)***	H3: Supported
CL		PWOM	.358 (7.498)***	.757 (5.819)***	.620 (6.513)***	.907 (5.100)***	H4a: Supported
CL		RI	.281 (6.045)***	.480 (3.600)***	.513 (4.508)***	.554 (3.406)***	H4b: Supported
CAC	R ²		.334	.325	.255	.400	
PSQ	R ²		.195	.225	.145	.220	
CS	R ²		.307	.369	.259	.395	
CL	R ²		.354	.374	.432	.298	
PWOM	R ²		.358	.424	.358	.379	
RI	R ²		.465	.436	.485	.435	

Note: ns: Not significant; **p < .01; ***p < .001.

Table 5. Mediating effect of CAC and PSQ: Bootstrap analysis

95% Bootstrap confidence intervals for indirect effect

Relationship	Effect	SE	Lower bounds	Upper bounds
EE → CAC → CS	.081	.024	.036	.130
EE → PSQ → CS	.417	.037	.342	.488

Note: CAC: Customer-affective commitment; PSQ: perceived service quality; EE: employee empathy; CS: customer satisfaction.

Likewise, the paths from EE to PSQ and, in turn, to CS were also significant (CI .95 = .342, .488), suggesting a mediating role of PSQ.

5. Discussion and conclusion

5.1. Theoretical contributions

In the marketing literature, in spite of an emphasis on the applicability of empathy during employee–customer interactions, methodological examinations concerning EE and its outcomes are inadequate (Meneses & Larkin, 2017; Ratcliffe, 2012; Wieseke et al., 2012). Due to the nature of services being intangible, diverse, and indivisible (Lee et al., 2011; Markovic et al., 2015; Stock, 2016), the telecommunication service sector is a vital service research setting where employee–customer interactions are influential for high SQ (Drollinger & Comer, 2013).

Our findings (see Table 4) gives further insights into how EE can play an essential role in developing CAC, PSQ, and CS during service interactions within telecommunication services (Khan, Ferguson, & Pérez, 2015; Markovic et al., 2015; Mayshak et al., 2017). Moreover, Richard, Bupp, and Alzaidalsharief (2016) argued in their study that empathy plays a buffering role toward the satisfaction of customers during service interactions. Hence, the display of empathic behavior by service employees during interpersonal interactions between customers and service employees positively affects commitment, perceived quality of service, and satisfaction (Jones & Shandiz, 2015). Our overall sample results confirm the proposed hypotheses, and it can be concluded that EE is central for those service brands that want to leverage their investments in CS and loyalty outcomes (Aksoy, 2013; Meneses & Larkin, 2012; Wieseke et al., 2012). Brand-wise sample results also showed significant relationship and supported the proposed hypotheses and relevant literature. However, the relationship between EE and CAC in the brand analysis showed insignificant relationship for China Unicom. It can be assumed that, China Unicom customers developed lower commitment toward the service brand during employee–customer interactions. Therefore, service employees can increase customer’s commitment during service interactions by using their knowledge and expertise concerning service brand along with adopting empathic behavior (Daniels et al., 2014; Wieseke et al., 2012).

Furthermore, because of the difficulty customers confront in assessing SQ, the development of CAC is more substantial in the service sector than in the area of goods/products (Bowden, 2011; Choudhury, 2014; Marinkovic & Obradovic, 2015; Markovic et al., 2015). Our results showed a significant effect of PSQ on CAC and supported the literature and proposed hypotheses.

This study confirms that CAC significantly contributes toward CS (Markovic et al., 2015). The full sample results showed a significant effect of CAC on CS while analysis of individual brands showed a significant effect in the case of China Mobile and China Telecom but not in the case of China Unicom (see Table 4). A pleasurable service experience creates commitment due to the individualized treatment and empathic behavior of service employees that eventually creates satisfaction with the service brand (Agnihotri & Krush, 2015; Wieseke et al., 2012). In the current study, committed customers aspire to convey positive evaluations to support the service brand, and

this support may also extend to their expressions of satisfaction (Johnson et al., 2008). However, in the case of China Unicom, it can be assumed that interaction between service employees and customers did not have a positive effect on the commitment due to unsatisfactory interactions (Itani & Inyang, 2015; Marinkovic & Obradovic, 2015; Markovic et al., 2015). Some researchers also indicate that it is not always the case that empathic behavior by service employees has a positive effect on commitment and satisfaction (Bernardo et al., 2013; Lee et al., 2011).

Similarly, the quality of service delivered to customers by service employees affects CS and positive behavior (Kim & Kim, 2016; Meesala & Paul, 2018). Sufficient and constant delivery of quality service during employee–customer interactions is vital for CS (Bernardo et al., 2013; Iglesias et al., 2011; Marinkovic & Obradovic, 2015). Overall test results supported the literature as the PSQ of a service brand positively affected CS during employee–customer interactions (e.g. Markovic et al., 2015; Su et al., 2016). It can be interpreted that those service brands that want to create CS must make sure to provide an adequate and stable SQ across service interactions (Iglesias et al., 2011). However, the results for individual brands showed an insignificant effect of PSQ on CS in the case of China Mobile. Customer expectations from services and frontline employees during service interactions involve getting timely solutions to their problems or needs, quick and accurate delivery of services, and customer orientation of service employees (Bernardo et al., 2013; Chen & Hu, 2013; Xie, Batra, & Peng, 2015). Unsuccessful service encounter or unsatisfactory customer experience during service interactions may result in a lower satisfaction toward the service brand. Hence, in this study, it is interpreted that customers might not have acquired the SQ desired by them due to the above reasons and this resulted in lower satisfaction (Bernardo et al., 2013; Puccinelli et al., 2013). It is also important, based on above literature, that service employees adopt customer-oriented behavior, resolve customer’s queries, provide adequate service, and provide correct information to customers to produce successful service interactions and build long-term customer relationships.

Loureiro and Kaufmann (2017) argued that loyalty to a service brand includes the use of services on a regular basis and avoiding looking for alternatives. It is important to note that we found a positive and significant effect of CS on CL, a result that supports the previous literature (e.g. Bernardo et al., 2013; Lee et al., 2011; Su et al., 2016; Wieseke et al., 2012).

Though the verdict that CL has a direct effect on loyalty outcomes is not unexpected (Johnson et al., 2008; Su et al., 2015), we also found a positive and significant effect of CL on PWOM and RI in both the overall sample results and brand results (see Table 4). Results of this study provide support to the literature (e.g. Chen, Chen, & Wu, 2014; Kassim & Abdullah, 2010; Khan et al., 2015; Su et al., 2015) and the proposed hypotheses. The inclusion of PWOM and RI in the model augments our understanding of EE’s influence on loyalty outcomes (Chen et al., 2014; Kassim & Abdullah, 2010; Khan et al., 2015).

Keeping in view the above literature, this study demonstrates an indirect and significant effect of EE on CS through CAC and PSQ. The mediating effects resulted in positive relationships among the constructs and supported the proposed hypotheses and literature (e.g. Markovic et al., 2015). This verdict agrees with the services literature that proposes that employees are the primary stakeholders in service brands and can influence customers positively during service interactions (Balmer, 2010; Choudhury, 2014; Itani & Inyang, 2015). It is stated that employees can conversely make or damage the service brand, specifically during service interactions where service is mutually co-produced with the customers (Drollinger & Comer, 2013; Stock, 2016). Hence, during employee–customer interactions, employees should adopt an empathic behavior that will establish customers’ emotional connection and satisfaction with the service brand (Kassim & Abdullah, 2010; Lee et al., 2011; Wieseke et al., 2012).

5.2. Conclusion

Indirect effect of EE on CL and loyalty outcomes was studied in this study. Overall sample analysis showed significant results of the proposed hypotheses. Moreover, brand-wise analysis conducted in the study provided detailed results and gave additional insights. Also, the proposed model tested the intervening effect of CAC and PSQ on CS. Mediation analysis verified the intervening effect of SQ and AC as proposed in the study. Hence, research objectives of this study were verified and supported the literature. Based on this study it is affirmed that service employee plays an essential role toward CS and loyalty with the service brand (Wieseke et al., 2012). Also, satisfied and loyal customers adopt loyalty intentions and behaviors toward the service brand such as PWOM and RI (Khan et al., 2015).

Service brands, considering empathic behavior of employees, could increase CS and loyalty with the service brand as in the case of telecommunication service brands studied in the current study. The study contributes toward the service marketing, relationship marketing, and consumer behavior literature with insights from the results obtained in this study. Also, importance of EE during service interactions has been demonstrated that helps practitioners in developing their understanding and about the concept and to improve their service strategies by focusing on interactions between customer and service employees. Future studies could study empathic behavior of front-line service employees and its effect on relationship quality and may also consider to study the antecedents of EE.

5.3. Practical implications

This study has identified several important implications for service managers. First, employees have to adopt empathic behavior and express during employee–customer interactions. This is because employees are the primary stakeholders in service brands and directly interact with customers during service interactions. Empathy must also be reflected in daily service processes that portray pro-customer image. This study illustrates that the empathic behavior of employees during service interactions increases service brand satisfaction and loyalty.

Second, service brand strategy should support human resource guidelines and principles (Iglesias & Saleem, 2015) and also align with service processes that focus on the empathic behavior of employees. Managers must avoid employing service employees with lower interpersonal skills (Hennig-Thurau, 2004). For better service encounters, managers should hire service employees who can sense customer expectations, personnel who have the aptitude to perceive and respond to customers' thoughts, feelings, and intentions to develop a positive brand image during employee–customer interactions.

Third, the results of this study confirmed a positive impact of CAC and PSQ in developing CS, which is an absolute antecedent of CL. Indeed, service providers are more concerned about customer's satisfaction and retention with the service brand as satisfaction possesses a substantial total effect on service loyalty. Therefore, it is important to integrate the antecedents of satisfaction to develop customer's loyalty and build long-term relationship with the customers.

Additionally, managers should also note that results of this study signify that customers PSQ and AC with the service brand depend on employee's empathic behavior. Managers must focus on employee characteristics along with SQ to retain customers.

5.4. Limitations and future research directions

Numerous limitations of this study might encourage prospective investigations. Primarily, the number of responses (360 respondents) is quite low compared to the number of Chinese consumers of telecom services. Therefore, care should be taken in generalizing the results. Future studies should use more efficient techniques to gather data and more objective measures to lessen the potential for self-reporting bias.

Moreover, this study focused on employee–customer interactions by only sampling active users of Chinese telecommunication services in the context of business-to-consumer services. Future studies can consider other service industries or business-to-business service markets across different cultures.

Further, this study examined the effect of EE as one of the three employee characteristics (the others being employee expertise and employee reliability) to study customer behavior toward the service brand. Future studies can incorporate all three employee characteristics (Khan et al., 2015; Wieseke et al., 2012) and examine their affect on CS and loyalty during service encounter.

Moreover, unsatisfactory service from service employee or brand may result into dissatisfying service experience. Customer empathy can negate the negative effect of unsatisfactory service experience and result into customers' further commitment and loyalty toward the service brand. Future work can incorporate customer empathy and study its affect on service interactions, customer relationship development, or co-creation of services.

Also, future study could focus on business outcomes such as market share and stock value. At last, age and gender are used as control variables in this study to measure CS and loyalty. Future studies can consider customer characteristics (e.g. product knowledge and prior experience) as moderators to measure their effect on customer–employee interaction.

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References

- Abbasi, A. S., & Alvi, A. K. (2013). Impact of employee characteristics and their performance on customer satisfaction. *Science International*, 25(2), 387–394.
- Agnihotri, R., & Krush, M. T. (2015). Salesperson empathy, ethical behaviors, and sales performance: The moderating role of trust in one's manager. *Journal of Personal Selling & Sales Management*, 35(2), 164–174. doi:10.1080/08853134.2015.1010541
- Aksoy, L. (2013). How do you measure what you can't define? The current state of loyalty measurement and management. *Journal of Service Management*, 24(4), 356–381. doi:10.1108/JOSM-01-2013-0018
- Anderson, E. W., & Sullivan, M. W. (1993). The antecedents and consequences of customer satisfaction for firms. *Marketing Science*, 12(2), 125–143. doi:10.1287/mksc.12.2.125
- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103(3), 411–423. doi:10.1037/0033-2909.103.3.411
- Arbuckle, J. (2003). *Amos 5.0 update to the Amos user's guide*. Chicago, IL: Smallwaters Corporation.
- Bagozzi, R. P. (2006). The role of social and self-conscious emotions in the regulation of business-to-business relationships in salesperson-customer interactions. *Journal of Business & Industrial Marketing*, 21(7), 453–457. doi:10.1108/08858620610708948
- Balmer, J. M. T. (2010). Explicating corporate brands and their management: Reflections and directions from 1995. *Journal of Brand Management*, 18(3), 180–196. doi:10.1057/bm.2010.46
- Bansal, H., Irving, P. G., & Taylor, S. F. (2004). A three-component model of customer commitment to service providers. *Journal of the Academy of Marketing Science*, 32, 234–250. doi:10.1177/0092070304263332
- Barnes, B. R., Leonidou, L. C., Siu, N. Y. M., & Leonido, C. N. (2015). Interpersonal Factors as drivers of quality and performance in Western–Hong Kong interorganizational business relationships. *Journal of International Marketing*, 23, 23–49. doi:10.1509/jim.14.0008
- Barnes, D. C., Collier, J. E., Howe, V., & Douglas Hoffman, K. (2016). Multiple paths to customer delight: The impact of effort, expertise and tangibles on joy and surprise. *Journal of Services Marketing*, 30, 277–289. doi:10.1108/JSM-05-2015-0172
- Baumann, C., Hoadley, S., Hamin, H., & Nugraha, A. (2017). Competitiveness vis-à-vis service quality as drivers of customer loyalty mediated by perceptions of regulation and stability in steady and volatile markets. *Journal of Retailing and Consumer Services*, 36, 62–74. doi:10.1016/j.jretconser.2016.12.005
- Bearden, W. O., Sharma, S., & Teel, J. E. (1982). Sample size effects on Chi-square and other statistics used in evaluating causal models. *Journal of Marketing Research*, 19(4), 246–245. doi:10.2307/3151716
- Bernardo, M., Llach, J., Marimon, F., & Alonso-Almeida, M. M. (2013). The balance of the impact of quality and recovery on satisfaction: The case of e-travel. *Total Quality Management and Business Excellence*, 24(12), 1390–1404. doi:10.1080/14783363.2013.799327
- Bitner, M. J. (1990). Evaluating service encounters: The effects of physical surroundings and employee responses. *Journal of Marketing*, 54(2), 69–82. doi:10.2307/1251871

- Bolton, R. N., & Drew, J. H. (1991). A multistage model of customers' assessments of service quality and value. *Journal of Consumer Research*, 17(4), 375–384. doi:10.1086/jcr.1991.17.issue-4
- Bowden, J. L. H. (2011). Engaging the student as a customer: A relationship marketing approach. *Marketing Education Review*, 21(3), 211–228. doi:10.2753/MER1052-8008210302
- Brislin, R. (1980). Oral & written materials: Content analysis and translation. In H. Triandis & J. Berry (Eds.), *Handbook of cross-cultural psychology* (Vol. 2, pp. 389–444). Boston: Allyn & Bacon.
- Byrne, B. M. (1994). *Structural equation modeling with EQS and EQS/Windows: Basic concepts, applications, and programming*. Thousand Oaks, London: SAGE Publications.
- Carman, J. M. (1990). Consumer perceptions of service quality: An assessment of the SERVQUAL dimension. *Journal of Retailing*, 66(1), 33–56.
- Casidy, R., & Wymer, W. (2015). The impact of brand strength on satisfaction, loyalty and WOM: An empirical examination in the higher education sector. *Journal of Brand Management*, 22(2), 117–135. doi:10.1057/bm.2015.6
- Chakrabarty, S., Brown, G., & Widing, R. E. (2012). The role of top management in developing a customer-oriented sales force. *Journal of Personal Selling & Sales Management*, 32(4), 437–450. doi:10.2753/PSS0885-3134320403
- Chen, C. J., Chen, C. C., & Wu, J. C. (2014). How customer participation can drive repurchase intent. In K. Siau, Q. Li, & X. Guo (Eds.), *PACIS 2014. Proceeding of the 19th Pacific Asia Conference on Information Systems (PACIS 2014)* (pp. 207). Chengdu, China: AIS Electronic Library (AISeL).
- Chen, P. T., & Hu, H. H. S. (2013). The mediating role of relational benefit between service quality and customer loyalty in airline industry. *Total Quality Management and Business Excellence*, 24(9), 1084–1095. doi:10.1080/14783363.2012.661130
- China Statistical Yearbook. (2016). *China statistical yearbook*. Retrieved October 15, 2017, from <https://www.chinayearbooks.com/china-statistical-yearbook-2016.html>
- Chitty, B., Ward, S., & Chua, C. (2007). An application of the ECSI model as a predictor of satisfaction and loyalty for backpacker hostels. *Marketing Intelligence & Planning*, 25, 563–580. doi:10.1108/02634500710819941
- Chomvilailuk, R., & Butcher, K. (2014). Effects of quality and corporate social responsibility on loyalty. *The Service Industries Journal*, 34, 938–954. doi:10.1080/02642069.2014.915952
- Choudhury, K. (2014). Service quality and word of mouth: A study of the banking sector. *International Journal of Bank Marketing*, 32(7), 612–627. doi:10.1108/IJBM-12-2012-0122
- Cronin, J. J., Brady, M. K., & Hult, G. T. M. (2000). Assessing the effects of quality, value, and customer satisfaction on consumer behavioral intentions in service environments. *Journal of Retailing*, 76(2), 193–218. doi:10.1016/S0022-4359(00)00028-2
- Dagger, T. S., David, M. E., & Ng, S. (2011). Do relationship benefits and maintenance drive commitment and loyalty? *Journal of Services Marketing*, 25(4), 273–281. doi:10.1108/08876041111143104
- Daniels, K., Glover, J., & Mellor, N. (2014). An experience sampling study of expressing affect, daily affective well-being, relationship quality, and perceived performance. *Journal of Occupational and Organizational Psychology*, 87(4), 781–805. doi:10.1111/joop.2014.87.issue-4
- De Ruyter, K., Bloemer, J., & Peeters, P. (1997). Merging service quality and service satisfaction: An empirical test of an integrative model. *Journal of Economic Psychology*, 18(4), 387–406. doi:10.1016/S0167-4870(97)00014-7
- Deng, Z., Lu, Y., Wei, K. K., & Zhang, J. (2010). Understanding customer satisfaction and loyalty: An empirical study of mobile instant messages in China. *International Journal of Information Management*, 30(4), 289–300. doi:10.1016/j.ijinfomgt.2009.10.001
- Donio, J., Massari, P., & Passiante, G. (2006). Customer satisfaction and loyalty in a digital environment: An empirical test. *Journal of Consumer Marketing*, 23(7), 445–457. doi:10.1108/07363760610712993
- Drollinger, T., & Comer, L. B. (2013). Salesperson's listening ability as an antecedent to relationship selling. *Journal of Business & Industrial Marketing*, 28(1), 50–59. doi:10.1108/08858621311285714
- Falk, R. F., & Miller, N. B. (1992). *A primer for soft modeling*. Akron, OH: University of Akron Press.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50. doi:10.2307/3151312
- Giovanis, A. N., & Athanapoulou, P. (2018). Consumer-brand relationships and brand loyalty in technology-mediated services. *Journal of Retailing and Consumer Services*, 40, 287–294. doi:10.1016/j.jretconser.2017.03.003
- Gordon, R., Zainuddin, N., & Magee, C. (2016). Unlocking the potential of branding in social marketing services: Utilising brand personality and brand personality appeal. *Journal of Services Marketing*, 30, 48–62. doi:10.1108/JSM-02-2015-0105
- Gorry, G. A., & Westbrook, R. A. (2011). Once more, with feeling: Empathy and technology in customer care. *Business Horizons*, 54(2), 125–134. doi:10.1016/j.bushor.2010.10.003
- Grace, D., & O'Cass, A. (2005). Service branding: Consumer verdicts on service brands. *Journal of Retailing and Consumer Services*, 12(2), 125–139. doi:10.1016/j.jretconser.2004.05.002
- Guenzi, P., De Luca, L. M., & Troilo, G. (2011). Organizational drivers of salespeople's customer orientation and selling orientation. *Journal of Personal Selling & Sales Management*, 31(3), 269–285. doi:10.2753/PSS0885-3134310305
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (1998). *Multivariate data analysis*. Upper Saddle River, NJ: Prentice Hall.
- Harwood, T., & Garry, T. (2015). An investigation into gamification as a customer engagement experience environment. *Journal of Services Marketing*, 29(6/7), 533–546. doi:10.1108/JSM-01-2015-0045
- He, H., & Li, Y. (2011). CSR and service brand: The mediating effect of brand identification and moderating effect of service quality. *Journal of Business Ethics*, 100(4), 673–688. doi:10.1007/s10551-010-0703-y
- Hennig-Thurau, T. (2004). Customer orientation of service employees: Its impact on customer satisfaction, commitment, and retention. *International Journal of Service Industry Management*, 15(5), 460–478. doi:10.1108/09564230410564939
- Hightower, R., Brady, M. K., & Baker, T. L. (2002). Investigating the role of the physical environment in hedonic service consumption: An exploratory study of sporting events. *Journal of Business Research*, 55(9), 697–707. doi:10.1016/S0148-2963(00)00211-3

- Hu, H.-H., Kandampully, J., & Juwaheer, T. D. (2009). Relationships and impacts of service quality, perceived value, customer satisfaction, and image: An empirical study. *The Service Industries Journal*, 29(2), 111–125. doi:10.1080/02642060802292932
- Huang, C. S. (2011). Some insights into customer orientation: An investigation of sales-people in Taiwan. *International Journal of Human Resource Management*, 22(12), 2647–2663. doi:10.1080/09585192.2011.599945
- Hur, W. M., Kim, Y., & Park, K. (2013). Assessing the effects of perceived value and satisfaction on customer loyalty: A 'Green' perspective. *Corporate Social Responsibility and Environmental Management*, 20, 146–156. doi:10.1002/csr.1280
- Hwang, K., & Kim, H. (2016). Are ethical consumers happy? Effects of ethical consumers' motivations based on empathy versus self-orientation on their happiness. *Journal of Business Ethics*, 1–20. doi:10.1007/s10551-016-3236-1
- Iglesias, O., & Saleem, F. Z. (2015). How to support consumer-brand relationships: The role of corporate culture and human resource policies and practices. *Marketing Intelligence & Planning*, 33(2), 216–234. doi:10.1108/MIP-10-2014-0196
- Iglesias, O., Singh, J. J., & Batista-Foguet, J. M. (2011). The role of brand experience and affective commitment in determining brand loyalty. *Journal of Brand Management*, 18(8), 570–582. doi:10.1057/bm.2010.58
- Iqbal, M. S., UI Hassan, M., & Habibah, U. (2018). Impact of self-service technology (SST) service quality on customer loyalty and behavioral intention: The mediating role of customer satisfaction. *Cogent Business & Management*, 5. doi:10.1080/23311975.2018.1423770
- Itani, O. S., & Inyang, A. E. (2015). The effects of empathy and listening of salespeople on relationship quality in the retail banking industry. *International Journal of Bank Marketing*, 33(6), 692–716. doi:10.1108/IJBM-06-2014-0076
- Jiang, H., & Zhang, Y. (2016). An investigation of service quality, customer satisfaction and loyalty in China's airline market. *Journal of Air Transport Management*, 57, 80–88. doi:10.1016/j.jairtraman.2016.07.008
- Johnson, M. S., Sivadas, E., & Garbarino, E. (2008). Customer satisfaction, perceived risk and affective commitment: An investigation of directions of influence. *Journal of Services Marketing*, 22(5), 353–362. doi:10.1108/08876040810889120
- Jones, J. L., & Shandiz, M. (2015). Service quality expectations: Exploring the importance of SERVQUAL dimensions from different nonprofit constituent groups. *Journal of Nonprofit & Public Sector Marketing*, 27(1), 48–69. doi:10.1080/10495142.2014.925762
- Jones, T., & Taylor, S. F. (2007). The conceptual domain of service loyalty: How many dimensions? *Journal of Services Marketing*, 21, 36–51. doi:10.1108/08876040710726284
- Kasiri, L. A., Cheng, K. T. G., Sambasivan, M., & Sidin, S. M. (2017). Integration of standardization and customization: Impact on service quality, customer satisfaction, and loyalty. *Journal of Retailing and Consumer Services*, 35, 91–97. doi:10.1016/j.jretconser.2016.11.007
- Kassim, N., & Abdullah, N. A. (2010). The effect of perceived service quality dimensions on customer satisfaction, trust, and loyalty in e-commerce settings. *Asia Pacific Journal of Marketing and Logistics*, 22(3), 351–371. doi:10.1108/13555851011062269
- Khan, Z., Ferguson, D., & Pérez, A. (2015). Customer responses to CSR in the Pakistani banking industry. *International Journal of Bank Marketing*, 33(4), 471–493. doi:10.1108/IJBM-07-2014-0097
- Kim, M. K., Wong, S. F., Chang, Y., & Park, J. H. (2016). Determinants of customer loyalty in the Korean smartphone market: Moderating effects of usage characteristics. *Telematics and Informatics*, 33, 936–949. doi:10.1016/j.tele.2016.02.006
- Kim, S. B., & Kim, D. Y. (2016). The impacts of corporate social responsibility, service quality, and transparency on relationship quality and customer loyalty in the hotel industry. *Asian Journal of Sustainability and Social Responsibility*, 1–17. doi:10.1186/s41180-016-0004-1
- Kurniati, R. R., Suharyono, H., & Arifin, Z. (2015). The effect of customer relationship marketing (CRM) and service quality to corporate image, value, customer satisfaction, and customer loyalty. *European Journal of Business and Management*, 7, 107–120.
- Lee, S., Comer, L. B., Dubinsky, A. J., & Scafer, K. (2011). The role of emotion in the relationship between customers and automobile salespeople. *Journal of Managerial Issues*, 23(2), 206–226.
- Lewis, J. R. (1993). Multipoint scales: Mean and median differences and observed significance levels. *International Journal of Human-Computer Interaction*, 5(4), 383–392. doi:10.1080/10447319309526075
- Loureiro, S. M. C., & Kaufmann, H. R. (2017). Advertising and country-of-origin images as sources of brand equity and the moderating role of brand typicality. *Baltic Journal of Management*, 12(2), 153–170. doi:10.1108/BJM-11-2015-0226
- MacKinnon, D. P., Lockwood, C. M., & Williams, J. (2004). Confidence limits for the indirect effect: Distribution of the product and resampling methods. *Multivariate Behavioral Research*, 39, 99–128. doi:10.1207/s15327906mbr3901_4
- Malik, S. U. (2012). Customer satisfaction, perceived service quality and mediating role of perceived value. *International Journal of Marketing Studies*, 4(1), 68–76. doi:10.5539/ijms.v4n1p68
- Mandhachitara, R., & Poolthong, Y. (2011). A model of customer loyalty and corporate social responsibility. *Journal of Services Marketing*, 25(2), 122–133. doi:10.1108/08876041111119840
- Marakanon, L., & Panjakajornsak, V. (2017). Perceived quality, perceived risk and customer trust affecting customer loyalty of environmentally friendly electronics products. *Kasetsart Journal of Social Sciences*, 38, 24–30. doi:10.1016/j.kjss.2016.08.012
- Marinkovic, V., & Obradovic, V. (2015). Customers' emotional reactions in the banking industry. *International Journal of Bank Marketing*, 33(3), 243–260. doi:10.1108/IJBM-09-2013-0107
- Markovic, S., Iglesias, O., Singh, J. J., & Sierra, V. (2015). How does the perceived ethicality of corporate services brands influence loyalty and positive word-of-mouth? Analyzing the roles of empathy, affective commitment, and perceived quality. *Journal of Business Ethics*. doi:10.1007/s10551-015-2985-6
- Marsh, H. W., & Hocevar, D. (1988). A new, more powerful approach to multitrait-multimethod analyses: Application of second-order confirmatory factor analysis. *Journal of Applied Psychology*, 73, 107–117. doi:10.1037/0021-9010.73.1.107
- Mayshak, R., Sharman, S. J., Zinkiewicz, L., & Hayley, A. (2017). The influence of empathy and self-presentation on engagement with social networking website

- posts. *Computers in Human Behavior*, 71, 362–377. doi:10.1016/j.chb.2017.02.026
- Meesala, A., & Paul, J. (2018). Service quality, consumer satisfaction and loyalty in hospitals: Thinking for the future. *Journal of Retailing and Consumer Services*, 40, 261–269. doi:10.1016/j.jretconser.2016.10.011
- Mende, M., & Bolton, R. N. (2011). Why attachment security matters: How customers' attachment styles influence their relationships with service firms and service employees. *Journal of Service Research*, 14(3), 285–301. doi:10.1177/1094670511411173
- Meneses, R. W., & Larkin, M. (2012). Edith stein and the contemporary psychological study of empathy. *Journal of Phenomenological Psychology*, 43(2), 151–184. doi:10.1163/15691624-12341234
- Meneses, R. W., & Larkin, M. (2017). The experience of empathy: Intuitive, sympathetic and intellectual aspects of social understanding. *Journal of Humanistic Psychology*, 57(1), 3–32. doi:10.1177/0022167815581552
- Meyer, J. P., & Allen, N. J. (1991). A three-component conceptualization of organizational commitment. *Human Resource Management Review*, 1(1), 61–89. doi:10.1016/1053-4822(91)90011-Z
- Nyadzayo, M. W., & Khajehzadeh, S. (2016). The antecedents of customer loyalty: A moderated mediation model of customer relationship management quality and brand image. *Journal of Retailing and Consumer Services*, 30, 262–270. doi:10.1016/j.jretconser.2016.02.002
- Oh, H., & Kim, K. (2017). Customer satisfaction, service quality, and customer value: Years 2000–2015. *International Journal of Contemporary Hospitality Management*, 29(1), 2–29. doi:10.1108/IJCHM-10-2015-0594
- Olander, H., Vanhala, M., Hurmelinna-Laukkanen, P., & Blomqvist, K. (2016). Preserving prerequisites for innovation: Employee-related knowledge protection and organizational trust. *Baltic Journal of Management*, 11(4), 493–515. doi:10.1108/IJBM-03-2015-0080
- Oliver, R. L. (1997). *Satisfaction: A behavioral perspective on the consumer*. New York: McGraw-Hill.
- Oliver, R. L. (1999). Whence consumer loyalty. *Journal of Marketing*, 63(4), 33–44. doi:10.2307/1252099
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64(1), 12–40.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1994). Reassessment of expectations as a comparison standard in measuring service quality: Implications for further research. *Journal of Marketing*, 58(1), 111–124. doi:10.2307/1252255
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879–903. doi:10.1037/0021-9010.88.5.879
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40(3), 879–891.
- Puccinelli, N. M., Andrzejewski, S. A., Markos, E., Noga, T., & Motyka, S. (2013). The value of knowing what customers really want: The impact of salesperson ability to read non-verbal cues of affect on service quality. *Journal of Marketing Management*, 29(3–4), 356–373. doi:10.1080/0267257X.2013.766631
- Qu, H., Kim, L. H., & Im, H. H. (2011). A model of destination branding: Integrating the concepts of the branding and destination image. *Tourism Management*, 32(3), 465–476. doi:10.1016/j.tourman.2010.03.014
- Ratcliffe, M. (2012). Phenomenology as a form of empathy. *Inquiry*, 55, 473–495. doi:10.1080/0020174X.2012.716196
- Richard, E. M., Bupp, C. P., & Alzaidalsharief, R. G. (2016). Supervisor empathy moderates the negative effects of customer injustice. *Emotions and Organizational Governance*, 12, 117–140.
- Rust, R. T. (1994). Service quality: Insights and managerial implications from the frontier. In R. T. Rust & R. L. Oliver (Eds.), *Service quality: New directions in theory and practice* (pp. 1–19). Thousand Oaks, CA: Sage Publications.
- Shiu, E., Hair, J. F., Bush, R. P., & Ortinao, D.J. (2009). *Marketing research*. London, UK: McGraw Hill Education.
- Smith, A. (2006). Cognitive empathy and emotional empathy in human behavior and evolution. *The Psychological Record*, 56(1), 3–21. doi:10.1007/BF03395534
- Srivastava, M., & Kaul, D. (2016). Exploring the link between customer experience–Loyalty–Consumer spend. *Journal of Retailing and Consumer Services*, 31, 277–286. doi:10.1016/j.jretconser.2016.04.009
- Srivastava, M., & Rai, A. K. (2014). An investigation into service quality–Customer loyalty relationship: The moderating influences. *Decision*, 41, 11–31. doi:10.1007/s40622-014-0025-5
- Srivastava, N., Dash, S. B., & Mookerjee, A. (2016). Determinants of brand trust in high inherent risk products. *Marketing Intelligence & Planning*, 34, 394–420. doi:10.1108/MIP-01-2015-0004
- Stock, R. M. (2016). Understanding the relationship between frontline employee boreout and customer orientation. *Journal of Business Research*, 69, 4259–4268. doi:10.1016/j.jbusres.2016.02.037
- Story, J., & Hess, J. (2010). Ethical brand management: Customer relationships and ethical duties. *Journal of Product & Brand Management*, 19(4), 240–249. doi:10.1108/10610421011059568
- Su, L., Swanson, S. R., & Chen, X. (2015). Social responsibility and reputation influences on the intentions of Chinese Huitang Village tourists: Mediating effects of satisfaction with lodging providers. *International Journal of Contemporary Hospitality Management*, 27(8), 1750–1771. doi:10.1108/IJCHM-06-2014-0305
- Su, L., Swanson, S. R., Chinchanchokchai, S., Hsu, M. K., & Chen, X. (2016). Reputation and intentions: The role of satisfaction, identification, and commitment. *Journal of Business Research*, 69(9), 3261–3269. doi:10.1016/j.jbusres.2016.02.023
- Toufaily, E., Ricard, L., & Perrien, J. (2013). Customer loyalty to a commercial website: Descriptive meta-analysis of the empirical literature and proposal of an integrative model. *Journal of Business Research*, 66, 1436–1447. doi:10.1016/j.jbusres.2012.05.011
- Tsoukatos, E., & Rand, G. K. (2006). Path analysis of perceived service quality, satisfaction and loyalty in Greek insurance. *Managing Service Quality: An International Journal*, 16(5), 501–519. doi:10.1108/09604520610686746
- Van de Vijver, F. J., & Leung, K. (1997). *Methods and data analysis for cross-cultural research*. Thousand Oaks, London: SAGE Publications.
- Van Doorn, J., Lemon, K. N., Mittal, V., Nass, S., Pick, D., Pirner, P., & Verhoef, P. C. (2010). Customer

- engagement behavior: Theoretical foundations and research directions. *Journal of Service Research*, 13 (3), 253–266. doi:10.1177/1094670510375599
- Van Lierop, D., & El-Geneidy, A. (2016). Enjoying loyalty: The relationship between service quality, customer satisfaction, and behavioral intentions in public transit. *Research in Transportation Economics*, 59, 50–59. doi:10.1016/j.retrec.2016.04.001
- Vera, J., & Trujillo, A. (2017). Searching most influential variables to brand loyalty measurements: An exploratory study. *Contaduría Y Administración*, 62, 600–624. doi:10.1016/j.cya.2016.04.007
- Verhoef, P. C., Reinartz, W. J., & Krafft, M. (2010). Customer engagement as a new perspective in customer management. *Journal of Service Research*, 13 (3), 247–252. doi:10.1177/1094670510375461
- Walonick, D. S. (1997). *Survival statistics: Master statistical analysis techniques without pain*. Bloomington, MN: StatPac Incorporation.
- Wang, Y., Lo, H., & Yang, Y. (2004). An integrated framework for service quality, customer value, satisfaction: Evidence from china's telecommunication industry. *Information Systems Frontiers*, 6(4), 325–340.
- Wieseke, J., Geigenmüller, A., & Kraus, F. (2012). On the role of empathy in customer-employee interactions. *Journal of Service Research*, 15(3), 316–331. doi:10.1177/1094670512439743
- Xie, Y., Batra, R., & Peng, S. (2015). An extended model of preference formation between global and local brands: The roles of identity expressiveness, trust, and affect. *Journal of International Marketing*, 23, 50–71. doi:10.1509/jim.14.0009
- Zeithaml, V. A., Berry, L. L., & Parasuraman, A. (1996). The behavioral consequences of service quality. *Journal of Marketing*, 60(2), 31–46. doi:10.2307/1251929

Appendix: Measures

Employee empathy

- (1) The service employees give customers individual attention
- (2) The service employees deal with customers in a caring fashion
- (3) The service employees have the customer best interest at heart
- (4) The service employees understand the needs of their customers

Customer-affective commitment

- (1) I enjoy being a customer of the service brand
- (2) I have positive feelings about the service brand
- (3) I feel attached to the service brand

Perceived service quality

- (1) Overall, I have received high-quality service from the service brand
- (2) Generally, the service provided by the service brand is excellent
- (3) I think the service provided by the service brand is superior in all aspects

Customer satisfaction

- (1) I am very satisfied with the service provided by this brand
- (2) The service provided by this brand is very satisfactory
- (3) I believe that using this brand is usually a very satisfying experience

Customer loyalty

- (1) I consider the service brand my first choice when I purchase the services they supply
- (2) I am willing to maintain my relationship with the service brand
- (3) I am loyal to the service brand

Positive word-of-mouth

- (1) I say positive things about the service provider to other people
- (2) I recommend the service provider to someone who seeks my advice
- (3) I encourage friends and relatives to do business with the current service provider
- (4) I advocate (support) the current service provider

Repurchase intentions

- (1) In the future, I intend to use the services from the service provider
- (2) If you were in the market for additional telecom services, how likely would you be to use those services from existing service provider?
- (3) In the future, I will continue using the service provider for telecom services



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