Service Loyalty: An Integrative Model and Examination across Service Contexts

Xiaoyun Han,

Robert J. Kwortnik, Jr.,

and

Chunxiao Wang*

*Xiaoyun Han is Associate Professor of Marketing (email: hanxy@mail.sysu.edu.cn; phone: 020-84115122), School of Business, Sun Yat-Sen University, No. 135, Xingang West Road, Guangzhou, China; Robert J. Kwortnik, Jr., is Assistant Professor of Marketing (email: rjk34@cornell.edu; phone: 607-254-6543; FAX: (607) 255-4179), School of Hotel Administration, Cornell University, Ithaca, NY 14853-6902; Chunxiao Wang is a Professor of Marketing (email: mnswcb@mail.sysu.edu.cn; phone: 020-84114178), School of Business, Sun Yat-Sen University, No. 135. Xingang West Road, Guangzhou, China. Correspondence: Robert Kwortnik. The authors thank Judy Siguaw, Mike Sturman, and Bill Ross for their insightful comments on drafts of this paper. The research is supported by Guangdong Natural Science Foundation and National Natural Science Foundation of China.

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ABSTRACT

Marketing academics and practitioners generally agree that customer loyalty is vital to business success. There is less agreement on the factors that determine customer loyalty, particularly in service contexts. Research on the determinants of service loyalty has taken three distinct paths: 1) quality/value/satisfaction; 2) relationship quality; and, 3) relational benefits. In this research, the authors coalesce these paths to derive a model that links dimensions of customer loyalty (cognitive, affective, intention, and behavioral) with a system of determinants. The model is tested with data from varied services (airlines, banks, beauty salons, hospitals, hotels, and mobile telephone) and 3,500 customers in China. Results are consistent across contexts and support a multidimensional view of customer loyalty. Key loyalty determinants are customer satisfaction, commitment, service fairness, service quality, trust, and a construct new to service loyalty models—commercial friendship. The research contributes to the literature by providing a more complete, integrated view of customer loyalty and its determinants in services contexts.

The pursuit of customer loyalty, both as an objective of marketing managers and as a subject of study for marketing researchers, has commanded recent attention. A search in the top marketing journals shows a tenfold increase in the study of loyalty from 1995 to 2005 compared to the prior 10 years. In their seminal monograph on the topic, Jacoby and Chestnut (1978, p. 42) noted that "…loyalty is most probably a complex, multifaceted phenomenon." Indeed, research underscores this view. For example, the diversity of findings regarding the satisfaction-loyalty relationship (e.g., Bolton 1998; Brady and Cronin 2001; Hennig-Thurau, Gwinner, and Gremler 2002; Olsen 2002), as well as factors that moderate or mediate this relationship (e.g., Agustin and Singh 2005; Mittal and Kamakura 2001; Olsen and Johnson 2003; Seiders, Voss, Grewal, and Godfrey 2005) underscore the call by scholars for a more complete construal of customer loyalty and its determinants (Agustin and Singh 2005; Dick and Basu 1994; Oliver 1997; 1999).

Studies of loyalty tend to use subsets of factors (e.g., service fairness and service quality; or, commitment and trust); that are theoretically related, but rarely examined together. Models are needed that represent the interrelated effects which engender loyalty, especially for services, where evaluative as well as relational factors can influence the loyalty response (Henning-Thurau, Gwinner, and Gremler 2002; Oliver 1999). We contribute to the literature an integrative service loyalty model that links previously distinct streams of research and conceptualizes a system of loyalty determinants: service quality, service fairness, customer satisfaction, trust, commitment, and a construct new to loyalty models—commercial friendship (Price and Arnould 1999). We also offer a rare test of Oliver's (1997) phased loyalty construct. We next review the literature and present our model. We then use structural equation modeling to test the model with data from more than 3,500 customers of 24 firms across six service contexts (airline, banking, beauty salon, hospital, hotel, and mobile phone) in China. We close by discussing implications, research limitations, and directions for future study of the important domain of service loyalty.

CONCEPTUALIZING SERVICE LOYALTY

Early work on loyalty focused on repeat purchase behavior and lacked theoretical grounding (c.f. Day 1969). A more robust theoretical base was offered by Jacoby and Chestnut (1978), who proposed that brand loyalty is repeat purchase behavior based on belief acquisition, affect formation, and behavioral intention. This view of loyalty as a mix of attitudinal and behavioral factors is now well accepted by marketing scholars. For example, Gremler and Brown (1996, p. 173) referred to service loyalty as "the degree to which a customer exhibits repeat purchasing behavior from a service provider, possesses a positive attitudinal disposition toward the provider, and considers using only this provider when a need for this service arises."

We adopt this composite view of loyalty and highlight several theoretical points that informed our perspective. First, service loyalty is the result of a dynamic learning and decision process (Jacoby and Chestnut 1978), with evaluative (e.g., service fairness, service quality, and customer satisfaction) and relational (e.g., commercial friendship, trust, and commitment) factors merging to influence the loyalty attitude and behavioral response. Second, the attitudinal base of service loyalty is a relative attitude, or an appraisal of the extent to which a service dominates alternatives (Dick and Basu 1994; Oliver 1997; Olsen 2002). Finally, consistent with Oliver's framework (1997; 1999), service loyalty is a sequence of effects, with behavioral loyalty the outcome of cognitive, affective, and intentional (conative) phases of attitude formation.

An Integrative Model of Service Loyalty

Scholars have studied a variety of service loyalty determinants, which we categorize into

1) QVS (quality, value, satisfaction) models; 2) relationship-quality models; and, 3) relational-benefits models. Cronin, Brady, and Hult (2000) reported that QVS studies typically find that satisfaction mediates the effects of quality and value perceptions on loyalty. Few of these studies examined determinants beyond the QVS factors. Relationship-quality research focuses on trust and commitment, usually to the exclusion of QVS factors, and typically reveals associations between the relational factors and loyalty (Fullerton 2003; Morgan and Hunt 1994; Pritchard, Havitz, and Howard 1999). Finally, relational benefits models (Gwinner, Gremler, and Bitner 1998) address interpersonal benefits customers attain from service providers and find that these social influences are related to loyalty (Hennig-Thurau, Gwinner, and Gremler 2002).

The QVS, relationship-quality, and relational-benefits approaches are each important to understanding service loyalty. Yet, an integrative model is lacking (see Agustin and Singh 2005, Bolton, Lemon, and Verhoef 2004, Harris and Goode 2004, Hennig-Thurau, Gwinner, and Gremler 2002, and Salegna and Goodwin 2005 for work in this direction). We propose a holistic framework that unites these theoretically-related views (Figure 1). We suggest that behavioral loyalty is directly determined only by loyalty intentions. Loyalty intentions are a direct function of affective loyalty and an indirect function of cognitive loyalty, which are determined by affective and calculative commitment, respectively. We take a cumulative view of customer satisfaction, which we expect to influence loyalty (cognitive) directly and indirectly through the commitment factors and to be determined by perceptions of service fairness, service quality, trust, and commercial friendship. We also expect commercial friendship to affect commitment.

This integrative model includes factors that theory suggests influence service loyalty, while omitting factors that are subsumed by the models' constructs, such as equity (captured by service fairness), value and expectancy disconfirmation (captured by customer satisfaction), involvement (captured by commitment), and social benefits (captured by commercial friendship). Thus, the model is relatively parsimonious for a dynamic, process-based view of a complicated psychological phenomenon (Oliver 1999). More importantly, the model advances theory by describing a *system of effects* that forms the service loyalty response; models that omit these effects will tend to be underspecified and offer an incomplete construal of service loyalty. Next we examine key constructs and relationships in the model, beginning with the end of the loyalty formation process. While *some* of these relationships have been examined in prior research based on North American consumers, the proposed system of effects has not been simultaneously tested in an integrated theoretical framework or in a multi-context, international setting.

The Customer Loyalty Cascade

The loyalty construct that anchors our model has received little attention from marketing scholars since Jacoby and Chestnut (1978) proposed a hierarchy of loyalty effects (see Harris and Goode (2004) and Evanschitzky and Wunderlich (2006) for exceptions). Oliver (1997) enriched this framework by describing phases of loyalty-formation beginning with *cognitive loyalty* based on brand-related beliefs. Oliver argued that cognitive loyalty can be weak, as it is comprised of beliefs that are subject to competitive threats and counter-argumentation. If this information is processed for satisfaction, it can elicit positive attitudes based on "cumulatively satisfying usage occasions" (Oliver 1999, p. 35). This *affective loyalty* is stronger because it integrates beliefs and hedonic evaluations. As loyalty attitudes strengthen based on repeated experiences, reinforced cognitions, and affective responses, consumers develop a motivation to rebuy and to engage in brand-consonant behaviors (e.g., word-of-mouth). This desire represents *conative* or *intention loyalty*, the most studied dimension of service loyalty. Finally, when attitudes and intentions convert to action, this leads to "true" as opposed to "spurious" (Day 1970) *behavioral loyalty*.

Consistent with Oliver (1997), we expect service loyalty to exhibit a sequential structure.

The Commitment-Loyalty Relationship

Commitment is the highest level of relational bonding and reflects a desire to maintain a valued relationship (Dwyer, Schurr, and Oh 1987). Commitment is essential for successful long-term relationships (Garbarino and Johnson 1999; Johnson, Herrmann, and Huber 2006; Morgan and Hunt 1994) and is key to relationship quality—the overall evaluation of relationship strength and performance in satisfying needs (DeWulf, Odekerken-Schroder, and Iacobucci, 2002). While commitment is closely related to loyalty (Oliver 1997; Pritchard, Havitz, and Howard 1999), we view these constructs as theoretically distinct, with commitment capturing relationship strength or "stickiness" even in the face of dissatisfaction (Gustafsson, Johnson, and Roos 2005), and loyalty reflecting attitudes and behaviors in response to commitment. Commitment, then, is akin to involvement (Oliva, Oliver, and MacMillan 1992) and reflects motivation associated with the personal relevance of and identification with the brand (Pritchard, Havitz, and Howard 1999).

Scholars typically describe commitment along two dimensions. *Affective commitment* is the "hotter," emotional element formed through satisfying exchanges and reflects a deepening liking (Gustafsson, Johnson, and Roos 2005). Affective commitment involves dedication-based relationship maintenance (Bendapudi and Berry 1997), feelings of emotional attachment to and identification with exchange partners (Fullerton 2003), and addresses the question: *How strongly do I feel* about my relationship with this exchange partner? In contrast, *calculative commitment* is the "colder," rational element that results from assessment of relationship benefits, costs, risks, perceived performance, switching costs, etc. (Gustafsson, Johnson, and Roos 2005). Calculative commitment involves constraint-based relationship maintenance (Bendapudi and Berry 1997), beliefs about being bound to an exchange partner (Fullerton 2003), and addresses the question: *What do I get* from my relationship with this exchange partner?

Affective and calculative commitment are related, but influence relationships differently. Studies find effects for affective commitment on loyalty (Garbarino and Johnson 1999; Johnson, Herrmann, and Huber 2006); we expect that emotional attachment to a firm yields affective loyalty and consequent intention and behavioral loyalty. Mixed results have been reported for the effects of calculative commitment on loyalty (Fullerton 2003; Gruen, Summers, and Acito 2000; Gustafsson, Johnson, and Roos 2005). We expect, though, that customers who exhibit calculative commitment based on a rational assessment of the benefits of loyalty will develop cognitive loyalty (Dwyer, Schurr, and Oh 1987). We also expect affective commitment to influence calculative commitment; customers who are emotionally attached to a service brand will perceive greater benefits to loyalty and greater risks to switching brands (Fullerton 2003; Gundlach, Achrol, and Mentzer 1995).

The Role of Cumulative Customer Satisfaction

The satisfaction construct in loyalty research is typically conceptualized as an overall evaluation of a customer's experiences with a service provider, as opposed to a transaction-specific satisfaction judgment (Harris and Goode 2004; Hennig-Thurau, Gwinner, and Gremler 2002; Johnson and Gustafsson 2000). *Cumulative satisfaction* assumes that individual judgments are aggregated to form a global assessment of "pleasurable fulfillment" of needs (Oliver 1997). In this way, cumulative satisfaction is a meta-evaluation of service performance and the service relationship over time. Compared to transaction satisfaction, cumulative satisfaction is more closely linked to loyalty intentions and behaviors (Johnson and Gustafsson 2000); hence, we

examine customers' cumulative satisfaction based on all experiences with the service firm.

Research shows that satisfaction is comprised of a utilitarian component—judgments of how well the firm has met expectations for performance, and a hedonic component—feelings of (dis)pleasure arising from this evaluation (Oliver 1997). Satisfied customers perceive greater relationship benefits, more of an emotional attachment, and higher switching costs (Ganesh, Arnold, and Reynolds 2000). Gustafsson, Johnson, and Roos (2005, p. 211) also argued that satisfaction is a "backward looking" aspect of consumer experience, whereas commitment is "forward looking." Therefore, we expect commitment to mediate the satisfaction-loyalty relationship (Garbarino and Johnson 1999; Hennig-Thurau, Gwinner, and Gremler 2002) through the effects of utilitarian and hedonic dimensions of satisfaction on calculative and affective commitment, respectively. However, research also supports a direct effect of satisfaction on loyalty intentions (Cronin, Brady, and Holt 2000; Hennig-Thurau, Gwinner, and Gremler 2002; Seiders et al. 2005) or on loyalty behavior (Bolton 1998; Gustafsson, Johnson, and Roos 2005). Consistent with the construal of loyalty phases, we propose instead that the direct effect of satisfaction on loyalty will occur at the beginning of the loyalty cascade, with cognitive loyalty.

Relational Antecedents of Commitment: Trust and Commercial Friendship

Trust. Service exchanges rely on trust because the intangible nature of services creates uncertainty and perceived risk for the consumer during purchase and consumption (Berry 1995; Crosby, Evans, and Cowles 1990). Trust exists "when one party has confidence in an exchange partner's reliability and integrity" (Morgan and Hunt 1994, p. 23). Nurturing a relationship with a trusted firm reduces risk, as well as transaction costs associated with search for and investment in new service partners (Bendapudi and Berry 1997).

Scholars conceptualize trust in relational exchanges in varied ways. Hennig-Thurau, Gwinner, and Gremler (2002) described confidence benefits as similar to trust, and found that that satisfaction mediated the effects of confidence benefits on commitment across a range of services. Sirdeshmukh, Singh, and Sabol (2002) reported that value—a construct which is conceptually similar to cumulative satisfaction—mediated the influence of trust on service loyalty. Likewise, in an online retail setting, Harris and Goode (2004) demonstrated that trust influences loyalty through satisfaction—but also that trust has direct effects on loyalty.

There are theoretical reasons, however, to propose the reverse causality, that satisfaction fosters trust in relational exchanges, especially over time (Bendapudi and Berry 1997). Garbarino and Johnson (1999) found that satisfaction mediated the effects of service attitudes on loyalty intentions for new customers, but not for customers with established relationships with the firm, for whom trust and commitment mediated the attitudes-loyalty link. Agustin and Singh (2005) demonstrated that trust partially mediated the effects of satisfaction on loyalty, though they defined satisfaction as transaction-specific, not cumulative. Despite such ambivalent findings, we argue that when trust develops, customers become less concerned about the benevolence, ability, and integrity of the firm, which reduces uncertainty (Moorman, Deshpande, and Zaltman 1993) and should enhance cumulative satisfaction with the relationship. Therefore, we expect satisfaction to mediate the effect of trust on commitment and loyalty.

Commercial Friendship. Service encounters are often social exchanges, with satisfaction partly determined by interpersonal interactions with employees (Parasuraman, Zeithaml, and Berry 1985). Many social factors affect relationship quality, such as employee friendliness and listening (Ganesh, Arnold, and Reynolds 2000), integrity, expertise, and sincerity (Moorman, Deshpande, and Zaltman 1993), relational selling behaviors such as mutual disclosure (Crosby, Evans, and Cowles 1987), and rapport (Gremler and Gwinner 2000). Research suggests that

customers enjoy and may seek relational benefits in addition to instrumental service outcomes (Gwinner, Gremler, and Bitner 1998), and these desired social benefits can influence customer commitment and loyalty (Hennig-Thurau, Gwinner, and Gremler 2002). Moreover, loyalty to service personnel can enhance loyalty to the firm, though customer relationships must be managed to avert defection should personnel leave (Palmatier, Scheer, and Steenkamp 2007).

An idea that captures this tapestry of relational influences is Price and Arnould's (1999) commercial friendship concept. Their research reveals that consumers can feel that they become friends with service personnel, and that these friendships involve affection, self-disclosure, social support, reciprocity, and trust. Furthermore, customers perceive the service provider's listening to their needs and special treatment as instrumental benefits of the friendship. We propose that customers who develop commercial friendships will believe in employees' benevolence and integrity, and will provide detailed information to enable service customization that will enhance satisfaction. Because customers often view employees as personifying the service (Zeithaml, Bitner, and Gremler 2006), trust in and satisfaction with the employees will transfer to the firm. Likewise, the customer's feelings for service personnel that emerge from commercial friendships will directly influence the affective commitment the customer feels for the firm. We also expect these feelings to indirectly affect the customer's calculative commitment as he considers the instrumental and social benefits that would be sacrificed should the commercial friendship end.

Evaluative Antecedents of Customer Satisfaction: Service Quality and Service Fairness

Service quality. Scholars generally agree that service quality is the customer's judgment of service excellence across a number of dimensions (Parasuraman, Zeithaml, and Berry 1988) and a determinant of customer satisfaction (Oliver 1997; Zeithaml, Bitner, and Gremler 2006). The higher customer perceived service quality is, the more satisfied customers should feel. This view is not unusual in the literature, though the expectation that customer satisfaction mediates the effects of service quality perceptions on customer loyalty is more contested (Cronin, Brady, and Hult 2000; Cronin and Taylor 1992; Zeithaml, Berry, and Parasuraman 1996).

For many services, customer-contact employees influence the interaction quality that reflects how the service is delivered (Brady and Cronin 2001). Customers may view as friends those employees who are perceived as reliable, responsive, and caring (Parasuraman, Zeithaml, and Berry 1988). When employees are perceived as friends who have the ability and desire to provide excellent service, we expect this to foster confidence in the individual and trust in the organization. Likewise, when service firms are perceived to be reliable in fulfilling the service promise, this should enhance trust (Parasuraman, Zeithaml, and Berry 1988). Therefore, we expect service quality to influence commercial friendship and trust in the firm.

Service fairness. Customer perceptions of service fairness indicate "rightness" in their evaluation of exchange inputs and outcomes (Oliver 1997). The social nature of services makes fairness salient for customers, with consequent effects on evaluative and relational elements of service loyalty (Huppertz, Arenson, and Evans 1978; Oliver and Swan 1989). We expect fairness to influence service quality because justice dimensions—distributive, procedural, and interactional—correspond with factors that determine quality judgments (Brady and Cronin 2001). We also expect fairness to influence commercial friendship with employees and trust in the firm because customers who feel fairly treated should build stronger bonds with service partners, both at the individual and firm level. Although there is debate about the sequence of effects in the context of cumulative evaluations (Olsen and Johnson 2003), we also expect fairness to affect satisfaction; if customers feel that service outcomes are commensurate with inputs, they will evaluate their overall satisfaction with the service positively (Oliver 1997).

Conceptual Summary

Reviewing research on the satisfaction-loyalty relationship, Oliver (1999) asked, "Whence Customer Loyalty." We offer a tentative answer with a theoretically-driven, integrative model of service loyalty. Key to our model is the system of evaluative and relational factors that research has found to affect service loyalty, but that have not been coalesced in a cohesive explanation of loyalty determinants. In the next section, we describe research methods designed to test our construal of service loyalty and its antecedent factors.

RESEARCH DESIGN AND METHODS

We conducted a research program in three stages. To clarify constructs and relationships in our theoretical model, we first developed a measurement model (Figure 1) using data collected in a hotel context. Next, we did a validation study with data drawn from six new hotels. To test the generalizability of the model across services, we elicited responses from customers of a variety of services based on an adaptation of Bowen's (1990) taxonomy: in addition to the hotels, we sampled from three hospitals and five beauty salons (relatively high levels of contact, customization, and employee importance), and three airlines, five banks, and one mobile phone company (relatively moderate levels of contact, customization, and employee importance). These services are more relationship-oriented than services such as road repair or furniture delivery that are characterized by discrete transactions and minimal formal relationships (Lovelock 1983). By studying relationship-oriented services, we strived to highlight factors that affect service loyalty. In addition, variability across the sampled services in terms of the nature of the service act and especially room for customer-contact personnel to customize service (Lovelock 1983) permits a stronger test of the generalizability of the proposed model, as well as tests for the moderating effect of service-employee influence as captured by the commercial-friendship construct.

The full sample involved more than 3,500 participants from 24 firms across six different service contexts. We used qualitative and quantitative methods for data collection. We first conducted three focus groups—one with ten customers, one with eight service employees, and one with six managers—to identify the meanings of customer loyalty. Because our measures were translated from English to Chinese, several services-marketing scholars in China examined the items for cultural differences and content validity, with problematic items deleted from the instrument. We tested the face validity of the items by collecting 156 surveys from hotel guests. We factor analyzed this data, deleted items for which factor loadings were less than 0.30, and revised the survey. Next, we administered cross-sectional surveys using three versions of the instrument with randomized questions to minimize potential biases due to order effects. The measurement and structural equation models (SEM) were analyzed with LISREL 8.72.

Samples

In Study 1, we used a convenience sample of guests in a 3-star hotel in Guangzhou. Of 660 surveys distributed by service personnel, 502 were returned for a response rate of 76.1%.[1] In the validation study we used systematic sampling. First, we asked hotel managers at three 4-star hotels and three 2-star hotels to identify repeat guests from the hotels' databases who were staying at the hotel. One guest out of every five was selected according to their room number to receive a survey. Of 800 surveys distributed, 601 were returned for a response rate of 75.1%.

In the five generalization studies, we used systematic sampling for all but the beauty-salon sample. Participants for the airline sample were recruited in Baiyun International Airport in

Guangzhou by selecting one person out of every five seats and asking if he/she was a customer of one of three airlines, otherwise, we asked the person in the next seat, and so on. Of 601 surveys distributed, 465 were returned, for a response rate of 77.4%. Participants for the hospital sample were in-patients (except pediatrics) of two hospitals in Guangzhou and one in Yan'an city. We asked the head of nurses to distribute surveys according to bed number, selecting one out of every five beds. Of 1,050 surveys distributed, 596 were returned, for a response rate of 56.8%. Participants in the bank sample were customers of three banks in Guangzhou and two banks in Yan'an. We asked bank managers to distribute surveys according to waiting number, selecting one out of every five customers. Of 885 surveys distributed, 544 were returned, for a response rate of 61.5%. Participants for the mobile phone sample were customers of one firm in Guangzhou. We asked a manager to distribute surveys according to waiting number, selecting one out of every five customers. Of 600 surveys distributed, 461 were returned, for a response rate of 76.8%. Because the five sampled beauty salons were small, we asked managers to survey all customers. Of 500 surveys distributed, 409 were returned, for a response rate of 81.8%. Given the full dataset's large sample size, the sampling method, and the fact that less than 1% of completed surveys had missing data, we used listwise deletion to remove incomplete cases.

Measures

We measured constructs in the service loyalty model with self-reported, multiple-item scales adapted from the literature (see the Appendix). With the exception of the service quality items (measured with semantic differential scales), items were measured with seven-point scales anchored at 1 (strongly disagree) and 7 (strongly agree). Four items were used to measure each phase of service loyalty, based on the work of DeWulf, Odekerken-Schroder, and Iacobucci (2002), Grelmer et al. (2001), Oliver (1997), and Zeithaml, Berry, and Parasuraman (1996). Five items each were used to measure affective commitment and calculative commitment based on measures from Allen and Meyer (1990) and Johnson, Gustafsson, Andresassen, Lervik, and Cha (2001). Five items were used to measure customer satisfaction; three were adapted from Fornell (1992), and two were from Cronin, Brady, and Hult (2000). Four items used to measure trust were adapted from McKnight, Cumming, and Chervany (1998). Eight items used to measure service quality were based on the research of Parasuraman, Zeithaml, and Berry (1988). Service fairness (interactive, distributive, and procedural justice) was measured with 14 items adapted from Bowman and Narayandas (2001), Blodgett, Hill, and Tax (1997), and Clemmer and Schneider (1996). Finally, we measured commercial friendship with five items adapted from Price and Arnould (1999). We split the items of each construct into two groups and took the mean of each group as construct indicators. In latent-variable SEM analysis, this method can reduce the number of estimated coefficients, and increase indicator reliability and estimated coefficients stability (Sweeney, Soutar, and Johnson 1999).

STUDY 1: INITIAL MODEL TEST IN A HOTEL CONTEXT

Measurement Model Analysis

Common Method Variance. Because we collected data with cross-sectional surveys, we examined and controlled for potential biases due to common method variance (CMV). Following the ideas of Podsakoff, MacKenzie, Lee, and Podsakoff (2003), we tested for CMV by, first, loading indicators in the service loyalty model on a single factor. This method-only model yielded a poor fit to the data (χ^2= 3982.03, *df* = 218, RMSEA = 0.20) compared to a trait-only

model with indicators loading on hypothesized constructs (χ^2 = 200.88, *df* = 154, RMSEA = 0.022). We next estimated a trait-method model by loading indicators on hypothesized constructs as well as on the latent method factor (χ^2=163.75, *df* = 133, RMSEA = 0.018). This trait-method model yielded a better fit than the trait-only model, which indicates that CMV is present. Thus, we included a CMV factor in our analyses to partial out common method effects.[2]

Reliability and CFA. We also conducted a confirmatory factor analysis to evaluate each construct's measures. Because some constructs violated assumptions of normality, we performed a normal transformation using PRELIS 2 (Joreskog and Sorbom 1996).[3] The covariance matrix was used as the input matrix. The resulting measurement-model statistics suggest a good fit to the data: NFI = 1.00, CFI = 1.00, IFI = 1.00, GFI = 0.97, AGFI = 0.95, RFI = 0.99, SRMR = 0.0067, RMSEA = 0.016, χ^2=155.79 (*df* = 132). Factor loadings for the constructs are significant (t-values from 8.18 to 26.24), indicating excellent convergent validity. Reliability of the construct indicators is high (Cronbach's α from .94 to .96), indicating strong internal consistency. Construct reliability is high, as indicated by composite alpha (0.90 to 0.96) and average variance extracted (AVE: the variance in the measures accounted for by the latent construct) values well above the suggested .50 threshold (Bagozzi and Yi 1988); see Table 1. Discriminant validity is supported when the AVE of each construct is greater than shared variance between each pair of constructs, i.e., the squared correlation between constructs, or Φ^2 (Fornell and Larcker 1981); this criterion is met for all possible construct pairs. In sum, the measurement model is supported.

Second-Order Factor Analysis. To examine the dimensionality of and relationships between loyalty and commitment, we performed a second-order factor analysis. The resulting statistics suggest a good fit to the data: NFI = 1.00, NNFI = 1.00, CFI = 1.00, IFI = 1.00, RFI = 0.99, SRMR = .0088, RMSEA = .048, GFI = .98, AGFI = .94, χ^2 = 78.56 (*df* = 35). Factor loadings of the four loyalty components with customer loyalty and the two commitment components with customer commitment are significant (t-values from 2.37 to 5.68 and from 2.68 to 5.03, respectively). These results indicate that affective and calculative commitment are sub-factors of the second-order factor of customer commitment, and that the loyalty components are sub-factors of the second-order factor of customer loyalty, in support of Oliver's (1997) ideas. The correlations between the second-order factors of loyalty and commitment (r = .47, SE = .19), as well as between affective commitment and affective loyalty (r = .47, SE = .16) and between calculative commitment and cognitive loyalty (r = .55, SE = .17), though significant, are at least two standard errors away from one (Anderson and Gerbing 1988); thus we conclude that loyalty and commitment are two related but different constructs.

Structural Equation Model Results

Overall Model Fit. We estimated a structural equation model using the ML procedure in LISREL 8.72 to assess path coefficients and test relationships proposed in the conceptual model. The structural model yielded a good fit to the data (NFI = 1.00, CFI = 1.00, IFI = 1.00, GFI = 0.96, AGFI = 0.94, RFI = 0.99, SRMR = 0.020, RMSEA = 0.030, χ^2 = 255.25 (*df* = 169). The variances explained by the model for the four loyalty components are high (cognitive loyalty = 0.87; affective loyalty = 0.89, intention loyalty = 0.92, and behavioral loyalty = 0.87). These results support our conceptualization of an integrated service loyalty system.

Path Results. To test specific construct relationships, we optimized the fit of the data to the model and examined standardized parameter estimates for all significant construct pairs (see table 2, column 2). In support of the loyalty cascade, results show significant path coefficients along the expected sequence: cognitive to affective loyalty ($\beta_{8.7}$ = 0.69; t = 11.63), affective to intention loyalty ($\beta_{9.8}$ = 0.82; t = 11.75), and intention to behavioral loyalty ($\beta_{10.9}$ = 0.74; t =

12.29). We proposed that the commitment-loyalty relationship is described by direct associations between calculative commitment and cognitive loyalty, and between affective commitment and affective loyalty. Results are significant for these relationships (CC→CL: $\beta_{7.6} = 0.31$; t = 4.70; AC→AL: $\beta_{8.5} = 0.09$; t = 2.57). We expected calculative commitment to be influenced by affective commitment; results identify this link as significant ($\beta_{6.5} = 0.27$; t = 7.49). We also expected satisfaction to have direct effects on calculative and affective commitment, and direct effects on loyalty, in particular, cognitive loyalty (CS→CC: $\beta_{6.4} = 0.67$; t = 15.78; CS→AC: $\beta_{5.4} = 0.25$; t = 5.55; CS→CL: $\beta_{7.4} = 0.55$; t = 8.44); results also support these relationships.

We proposed that trust affects loyalty indirectly through satisfaction; that is, cumulative customer satisfaction mediates trust. In support of this construal, we find a significant path from trust to satisfaction, (TR→CS: $\beta_{4.3} = 0.26$; t = 4.33) and non-significant paths from trust to calculative commitment and cognitive loyalty. However, a significant path from trust to affective commitment is evident ($\beta = 0.41$; t = 7.27); we address this finding in the next section. We also expected perceptions of friendship with service employees to affect trust in, satisfaction with, and affective commitment to the firm. Significant paths support these relationships (CF→TR: $\beta_{3.2} = 0.64$; t = 14.80; CF→CS: $\beta_{4.2} = 0.25$; t = 4.73; CF→AC: $\beta_{5.2} = 0.19$; t = 3.59) and our conceptualization of commercial friendship and trust as antecedents to customer satisfaction and commitment. Finally, we proposed that service quality perceptions would influence customer satisfaction, commercial friendship, and trust in the firm—theoretical relationships that have received little empirical attention in non-North American contexts. Results support these paths (SQ→CS: $\beta_{4.1} = 0.21$; t = 4.16; SQ→CF: $\beta_{2.1} = 0.57$; t = 9.34; SQ→TR: $\beta_{3.1} = 0.30$; t = 6.15). Our only mixed results are for expected effects of service fairness. We find significant paths for service fairness to service quality ($\gamma_{1.1} = 0.52$; t = 13.46) and service fairness to satisfaction ($\gamma_{4.1} = 0.32$; t = 9.02), but the paths to commercial friendship and trust are not significant.

Tests of Alternative Models. Overall, 18 of 20 (90%) predicted paths are significant in the service loyalty model, which also offers a strong fit to the data and explains significant variance in loyalty. To reinforce this analysis, we compared our model to alternative models that feature different structural relationships, such as the reverse casual relationship between cumulative customer satisfaction and trust: CS→TR (Agustin and Singh 2005), between satisfaction and service quality: CS→SQ (Bolton and Drew 1991), and between trust and commercial friendship: TR→CF (Hennig-Thureau, Gwinner, and Gremler 2002).

Given the ambivalent treatment in the literature of the trust-satisfaction path structure, we tested an alternative model in which trust mediates cumulative customer satisfaction (CS→TR). SEM results yield acceptable fit to the data.[4] Because the service loyalty and alternative models are not nested, we determined which model better fit the data via lower AIC and CAIC, and higher PNFI and PGFI values (Hair, Anderson, Tatham, and Black., 1998). The service loyalty model (AIC = 415.07; CAIC = 853.43; PNFI = 0.73; PGFI = 0.64; $\chi^2 = 255.25.45$; $df = 169$) marginally fit the data better than the alternative model (AIC = 416.81; CAIC = 855.17; PNFI = 0.72; PGFI = 0.63; $\chi^2 = 258.07$; $df = 169$). In addition, modification of the CS→TR model shows that the paths from satisfaction to the commitment factors and cognitive loyalty remain significant and nearly unchanged, whereas only the path from trust to affective commitment is significant, which suggests minimal mediation role for trust. In sum, the service loyalty model, which posits that cumulative satisfaction mediates trust, better fits the data.

A similar model comparison shows that the fit of the service loyalty model to the data is the same or better than models that propose a CS→SQ relationship (AIC = 416.14; CAIC = 854.50; PNFI = 0.73; PGFI = 0.64; $\chi^2 = 255.61$; $df = 169$) or a TR→CF relationship (AIC = 415.07, CAIC = 853.43; PNFI = 0.73; PGFI = 0.64; $\chi^2 = 255.25$; $df = 169$). In general, our proposed model represents the system of loyalty determinants as well or better than alternative

models. However, because Study 1 used a convenience sample collected from one hotel, the validity and generalizability of the findings are limited. Therefore, we sought additional service contexts to test the model and examine construct relationships.

STUDIES 2—7: VALIDATION & GENERALIZATION ACROSS SERVICE CONTEXTS

We began the additional tests of the service loyalty model by sampling from three 4-star and three 2-star hotels to validate the results from Study 1, which sampled from one 3-star hotel. After obtaining consistent findings, we extended the tests to five new and different service settings to examine whether our model generalized to non-hotel contexts. For efficiency in reporting results, we combine the description of our validation and generalization tests below.

Measurement Model Results

Common Method Variance. We again tested for common method variance (CMV) due to our use of cross-sectional surveys for data collection by applying the procedure for identifying and statistically controlling for CMV described in Study 1. Results of this analysis revealed the same pattern of effects across samples, indicating that CMV is present in our data. To partial out the common method effects, we again included a CMV factor in the analyses.[5]

Reliability and CFA. Confirmatory factor analysis for the measurement model yielded statistics that suggest a good fit of the model to the data across samples (see table 3). Cronbach's α of each indicator is at least 0.80, supporting the internal consistency of the model's measures. Composite α of each construct is at least 0.80, and all AVE values are above .70, indicating high construct reliability. The AVE of each construct is greater than the shared variance between each pair of constructs (Φ^2), providing evidence of discriminant validity. The factor loadings for the indicators are significant (t-values from 4.49 to 27.25), indicating excellent convergent validity. Overall, the measurement model is strongly supported in the six different service contexts.

Second-Order Factor Analysis. A second-order factor analysis produced significant factor loadings for the four loyalty components (t-values from 3.15 to 9.40) and two commitment components (t-values from 2.75 to 8.05). Although the loyalty-commitment correlations are significant across samples (second-order factors, r = 0.27 to 0.59; affective commitment-affective loyalty, r = 0.35 to 0.65; calculative commitment-cognitive loyalty, r = 0.24 to 0.58), the correlations are at least two standard errors away from one. Therefore, consistent with the Study 1, we find that cognitive, affective, intentional, and behavioral loyalty are sub-factors of the second-order factor of customer loyalty, and affective and calculative commitment are sub-factors of the second-order factor of commitment. Furthermore, we are confident that loyalty and commitment are two related but different constructs.

Structural Equation Model Results

Overall Model Fit. The fit of the structural relationships in the conceptual model was evaluated using the ML procedure of LISREL 8.72. Goodness-of-fit indices again suggest a good fit of the model to the data (see table 4). Explained variance of the loyalty components are from 59% (behavioral loyalty in the hospital sample) to 98% (behavioral loyalty in the bank sample), indicating strong explanatory ability of the model across contexts. These results provide solid support for our construal of the service loyalty model.

Path Results. We examined standardized parameter estimates across the validation and generalization samples by optimizing the fit of the data to the model (see table 2, columns 3—8).

Results tell a highly consistent story. We again find strong support for the proposed sequential structure of service loyalty. All paths from cognitive to affective to intention to behavioral loyalty are significant across the six service contexts. We also find unexpected significant paths between cognitive and intention loyalty in the airline, mobile phone, and beauty salon sample, and between cognitive and behavioral loyalty in the hotel and airline samples. These findings highlight the multidimensional complexity of customer loyalty (Jacoby and Chestnut 1978).

The expected relationship between commitment and loyalty is replicated in studies 2—7. We find significant paths between calculative commitment and cognitive loyalty and between affective and calculative commitment across all samples. The relationship between affective commitment and loyalty is weaker and not significant in the hotel and hospital samples. We also find an unexpected relationship between calculative commitment and behavioral loyalty in the hospital and airline samples. The fact that the unexpected paths between the commitment and loyalty dimensions are significant in only five out of thirty-six instances reinforces our measurement-model conclusion of discriminant validity.

Consistent with Study 1 and as conceptualized in our model, across all service contexts cumulative customer satisfaction has a significant relationship with calculative and affective commitment (except the CS→CC link in the airline sample). We also find expected effects of satisfaction on cognitive loyalty in all but the bank context. Analysis also reveals unexpected significant paths between satisfaction and other loyalty dimensions in varying contexts, e.g., satisfaction and affective loyalty in the hotel, hospital, and beauty salon samples; satisfaction and intention loyalty in the airline, bank, and hospital samples; and, satisfaction and behavioral loyalty in the bank samples. These results support the strong influence of cumulative customer satisfaction on loyalty, both directly and mediated by commitment.

The complexity of the trust-satisfaction relationship again emerges in the data. We find a significant relationship between trust in the service firm and cumulative customer satisfaction across contexts. However, path analysis reveals unexpected significant relationships between trust and affective commitment in three samples (hotel, airline, and mobile phone), and between trust and loyalty intentions in three samples (hotel, hospital, and beauty salons). Although the pattern of effects is difficult to interpret, these findings suggest that trust may be only partially mediated by customer satisfaction in certain service contexts. We reexamine this issue in the next section with model tests that posit the reverse trust-satisfaction structural relationship.

The finding of significant relationships between the previously unexamined commercial friendship construct and trust, cumulative satisfaction, and commitment reinforces the important role of interpersonal factors in service loyalty. Overall, 13 of 18 paths involving commercial friendship's proposed effects are significant, and 10 of 12 paths between commercial friendship and its proposed antecedents are significant. Commercial friendship influences trust, satisfaction, and affective commitment more in the high-service (high contact, customization and employee importance) hotel, hospital, and beauty salon contexts (eight of nine paths are significant) than in the moderate-service bank, mobile phone, and airline contexts (five of nine paths are significant).

To further examine the influence of commercial friendship, we ran a series of chi-square difference tests by separately treating trust, satisfaction, and commitment as dependent variables and constraining the path from commercial friendship to these constructs to zero or allowing the path to be freely estimated. We used the structure proposed in the service loyalty model, but created reduced nested models to test one dependent variable at a time. For example, to test the explanatory contribution of commercial friendship for trust in the service firm, we removed subsequent constructs (satisfaction, commitment, and loyalty) from the model; to test the explanatory contribution of commercial friendship for satisfaction, we kept trust in its proposed antecedent position in the model, but removed commitment and loyalty. To enable separate chi-

square difference tests of commitment, we treated this construct as unidimensional. Results show significant difference statistics across samples and dependent variables in 13 of 21 tests (see Table 5). The chi square difference is significant in three of seven contexts for the commercial friendship—satisfaction relationship, in three of seven contexts for the commercial friendship—trust relationship, and in all contexts for the commercial friendship—commitment relationship. This latter finding has face validity and supports the idea that feelings of commercial friendship with employees strengthen the customer's attachment to and relationship with the service firm.

Finally, the SEM results for paths involving service quality and service fairness reveal the generalizability of past research to an international context. We find that service quality has a positive relationship with customer satisfaction and trust in the service firm across contexts, and with commercial friendship in all but the bank sample. In contrast to Study 1, all hypothesized paths between service fairness and service quality and trust are significant across contexts. In all contexts but airlines, the path between service quality and commercial friendship is significant. In addition, the path coefficients are consistently high for the relationship between fairness and service quality. Results also reveal an unexpected link between service fairness and cognitive loyalty in all but the airline and hospital samples.

Tests of Alternative Models. We again compared our model to alternative models that featured different structural relationships.[6] The service loyalty model better fit the data than the CS→TR model that features trust mediating cumulative customer satisfaction for all but the airline sample. Path analysis shows that three of six paths from trust to affective commitment are significant, but none of the paths from trust to calculative commitment or to cognitive loyalty are significant. Further, of the 16 out of 18 paths from satisfaction to the commitment dimensions and cognitive loyalty that were significant in the service loyalty model, all remain significant in the alternative model—and with negligible effects on the size of the path coefficients. These results support the idea that cumulative customer satisfaction mediates trust in the service loyalty system as opposed to the reverse relationship.

Compared to the TR→CF model, our model yielded the same fit across samples; however, several proposed structural paths that were significant in the service loyalty model were not significant in the TR→CF model: SF→CF (hotel), SQ→CF and CC→CL (mobile phone), and SQ→CF and TR→CS (beauty salon). The service loyalty model yielded a better fit than a model positing a CS→SQ structural relationship in the airline and bank contexts, and the same fit in the other contexts; in the mobile phone sample, the SQ→CF and CC→CL paths are no longer significant, and in the beauty salon context, the SQ→CF is no longer significant. Thus, we conclude that the proposed service loyalty model represents the system of loyalty determinants as well or better than alternative models derived from the literature.

Multigroup Analysis—The Moderating Effect of Service Context. The SEM results for the validation and generalization studies provide consistent evidence in support of the service loyalty model. At least 17 of 20 proposed paths are significant in any one study; in the beauty salon context, all expected paths are significant. Of the 20 construct relationships proposed in the model, 13 have significant paths across all studies; overall, 109 of 120 proposed paths (90.8%) are significant. These results reinforce the generalizability of the model; however, path analysis also reveals variability across the service contexts studied here, both in the significance and the size of the standardized coefficients (Table 2). Pairwise comparisons of path coefficients across construct relationships and between service contexts yield few clear patterns for which confident conclusions about the moderating effect of service context may be derived. Fortunately, our multi-sector dataset, when collapsed based on service type, permits a more nuanced analysis.

We performed a multi-group analysis for testing moderation in SEM consistent with similar approaches used in the literature (e.g., DeWulf, Odekerken-Schroder, and Iacobucci

2001; Palmatier, Scheer, and Steenkamp 2007). First we collapsed the data from hospital, hotel, and beauty salon samples, and from the airline, bank, and mobile phone samples to create a high-service group and moderate-service group, respectively. We then used the service loyalty model to estimate structural models for each service-context group; goodness-of-fit indices suggest acceptable fit of the model to the data sets (see table 6), though the model fits the high-service data ($\chi^2 = 836.41$; df = 169) better than the moderate-service data ($\chi^2 = 1404.80$; df = 169). In addition, all proposed paths are significant in the high-service group, but in the moderate-service group, paths from commercial friendship to cumulative customer satisfaction (CF→CS), and from satisfaction to calculative commitment (CS→CC) are not significant.

To more precisely examine these context differences, we estimated a model for which all proposed service-loyalty paths were constrained to be equal across the high- and moderate-service groups. Using a chi-square difference test, we compared the equal-path model to a series of models for which we enabled one proposed path at a time to vary freely across the high- and moderate-service groups. Results reported in Table 5 show that service context moderated only three of twenty paths: SQ→CF, SQ→TR, and CF→TR. Of interest, though, are the inter-relationships of these constructs. Service quality had a stronger effect on commercial friendship in the high-service contexts ($\beta_{2.1} = 0.51$ vs. 0.37; $\Delta\chi^2_{(1)} = 5.32$, $p < .05$), but a stronger effect on trust in the moderate-service contexts ($\beta_{3.1} = 0.56$ vs. 0.40; $\Delta\chi^2_{(1)} = 9.52$, $p < .01$). On the other hand, commercial friendship had a stronger effect on trust in the high-service contexts ($\beta_{3.2} = 0.45$ vs. 0.12; $\Delta\chi^2_{(1)} = 43.40$, $p < .001$). These results suggest service type (i.e., high vs. moderate service contact, customization, and employee importance) does moderate aspects of the service loyalty system. We elaborate upon this and prior findings in the discussion that follows.

DISCUSSION

Customer loyalty is a paramount marketing objective for most service firms. However, attaining customer loyalty is complicated by the myriad factors that influence loyalty formation, and producing customer satisfaction alone is not enough. Oliver (1999, p. 33), in reflecting on this "satisfaction-loyalty conundrum," called for "a greater understanding of the role of customer satisfaction in loyalty, other nonsatisfaction determinants of customer loyalty, and their interrelationships." We answer this call by conceptualizing and testing across service domains (and in an international setting) an integrative model of customer loyalty. Our model and the empirical studies that support it contribute to the marketing literature in a number of ways:

- By melding theoretically-related loyalty antecedents—evaluative factors (service fairness, service quality, and customer satisfaction) and relational factors (commercial friendship, trust, and commitment), and simultaneously testing their effects for the first time, our model of the service loyalty system accounts for the interrelated influences of these determinants on loyalty attitudes and behavior across a range of service contexts.
- We find that Oliver's (1997; 1999) phased loyalty construct fits the data across service contexts; yet, evidence of direct effects of cognitive and affective loyalty on intention and behavioral loyalty in certain contexts suggests that loyalty is more complex than reflected by the linear, sequential structure of the loyalty cascade (Agustin and Singh 2005).
- Cumulative customer satisfaction is a meta-judgment in the service loyalty system and generally mediates the effects of other determinants on commitment and loyalty; however, a few exceptions are apparent, such as the expected influence of commercial friendship and unexpected influence of trust on affective commitment. Further, the effects of cumulative customer satisfaction on behavioral loyalty are partially mediated by commitment and loyalty

attitudes, which provides an explanation for the satisfaction-loyalty conundrum.

- Commercial friendship, a construct that reflects social benefits of service relationships, enhances the explanatory power of the service loyalty model beyond the factors traditionally examined in customer loyalty research; however, the influence of commercial friendship depends in part on the service context.

Theoretical Implications

A more complete understanding of service loyalty. Results of our studies indicate that prior divergent conclusions about the determinants of service loyalty are due in part to narrow conceptualizations of loyalty and underspecified models. We develop a more comprehensive, theory-driven loyalty model that yields high explained variance in customer loyalty across service contexts. The emerging view of service loyalty is one that recognizes the confluence of evaluative and relational factors resulting from consumption experience and informing a dynamic decision process that yields loyalty attitudes and behaviors (Hennig-Thurau, Gwinner, and Gremler 2002; Jacoby and Chestnut 1978; Oliver 1999). This system of determinants has not been conceptually integrated or empirically tested before. As proposed in the service loyalty model, perceptions of service fairness and quality, commercial friendships between customers and service employees, trust in the firm, cumulative customer satisfaction, and calculative and affective commitment are all antecedents to service loyalty.

Insights into the structure of customer loyalty for services. An important contribution of our research is the use of multi-item scales to measure and test Oliver's (1997; 1999) loyalty phases. Our results support the view that loyalty is multidimensional and highlight the limitations of research that measure loyalty attitudes *or* behaviors—but not both, or that measure but one aspect of loyalty (e.g., repeat purchase only). We echo the conclusion of Day (1969) and other scholars that incomplete conceptualizations of loyalty confound true loyalty and spurious loyalty. Across our studies, behavioral loyalty is mediated by loyalty attitudes, with relatively few instances of significant direct relationships between antecedent factors and behavioral loyalty. While this might be seen as further evidence of the satisfaction-loyalty conundrum (Oliver 1999), we conclude that customer satisfaction is significantly related to behavioral loyalty—when satisfaction fosters the development of commitment and loyalty attitudes first.

The complex role of satisfaction in service loyalty. We find support for the expectation that cumulative customer satisfaction influences service loyalty directly through the cognitive dimension. However, evidence for the direct influence of satisfaction on affective loyalty and loyalty intentions in several service contexts underscores the dimensional complexity of the cumulative satisfaction construct. Moreover, the expected finding that cumulative customer satisfaction mediates perceptions of service fairness, service quality, and trust on commitment and loyalty, is complicated by evidence of unexpected direct effects, such as the influence of service fairness on cognitive loyalty in four service contexts, and trust on loyalty intentions in three contexts. Together, these findings reinforce Oliver's (1999) proposition that satisfaction is necessary for loyalty development, but may be less important for enduring loyalty as other nonsatisfaction determinants exert increasing influence. Although we provide analyses in support of the theory that cumulative customer satisfaction mediates trust in the service firm, alternative arguments and evidence exist in the literature. It is certainly reasonable to conceptualize trust-satisfaction as an evolving, reciprocal relationship with feedback effects that alter the causal nature of these factors on commitment and loyalty over time. For example, transaction satisfaction may be needed to develop trust in the firm early in a service relationship, though

deepening trust may later be needed to build strong cumulative customer satisfaction. Future research that accounts for the temporal dimension of service relationships and different service contexts is needed to disentangle the complicated association between cumulative customer satisfaction, trust, and other nonsatisfaction factors in the service loyalty system.

Friendship and feeling in services. A unique aspect of service relationships is the social quality, which we measured as commercial friendship (Price and Arnould 1999). While the expected influence of customer perceptions of friendship with service employees on trust in and customer satisfaction with the firm were mixed, path analysis revealed effects of service context. In the high-service (high contact, customization, and employee importance) hotel, hospital, and beauty salon contexts, five of six paths between commercial friendship and trust and satisfaction were significant, whereas only two of six of the same paths were significant in the moderate-service airline, bank, and mobile phone contexts. Multigroup SEM analysis reinforces the moderating effect of service context, especially on the relational factors. Particularly interesting is the varied path of influence of service quality—through trust in the service firm in moderate-service contexts, but through commercial friendship and then trust in high-service contexts.

This influence of a social/interpersonal factor on service loyalty was largely absent from prior research (Hennig-Thurau, Gwinner, and Gremler 2002), though Oliver (1999) argued that social influences may be particularly important for the development of "ultimate loyalty." Even though we find less influence of commercial friendship on trust and satisfaction in moderate-service contexts, commercial friendship had significant effects on affective commitment across all contexts we studied—and affective commitment influenced calculative commitment. This implies that customers who feel a friendship with service personnel can develop an emotional attachment to the service firm that translates into strengthened calculative commitment due to perceived social benefits and high switching costs; this commitment impacts loyalty attitudes and behavior. These findings reveal that friendship bonds foster feelings that enhance service loyalty. However, a question left unanswered by the present research is whether commercial friendship would still function as a key determinant in the service loyalty system when customer contact, service customization, and employee importance is low, such as self-service and online service contexts. Based on the conceptualization developed for the service loyalty model, we would expect the influence of commercial friendship to be minimal in low-service contexts. However, service relationships may also develop social bonds through the service provider's interaction with the customer's social network (e.g., online), through broader service-brand communities (e.g., travel clubs), and perhaps even through the customer's interaction with a virtual service provider (e.g., an anthropomorphized virtual "friend" who makes product recommendations), which can increase trust (at the firm level), commitment, as well as switching costs (Bendapudi and Berry 1997; Oliver 1999). The exploration of alternative forms and effects of commercial friendships in service is an interesting avenue for future research.

Managerial Implications

Recent research has given marketing practitioners reason to question the benefits of strategies designed to enhance customer satisfaction in pursuit of loyalty (Oliver 1999). The theoretical model and analysis we present indicate that this skepticism is unfounded; however, our studies highlight the complexity of service loyalty and the need to measure and manage more than just satisfaction. A straight-forward, overarching implication for marketing managers is that service loyalty—loyalty attitudes and behaviors—is determined by a system of effects—service fairness, service quality, commercial friendship, trust, customer satisfaction, and affective and calculative commitment, so attention should be paid to each of the constructs because each

influences the loyalty response. In this regard, we echo Agustin and Singh (2005, p. 107), who said: "Managers are likely to have the urge to sort through our results to address the bottom-line question, Which loyalty determinant is most important? Our response is that they all are."

More generally, our service loyalty model offers managers a path for reaching behavioral loyalty goals—as well as a system of constructs and measures for marking progress. Based on the generalizability of our findings, we conclude that attainment of customer loyalty requires service firms to treat customers fairly, to deliver service quality, and to develop customer trust, cumulative satisfaction, and commitment to a relationship with the firm. This basic managerial prescription is tempered, however, by our finding that some paths in the service loyalty model are moderated by service context. Thus, managers of high-service firms (high contact with customers, more customization, and greater employee importance) should focus equal or more attention on relational factors, in particular the development of commercial friendships with customers. On the other hand, for moderate-service firms, commercial friendships have less influence on trust and cumulative customer satisfaction; instead, evaluative factors such as service fairness and service quality play a larger role in determining service loyalty.

Research Limitations and Future Directions

Scholars have noted a need to validate models created in one setting with examination in other settings (DeWulf, Odekerken-Schroder, and Iacobucci 2002). Our model is derived from research conducted in North America, though we test it in China. We view this as a strength of our research, especially given the growth of services in the world's largest market. Nevertheless, the mono-cultural setting of our studies is a potential limitation if the determinants of service loyalty for Chinese consumers are systematically different than for consumers in other countries. The generalizability of our model would be enhanced by replication in other settings.

Another limitation of our research is the cross-sectional design. Loyalty is dynamic, and the relative influence of antecedent factors evolves as relationships mature (Johnson, Herrmann, and Huber 2006). Though we strived to capture this dynamic nature with our constructs (e.g., cumulative customer satisfaction) and theory-driven conceptualization, a longitudinal design that assesses service loyalty at different points in time is more appropriate. A related limitation is our operationalization of behavioral loyalty, which uses self-reported past behavior to indicate future behavior. Ideally, future research would measure actual behavior over time. Though our model was based on theory and a priori hypotheses derived from the literature about causal relationships in the loyalty system, the nature of our correlational data and the SEM analytic method precludes causal inference. Thus, although we present conclusions about the direction of influence of constructs in the model and test alternative structural relationships, and although our LISREL results support this causal structure, we acknowledge the possibility of alternative paths and causality. Here again, future research that uses a longitudinal design is needed to support the validity of causal conclusions. Finally, although our main objective was to derive predictive power from a more conceptually complete view of service loyalty that generalized to multiple service contexts, recent research reveals curvilinear effects (e.g., Agustin and Singh 2005) and moderated relationships (e.g., Seiders et al. 2005) that influence loyalty. We explore one such factor here, the moderating effect of service context, and see the theoretical and empirical examination of other moderators (e.g., relationship duration or individual difference factors) as a fruitful area for future research. In general, we encourage research that extends and tests our service loyalty model with new constructs and relationships that enhance nomological validity and in new contexts that enhance external validity. We hope that our research is a solid step toward a richer understanding of service loyalty and its determinants.

[1] We attained high response rates for the samples in this study thanks to close relationships between the authors and personnel who facilitated data collection at several of the sampled service firms.
[2] Despite the presence of CMV, the effect of including a common-method factor in the service loyalty model is negligible. For example, comparison of estimated path coefficients across the trait-only and trait-method models reveals no changes in the significance of predicted paths.
[3] This normal-transformation procedure was followed for the other samples due to non-normal distributions.
[4] Fit statistics are not reported here for the alternate models, but are available from the authors.
[5]Model comparison (χ^2 tests) results are available from the authors. As with the analysis reported for Study 1, inclusion of a method-factor for the SEM analysis of the service loyalty model revealed little influence of CMV. Of 120 proposed paths across the six study samples, only three significant paths became not significant.
[6] Fit statistics for these model tests are available from the authors.

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TABLE 1
Study 1 Descriptive Statistics

Variable	Mean	S.D	α	SF	SQ	CF	TR	CS	AC	CC	CL	AL	IL	BL
SF	4.975	1.054	0.95	0.90	0.36	0.09	0.12	0.36	0.18	0.34	0.27	0.27	0.25	0.22
SQ	4.711	1.159	0.90	0.60	0.82	0.44	0.59	0.64	0.59	0.62	0.62	0.61	0.58	0.50
CF	4.672	1.230	0.92	0.30	0.66	0.85	0.64	0.45	0.56	0.48	0.46	0.48	0.46	0.44
TR	4.679	1.308	0.95	0.34	0.77	0.80	0.90	0.50	0.67	0.52	0.52	0.49	0.48	0.42
CS	4.475	1.292	0.95	0.60	0.80	0.67	0.71	0.91	0.56	0.83	0.85	0.76	0.71	0.67
AC	4.685	1.191	0.92	0.42	0.77	0.75	0.82	0.75	0.86	0.64	0.55	0.56	0.55	0.45
CC	4.450	1.291	0.93	0.58	0.79	0.69	0.72	0.91	0.80	0.87	0.81	0.79	0.74	0.69
CL	4.338	1.335	0.94	0.52	0.79	0.68	0.72	0.92	0.74	0.90	0.89	0.86	0.83	0.76
AL	4.387	1.378	0.95	0.52	0.78	0.69	0.70	0.87	0.75	0.89	0.93	0.91	0.90	0.81
IL	4.426	1.403	0.96	0.50	0.76	0.68	0.69	0.84	0.74	0.86	0.91	0.95	0.91	0.86
BL	4.328	1.459	0.96	0.47	0.71	0.66	0.65	0.82	0.67	0.83	0.87	0.90	0.93	0.92

Notes： SF = service fairness, SQ = service quality, CF = commercial friendship, TR = trust, CS = customer satisfaction, AC = affective commitment, CC = calculative commitment, CL = cognitive loyalty, AL = affective loyalty, IL = intention loyalty, BL = behavioral loyalty; α is composite reliability; left of the diagonal (shaded) is the correlation matrix; the value on the diagonal is AVE; right of the diagonal is φ^2.

TABLE 2
Estimated Path Coefficients Across Samples

Standardized Path Estimate/t-value

Path (Hypothesis)	Hotel 1	Hotels 2	Airlines	Mobile phone	Hospitals	Banks	Beauty salons
SF→SQ ($\gamma_{1.1}$)	0.52/13.46	0.82/28.69	0.89/31.36	0.80/21.77	0.91/34.08	0.84/29.05	0.91/32.95
SF→CF ($\gamma_{2.1}$)		0.36/5.67		0.39/4.82	0.75/10.46	0.73/20.12	0.64/6.94
SF→TR ($\gamma_{3.1}$)		0.25/4.77	0.35/4.02	0.45/6.48	0.66/9.33	0.30/4.95	0.20/2.95
SF→CS ($\gamma_{4.1}$)	0.32/9.02	0.18/2.85	0.18/2.95*	0.35/4.66	0.27/2.85	0.31/4.72	0.19/2.59*
SF→AC		0.21/4.03				0.11/2.30*	
SF→CC	0.07/2.57*						
SF→CL		0.12/2.37*		0.33/5.76		0.45/10.46	0.20/2.65*
SF→AL			0.27/6.10			0.28/4.20	
SQ→CF ($\beta_{2.1}$)	0.57/9.34	0.47/7.14	0.57/10.46	0.21/2.54*	0.18/2.52*		0.20/2.12*
SQ→TR ($\beta_{3.1}$)	0.30/6.15	0.18/3.17	0.47/5.24	0.27/4.02	0.25/3.47	0.55/8.56	0.39/5.79
SQ→CS ($\beta_{4.1}$)	0.21/4.16	0.22/3.35	0.50/6.62	0.25/3.48	0.25/3.86	0.14/2.11*	0.37/4.35
SQ→AC	0.11/3.02	0.11/2.12*					
SQ→CC				0.15/2.69*			
SQ→CL	0.06/2.42*		0.23/3.14				0.37/4.20
SQ→AL						0.16/3.17	0.18/2.60*
SQ→IL							0.23/3.09
CF→TR ($\beta_{3.2}$)	0.64/14.80	0.53/9.76		0.20/4.54			0.41/9.87
CF→CS ($\beta_{4.2}$)	0.25/4.73	0.26/3.21			0.24/3.60	0.35/8.05	0.14/2.30*
CF→AC ($\beta_{5.2}$)	0.19/3.59	0.29/4.11	0.28/7.81	0.20/4.30	0.23/3.82	0.38/7.55	0.46/9.57
CF→CC					0.17/3.00	0.33/6.10	
CF→CL	0.07/2.41*	0.15/2.40*				0.19/2.85	
CF→IL					0.16/2.75		
CF→BL							0.25/4.55
TR→CS ($\beta_{4.3}$)	0.26/4.33	0.20/2.22*	0.25/4.89	0.24/3.50	0.18/3.29	0.15/2.64	0.26/2.75
TR→AC	0.41/7.27	0.15/2.01*	0.17/3.12	0.23/3.59			
TR→AL		0.13/2.77*					
TR→IL		0.33/6.11			0.20/3.97		0.22/3.61
TR→BL				0.30/4.59			
CS→CC ($\beta_{6.4}$)	0.67/15.78	0.48/8.44		0.28/3.73	0.38/3.90	0.27/4.88	0.42/6.83
CS→AC ($\beta_{5.4}$)	0.25/5.55	0.25/5.45	0.56/10.20	0.53/9.04	0.74/12.15	0.47/8.50	0.50/10.70
CS→CL ($\beta_{7.4}$)	0.55/8.44	0.35/4.17	0.41/5.13	0.29/3.85	0.30/3.62		0.22/2.85
CS→AL		0.30/4.88			0.37/5.49		0.22/2.93
CS→IL			0.17/3.37		0.29/3.36	0.21/3.69	
CS→BL						0.16/3.35	
CC→CL ($\beta_{7.6}$)	0.31/4.70	0.33/3.32	0.28/6.49	0.30/4.38	0.47/6.41	0.28/5.42	0.18/3.60
CC→AL	0.19/2.95						
CC→BL			0.21/4.66		0.53/7.37		
AC→AL ($\beta_{8.5}$)	0.09/2.57*		0.37/6.87	0.43/6.51		0.24/2.70	0.21/3.87
AC→IL						0.32/4.74	
AC→BL		0.19/2.77					
AC→CC ($\beta_{6.5}$)	0.27/7.49	0.46/8.09	0.72/18.52	0.50/6.54	0.40/3.76	0.31/4.35	0.49/7.88
CL→AL ($\beta_{8.7}$)	0.69/11.63	0.54/7.91	0.37/6.42	0.55/8.26	0.60/8.60	0.31/2.84	0.35/5.68
CL→IL	0.14/2.03*		0.33/6.58	0.18/2.05*			0.22/3.69
CL→BL	0.21/3.48	0.21/2.75	0.17/2.31				
AL→IL ($\beta_{9.8}$)	0.82/11.75	0.63/10.92	0.48/8.18	0.74/8.20	0.32/4.66	0.43/6.74	0.32/6.08
AL→BL						0.19/2.77	
IL→BL ($\beta_{10.9}$)	0.74/12.29	0.47/6.28	0.48/6.68	0.57/7.72	0.28/3.96	0.59/8.25	0.60/10.79

Notes: * $p < 0.05$ level; others $p < 0.01$ level. Expected paths are denoted by path coefficient labels in parentheses.

TABLE 3
Validation and Generalization Studies—Measurement Model Results

	Study Samples					
Model Statistics	**Hotels**	**Airlines**	**Mobile phone**	**Hospitals**	**Banks**	**Beauty salons**
df	132	132	132	132	132	132
χ^2	197.54	259.79	190.42	303.33	265.33	217.46
χ^2/df	1.50	1.97	1.44	2.30	2.01	1.65
p	0.00	0.00	0.00	0.00	0.00	0.00
NFI	1.00	0.99	0.99	1.00	1.00	1.00
NNFI	1.00	0.99	1.00	1.00	1.00	1.00
CFI	1.00	1.00	1.00	1.00	1.00	1.00
IFI	1.00	1.00	1.00	1.00	1.00	1.00
GFI	0.97	0.95	0.96	0.96	0.96	0.96
AGFI	0.94	0.91	0.93	0.92	0.92	0.91
RFI	0.99	0.99	0.99	0.99	0.99	0.99
SRMR	0.012	0.015	0.014	0.013	0.011	0.0086
RMSEA	0.029	0.045	0.030	0.046	0.042	0.038

TABLE 4
Validation and Generalization Studies—SEM Fit Statistics

	Study Samples					
Model Statistics	**Hotels**	**Airlines**	**Mobile phone**	**Hospitals**	**Banks**	**Beauty salons**
df	169	169	169	169	169	169
χ^2	335.11	482.95	330.03	490.85	580.40	438.79
χ^2/df	1.98	2.86	1.95	2.90	3.43	2.60
p	0.00	0.00	0.00	0.00	0.00	0.00
NFI	0.99	0.99	0.99	0.99	0.99	0.99
NNFI	1.00	0.99	0.99	0.99	0.99	0.99
CFI	1.00	0.99	0.99	1.00	0.99	0.99
IFI	1.00	0.99	0.99	1.00	0.99	0.99
GFI	0.95	0.92	0.94	0.93	0.92	0.92
AGFI	0.93	0.87	0.91	0.89	0.87	0.88
RFI	0.99	0.99	0.98	0.99	0.99	0.99
SRMR	0.027	0.034	0.037	0.024	0.031	0.040
RMSEA	0.040	0.062	0.043	0.057	0.065	0.058
AIC	501.19	638.28	482.62	669.10	720.91	570.34
CAIC	954.67	1070.03	913.46	1121.88	1167.02	991.50
PNFI	0.73	0.72	0.72	0.73	0.72	0.73
PGFI	0.64	0.61	0.63	0.62	0.61	0.61

TABLE 5
Chi-Square Difference Model Tests for Incremental Explanatory Contribution of Commercial Friendship

		Hotel 1	Hotel 2	Airlines	Banks	Beauty Salon	Hospitals	Mobile Phone
CF→TR = γ	df	10	10	11	10	11	10	11
	χ^2	13.68	15.10	19.77	40.65	13.79	21.28	38.27
CF—TR = 0	df	11	11	12	11	12	11	12
	χ^2	15.66	55.93	22.86	41.15	41.41	23.89	51.85
	χ_d^2	1.98	40.83**	3.09	0.50	27.62**	2.61	13.58**
CF→CS = γ	df	21	21	22	21	21	20	22
	χ^2	31.10	29.73	37.48	50.64	36.99	47.03	44.21
CF—CS = 0	df	22	22	23	22	22	21	23
	χ^2	21.25	60.46	42.22	65.88	37.03	48.48	45.60
	χ_d^2	0.15	30.73**	4.74*	15.24**	0.04	1.45	1.39
CF→CO = γ	df	33	35	37	36	38	37	37
	χ^2	38.61	69.87	80.58	86.03	80.41	92.48	55.48
CF—CO = 0	df	36	36	38	37	39	38	38
	χ^2	48.35	95.19	99.77	90.05	86.52	149.17	88.66
	χ_d^2	9.74**	25.32**	19.19**	4.02*	6.11*	56.69**	33.18**

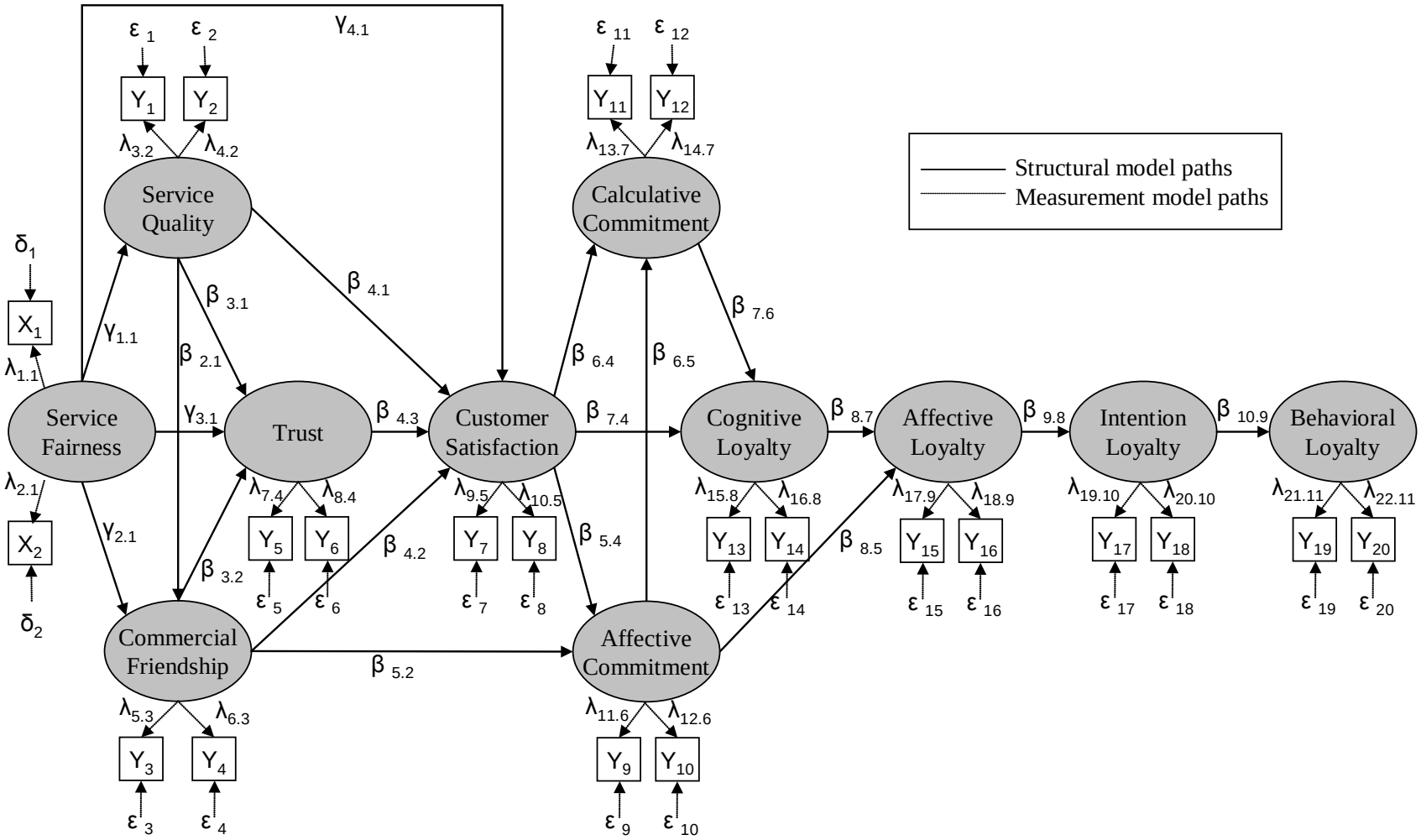
Notes: *p < .05; ** p < .01
CF = commercial friendship, TR = trust, CS = customer satisfaction, CO = commitment. CF→variable = γ means the path between commercial friendship and the dependent variable was freely estimated; CF—variable = 0 means the path was constrained to zero. In instances where the chi-square difference test was other than a 1 df test, this is because constraining the path from commercial friendship to the dependent variable rendered another antecedent path not significant.

TABLE 6
Multigroup Analysis: Tests for Moderating Effect of Service Context on Loyalty

Proposed Service Loyalty Paths	Standardized Path Coefficients: High-service (hotel, hospital, and beauty salon)	Standardized Path Coefficients: Moderate-service (airline, bank, and mobile phone)	$\Delta\chi 2$ (df = 1)
SF→SQ ($Y_{1.1}$)	0.88/71.36**	0.91/38.70**	2.70
SF→CF ($Y_{2.1}$)	0.37/11.70**	0.42/5.24**	1.20
SF→TR ($Y_{3.1}$)	0.12/4.48**	0.24/3.21**	2.52
SF→CS ($Y_{4.1}$)	0.21/8.46**	0.22/3.91**	0.95
SQ→CF($\beta_{2.1}$)	0.51/15.95**	0.37/4.50**	**5.32***
SQ→TR ($\beta_{3.1}$)	0.40/13.90**	0.56/6.91**	**9.52****
SQ→CS ($\beta_{4.1}$)	0.32/10.43**	0.38/5.23**	0.86
CF→TR ($\beta_{3.2}$)	0.45/19.56**	0.12/3.51**	**43.40****
CF→CS ($\beta_{4.2}$)	0.17/6.26**	**0.03/0.97**	1.96
CF→AC ($\beta_{5.2}$)	0.34/14.52**	0.35/13.74**	3.00
TR→CS ($\beta_{4.3}$)	0.27/8.54**	0.34/7.55**	0.19
CS→CC ($\beta_{6.4}$)	0.56/17.98**	**0.19/1.89**	0.01
CS→AC ($\beta_{5.4}$)	0.63/26.19**	0.66/24.68**	1.98
CS→CL ($\beta_{7.4}$)	0.65/20.05**	0.52/16.66**	2.38
AC→CC ($\beta_{6.5}$)	0.38/12.18**	0.48/15.52**	1.07
AC→AL ($\beta_{8.5}$)	0.51/12.65**	0.26/7.53**	2.48
CC→CL ($\beta_{7.6}$)	0.29/9.04**	0.44/13.85**	2.51
CL→AL ($\beta_{8.7}$)	0.54/13.19**	0.72/19.70**	0.33
AL→IL ($\beta_{9.8}$)	0.95/66.91**	0.97/50.28**	0.69
IL→BL ($\beta_{10.9}$)	0.86/56.98**	0.91/47.39**	1.31

Constrained (equal-paths) Model: $\chi^2 = 2481.52$; df = 358, RMSEA = 0.058
Loyalty Model, High-service Contexts: $\chi^2 = 836.41$; df = 169; NFI = 1.00; NNFI = 1.00; CFI = 1.00; IFI = 1.00; GFI = 0.96; AGFI = 0.95; RFI = 1.00; SRMR = 0.017; RMSEA = 0.044
Loyalty Model, Moderate-service Contexts: $\chi^2 = 1404.80$; df = 169; NFI = 0.99; NNFI = 0.99; CFI = 0.99; IFI = 0.99; GFI = 0.92; AGFI = 0.88; RFI = 0.99; SRMR = 0.023; RMSEA = 0.070
* $p < .05$; ** $p < .01$

FIGURE 1
A Conceptual Model of Service Loyalty Determinants



Appendix

Except for the service quality measure, which used a 7-point semantic differential scale, respondents were asked to choose the number that best described how strongly they agreed (scale anchors: 7 = strongly agree and 1 = strongly disagree) with each statement.

Service Fairness (Interactive Justice)

I was treated with courtesy.
Hotel staff was ready to answer my questions.
Hotel staff was enthusiastic or eager to resolve my problems.
Hotel staff did an excellent job building rapport with me.
I was treated with respect.

Service Fairness (Procedural Justice)

I received service in a very timely manner.
The service procedures of the hotel were reasonable.
Hotel staff provided me with information that was clear and understandable.
Hotel staff seemed very knowledgeable about any of my questions or concerns.
Hotel staff treated me flexibly according to my needs.

Service Fairness (Distributive Justice)

The hotel has fully met my needs.
The hotel served me correctly.
The hotel provided me with what I asked.
The price of the hotel was reasonable for the service I received.

Service Quality (Please evaluated the hotel's service quality along the following dimensions)

Service reliability:	1 = very unreliable …	7 = very reliable
Service individuation:	1 = very standard …	7 = very individualized
Service professionalism:	1 = very unprofessional …	7 = very professional
Service speed:	1 = very slow …	7 = very fast
Service facilities:	1 = very dated …	7 = very advanced
Staff appearance and manner:	1 = very inappropriate …	7 = very appropriate
Staff interest and caring:	1 = very little …	7 = very much
Overall service quality:	1 = poor …	7 = excellent

Commercial Friendship

I feel a sense of familiarity with the hotel's staff.
I like and enjoy the hotel's staff.
I trust the hotel's staff.
I feel like I know the hotel's staff well.
I regard the hotel staff who served me as friends.

Trust

This hotel is trustworthy because it is concerned with the customer's interests.
This hotel treats customers with honesty.
This hotel has the ability to provide for my needs.
I trust and am willing to depend on this hotel.

Satisfaction

I am satisfied with my experiences in this hotel.
I have had pleasurable stays in this hotel.
I am satisfied with this hotel overall.
My experiences at this hotel have exceeded my expectations.
It was wise of me to stay at this hotel.

Affective Commitment

I identify with this hotel very much.
I feel like “part of the family” at this hotel.
I feel “emotionally attached” to this hotel.
I feel happy being a customer of this hotel.
I feel a strong sense of belonging to this hotel.

Calculative Commitment

I have received more benefits in this hotel than in other hotels of this city.
Compared with this hotel, it would be too costly for me to stay at other X-star hotels.
It is more convenient for me to stay at this hotel than at other X-star hotels in this city.
I would not receive the same treatment in other X-star hotels that I receive in this hotel.
I have few hotel options in this city that I would consider other than this hotel.

Cognitive Loyalty

I consider this hotel my first choice when I need lodging services in this city.
I consider this hotel my primary hotel when I stay in this city.
The service of this hotel is better than that of other X-star hotels in this city.
I am willing to pay more to be a guest at this hotel than at other X-star hotels in this city.

Affective Loyalty

I like staying at this hotel very much.
To me, this hotel is the one I enjoy the most in this city.
Compared with other X-star hotels, I prefer this hotel more.
This hotel is the one that I appreciate most in this city.

Intention Loyalty

I intend to stay at this hotel again when I am in this city.
I intend to recommend this hotel to others.
I intend to say good things about this hotel to others.
I intend to give feedback to this hotel so that it can improve its service quality.

Behavioral Loyalty

When I come to the city, I stay at this hotel.
Compared with other hotels, I have spent more money at this hotel.
Compared with other hotels in this city, I have stayed more at this hotel.
Compared with other hotels in this city, I have used more of the services offered at this hotel.

Biographical Information

Xiaoyun Han is an associate professor in the School of Business at Sun Yat-Sen University, China. She holds her Ph.D in business administration from Sun Yat-Sen University and a BA from Renmin University of China. Her current research focuses on customer empowerment, service quality, and customer loyalty.

Robert J. Kwortnik, Jr., is an assistant professor of services marketing in the School of Hotel Administration at Cornell University. He holds a Ph.D. and BA from Temple University and an MBA from California State University, Northridge. His research focuses on consumer behavior for services, with particular attention to decision making for and the design and management of service experiences. He also specializes in the leisure cruise industry and grounds much of his research in that service context. His work has appeared in *Journal of Service Research, International Journal of Research in Marketing, Psychology & Marketing*, and the *Cornell Hospitality Quarterly*.

Chunxiao Wang is a professor of hotel administration and director of the Research Centre for Services Management at Sun Yat-Sen University, China. He received both his MPS and Ph.D. in hotel administration from Cornell University. His current research interests include servant leadership, service climate, and service quality management.