Investigating the Role of Customers’ Perceptions of Employee Effort and Justice in Service Recovery: A Cross-Cultural Perspective

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Abstract

Purpose – The purposes of this paper are, first, to identify the relationship, if any, between customers’ perceptions of justice (functional element) and employee effort (symbolic element) and their effects on satisfaction and loyalty in the context of service recovery and, second, to determine the impact of cross-cultural differences on these relationships.

Design/methodology/approach – Survey data from actual customers were gathered in three countries (n = 414) and analyzed using structural equation modeling to test the proposed hypotheses.

Findings – The results demonstrate the role of the constructs of perceived employee effort and perceived justice in influencing post-recovery satisfaction and loyalty across cultures. While perceived justice is valued across cultures, customers from feminine (masculine) cultures require more (less) employee effort to influence post-recovery satisfaction positively. Customers from low (high) uncertainty cultures are more (less) willing to give the provider another chance after a service recovery.

Research limitations/implications – The study shows that both functional and symbolic elements of service recovery are important determinants of customer satisfaction and loyalty and that their influence can be significant in a cross-cultural context.

Practical implications – International service managers must consider the nature of cultural differences in their markets in order to develop and implement tailored recovery strategies that can result in satisfied customers.
Originality/value – This study is the first to integrate the functional and symbolic elements of service recovery, their impact on customers’ behavioral responses, and the influence of cultural variations.

Keywords Culture, Perceived employee effort, Perceived justice, Service recovery, Customer satisfaction, Customer loyalty

Paper type Research paper
Investigating the Role of Customers’ Perceptions of Employee Effort and Justice in Service Recovery: A Cross-Cultural Perspective

Introduction

As part of the dynamic evolution of services marketing, the area of service recovery has received increasing attention during the last three decades (e.g., Andreassen, 2001; Bitner et al., 1990; Mattila, 2014). Service recovery, which is concerned with providing satisfactory solutions to customers’ problems (Blodgett et al., 1997), consists of the actions a service provider takes in response to service failure (Grönroos, 1988). The effectiveness of a correction after a failure is strategically important, as it determines the customer’s satisfaction level, which can affect profits (Zeithaml et al., 1996). An effective correction occurs when the organization responds in a way that overcomes disappointment, restores justice perceptions and enhances customer satisfaction (Smith et al., 1999), and its benefits include positive word-of-mouth, repurchase intentions, and loyalty (Mattila and Patterson, 2004a; 2004b; Patterson et al., 2006; Tax et al., 1998).

Research shows that the personal interactions between customers and employees—that is, the service encounter (Czepiel et al., 1985)—usually determine customer’s perceptions of the service itself. There is a high degree of interaction between staff and customers during the service-recovery process. In this context, human interactions are important and employee effort is of significant value in its own right, so an examination of customers’ evaluation of employee effort and how it impacts satisfaction after the recovery can show service organizations how to maximize the benefits of effective service recovery (Mohr and Bitner, 1995). However, the service-recovery research is dominated by studies that focus on the construct of perceived
justice, which reflects how fairly the customer feels the organization has treated him or her and the effect of that perception on the customer’s post-recovery satisfaction (e.g., Chebat and Slusarczyk, 2005; Del Rio-Lanza et al., 2009; Jung and Seock, 2017; Maxham and Netemeyer, 2002). While the services marketing literature largely ignores the role of employee effort, its influence is gaining attention as a central element in the link between employees’ emotional responses and emotional intelligence and that link’s influence on the performance of service recovery (Kim and Oh, 2012; Lee et al., 2013). Most important, employee effort can impact perceptions of justice (Liao, 2007; McQuilken et al., 2013). Therefore, since studies assert the importance of understanding customers’ perceptions of service quality and their interrelationships (Cronin et al., 2000; Ostrom and Iacobucci, 1995), excluding customers’ perceptions of employee effort from the context of service recovery results in an incomplete picture of the determinants of post-recovery satisfaction.

The challenge of addressing service failures is compounded when a service-provider serves customers in multiple countries and cultures, as a successful recovery strategy begins by understanding customers’ core values (Becker, 2000). Service encounters are social exchanges, and customers’ perceptions of these processes are heavily influenced by the cultural environments that shape their values (e.g., De Matos et al., 2011; Patterson et al., 2016; Patterson et al., 2006; Schoefer, 2010). Orsingher et al.’s (2010) meta-analysis of studies on satisfaction shows that cultural differences explain differences in the relationships between the variables related to service recovery. While most cross-cultural studies focus on the effectiveness of service-recovery methods, such as compensation and apology (e.g., Mattila and Patterson, 2004a; 2004b; Nguyen et al., 2012; Patterson et al., 2006; Wong, 2004), others show the difficulties service providers have in recognizing the emotions of dissatisfied customers when the
provider and the customer are culturally mismatched (Tombs et al., 2014). However, the last three decades of cross-cultural studies in research on service recovery issues is limited (Burgess and Steenkamp, 2006; Steenkamp, 2005; Zhang et al., 2008). Since most of the research in this area focuses on the role of perceived justice, any effort that integrates both perceived justice and perceived employee effort can help to clarify their interrelationships and their impact on post-recovery satisfaction and loyalty.

Because of increasing globalization, the role of culture and its impact on consumer behavior has become pre-eminent in international marketing (De Mooji and Hofstede, 2002; Yaprak, 2008). Consequently, as organizations continue to grow through international expansion, marketing researchers and managers must understand how customers’ perceptions of service-recovery actions vary across nations whose cultures, geographic locations, and levels of economic development differ (Morgeson et al., 2015). Marketing theories and their practical implications rely heavily on findings from studies conducted in the Western world, particularly the United States, but cross-national and cross-cultural generalizability cannot be assumed. Therefore, international marketing research is necessary in order to identify the strategies that can be applied globally and those that must be tailored to specific cultural contexts (Burgess and Steenkamp, 2006; Steenkamp, 2005).

The purpose of the present study is to address the gaps in the literature that are related to the integration of the symbolic element of perceived employee effort and the functional element of perceived justice as determinants of post-recovery satisfaction and loyalty in a cross-cultural context by addressing the questions: how do customers in different cultural contexts evaluate employee effort and justice, how are employee effort and justice related, and what is their impact on post-recovery satisfaction and customer loyalty?
We make three primary contributions to the literature. First, we expand what we know about customers’ perceptions of employee effort as a determinant of customers’ post-recovery satisfaction and loyalty. Second, we clarify how customers perceive the relationship between employee effort and justice, and the influence of these two constructs on post-recovery satisfaction and loyalty. Third, we offer a model of service recovery that takes into account cultural variations in the global marketplace.

Our paper is organized as follows: First, we explain our conceptual model and derive our hypotheses, drawing on the theories of social exchange, equity, motivation, justice, relationship marketing, and national culture. Next, we explain the methodology of cross-cultural research before presenting the results of our hypotheses testing. We conclude with a discussion of the main implications of our findings to theory and management practice, their limitations, and avenues of research for future studies.

Conceptual Framework and Hypotheses Development

Figure 1 shows the conceptual model, which summarizes the hypotheses. Drawing on social exchange and equity theories (e.g., Walster et al., 1973), we define a service recovery encounter as an exchange between an organization and a customer in which a customer experiences a service failure and an organization attempts to make up for it (Smith et al., 1999). According to these theories, the exchange should be equitable and fair (Bagozzi, 1975) such that both parties see reasonably balanced benefits and costs from the exchange. We follow studies that consider the equity theory framework especially appropriate to service recovery (e.g., Blodgett et al., 1997; Maxham and Netemeyer, 2002; Oliver and Swan, 1989). When a service failure occurs, customers tend to perceive an inequity, so the organization’s ability to restore equity is essential
to shaping the customer’s perception of satisfactory exchange. Studies demonstrate that when consumers perceive fairness in the recovery effort, their post-recovery satisfaction increases (e.g., Oliver and Swan, 1989; Smith et al., 1999; Tax et al., 1998).

The exchange between the customer and the provider involves both utilitarian dimensions (functional benefits, including money or goods) and symbolic dimensions (psychological benefits, including status and empathy) (Bagozzi, 1975). In the context of service recovery, Smith et al. (1999) recognize two types of failures: an outcome failure which involves a utilitarian exchange and a process failure, related to a symbolic exchange. As the organization tries to recover from failure, both dimensions of the service recovery exchange—what is offered as compensation and how it is offered in terms of employee interactions with the customer—affect the customer’s perceptions of the organization’s attempt at service recovery (Sparks and McColl-Kennedy, 2001) and influences his or her satisfaction with and continued loyalty to the company (Blodgett et al., 1997; Tax et al., 1998). Consequently, creating customer satisfaction is at the heart of marketing theory and practice, and there is considerable evidence that satisfaction is the key to customer retention (Bolton, 1998). Customer retention is a paramount consideration in service recovery (Andreassen, 2001); studies like Reichheld and Sasser (1990) find that the cost of attracting a new customer is far more expensive than retaining an existing one, so building a long-term relationship with existing customers is essential to increasing profitability and ensuring the company’s long-term survival.

The purpose of service recovery is to bring the customer from a state of dissatisfaction to a state of satisfaction with the hope of strengthening loyalty and retaining the customer (Andreassen, 2001). The relationship marketing framework is critical to building such long-term, service-based relationships, as it focuses on attracting, maintaining, and enhancing customer
relationships (Berry, 1995). The intangibility of services makes relationship marketing particularly important to the field of services marketing, as both focus on enhancing the company’s relationship with existing customers, which increases customers’ satisfaction, commitment, and trust (Tax et al., 1998). Successful service recovery engenders positive perceptions of employee effort, which increases post-recovery satisfaction (Mohr and Bitner, 1995; Mattila and Patterson, 2004b) and justice or fairness, which also enhances post-recovery satisfaction (Oliver and Swan, 1989; Smith et al., 1999). Consequently, effective service recovery, as a relationship marketing tool (DeWitt et al., 2008), should be a critical element of effects to maintain strong customer-provider relationships (Blodget et al., 1997; Smith and Bolton, 2002; Tax et al., 1998).

We argue, then, that customers evaluate their perceptions of an organization’s service-recovery effort in terms of two elements: their perceptions of employee effort, which is related to symbolic or social elements like empathy and status that are derived from the employee’s level of motivation or energy expended in solving the problem, and their perceptions of justice, which is related to utilitarian or functional elements like compensation. These two elements influence post-recovery satisfaction and its correlate, loyalty.

We propose a model that examines a) the relationship between customers’ perceptions of employee effort and their perceptions of justice, b) these perceptions as determinants of the post-recovery satisfaction that affects loyalty, and c) how customers’ cultural orientations affect the model’s hypothesized relationships. In addressing the last of these three goals, we take the same approach as that of Brettel et al. (2008), De Matos et al. (2011), Mazaheri et al. (2011), and Schoefer (2010), such that not all cultural dimensions and variables are included in each
hypothesis, but each variable relates back to specific cultural dimensions based on theoretical and/or empirical support.

Perceived employee effort and perceived justice

The intuitive relationship between the customer’s perceptions of employee effort (symbolic element) and his or her perceptions of justice (functional element) is that the more the customer perceives that the service employee has made a genuine effort to sort out a service failure, the more likely the customer is to perceive the recovery outcome as fair and just. Evidence from research shows that customers’ perceptions of employees’ positive behavior in the service recovery encounter influences their perceptions of the justice of the outcome (McQuilken et al., 2013), which enhances satisfaction and repurchase intent (Liao, 2007). How the firm’s staff treats customers during the recovery process, including their courtesy and empathy (Tax et al., 1998) and the sensitivity and effort with which they try to solve the problem (Del Río-Lanza et al., 2009), affects customers’ overall perception of justice. Despite its importance, this relationship has rarely been tested empirically. We argue that companies should recognize that customers value highly motivated employees who make serious efforts to fix service failures and that this effort is fundamental to enhancing customers’ perceptions of the fairness of the recovery effort. Based on this discussion, we propose:

H1. There is a positive relationship between perceived employee effort and perceived justice.

Perceived employee effort and post-recovery customer satisfaction
Based on the distinction the services marketing literature makes between the service (functional) outcome (what the customer receives during the transaction) and the process of service delivery (how the outcome is transferred to the customer), Mohr and Bitner (1995) argue that the functional outcome and the symbolic meaning the consumer gives to the social interaction combine to influence the customer’s satisfaction with the transaction. Mohr and Bitner (1995) draw on theories of motivation, attribution, and equity to operationalize the process of service delivery through employee effort and develop a scale with which to capture customers’ perceptions of this factor and its effect on satisfaction.

The customer’s perception of employee effort is a social influence factor that refers to the amount of energy that customers perceive an organizations’ staff has put into a behavior or series of behaviors (Mohr and Bitner, 1995). Bitner et al. (1990) report that a large number, 43 percent, of unsatisfactory encounters arise from the employee’s inability to respond to service failure, revealing the importance of customers’ perceptions of employee effort during the service-recovery encounter since “the service encounter frequently is the service from the customer’s point of view” (Bitner et al., 1990, p. 1). Consequently, employee effort can be so important to customers’ satisfaction with the service encounter that they “sometimes [have] difficulty seeing when effort and outcome were not consistent with each other” (Mohr and Bitner, 1995, p. 251). Mohr and Bitner’s (1995) findings show that higher levels of customer satisfaction result when they perceive a high level of employee effort, independent of the outcome. Later studies (Huang, 2008; Mattila and Patterson, 2004b) obtain similar results.

Despite its importance, the service recovery literature largely ignores customers’ perceptions of employee effort. Walsh et al. (2008, p. 986) argue that “during critical incidents, the personal interactions between the employee and customer become surrogates for the actual problem”; that
is, how the staff deals with customers’ queries is often more important to customers than the causes of the earlier service failures. The importance of the service staff is so high that Bitner (1990) suggests they should be appropriately screened, trained, and motivated to understand customers’ needs and wants. In line with these findings, we argue that a customer’s perception of employee effort is a symbolic element that affects post-recovery satisfaction, and we expect that:

$H2$. Perceived employee effort is positively associated with post-recovery customer satisfaction.

Perceived justice and post-recovery customer satisfaction

The perception of justice refers to the degree to which customers feel an organization has treated them fairly when they have complained about a service failure (Maxham and Netemeyer, 2002). Justice (or fairness) exists in perception, so it is the individual who decides whether an action is fair or just (Mattila, 2014). Justice theory identifies three forms of justice: distributive justice, which involves tangible outcomes (e.g., compensation); procedural justice, which relates to the methods used; and interactional justice, which refers to how a customer is treated during the service recovery process (Blodgett et al., 1997; Smith et al., 1999). These three dimensions of justice can be combined into one dimension (e.g., DeWitt et al., 2008), which suggests that despite the amount of research on the facets of justice, recent studies are shifting from the dimensional view to an overall justice (Ambrose and Schminke, 2009).

Perceived justice has a positive influence on customers’ evaluations of service-recovery experiences (Blodgett et al., 1997; Tax et al., 1998), while perceived injustice has a negative impact (Balaji et al., 2017). The literature provides ample evidence that, when customers experience fair treatment and a good outcome, they tend to perceive a greater level of justice,
leading to satisfaction with the recovery (e.g., Liao, 2007; Oliver and Swan, 1989; Sabharwal et al., 2010; Smith et al., 1999). Consistent with Oliver and Swan’s (1989) findings, Smith et al. (1999) show that a customer’s perception of justice accounts for most of the explained variance in satisfaction with the recovery. Studies find that the distributive justice dimension accounts for a relatively large percentage of perceived justice’s overall effect on satisfaction (e.g., Kau and Wan-Yiun Loh, 2006; Orsingher et al., 2010; Smith et al., 1999). Based on these studies, we argue that perceived justice is largely a functional element that influences post-recovery satisfaction and hypothesize:

H3. Perceived justice is positively associated with post-recovery customer satisfaction.

Post-recovery customer satisfaction and loyalty

In a seminal work, Oliver (1997) describes customer satisfaction as a positive post-consumption evaluation. Research shows that satisfaction enhances loyalty (Grønholdt et al., 2000; Homburg and Giering, 2001; Poon et al., 2004)—that is, the likelihood that a customer will commits to an organization (Dick and Basu, 1994). Loyalty entails an attitudinal element and a behavioral element (Ganesh et al., 2000; Garbarino and Johnson, 1999; Oliver, 1999). In the context of service recovery, studies show that satisfied customers are willing to do business with the service company again (Liao, 2007; Smith and Bolton, 1998; Smith et al., 1999; Sparks and McColl-Kennedy, 2001). Furthermore, effective service recovery can strengthen the customer-supplier relationship leading to higher levels of customer loyalty, as studies find that customers’ post-recovery satisfaction can be higher than their satisfaction before the failure (De Matos et al., 2007; Mattila and Patterson, 2004b; McCollough and Bharadwaj, 1992). Research also suggests
that the satisfaction-loyalty link is stronger for customers who have experienced an effective service recovery than it is for those who have never experienced a service failure (Walsh et al., 2008). Therefore, we expect that:

\[ H4. \text{Post-recovery satisfaction is positively associated with loyalty.} \]

Cultural dimensions and service-recovery variables

Marketing scholars increasingly recognize the importance of moderator variables in explaining apparently established relationships in consumer behavior, especially customer satisfaction and its correlate, loyalty (e.g., Walsh et al., 2008). Cross-cultural studies in service recovery are particularly limited, and little is known about the generalizability of findings in this area. We use Hofstede’s (1980) four original cultural dimensions as moderators of the relationships that we proposed in our first three hypotheses, as we expect that customers’ cultural values moderate their experiences with and evaluations of service failure and recovery (Becker, 2000). We propose that the value or emphasis that a customer places on employee effort, justice, satisfaction, and loyalty and the interrelationships of these dimensions are likely to differ based on the customer’s culture, and we propose three hypotheses that reflect the links between these variables and four cultural dimensions.

According to Hofstede (1980, p. 25), culture is “the collective programming of the mind which distinguishes the members of one human group from another.” The behavior of individuals or consumers from various countries and cultures differs based on their cultural values (Hofstede, 2001). Studies demonstrate that Hofstede’s cultural dimensions are useful in understanding customers’ evaluations of service recovery, including their perceptions of justice (e.g., Mattila and Patterson, 2004a; Patterson et al., 2006), their perceptions of employee effort,
(Huang, 2008; Mattila and Patterson, 2004b), their post-recovery satisfaction (Maxham and Netemeyer, 2002), their repurchase intentions (Wong, 2004), and their loyalty to the organization (Chebat and Slusarczyk, 2005). We follow the traditional approach (e.g., Brettel et al., 2008; Walsh et al., 2015; Wong, 2004) in employing Hofstede’s (1980) country scores for masculinity/femininity, individualism/collectivism, power distance, and uncertainty avoidance, shown in Table I, to test three hypotheses.

Masculinity/femininity opposes ego goals with social goals. While masculinity is characterized by competition, achievement, assertiveness, and success, femininity relates to cooperation, helping others, sharing, empathy, and solidarity. Individualism/collectivism refers to the degree of interdependence a society maintains among its members. People in individualist cultures are expected to take care of themselves, while in collectivist cultures people are integrated into groups that protect them in exchange for loyalty. Power distance reflects the extent to which the less powerful members expect and accept that power is distributed unequally or believe that inequalities should be minimized. Finally, uncertainty avoidance relates to the extent to which members of a culture feel threatened by ambiguous or unknown situations. Cultures with high levels of uncertainty avoidance maintain rigid codes of belief and behavior, while those with low levels have a more relaxed and accepting attitude toward uncertainty.

We propose that the masculinity/femininity dimension affects customers’ perceptions of employee effort. According to Hofstede (1983), people in masculine cultures put less emphasis on helping others and have lower levels of “service mindedness” than do those in feminine cultures, as the latter place more value on relationships, service, caring for others, empathy, and solidarity. Consequently, when they report a service failure, customers from feminine cultures anticipate that employees should make serious, determined, and significant effort to understand
and resolve their problems, and perceptions of such employee effort increase customers’ satisfaction (Bitner et al., 1990; Huang, 2008; Mattila and Patterson, 2004b; Mohr and Bitner, 1995). Therefore, we propose that:

**H5.** The positive relationship between perceived employee effort and post-recovery satisfaction is stronger in feminine cultures than it is in masculine cultures.

The influence of the cultural dimensions on perceived justice is not clear. Studies link customers’ perceptions of justice to individualism/collectivism and power distance, but the results from these studies are mixed (Mattila and Patterson, 2004a; Patterson et al., 2006). The link between perceived justice and post-recovery satisfaction is generally established in the service recovery literature (e.g., Blodgett et al., 1997; Maxham and Netemeyer, 2002; Smith et al., 1999; Tax et al., 1998), but only a few studies examine this relationship cross-culturally. The limited evidence from cross-cultural research seems to indicate that “people’s justice perceptions are determined by similar principles across cultures” (Morris and Leung, 2000, p. 114). Studies found that cultural orientation, i.e., individualism/collectivism, does not influence the relationship between perceived justice and post-recovery satisfaction (De Matos et al., 2011; Mattila and Patterson, 2004a). Therefore, we expect similar results in this study and hypothesize that:

**H6.** Cultural orientation does not moderate the relationship between perceived justice and post-recovery satisfaction.

Finally, people in cultures that score high on uncertainty avoidance tend to be concerned with security, as uncertainty creates anxiety (Hofstede, 1980). Therefore, we argue that a high
level of uncertainty avoidance causes individuals to be less willing to take risks than are those who have a low level of this dimension because of a greater fear of failure. In the context of service recovery, a high level of uncertainty avoidance has a negative impact on repurchase intentions (Wong, 2004) and loyalty because such individuals seek to minimize the potential of a future service failure. In contrast, customers in cultures with a low level of uncertainty avoidance are more tolerant of ambiguity and may be willing to give the provider another chance. This argument is consistent with the finding that East Asian consumers have less tolerance for uncertain and ambiguous situations than US consumers do (Mattila and Patterson, 2004b). Therefore, we expect that:

*H7. The positive relationship between post-recovery satisfaction and loyalty is stronger for customers from cultures characterized by low uncertainty avoidance than it is for customers from cultures characterized by high uncertainty avoidance.*

Figure 1 illustrates the conceptual model for this study.

[Take in Figure 1]

**Methodology**

*Rationale for the choice of industry and countries sampled*

To test our model empirically, we use the mobile phone services industry, which is characterized by both a high diversity of customers’ cultural contexts and extensive personal contact between employees and customers. The industry has nearly reached the level of commodity—that is, the suppliers’ offerings and support infrastructures are almost identical—so differences between countries are comparatively easy to isolate (Morgeson et al., 2015).
We conducted a survey with a sample of customers in the UK, Spain, and Mexico, countries that vary in terms of their cultural dimensions, which is important for meaningful comparisons (see, e.g., Sekaran, 1983). As Table I shows, the Mexican and UK cultures are masculine, while the Spanish culture is feminine; the UK is individualist, while Mexico and Spain are collectivist; and Mexico and Spain score high on both power distance and uncertainty avoidance, as opposed to the UK’s low scores. Beyond Hofstede’s scores, although Spain and Mexico share a common language and similar cultural backgrounds, they differ in their economic outlook and development. Considering that the growth in the service sector comes largely from emerging markets (Alam, 2014), the inclusion of Mexico helps us determine the generalizability of previous findings that are grounded in well-developed economies like that of the US (Burgess and Steenkamp, 2006). Mexico’s developing economy is large and growing, and the number of mobile phone users, which has increased from 59.1 million in 2011 to 82.0 million in 2015 (approximately 40% in four years), is expected to rise to 90.7 million in 2020. (Statista, 2018). Considering the notable differences in cultural dimensions among the country samples, as shown in Table I, we expect customers’ perceptions of service recovery to differ based on national culture.

[Take in Table I]

Sample and procedure

We obtained a convenience sample of 414 responses from customers who had complained to their mobile phone service providers in Mexico (n = 102), the UK (n = 111), and Spain (n = 201) during the most recent twelve months. Although the use of real problems meant that the respondents would be talking about a variety of issues (e.g., network coverage failure, defective
handsets, billing errors, long waiting times, rude treatment from staff), using actual experiences facilitated a more accurate assessment of their perceptions of the organizations’ service recovery processes than a created scenario would have. In our study, as in previous cross-cultural consumer research, the lack of reliable population data and the absence of suitable sampling frames makes probability sampling unsuitable (Craig and Douglas, 2000; Malhotra et al., 1996). Furthermore, because of the cross-cultural nature of our study, we sought sample equivalence to enhance data comparability (Steenkamp and Baumgartner, 1998). As Reynolds et al. (2003, p. 86) explain, “in such studies the key concern is with internal validity and therefore control of extraneous factors to ensure between-country comparability is of paramount importance. Such comparability is facilitated by the use of homogeneous samples: these are typically selected via nonprobabilistic procedures.” Therefore, we use nonprobability sampling (e.g., convenience), as it is the most appropriate strategy for the nature of our research.

We employed a face-to-face questionnaire that asked participants to rate measures of employee effort, justice, satisfaction with the recovery, and loyalty to the provider. The data collection took place over a two-week period at two large urban shopping malls in the three countries during scheduled times (morning, afternoon and evening), seven days a week. Interceptions occurred near the mall entrances and exits to reduce sampling bias and to obtain a mix of respondents, as suggested by Kok and Fon (2014). The mall intercept is a popular method in marketing research (see Bush and Hair, 1985) and has been used in similar studies (e.g., Keillor et al., 2007). The mall-intercept method was appropriate for our use because it enabled interviewers to screen potential respondents for their eligibility and to seek clarification if needed. We defined our target population as adults who had experienced a service failure episode with their mobile phone service providers, placed a complaint, and received a response from the
firm. Shoppers were approached randomly by trained research assistants and invited to complete a short, self-administered questionnaire. The research assistants asked them two screening questions to determine whether they had experienced a service failure episode with their mobile phone service provider and whether they had placed a complaint and had received a response from the firm. The research assistants collected data from a similar mix of adult males and females with a goal of 100-200 customers in each country.

We used four strategies—sample matching, translation equivalence, pre-tests, and data equivalence—to ensure comparability of data, a fundamental issue in cross-cultural research. Matching samples were necessary in order to rule out demographic differences as alternative explanations for our results (Lonner and Berry, 1986). Most of the participants were young adults between eighteen and thirty-five years of age (Mexico 77%, Spain 66%, the UK 68%), and these was approximately equal participation between males (Mexico 40%, Spain 52%, the UK 47%) and females. To ensure translation equivalence, we translated the questionnaire into Spanish for use in Spain and Mexico through an iterative process of translation and back-translation by a team of bilingual speakers (Brislin et al., 1973). We used a concept-driven, rather than a translation-driven, approach (Erkut et al., 1999), which required a bilingual/bicultural research team with native researchers from each country to check for linguistic nuances (Barnard, 1982).

We pre-tested the questionnaires (Douglas and Craig, 2007) to detect any ambiguity, improve the sequencing and wording of the items, and ensure that all the items worked well in actual use (Brislin, 1986). In two pre-tests, we employed thirty people—ten in each country—who matched the characteristics of the target population but did not form part of the main sample. Besides filling in the questionnaire, the tests’ respondents were asked whether they
understood the directions for completing the survey, whether the wording in each question and the place to mark responses were clear, and how long it took to answer. They were also asked to provide any ideas for improving the questionnaire. After the first pre-test, the questionnaire was refined, and a second pre-test was conducted with a different group of ten respondents in each country, who voiced no issues regarding the revised questionnaire, its wording, or format, so it was deemed ready for use on the main sample. Finally, we conducted invariance tests to verify empirically the data’s equivalence, which is crucial to the validity and reliability of findings in cross-cultural studies (Salzberger and Sinkovics, 2006).

**Measurement**

All items were measured on a seven-point Likert scale that ranged from (1) strongly disagree to (7) strongly agree. Perceived employee effort was measured with three items adapted from Mohr and Bitner (1995), and perceived justice was measured with seven items adapted from Blodgett *et al.* (1997) and Smith *et al.* (1999). Following DeWitt *et al.* (2008), we combined the three dimensions of justice (distributive, procedural, and interactional) into a single perceived justice construct. To measure post-recovery satisfaction, we used two items adapted from Reynolds and Beatty (1999). Finally, we measured loyalty using five items adapted from Garbarino and Johnson (1999) (behavioral loyalty) and Ganesh *et al.* (2000) (attitudinal loyalty). As with our measurement of perceived justice, we combined the two dimensions of loyalty into a single loyalty construct. All measurement scales items are shown in the Appendix.

**Results**

*Reliability and validity*
Table II presents the means, standard deviations, correlation coefficients, Cronbach’s alpha coefficients, and average variance extracted (AVE) of our service-recovery measurement scales, both combined for all countries and separately for each one. Our results indicate that the respondents in all three countries used the full range of each scale, for the most part, with an acceptable standard deviation. Cronbach’s alpha coefficients ranged between 0.83 and 0.93, well above the 0.70 threshold criterion (Kline, 2000), which indicates satisfactory reliability for all constructs in all samples. To establish convergent validity, we computed the AVE following the approach Fornell and Larcker (1981) suggest, which uses the R package semTools (Pornprasertmanit et al., 2016). The AVE is the amount of variance in indicator variables that a construct explains. Values above 0.50 are recommended to ensure that the measurement error variance is not larger than the variance of the construct itself. As Table II shows, the AVE was above the 0.50 threshold for all constructs and countries, which indicates convergent validity.

Conversely, discriminant validity is established if a construct’s AVE is larger than the squared correlation between any two constructs. Table II shows that discriminant validity was established both in the pooled dataset and in each of the countries. However, we note that two of the path coefficients for the UK sample on Table II are high. We tested for and found discriminant validity using the two tests Fornell and Larcker (1981) recommend for discriminant validity: the strict test that requires a construct’s AVE to be larger than the squared correlation between any two constructs, and a more lenient test that requires that the correlation between any pair of constructs is less than 1. Anderson and Gerbing (1988) advocate the use of this more lenient test. In our case, the calculation of the stricter test is as follows: In the UK, the AVE for post-recovery satisfaction = 0.86, and the correlation between post-recovery satisfaction and perceived justice = 0.82. Therefore, 0.82^2 = 0.67; 0.86 AVE > 0.67. The AVE for perceived
justice = 0.67, and the correlation between perceived justice and post-recovery satisfaction = 0.82. Therefore, \(0.82^2 = 0.67\); 0.67 AVE = 0.67. While the AVE in the first case is greater than the squared correlation, we acknowledge that it is borderline in the second case but nevertheless satisfies the more lenient test’s requirement that the correlation between the pair of constructs is less than 1 (0.67 < 1) (Anderson and Gerbing, 1988; Fornell and Larcker, 1981).

[Take in Table II]

Results of the model analyses

We used structural equation modeling (SEM) to examine the set of hypothesized relationships. First, we used the R package MVN and the Henze-Zirkler’s test, which is recommended for sample sizes of more than 100, to determine whether the data was multivariate normally distributed (Korkmaz et al., 2014). This test was significant, indicating that the data is not multivariate normally distributed (HZ = 1.25, \(p < 0.001\)). Therefore, following Rosseel (2012), we used the robust standard error estimation and the Satorra-Bentler scaled model test statistics (e.g., Chou et al., 1991) for SEM and measurement equivalence testing. We conducted additional data analyses using the R package latent variable analysis (lavaan, version 0.5-20; Rosseel 2012) and semTools (version 0.4-11; Pornprasertmanit et al., 2016).

We computed four models—one model of the combined data and one of each country—to test the hypothesized set of relationships. As Table III shows, the four data sets fit the baseline model well (Van de Schoot et al., 2012). We followed a conservative approach by allowing only the four endogenous factors and none of the items or residuals to correlate.

[Take in Table III]
A certain level of measurement equivalence or measurement invariance must be established in order to conduct meaningful comparisons across groups (e.g., comparison of path coefficients), to test our hypotheses regarding cultural effects, and to allow for the assumption of a similar comprehension of the constructs across all cultures (Steenkamp and Baumgartner, 1998). The levels of equivalence are often considered hierarchical; testing for a stricter level of invariance is usually meaningful only if previous levels have been established. For the purpose of our research, it is sufficient to establish the first three levels of measurement invariance—configural, weak or metric, and strong or scalar invariance—in order to establish that the number of factors, the factor loadings, and the item intercepts are invariant across groups (Davidov et al., 2014; Hirschfeld and von Brachel, 2014). Wu et al. (2007) provide several examples of the importance of invariance. For example, if the factor loadings are not invariant, then a factor score of X is associated with different item scores across groups. Therefore, “cross-group inequality of factor loadings can be understood as the difference in factor score calibration with regard to the unit of measurement” (Wu et al., 2007, p. 10).

In particular, scalar invariance must be established before the path coefficients and the means of latent variables can be meaningfully compared. Although extant research offers several recommendations for the cut-off criteria between the models (Chen, 2007; Cheung and Rensvold, 2002), we followed Cheung and Rensvold’s (2002) recommendation that equivalence is established if the difference between two models remains CFI ≤ 0.01. As Table IV shows, configural and metric invariance was established, but scalar invariance was not. If measurement equivalence is not established, extant research suggests unconstraining (freeing) one or more items based on the modification indices (Byrne et al., 1989; Yoo and Donthu, 2002). After we removed the constraints of equal intercepts for two items of the justice scale, scalar invariance
was established ($\Delta$CFI = 0.008), allowing us to compare the three path coefficients across countries. These results are presented in Table IV.

[Take in Table IV]

We estimated $R^2$ values in order to assess our model’s explanatory power. Our results show $R^2 = 0.38$ across the pooled sample, 0.21 in Mexico, 0.37 in Spain, and 0.54 in the UK (all $p < 0.001$). In the context of human behavior, these values indicate that our model provides satisfactory explanatory power (Cohen, 1988). We argue that the large $R^2$ range, from 0.21 to 0.54, is in line with our arguments for cross-cultural moderation, as explained in our discussion section regarding $H7$.

Table V presents the results of our hypotheses testing. The results suggest that the patterns of relationships proposed in our hypotheses are borne out empirically. In support of $H1$, we found a significant strong relationship between perceived justice and perceived employee effort ($0.72, p < 0.001$) for both the overall sample and individual countries. The coefficients for individual countries were close to each other, ranging between 0.69 and 0.76. We also found support for $H2$, as the relationship between perceived employee effort and post-recovery satisfaction was significant for the overall sample ($0.16, p < 0.05$), but at the individual country level, the path coefficient was significant only for Spain ($0.26, p < 0.01$). We found a significant and strong link between perceived justice and post-recovery satisfaction ($0.78, p < 0.001$) for both the overall sample and individual countries, whose path coefficients ranged between 0.70 and 0.88, with the largest value being that for the UK. These results provide support for $H3$.

$H4$ was also supported, as the overall sample showed a significant and strong relationship between post-recovery satisfaction and loyalty, with a path coefficient of 0.72 ($p < 0.001$). The
path coefficients for individual countries were also significant and strong, ranging between 0.48 and 0.85, again with the largest value for the UK.

[Take in Table V]

To test our last three hypotheses regarding the cultural moderators, we used Brettel et al.’s (2008) formula to compare the path coefficients. Table V shows the path coefficients, the differences between the cultural groups, and these differences’ significance. As expected, the results for H5 show that the effect of perceived employee effort on post-recovery satisfaction was positive and significant and strong only in the feminine Spanish culture (0.26, $p < 0.05$), while it is insignificant in the masculine Mexican and UK cultures. The difference between Spain and the UK is large and marginally significant ($0.27, p \leq 0.07$), but there is no difference between Spain and Mexico. These results provide partial support for H5, at least when the more conservative criterion of significance is applied. Results also show support for H6’s proposition that cultural orientation does not influence the relationship between perceived justice and post-recovery satisfaction, since there were no significant differences among the countries. Finally, results for H7 show that the effects of post-recovery satisfaction and loyalty were numerically larger in the low uncertainty-avoidant British culture than they were in the high uncertainty-avoidant cultures of Mexico and Spain. However, these differences were statistically significant between the UK and Mexico ($0.37, p < 0.05$), which provides partial support for H7. An unexpected significant difference was found between the two highly uncertainty-avoidant cultures of Mexico and Spain ($0.23, p < 0.05$), which is discussed in the next section.

Discussion and Implications
Our findings show that we can obtain a fuller picture when we integrate the functional (perceived justice) and the symbolic (perceived employee effort) elements of service recovery as determinants of post-recovery satisfaction and loyalty. While the functional element (e.g., compensation) is a practical matter, the symbolic element (e.g., empathy) says something about the company’s values. This integration addresses research that calls for the combined examination of customers’ perceptions of service quality in order to clarify their relationships (Cronin et al., 2000; Ostrom and Iacobucci, 1995). We also address calls for more international and cross-cultural research in marketing that focuses on emerging markets (Burgess and Steenkamp, 2006; Steenkamp, 2005), particularly in the area of service recovery (De Matos et al., 2011; Mattila and Patterson, 2004a; Zhang et al., 2008).

This paper contributes to the literature in services marketing, with implications for international marketing, by focusing on service recovery and cross-cultural consumer behavior. Our study is the first to provide empirical, cross-cultural evidence of the relationship between customers’ perceptions of employee effort and justice. It is also the first to provide cross-cultural evidence of the influence of these perceptions on post-recovery satisfaction and loyalty. By providing evidence of the cross-cultural generalizability of this set of relationships, this study helps international marketers to tailor and communicate their service-recovery strategies to specific cultural contexts in order to restore satisfaction after service recovery and reinforce loyalty.

Overall, our findings provide support for all seven of our hypotheses and are consistent with other studies in service recovery. The result for $H1$ demonstrates empirically for the first time the direct link between perceived employee effort, as conceptualized by Mohr and Bitner (1995), and perceived justice. While the literature does not report on this link, our result is
consistent with previous research (Del Rio-Lanza et al., 2009; Liao, 2007; McQuilken et al., 2013) that measures employee effort differently than it is measured in the present study. This finding indicates that the more effort an employee makes to resolve a service failure, the more likely the customer is to consider the outcome to be fair.

A major finding in our study is that the more effort or energy an employee is perceived to exert to resolve a failure, the more likely the customer is to be satisfied with the service recovery. This result provides support to $H2$ and is in line with the limited number of studies that examine this relationship (Bitner et al., 1990; Mattila and Patterson, 2004b; Mohr and Bitner, 1995). The link between perceived employee effort and post-recovery satisfaction is important to both theory and management. The literature ignores the perceived employee effort construct, focusing instead on customers’ perceptions of justice. However, perceived employee effort is the symbolic element that represents the manner in which the outcome is transferred to the customer, from which the customer derives meaning (Mohr and Bitner, 1995)—that is, how the staff deals with customers’ concerns is often more important to customers than are the causes of the earlier service failures (Walsh et al., 2008). For management, our finding is critical to successful service recovery, since the customer often has difficulty seeing when employee effort and outcome are not consistent (Mohr and Bitner, 1995), and a large proportion of unsatisfactory encounters arise from the employee’s inability to respond to the service failure (Bitner et al., 1990).

We also find that perceived justice is positively associated with post-recovery satisfaction ($H3$), a finding that is consistent with prior studies (Liao, 2007; Maxham and Netemeyer, 2002; Oliver and Swan, 1989; Sabharwal et al., 2010; Smith et al., 1999). Furthermore, we find a direct link between post-recovery satisfaction and loyalty ($H4$), which suggests that satisfied customers are willing to do business with the service company again as shown in previous research (Liao,
2007; Smith and Bolton, 1998; Smith et al., 1999; Sparks and McColl-Kennedy, 2001). In other words, effective service recovery processes decrease the chance that customers will switch to other providers and that such processes can often increase the possibility of cultivating long-lasting relationships, as suggested in DeWitt et al. (2008) and Walsh et al. (2008). The main theoretical implication from these findings is that perceived employee effort (symbolic element) and perceived justice (functional element) are interrelated and have a direct impact on post-recovery satisfaction and loyalty. Investigating the two factors simultaneously can provide broader, more meaningful insights and a more complete explanation than is possible when perceived justice is used alone, as is the case in most service recovery studies.

Taken together, the three cultural-orientation-related hypotheses are supported in terms of their influence (or lack of influence) on the proposed relationships. In support of H5, we found that cultural orientation strengthens the relationship between perceived employee effort and post-recovery satisfaction, and in support of H7, we found that cultural orientation also strengthens the relationship between post-recovery satisfaction and loyalty. We also found support for H6, which proposes that cultural orientation does not moderate the relationship between perceived justice and post-recovery satisfaction. Our findings for H5 show that cultural orientation influences the relationship between perceived employee effort and post-recovery satisfaction and suggest that feminine cultures like that of Spain, where relationships, caring for others, and empathy are paramount, attach more importance to the amount of effort an employee expends in trying to recover a service failure than do masculine cultures like the UK, as they are more focused on monetary success than on helping others (Hofstede, 1983). However, H5 is partially supported because we found no significant difference between Spain and Mexico (masculine).
Similarly, we found that cultural orientation strengthens the relationship between post-recovery satisfaction and loyalty, as $H7$ proposes. Our results suggest that UK customers are more likely to give providers a second chance than are those in more uncertainty-avoidant cultures (e.g., Spain and Mexico), who are likely to seek to decline a second chance in order to minimize the potential for service failure in the future, negatively affecting loyalty. This result is consistent with Mattila and Patterson (2004b) and Wong (2004). However, $H7$ is partially supported, as the differences were statistically significant only for the comparison between the UK and Mexico.

We found an unexpected difference in the relationship between post-recovery satisfaction and loyalty between Spain and Mexico. This result can be explained using Morgeson et al.’s (2015) study, which finds that the relationship between satisfaction and loyalty is significantly weaker in emerging markets than it is in developed economies because customers in emerging markets are more sensitive to prices and instability in personal income. Therefore, although Spain and Mexico are similarly high in uncertainty avoidance, this cultural dimension is exacerbated in Mexico because of its economic conditions, as “both price tolerance and repurchase intention might be determined less by customers’ sense of satisfaction fulfillment and more by uncertainty surrounding their economic situation” (Morgeson et al., 2015, p. 7). Finally, our results indicate that cultural orientation has no effect on the positive relationship between perceived justice and post-recovery satisfaction, so $H6$ is supported. This result suggests that the concept of justice is likely to be universal and that perceived justice predicts post-recovery satisfaction, irrespective of the cultural environment, which is in line with De Matos et al. (2011) and Mattila and Patterson (2004b), among others. Our findings help fill a gap in the literature, as cross-cultural research on this set of relationships is limited.
Managerial implications

Managers should recognize that customers value highly motivated employees whom they perceive as exerting a significant level of effort to correct a failure, and this perceived effort is crucial to enhancing customers’ perceptions of justice in the recovery. Understanding this link can help companies differentiate themselves using their service recovery efforts. In an international context, this study suggests that effective service providers are those who recognize the nature of differences in customers’ cultural values and tailor their recovery strategies accordingly. While all of the countries in our sample place significant value on justice, our findings indicate that customers from masculine cultures like those of the UK and Mexico emphasize their perceptions of fairness and justice (the functional element) in the service-recovery process. Therefore, customers from these cultures may be likely to be satisfied with redress in the form of financial compensation, whereas customers from feminine cultures like that of Spain, who place a higher emphasis on interpersonal relationships, are also concerned with how they are treated, as demonstrated by the time and effort employees devote to solving their problems. Companies may consider, for example, allocating call-center employees who deal with such cultures more time to solve customers’ problems and giving them more training in empathizing with the customer. This finding helps to address the tendency of cross-cultural research to focus solely on tangible aspects of service recovery (Keillor et al., 2007).

Service providers should also be aware that customers from cultures with high levels of uncertainty avoidance, such as Mexico and Spain, are less willing than are those from low uncertainty-avoidant cultures like the UK to give the provider another chance after a service failure, even if they are satisfied with the recovery. Therefore, providers who operate in cultures
should work to reduce service failures, especially if they operate in emerging markets, such as that of Mexico, where customers’ uncertainty avoidance is compounded by an economic situation that increases their sensitivity to prices and instability in personal income. As the service sector’s growth is likely to come from emerging economies, and little is known about how firms interact with customers in such economies (Alam, 2014), mobile phone providers in particular may need to look closely at pricing strategies and service availability to remain competitive.

Our findings suggest that international managers should monitor and address failures in service recovery that result from an overly standardized or globalized approach to agent training. For example, call-center staff members who are trained to follow a standardized script for complaints may be destined to fail in dealing with customers from a culture other than which the original script is based. Empathy with customers and knowledge about their cultural backgrounds are critical to effective service recovery and, ultimately, customer satisfaction and loyalty.

Limitations and future research directions

The limitations of the study and directions for future research are discussed as follows. First, our study focuses on one sector (the mobile phone market) and so the findings are relevant to this context. Future research could apply our model in other sectors to extend our findings. Some service sectors that may be of interest are the banking, hospital, insurance, travel, and hotel industries, which have different contextual and competitive characteristics, but entail a high level of human interaction between customers and company’s staff, as in the case of the mobile phone market. Second, data came from three samples (Mexico, the UK, and Spain), and hence
replications across other cultural groups and regions (e.g., Middle East, Asia, Africa) will be needed to strengthen the robustness of our conclusions and/or identify differences. Third, our model does not include the severity of the failure as a variable. Although we follow most service-recovery studies in holding the magnitude of the failure constant (Weun et al., 2004), some studies find that, when customers perceive the failure as severe, their perceptions and evaluations of the service recovery effort are affected (e.g., Smith et al., 1999; Weun et al., 2004). Therefore, to clarify this issue, severity of the failure should be included in future research. Finally, as with most existing research in the area, our study employed convenience sampling to measure customers’ intentions to remain with or leave their provider after a service failure and recovery event. To further validate our findings, future research could move beyond convenience sampling by testing our model with a list of cases (made available by service providers) of customers, who have actually remained loyal or defected following a service recovery event.

**References**


Table I.
Value scores of cultural dimensions

<table>
<thead>
<tr>
<th>Country</th>
<th>Masculinity</th>
<th>Individualism</th>
<th>Power distance</th>
<th>Uncertainty avoidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexico</td>
<td>69</td>
<td>30</td>
<td>81</td>
<td>82</td>
</tr>
<tr>
<td>Spain</td>
<td>42</td>
<td>51</td>
<td>57</td>
<td>86</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>66</td>
<td>89</td>
<td>35</td>
<td>35</td>
</tr>
</tbody>
</table>

Note: Scores run between 0-100; 86 = highest; 30 = lowest (Hofstede 1980).

Table II.
Descriptive statistics, correlations, reliability, convergent and discriminant validity

<table>
<thead>
<tr>
<th>Country</th>
<th>Constructs</th>
<th>M</th>
<th>SD</th>
<th>α</th>
<th>AVE</th>
<th>JUS</th>
<th>EFF</th>
<th>SAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>All countries</td>
<td>JUS</td>
<td>3.72</td>
<td>1.45</td>
<td>0.93</td>
<td>0.67</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>EFF</td>
<td>3.74</td>
<td>1.47</td>
<td>0.90</td>
<td>0.76</td>
<td>0.66</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SAT</td>
<td>3.70</td>
<td>1.78</td>
<td>0.88</td>
<td>0.80</td>
<td>0.81</td>
<td>0.66</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LOY</td>
<td>3.59</td>
<td>1.44</td>
<td>0.83</td>
<td>0.56</td>
<td>0.55</td>
<td>0.41</td>
<td>0.61</td>
</tr>
<tr>
<td>Mexico</td>
<td>JUS</td>
<td>3.71</td>
<td>1.37</td>
<td>0.92</td>
<td>0.62</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>EFF</td>
<td>3.71</td>
<td>1.44</td>
<td>0.89</td>
<td>0.74</td>
<td>0.68</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SAT</td>
<td>3.70</td>
<td>1.61</td>
<td>0.80</td>
<td>0.67</td>
<td>0.75</td>
<td>0.64</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LOY</td>
<td>3.68</td>
<td>1.48</td>
<td>0.87</td>
<td>0.62</td>
<td>0.40</td>
<td>0.34</td>
<td>0.44</td>
</tr>
<tr>
<td>Spain</td>
<td>JUS</td>
<td>3.27</td>
<td>1.36</td>
<td>0.92</td>
<td>0.63</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>EFF</td>
<td>3.55</td>
<td>1.52</td>
<td>0.88</td>
<td>0.72</td>
<td>0.63</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SAT</td>
<td>3.21</td>
<td>1.68</td>
<td>0.88</td>
<td>0.80</td>
<td>0.79</td>
<td>0.68</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LOY</td>
<td>3.33</td>
<td>1.38</td>
<td>0.81</td>
<td>0.51</td>
<td>0.54</td>
<td>0.40</td>
<td>0.59</td>
</tr>
<tr>
<td>UK</td>
<td>JUS</td>
<td>4.54</td>
<td>1.35</td>
<td>0.93</td>
<td>0.67</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>EFF</td>
<td>4.09</td>
<td>1.34</td>
<td>0.93</td>
<td>0.84</td>
<td>0.70</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table III.
Fit indices of baseline model

<table>
<thead>
<tr>
<th>Countries</th>
<th>χ²</th>
<th>df</th>
<th>p</th>
<th>CFI</th>
<th>TLI</th>
<th>RMSEA</th>
<th>SRMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>All countries</td>
<td>216.20</td>
<td>115</td>
<td>0.000</td>
<td>0.98</td>
<td>0.98</td>
<td>0.05</td>
<td>0.04</td>
</tr>
<tr>
<td>Mexico</td>
<td>174.63</td>
<td>115</td>
<td>0.000</td>
<td>0.94</td>
<td>0.93</td>
<td>0.07</td>
<td>0.08</td>
</tr>
<tr>
<td>Spain</td>
<td>149.21</td>
<td>115</td>
<td>0.029</td>
<td>0.98</td>
<td>0.98</td>
<td>0.04</td>
<td>0.05</td>
</tr>
<tr>
<td>UK</td>
<td>168.58</td>
<td>115</td>
<td>0.001</td>
<td>0.96</td>
<td>0.96</td>
<td>0.07</td>
<td>0.06</td>
</tr>
</tbody>
</table>

**Notes:** CFI: Comparative Fit Index, TLI: Tucker-Lewis Index, RMSEA: Root Mean Square Error of Approximation, SRMR: Standardized Root Mean Square Residual.

### Table IV.
Tests of the measurement equivalence of the key measurement variables

<table>
<thead>
<tr>
<th>Test</th>
<th>χ²</th>
<th>Δχ²</th>
<th>df</th>
<th>CFI</th>
<th>RMSEA</th>
<th>ΔCFI</th>
<th>ΔRMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Configural</td>
<td>631.07</td>
<td>-</td>
<td>345</td>
<td>0.968</td>
<td>0.057</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Metric</td>
<td>666.15</td>
<td>35.08</td>
<td>371</td>
<td>0.965</td>
<td>0.058</td>
<td>0.003</td>
<td>0.001</td>
</tr>
<tr>
<td>Scalar</td>
<td>745.96</td>
<td>79.81</td>
<td>397</td>
<td>0.951</td>
<td>0.065</td>
<td>0.013</td>
<td>0.008</td>
</tr>
<tr>
<td>Scalar (partial)</td>
<td>589.84</td>
<td>393</td>
<td>0.957</td>
<td>0.062</td>
<td>0.008</td>
<td>0.004</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** CFI is confirmatory fit index, RMSEA is root mean square of error approximation, Δ represents the differences between the current and the previous model, partial is the model fit after two items have been unconstrained. Scalar (partial) is the model fit after two items have been unconstrained.

### Table V.
Path coefficients with standard errors, and group comparisons

<table>
<thead>
<tr>
<th>Path Coefficients</th>
<th>Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Path</td>
<td>All Countries</td>
</tr>
<tr>
<td>--------</td>
<td>---------------</td>
</tr>
<tr>
<td>EFF $\rightarrow$ JUS</td>
<td>0.72***</td>
</tr>
<tr>
<td></td>
<td>(0.14)</td>
</tr>
<tr>
<td>EFF $\rightarrow$ SAT</td>
<td>0.16*</td>
</tr>
<tr>
<td></td>
<td>(0.07)</td>
</tr>
<tr>
<td>JUS $\rightarrow$ SAT</td>
<td>0.78***</td>
</tr>
<tr>
<td></td>
<td>(0.07)</td>
</tr>
<tr>
<td>SAT $\rightarrow$ LOY</td>
<td>0.72***</td>
</tr>
<tr>
<td></td>
<td>(0.05)</td>
</tr>
</tbody>
</table>

**Notes:** Standard errors are in brackets. JUS: Perceived justice; EFF: Perceived employee effort; SAT: Post-recovery satisfaction; LOY: Loyalty. ^: $p \leq 0.07$; *: $p < 0.05$; **: $p < 0.01$; ***: $p < 0.001$, one-tailed.
Figure 1.
Conceptual model of customer’s perceptions of service recovery in a cross-cultural context