



## Satisfaction with service recovery: Perceived justice and emotional responses

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### ABSTRACT

This study examines the relationship between perceived justice, emotions, and satisfaction during service recovery (SR). The current research work proposes a model analyzing the direct effects of justice on satisfaction, along with its indirect effects, via emotions. A field study that captures consumer perceptions of actual SR situations in the cellular-telephone sector tests the model. The paper investigates the relative effects of the dimensions of perceived justice on satisfaction and the emotions triggered by SR. Results indicate that all three justice dimensions affect satisfaction, with procedural justice showing the strongest relative influence, as well as being the only dimension affecting the emotions. Results also show that negative emotions mediate the effects of justice on satisfaction with SR (SSR).

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### 1. Introduction

Factors outside the individual organization's control influence the production and delivery of services. Many services are heavily people-based, possibly requiring various interactions with the consumers and/or the coordination of different service providers. As a result, the quality of service delivery depends often on the attitude and behavior of front-line employees, the expectations of customers, and even the behavior of other customers (Patterson et al., 2006). In addition, production and consumption of many services generally occur at the same time, meaning that little or no possibility of supervision exists before the service delivery. Thus, although service firms try to offer a high level of quality in their activities, they will not be able to eliminate mistakes entirely during service delivery. Even the most customer-oriented organization with the strongest quality program is unlikely to be able to eliminate all service failures. SR is a moment of truth for the firm, being critical both for satisfying its customers and strengthening its relationships with them (Blodgett et al., 1997; Smith and Bolton, 2002).

SR comprises the actions that a service provider takes to respond to service failures and the process by which the firm attempts to rectify the failure (Kelley and Davis, 1994). This study examines the relationship between perceived justice, emotions and satisfaction during SR. An investigation of these issues is important for various reasons. First, failures themselves do not necessarily lead to customer dissatisfaction, since most consumers accept that things can sometimes go wrong, particularly in services. In contrast, the organization's response (or lack of response) to the failure is the most likely cause of

dissatisfaction. Thus, Bhandari et al. (2007) argue that SSR is a critical component in the overall evaluation of service experiences. Spreng et al. (1995) show that consumer SSR has a greater impact on overall satisfaction than any other individual aspect of the outcome of the service delivery. Maxham and Netemeyer (2002) find that satisfaction with recovery has a positive influence on overall firm satisfaction and on word-of-mouth intent. Therefore, understanding the factors that determine SSR is of great interest.

Second, the research line that considers that perceived justice is a driver of emotions is relatively new in the SR context. Chebat and Slusarczyk (2005) and Schoefer and Ennew (2005) are two fundamental contributions but much is still unknown.

The current study seeks to extend the existing literature analyzing the direct effects of justice on satisfaction with SR, along with its indirect effects, via emotions. Combining justice theory and cognitive appraisal theory, Schoefer and Ennew (2005) explain these effects. However, they exclusively analyze the role of perceived justice as a cognitive appraisal dimension that elicits emotions during SR encounters.

This paper also investigates the relative effects of the dimensions of justice on two important concepts: satisfaction and emotions during SR. Chebat and Slusarczyk (2005) observe that the specific effects of the three justice dimensions on customer loyalty are quite different from each other. But work analyzing whether the justice dimensions also affect satisfaction with SR differently is absent for the literature. Maxham and Netemeyer (2002) analyze the effects of perceived justice on satisfaction with SR, but without examining the relative effects of the justice dimensions or considering the emotions as a variable mediating the relationship between perceived justice and satisfaction. Several authors stress that consumers' emotions during SR encounters influence their SSR (Menon and Dubé, 2004; Schoefer

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and Ennew, 2005; Smith and Bolton, 2002). However, few research works pay attention to the emotional responses to SR.

The present study uses a survey of cell-phone users who have experienced a failure in the service and received a response from the firm. Authors such as Chebat and Slusarczyk (2005), Harris et al. (2006), Schoefer and Ennew (2005), strongly recommend using a survey approach, in order to capture more real perceptions of justice, emotions and behavioral intentions.

Finally, the study is also of interest to on-line services firms, which share some characteristics with cell-phone service providers. In particular: low personal interactivity (face-to-face contacts) and high nonpersonal interactivity (e.g., distant contacts by phone or on-line).

## 2. Literature review and hypothesis development

### 2.1. Cognitive and affective appraisal of SR: perceived justice and emotions

Several theories exist regarding the formation of satisfaction perceptions, but justice theory, affect control theory and cognitive appraisal theory seem particularly relevant in a SR context because consumers generally perceive some inequity in response to service failures (Maxham, 2001). Thus, Konovsky (2000) argues that the concept of perceived justice is critical for studying a person's reactions in a conflict situation. Service failure is a typical example of a conflict situation, so perceived justice is relevant for explaining consumers' behavior in response to SR (Blodgett et al., 1997). Although some studies do not distinguish between the different dimensions of perceived justice (Pathak et al., 1994; Patterson et al., 1997), or do not analyze all three components (Oliver and Swan, 1989a,b), other researchers (Smith et al., 1999; Varela-Neira et al., 2008) recommend including all components of perceived justice (distributive, procedural, and interactional) in research on SR.

Additionally, some researchers argue that perceived justice affects emotions. Thus, according to cognitive appraisal theory, Bagozzi et al. (1999: 185) point out that "emotions arise in response to appraisals one makes for something of relevance to one's wellbeing". In other words, the way individuals evaluate the event generates the emotions, not the event itself. From this perspective, Schoefer and Ennew (2005) conclude that perceived justice represents a cognitive appraisal dimension, which drives the elicitation of emotions following complaint-handling experiences. Similarly, using affect control theory and psychosocial literature, Chebat and Slusarczyk (2005) indicate that emotions are the way consumers cope with (in)justice. They argue that depending on the level of perceived justice, individuals experience emotions and also engage in behaviors consistent with the impressions and feelings that they experience with the SR. Researchers also use this cognitive-affective sequence to try to understand different aspects of consumer behavior such as satisfaction (Mattila and Wirtz, 2000) and attributions of causality in the face of service failure (Szymanski and Henard, 2001). On the other hand, given the characteristics of services (a higher proportion of experience and/or credibility attributes, and the ease of establishing open transactions) and the situation of imbalance that derives from the service failure, emotions clearly have an important role in consumers' evaluations of SR encounters. Nevertheless, as Chebat and Slusarczyk (2005:666) state, "most studies on SR failed to take into account that (in)justice triggers emotional responses in addition to cognitive appraisal". Few studies examine emotions, and the ones that do so do not always consider emotions a consequence of perceived justice.

Thus, this article seeks to address these gaps by analyzing the relationship between the concepts of perceived justice, emotions and SSR. First, the work describes the effects of each dimension of perceived justice on satisfaction and emotions. Then, the work looks at their relative effects, before examining the mediating effect of emotions in the relationship between perceived justice and SSR.

### 2.2. Effects of distributive justice

Distributive justice refers to the assignment of tangible resources by the firm to rectify and compensate for a service failure (e.g., refunding money, changing the good or service, discounts for future purchase). A large number of empirical works study this component of justice, and considerable evidence exists to indicate that distributive justice is positively related to satisfaction with complaint handling (Homburg and Fürst, 2005; Karatepe, 2006; Tax et al., 1998). Researchers also find that distributive justice raises SSR (Maxham and Netemeyer, 2002, 2003; Smith et al., 1999).

Studies analyzing the effects of recovery-related justice on emotions using experimental designs show that low levels of perceived justice correspond to high levels of negative emotions (angry, furious, enraged, annoyed, sad) and low levels of positive emotions (happy, pleased, joyful). In this research line, Schoefer and Ennew's (2005) work stands out for its consideration of the three dimensions of justice (distributive, procedural and interactional), while earlier studies (Weiss et al., 1999; William, 1999) only analyze the impact of distributive and/or procedural justice. Chebat and Slusarczyk (2005) make another interesting contribution, analyzing emotions in an actual SR situation. These authors find that the three dimensions of perceived justice significantly affect negative emotions.

Thus,

**H1a.** Distributive justice positively affects the customer's SSR.

**H1b.** Distributive justice negatively affects negative emotions with respect to the SR.

### 2.3. Effects of procedural justice

Procedural justice refers to the methods the firm uses to deal with the problems arising during service delivery in aspects such as accessibility, timing/speed, process control, delay and flexibility to adapt to the consumer's recovery needs. Several studies show that procedural justice has a positive effect on the consumer's satisfaction with complaint handling (Homburg and Fürst, 2005; Karatepe, 2006; Tax et al., 1998), but its relationship with SSR is not clear. On the one hand, in a study of banking and new home construction services, Maxham and Netemeyer (2002) find that procedural justice does not have a significant effect on SSR. But, on the other hand, in a study of the online purchase of electronic equipment, these same authors (Maxham and Netemeyer, 2003) determine that procedural justice significantly influences the consumer's SSR.

With regard to the effects of procedural justice on emotions, empirical evidence suggests that low levels of perceived procedural justice elicit negative emotions (Schoefer and Ennew, 2005; Weiss et al., 1999). More specifically, Chebat and Slusarczyk (2005) establish that quick SR does not generate positive emotions, while slow SR generates negative feelings. In this respect, procedural justice is a basic requirement, since customers expect providers to correct failures in the service delivery quickly.

**H2a.** Procedural justice positively affects the customer's SSR.

**H2b.** Procedural justice negatively affects negative emotions with respect to the SR.

### 2.4. Effects of interactional justice

This component of justice includes customers' perceptions about employees' empathy, courtesy, sensitivity, treatment and the effort they expend to solve the problem. Empirical studies show that fair interpersonal treatment contributes to satisfaction with complaint handling (Davidow, 2003; Homburg and Fürst, 2005; Karatepe, 2006; Tax et al., 1998), and SSR encounter (Smith et al., 1999). But Maxham

and Netemeyer's (2002, 2003) studies find no evidence that interactional justice affects SSR.

In the context of SR, few empirical studies examine the relation between interactional justice and emotions. These research works generally find evidence for a significant relation between both concepts (Chebat and Slusarczyk, 2005; Schoefer and Ennew, 2005). Clemmer and Schneider (1996) also defend the link between interactional justice and emotions, arguing that employees' ability to put themselves in the place of the user, to share their emotions and help them improves the explanation of customer satisfaction.

Consequently,

**H3a.** Interactional justice positively affects the customer's SSR.

**H3b.** Interactional justice negatively affects negative emotions with respect to the SR.

### 2.5. Relative effects of justice dimensions

Organizational behavior researchers (Brockner and Weisenfeld, 1996; McFarlin and Sweeney, 1992) suggest that procedural justice and interactional justice may have a stronger influence than distributive justice on two important concepts: evaluation of an institution (i.e., global or holistic evaluations) and evaluations that require a long-run perspective (e.g., repatronage intentions, organizational commitment). Relationship marketing and service quality studies can help shed light on this proposition. Thus, from both perspectives, the way firms treat consumers during the delivery of the service (functional quality) and the establishment of relationships (social interaction) is critical in satisfying customers.

To date, four relevant works specifically analyze the relative effects of the justice dimensions in service settings. On the one hand, Clemmer and Schneider (1996), Martinez-Tur et al. (2006) and Maxham and Netemeyer (2002) show the relative importance of the dimensions of perceived justice on customer satisfaction. On the other, Teo and Lim (2001) examine the relative influence of these dimensions on satisfaction with the retailers that sell the product and on repatronage intentions. Among these works, Maxham and Netemeyer's (2002) paper is noteworthy for testing the relative influence of the justice dimensions more accurately, using structural equation modeling. Nevertheless, the results of these four studies are somewhat inconsistent. Teo and Lim (2001) argue that the relative importance of the justice dimensions depends on the nature of the construct under analysis. Thus, they point out that distributive justice is the most important predictor of attitudes related to a specific outcome (e.g., satisfaction with the store or with another particular aspect of the product being sold). A tentative explanation for the lack of convergence between the conclusions of these works may lay in the specific characteristics of the services analyzed and the research method used (Martinez-Tur et al., 2006; Maxham and Netemeyer, 2002). Hence the interest in continuing to explore the relative influence of the dimensions of perceived justice on SSR.

With regard to emotions, McColl-Kennedy and Sparks' (2003) exploratory qualitative study suggests that interactional justice may have a stronger influence on emotions, for at least two reasons. First, distributive and procedural justice have an interpersonal component that can favorably impact on the effects of interactional justice. Second, an employee's lack of empathy with a customer complaining about a service failure can elicit negative emotions (reducing satisfaction), and cancel out the firm's efforts to improve distributive and procedural justice.

Thus,

**H4a.** The distributive, procedural, and interactional justice dimensions will differ in their relative influence on SSR.

**H4b.** The distributive, procedural, and interactional justice dimensions will differ in their relative influence on negative emotions.

### 2.6. Emotions as mediators of the effects of justice on satisfaction with SR

According to Weiss et al. (1999), studies of perceived justice assume that emotions play a key role in transferring perceptions of injustice to subsequent attitudes and behaviors. But researchers in the SR context barely examine this question, perhaps because, as mentioned earlier, evidence of the effects of justice on emotions is only recent. The most notable study on this question is by Chebat and Slusarczyk (2005), who find that emotions triggered by SR mediate the effects of the three justice dimensions on loyalty. Schoefer and Ennew (2005), combining justice theory and cognitive appraisal theory, also suggest that perceived justice has both a direct and indirect effect (via emotions) on consumers' satisfaction. In other words, they consider that emotions triggered by SR mediate the relation between perceived justice and satisfaction. However, they do not empirically analyze this possible mediating role of emotions, since their research centers on analyzing the link between the dimensions of perceived justice and emotional responses.

Thus,

**H5.** Customers' emotions in response to SR mediate the effects of the dimensions of perceived justice on customer SSR.

## 3. Methods

### 3.1. Service sector of study

Cell-phone services are the object of analysis in the present study. Analysis of this sector is interesting from both the social and economic perspectives. Developed countries are building economies based on the processing of information, knowledge and ideas (information society). Communication by mobile networks has grown strongly both in the demand for lines and in the consumption of services (IDATE, DigiWorld, 2007). Besides this, the cell-phone sector is representative of business domains in which a good management of SSR can greatly benefit providers as they fight to improve customer retention (Lee et al., 2001): customer retention is critical in the cell-phone sector since a strong level of competition exists among the providers, which spend large sums acquiring new customers. The European Union has promoted measures to allow number portability between operators and unblocking of handsets. These measures have reduced two of the switching barriers of greatest weight in the sector and encouraged competition between the operators.

### 3.2. Sample and procedure

Data collection was carried out by a structured questionnaire administered through personal interviews to cell-phone users who had recently perceived some type of recovery effort. Given that the SR experience is not a common phenomenon, a simple random sample of the general population would typically result in only a small number of respondents with direct experience of SR (Schoefer and Ennew, 2005). Hence, the current work uses a convenience sample in three Spanish cities. The conditions for the inclusion of respondents were that they must have had some important problem with their cell-phone company in the past year, and perceived some attempt at SR after making their complaint. While this method has the advantage of reducing the biases from memory lapses common in self-reports of service failures (Smith et al., 1999), the method does raise concern about the generalisability of findings from such contexts. Specifically, the authors interviewed 554 customers who had experienced some problem with their cell-phone company in the past year, and used 184 (33%) of these for data analysis.

The demographic characteristics indicate that the respondents are a diverse group of people. Approximately 48% are men. The age of the participants ranges between 18 and 70, with a heavy concentration (47.3%) between 18 and 34. In terms of occupation, 40.8% are

**Table 1**  
Correlation matrix.

	Distributive justice	Procedural justice	Interactional justice	Emotions	SSR <sup>(1)</sup>
Distributive J.	<b>0.914</b>				
Procedural J.	0.574	<b>0.818</b>			
Interactional J.	0.400	0.677	<b>0.816</b>		
Emotions	−0.246	−0.555	−0.477	<b>0.883</b>	
SSR <sup>(1)</sup> :	0.559	0.800	0.687	−0.667	<b>0.870</b>

Notes: <sup>(1)</sup> SSR: Satisfaction with SR.

Correlations are significant at  $p < .01$ .

Square root of average variance extracted in bold.

employed workers, 25% students, 10.9% housewives, and 12% self-employed. The respondents mention the following service failures: employees' difficulty in fixing problems and attending to consumers (29.3%), lack of cell-phone coverage (21.7%), incompliance with communication services and guarantee (20.1%), incorrect billing (13%), messages not arriving (6.5%), delays in messages and/or calls (5.4%), and other causes (4%). With regard to the SR actions that the respondents mention, 52.2% of the respondents perceive flexibility and accessibility in the process used to rectify the service failure, 47.3% receive apologies from the service providers, and 27.2% perceive some type of tangible recovery effort (e.g. changing the handset or service for a similar one, refunds, or discounts for future purchases).

### 3.3. Measures

The study measures all constructs through multi-item scales adapted from the literature (see Appendix A). In order to adapt the scale items to the specific industry context, elicit comments on the content, and assess the questions for face validity, the authors carried out in-depth interviews with cell-phone company managers and marketing academics. Likewise, the authors organized a focus group with cell-phone users.

This work assesses the emotions triggered by SR in terms of negative and positive feelings. But the investigation considers negative emotions only, since the authors found problems of interpretation and incoherencies in the evaluation of the positive emotions. These problems were evident in the focus group with cell-phone users and in some responses to the questionnaire, and may be due to the fact that recalling a service failure puts consumer in a negative state of mind. Andreassen (2000) affirms that the initial condition of negative emotions is the common denominator of unsatisfactory service encounters (failures in the provision). In service failure contexts, other authors study only negative emotions (Yoon and Doucet, 2006), or find that while all three dimensions of justice

affect negative emotions, not all the dimensions affect positive emotions (Chebat and Slusarczyk, 2005). In other contexts, moreover, when studying the impact of emotions on behavioral intentions, Jones et al. (2007) suggest that negative emotions are weighed more heavily than positive emotions.

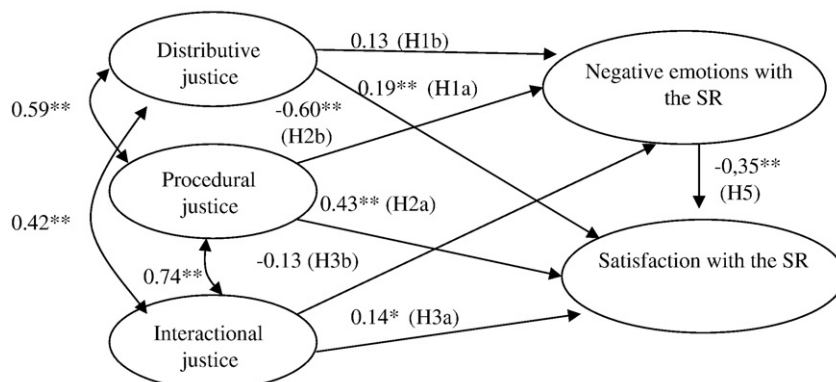
## 4. Results

### 4.1. Initial analyses

The data analysis begins with an exploratory factor analysis of the different justice variables. The results obtained through the principal components factor analysis, with varimax rotation, are clearly satisfactory. None of the variables fail to meet the cut-off point considered (a factor loading of 0.60). Nor do any variables load on more than one factor.

The following step was a confirmatory factor analysis (CFA), using EQS 6.1, to evaluate the psychometric properties of all the constructs. In structural equation modeling, the literature recommends a two-step analysis: first estimate the measurement model, and then fix the measurement model in the second stage when estimating the structural model. With regard to sample size, a minimum ratio of at least five respondents for each estimated parameter is usual. Bearing in mind the sample size requirements and the two-step analysis, the authors estimated a first measurement model that evaluates the indicators of distributive justice, procedural justice and interactional justice. Then, they estimated a second measurement model including the emotions and SSR constructs and specifying as indicators of justice the ones resulting from the first model. Both measurement models fit the data well, since the fit statistics meet or exceed the critical values: first measurement model,  $S-B\chi^2(116) = 246.48$  ( $p < .001$ ), BBNNFI = 0.93, CFI = 0.94, RMSEA = 0.09 (0.08, 0.1); second measurement model,  $S-B\chi^2(302) = 479.35$  ( $p < .001$ ), BBNNFI = 0.97, CFI = 0.97, RMSEA = 0.07 (0.06, 0.08).

The results also support the internal consistency of each construct, since composite reliability (CR) is greater than or equal to 0.80 in all cases. Cronbach's alpha achieves acceptable values and a high degree of shared variance is evident between the indicators of each construct, given that average variance extracted (AVE) is greater than 0.50. The convergent validity of the scales is confirmed since each item loads significantly on its respective construct and all loadings are over 0.5. Discriminant validity is tested in two ways. First, examination of the possible correlations between the latent constructs confirms that none of the confidence intervals contains 1. Second, by comparing the square root of the average variance extracted of each construct with its correlations with the other constructs. As Table 1 shows, the square root of the average variance extracted is greater than all the other



**Fig. 1.** Results of the structural model. Notes: The standardized parameters are shown (\*\* $p < 0.01$ ; \* $p < 0.05$ ).

correlations in all cases. Appendix A summarizes the psychometric properties of the scales.

#### 4.2. Structural model

Following the two-step analysis of structural equation modeling, after estimating the measurement model the authors estimated the structural model appearing in Fig. 1 in order to test the hypotheses formulated above. The goodness of fit of this model is adequate ( $S-B\chi^2(316) = 472.54$ ;  $p < 0.001$ ;  $BBNFI = 0.98$ ;  $CFI = 0.98$ ;  $RMSEA = 0.07$  (0.06, 0.08)), and five of the seven causal relations proposed are significant. A first important finding is that distributive justice positively influences consumers' level of SSR, but does not affect emotions. This result provides support for H1a, but not for H1b. Procedural justice significantly affects satisfaction and emotions triggered by SR. In both cases, the expected effect is evident: a higher perception of procedural justice improves SSR (H2a) and generates a lower level of negative emotions (H2b). In turn, interactional justice significantly and positively influences satisfaction (H3a), but the postulated effect on emotions (H3b) is not significant. Thus, in this respect interactive and distributive justice behave in a similar way.

On the other hand, the results show that emotions mediate the effect of procedural justice on satisfaction (H5). This mediating effect of emotions only exists for the procedural justice dimension. Procedural justice positively affects SSR strategies via two different paths: (1) directly (with a standardized coefficient of 0.43); and (2) indirectly, through emotions (the influence is  $-0.60 \times -0.35 = 0.21$ ). Thus, the direct effect is double the indirect effect, and this in turn exceeds the direct effects of both the other dimensions of justice (distributive and interactional).

#### 4.3. Relative effects of justice dimensions

H4a posits that the distributive, procedural and interactional justice dimensions differ in their relative influence on SSR. Taking account of the value of the standardized parameters, procedural justice has the strongest effect (0.43), while distributive justice (0.19) and interactional justice (0.14) exert a similar influence. In order to determine the relative importance of the three justice dimensions, the authors used a nested models approach. The first stage of the analysis involved the estimation of a model that constrained the parameter capturing the effect of procedural justice to be equal to the parameter for the effect of distributive justice, subsequently comparing this model with the unconstrained original model in which the paths were estimated freely (i.e., the hypothesized model). Since the  $\chi^2$  statistic of the unconstrained model differs from that of the constrained one (the one with the equated paths), then clearly, the effect of procedural justice on SSR is greater than the effect of distributive justice. This result provides support for H4a (Dif  $\chi^2 = 4.77$ ;  $df = 1$ ;  $p = 0.03$ ). The authors then compared the influence of procedural and interactional justice on SSR, using a model that specifies the parameters corresponding to these dimensions as equal. The results show that the effect of procedural justice is substantially greater than the effect of interactional justice (Dif  $\chi^2 = 5.41$ ;  $df = 1$ ,  $p = 0.02$ ). Regarding the relative influence of the interactional and distributive justice dimensions, comparison of the constrained model with the unconstrained model shows that these two dimensions affect SSR equally (Dif  $\chi^2 = 0.43$ ;  $df = 1$ ,  $p = 0.51$ ). In short, of the three dimensions of perceived justice, procedural justice has the strongest influence on consumer SSR. This result provides support for H4a.

H4b sustains that the interactional justice dimension has a stronger effect than distributive and procedural justice on negative emotions. The results of the structural model proposed show that procedural justice is the only dimension that significantly affects emotions. Use of the nested models approach is consequently not necessary: the results cannot support H4b.

## 5. Discussion and managerial implications

The model proposed in this study estimates the relationship between the perceived justice dimensions, emotions and SSR in the cell-phone industry. Previous studies typically find evidence that perceived justice in the SR acts as a direct cognitive antecedent to customer satisfaction (Kau and Loh, 2006; Maxham and Netemeyer, 2002; Patterson et al., 2006). More recent research shows that perceived justice elicits emotional responses from customers (Chebat and Slusarczyk, 2005; Schoefer and Ennew, 2005). The current work moves beyond prior research in the area, providing evidence that perceived justice affects consumer SSR both directly and indirectly (via emotions).

The results indicate that in the cell-phone industry procedural justice perceptions elicit emotional responses from customers as well as satisfaction judgments. This result is consistent with affect control theory and cognitive appraisal theory, which explain human emotions as a result of the subjective evaluation of events that occur in the environment. According to this, perceived procedural justice appears to represent a cognitive appraisal dimension that helps to explain the emotions triggered by SR.

Unlike what Schoefer and Ennew (2005) find in airlines and Chebat and Slusarczyk (2005) find in retail banking, in the cell-phone industry distributive justice and interactional justice do not affect the emotions that consumers experience with the SR. In other words, not all the dimensions of justice influence the emotions that the consumer experiences with the SR. Feelings of anger, offence and disappointment originate in the injustice that consumers perceive with respect to the firm's policies and methods to rectify the service failures and deal with the complaints (procedural justice). In contrast, the perception of an inadequate tangible compensation (distributive justice) or of deficiencies in the interpersonal relationship with employees (interactional justice) does not trigger negative emotions. Therefore, the absence of tangible efforts or the use of inadequate procedures when solving a problem does not lead customers to express negative emotions, but these failings do negatively affect customers' satisfaction with the firm's response. The same occurs when customers perceive their interaction with the employees to be deficient. This situation causes dissatisfaction, but does not trigger negative emotions.

Two characteristics of the cell-phone market may explain why the interactional and distributive justice dimensions do not affect negative emotions. First, after the relationship with the cell-phone company begins, the firm can deliver the service without requiring the customer's interaction with the organization. Consequently, contacts between employees and customers are infrequent and generally involve dealing with complaints and service failures, with most contacts being from a distance rather than face-to-face. Another characteristic to bear in mind is that many service failures in this market have to do with the basic attributes of the communication service (mainly failures in the coverage, delays in sending messages, inactivated communications services, saturation of telephone lines) more than with the economic conditions. In this context, customers conceivably want the firm to focus its SR efforts on re-establishing the telephone communication service as soon as possible. Hence, although customers will welcome tangible benefits and appropriate treatment, and their satisfaction will improve, they will not generate negative emotions if they do not obtain these compensations.

One of the main conclusions of this study is that in the cell-phone sector, procedural justice has a dominant role in explaining customer SSR, for at least two reasons. First, of the three dimensions of justice, procedural justice has the strongest direct effect on satisfaction. Second, procedural justice is the only dimension that exerts both a direct effect on satisfaction and an indirect one (via emotions). Moreover, this indirect effect presents a higher standardized coefficient than the direct effects of distributive justice and interactional justice.

These findings also have implications for justice theory, since they show that not all the dimensions of justice have the same relative

importance in explaining satisfaction and the emotions triggered by SR. This point would suggest the need to analyze the dimensions of perceived justice separately rather than in an aggregate form.

### 5.1. Managerial implications

Several key managerial implications emerge from this study. First, the previous comments about the greater importance of procedural justice do not by any means imply that firms should pay less attention to the other two dimensions of perceived justice. Managers should remember that all three dimensions of perceived justice are strongly interrelated, and they all have an important positive influence on consumers' SSR. This reinforces the idea that the importance of perceived justice in SR cannot be overlooked (Kau and Loh, 2006; McColl-Kennedy and Sparks, 2003).

Firms should train employees to understand what aspects of the outcome, the resolution procedures and the interpersonal communications and behavior of the SR can condition the consumer's perceptions of justice. If the firm can improve the consumer's perception of these aspects, the consumer will be more satisfied with the SR and the firm can avoid the so-called double deviation effect, whereby an inadequate SR worsens the consumer's already low levels of satisfaction after the service failure. Another implication of this point is the need to evaluate justice in the SR from the consumer's, not the firm's, point of view.

A fourth implication is that service providers can influence consumers' emotions through their efforts to recover the service. Specifically, to reduce negative emotions and consequently raise SSR, the current research suggests improving the perception of activities that have to do with procedural justice (accessibility, flexibility, speed and control over the solution given to the customer). Managers should see the presence of negative emotions as a sign of the need to improve perceptions of procedural justice, rather than just as a simple threat.

### 5.2. Limitations and future research

This study suffers from various limitations that restrict the generalization of its findings and open up directions for future research. First, the generalizability of the findings is somewhat limited because the research looks at just one sector (cell phones). This is a practical constraint that may be difficult to overcome due to the context-specific nature of SR (Mattila, 2001). In fact, much of the existing research on SR focuses on a single sector of study. But choosing a single service industry eliminates the problem of industry differences (Hartline and Ferrell, 1996). Thus, replication studies in other service sectors would be fruitful.

A second limitation refers to the use of emotions in a service context. Recently, researchers have tried to translate the emotions developed in a person-to-person relationship to a business context (Ponsonby-McCabe and Boyle, 2006; Tsai, 2005), but work still needs to be done on this topic. It is necessary to advance in this line, as it has happened, for example, with the concept of brand "personality," defined as the "set of human-like characteristics associated with a brand" (Aaker, 1997, p. 347), and its measurement, which is based on the extensive literature on human personality (Aaker, 1997; Milas and Mlačić, 2007). The sample of the study is another limitation of this research. This is a convenience sample consisting of 184 persons. Future research with a larger, randomly-selected, sample could provide a more comprehensive coverage.

Additionally, future research will need to consider more variables, whether antecedents, consequences or factors moderating the relationships between perceived justice, emotions and satisfaction. Among these variables, the authors would recommend studying customers' expectations about the SR, their image or evaluation of the firm's brand, their level of loyalty and global satisfaction with the firm and their attributions of the causes of the problem. Other questions of

interest for future research include how the responses from customers vary depending on the treatment, the severity of the failure, or how long ago the failure occurred.

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### Appendix A. Measurement scales used and psychometric properties

	$\lambda$	t-value
<b>Distributive justice</b> ( $\alpha = 0.96$ ; $\rho = 0.96$ ; AVE = 0.84)		
Adapted from: Folger and Konovsky (1989), Maxham and Netemeyer (2002) and Smith and Bolton (1998)		
Considering the trouble caused and the time lost, the compensation I received from (XX) was acceptable	0.87	16.01
(XX) took good compensation measures to solve the problem	0.90	15.49
(XX)'s efforts were sufficient to offer a satisfactory compensation	0.89	17.77
I think (XX) was quite fair when compensating me for the problem that occurred	0.95	20.75
In general, (XX) was able to compensate me adequately to solve the problems it had in the delivery of the service	0.95	22.47
<b>Procedural justice</b> ( $\alpha = 0.90$ ; $\rho = 0.91$ ; AVE = 0.67)		
Adapted from: Blodgett et al. (1997), Folger and Konovsky (1989), Maxham and Netemeyer (2002) and Smith and Bolton (1998)		
I think my problem was resolved in the right way	0.81	13.62
I think the firm (XX) has good policies and practices for dealing with problems	0.77	12.23
Despite the trouble caused by the problem, the firm (XX) was able to respond adequately	0.90	15.92
The firm (XX) proved flexible in solving the problem	0.87	16.05
The firm (XX) tried to solve the problem as quickly as possible	0.73	14.64
<b>Interactional justice</b> ( $\alpha = 0.93$ ; $\rho = 0.93$ ; AVE = 0.67)		
Adapted from: Folger and Konovsky (1989), Maxham and Netemeyer (2002), and Smith and Bolton (1998)		
The employees in (XX) showed interest in my problem	0.79	13.50
The employees in (XX) did everything possible to solve my problem	0.87	16.89
The employees in (XX) were honest when dealing with my problem	0.83	14.98
The employees in (XX) proved able and to have enough authority to solve the problem	0.79	13.28
The employees in (XX) dealt with me courteously when solving the problem	0.78	11.74
The employees in (XX) showed interest in being fair when solving the problem	0.84	14.27
The treatment and communication with (XX) employees to solve the problem were acceptable	0.81	13.27
<b>Satisfaction with solution to problem</b> ( $\alpha = 0.92$ ; $\rho = 0.94$ ; AVE = 0.76)		
Adapted from: Bitner (1990), Brown and Leigh (1996) and Davidow (2000)		
I am satisfied with the way my problem was dealt with and resolved	0.91	22.01
I am happy with the way my problem was solved	0.88	23.05
I am satisfied with the treatment from the employees involved in resolving the problem	0.81	15.47
I am satisfied with the procedure (way of working) and the resources used to solve the problem	0.88	19.62
In my opinion, the firm provided a satisfactory solution to this particular problem	0.87	20.18
I am satisfied with the compensation offered by the firm (restore service, refund money and similar) *		
<b>Emotions</b> ( $\alpha = 0.91$ ; $\rho = 0.91$ ; AVE = 0.78)		
Adapted from: Plutchik (1980) and Schoefer and Ennew (2005)		
Please indicate how you felt about the solution to the problem (SR strategy) adopted by the firm:		
Angry	0.95	18.02
Offended	0.93	15.38
Disappointed	0.75	9.18

Note: All constructs were measured using 1–7 Likert scales. \*Indicates item finally eliminated.

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