

## **Consumer Reaction to Service Failure and Recovery: The Moderating Role of Attitude Toward Complaining**

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### **Abstract**

This study investigates the effects of problem severity and company responsiveness on consumer satisfaction, repatronage intentions, word-of-mouth and complaining intentions, in a context of service failure and recovery. The research model is an extension of previous studies, especially considering more recent developments in the service failure/recovery literature. A 2 x 2 factorial experiment was conducted, manipulating problem severity (low x high) and company responsiveness (low x high), in order to test the proposed relationships. Participants included 185 users of airline services. The main results indicate that consumer attitude toward complaining is an important moderator in the consumer reactions to service failure and recovery. In particular, findings revealed that the effects of failure on satisfaction are more prominent for those consumers with higher propensity to complain (i.e. the 'complainers'). Also, the final satisfaction of these complainers were positively influenced by company responsiveness and their final satisfaction had a stronger effect on complaining intentions, repurchase intentions and word-of-mouth. Finally, these results are discussed and compared to previous findings from the literature.

### **Introduction**

Complaint management has been considered an important tool for managers to deal with failures, especially in the services sector, where customers evaluate a performance and not a tangible product (Stauss and Seidel, 2004; Grönroos, 1988). Because most of the customers do not complain when experience a service failure (Tax and Brown, 1998), but just change the service provider, it becomes clear that monitoring customer satisfaction over time is not enough. Companies must understand better how customers react to service failure and to the efforts of service recovery.

In the services marketing literature, research in the context of service failure and recovery has investigated (i) how customers react to different levels of problem severity and service recovery (Smith and Bolton, 1988; Maxham, 2001), (ii) the impact of relationship type on customer loyalty (Mattila, 2001), (iii) whether a highly satisfying service failure and recovery encounter enhance a customer's overall satisfaction with a service organization (i.e. the "recovery paradox" (Mccollough, 1995; Smith and Bolton 1988; Maxham, 2001) and (iv) how customers perceptions vary over time (Maxham and Netemeyer, 2002). In Brazil, studies have also investigated consumer reactions to service failure and recovery (e.g. Cortimiglia et al., 2003; Fonseca, Trez and Espartel, 2005; Santos and Fernandes, 2005; Fernandes and Santos, 2006), whether using experimental or descriptive designs.

However, recent developments in this literature have considered new variables to better understand the drivers of complaint intentions (e.g. Voorhees and Brady, 2005), such as the consumer general feeling of the "goodness" or "badness" of complaining (i.e. attitude toward complaining). Because of this, the purpose of this research was to test the effects of problem severity and company responsiveness on customers evaluations of satisfaction, repatronage intentions, complaining intentions and word-of-mouth. Specifically, the research model extends the Smith and Bolton's (1998) model by (i) considering prior cumulative satisfaction, satisfaction after service failure and satisfaction after service recovery, (ii) including word-of-mouth and complaining intentions as new constructs and (iii) testing the moderating effects of

attitude toward complaining. Our findings emphasize an important moderating effect of the attitude toward complaining in the customers' reactions to service failure and recovery.

The following section presents the conceptual model with the proposed relationships. Then, the experimental method is detailed in terms of participants, measures and procedures. Next, the results are presented, including manipulation checks, reliability/validity of the scales, the direct effects and the moderating effects. Finally, results are discussed and compared to previous findings from the literature.

## Conceptual Model and Hypotheses

In this section, the theoretical background of the proposed model is presented and also the expected direction of the relationships between the constructs. The model depicted in Figure 1 illustrates the constructs and relationships to be investigated.

### Satisfaction and Repatronage Intentions in the Context of Service Failure and Company responsiveness

Satisfaction is one of the most investigated concepts in the marketing literature (Szymanski and Henard, 2001). A common assumption of these studies is that a satisfied customer has a greater propensity to engage in favorable behavioral intentions, as repurchasing behavior and positive recommendation of the company/brand (i.e. positive word-of-mouth) and also a greater tolerance when experiencing a failure in the performance of the product or service (Oliver, 1980; Richins, 1983; Bearden and Teel, 1983; Ranaweera and Prabhu, 2003). Also, customers with higher (dis)satisfaction are more likely to engage in behaviors such as word-of-mouth, because of the consequent delight (regret) present in the satisfying (dissatisfying) situation (Oliver, 1997; Anderson, 1998; Steiner Neto, Schlemmer and Pádua Jr, 2004).

In the services marketing literature, service failure and recovery encounters are considered critical "moments of truth" in the relationship between service provider and customers (Grönroos, 1998). Research in the context of service failure and recovery has investigated (i) how customers react to different levels of problem severity (Smith and Bolton, 1988) and different levels of service recovery (Maxham, 1998; Smith and Bolton, 1988; Maxham, 2001), (ii) the impact of relationship type on customer loyalty (Mattila, 2001), (iii) whether a highly satisfying service failure and recovery encounter enhance a customer's overall satisfaction with a service organization and increase repatronage intentions (McCullough, 1995; Smith and Bolton, 1988; Maxham, 2001), (iv) the online versus offline setting (Harris et al., 2006), and (v) how customers perceptions vary over time (Maxham and Netemeyer, 2002). In Brazil, studies have also investigated consumer reactions to service failure and recovery (e.g. Cortimiglia et al., 2003; Fonseca, Trez and Espartel, 2005; Santos and Fernandes, 2005; Fernandes and Santos, 2006), whether using experimental or descriptive designs.

Experimental studies have demonstrated that service failure has a negative impact on customer satisfaction and repatronage intentions (Smith and Bolton, 1998). In this regard, we expect that:

*H1a: There will be a negative relationship between problem severity and satisfaction after service failure.*

Service failure can also work as an opportunity for customers to update their level of cumulative satisfaction, and because of this, the negative experience produced by the failure might have an influence of future assessments of satisfaction by the customers (Smith and Bolton, 1998). Then, we expect that:

*H1b: There will be a negative relationship between problem severity and satisfaction after service recovery.*

Responsiveness, i.e. the perception of the willingness of the service firm to remedy the problem and to provide a complaint handling mechanism (Richins, 1987), is an important factor that might motivate customers to communicate their bad experiences (Tax and Brown, 1998) and also seek for correction or compensation for the service failure (Richins, 1987). Research has demonstrated that excellent service recoveries can enhance customer satisfaction (Smith and Bolton, 1998). Then, it is expected that:

*H2: There will be a positive relationship between company responsiveness and satisfaction after service recovery.*

### **Perceived Justice and Satisfaction**

In the context of complaining behavior, perceived justice refers to the degree to which consumers feel that they have been treated fairly with respect to the outcome of the service encounter (Voorhees and Brady, 2005). This concept is usually considered as a three-component construct (Singh, 1988), formed by a distributive dimension (i.e. the perceived fairness of the redress offered by the service provider), the procedural dimension (i.e. the perceived fairness of the retailer's return and exchange policy) and the interactional dimension, referring to the manner in which the service provider responded to the consumer's complaint.

Blodgett, Granbois and Walters (1993) considered the three dimensions together in a global assessment of the fairness of the service recovery and found that perceived justice has a positive effect on repatronage intentions and a negative effect on negative word-of-mouth (see also Maxham and Netemeyer, 2002 and Santos and Fernandes, 2005). These dimensions of perceived justice are also positively correlated with the satisfaction with the complaint handling (Tax, Brown and Chandrashekar, 1998; Santos, 2001). Although these previous studies investigated how consumers were satisfied *with* the complaint handling management (i.e. the way the company dealt with the problem), this study uses the perspective of the customer satisfaction *after* service recovery (i.e. the same taken by Smith and Bolton, 1998), considering how satisfied the customer is after the problem has been handled by the company. Based on these findings, we propose that:

*H3: There will be a positive relationship between perceptions of justice with the service recovery and the customer satisfaction after service recovery.*

### **Satisfaction after Service Failure and Recovery**

Previous studies have demonstrated a positive correlation between the customer cumulative satisfaction and his/her repatronage intentions (Oliver, 1980; LaBarbera and Marzursky, 1983). In the context of service failure and recovery, research has proposed that customers with higher cumulative satisfaction have (i) higher repatronage intentions (Smith and Bolton, 1998; Maxham and Netemeyer, 2002) and (ii) higher positive word-of-mouth intent (Maxham and Netemeyer, 2002). Studies dealing with the customer satisfaction with the complaint handling have also found a positive link between this construct and the customer repurchase intentions and propensity to positive word-of-mouth (Maxham and Netemeyer, 2002; Santos and Fernandes, 2005). Because of this, it is expected that:

*H4a: Satisfaction derived from the service recovery will have a positive influence on repatronage intentions.*

*H4b: Satisfaction derived from the service recovery will have a positive influence on consumer propensity to word-of-mouth.*

Research has found an inverse relationship between satisfaction and complaining behavior (e.g. Bearden and Teel, 1983; Voorhees and Brady, 2005), meaning that the less satisfied customers are with the service provider, the greater their propensity to engage in complaining behavior. In the situation of service failure and recovery, it is expected that those customers who are less satisfied after the service recovery will be more likely to manifest a complaint behavior. Hence, it is expected that:

*H4c: Satisfaction derived from the service recovery will have a negative influence on future complaint intentions.*

### **Moderating Effects of Attitude Toward Complaining**

The next four hypotheses are based on consumer attitude and its role as moderate variable. According to the literature, attitude is defined as a “a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor.” (Eagly and Chaiken, 1993, p.1). Attitude toward complaining is defined as the personal tendency of dissatisfied consumers to seek compensation from the firm (Richins, 1987; Kim et al., 2003), i.e., how customers evaluate the act of complaining to sellers. This attitude encompasses a general feeling of the “goodness” or “badness” of complaining and is not restricted to a specific episode of dissatisfaction (Kim et al., 2003). These authors have found that consumers with higher attitude toward complaining have higher complaining intentions, which is consistent with the general model that predicts a positive correlation between attitudes, intentions and behavior (Ajzen and Fishbein, 1980).

More recent studies in the context of service failure and recovery have investigated the attitude toward complaining trait as a moderator, i.e. whether consumers are more likely to complain if they have a high predisposition toward complaining, regardless of the levels of dissatisfaction or perceived justice that they experience (Kim et al., 2003; Voorhees and Brady, 2005). If there is an influence of this predisposition on consumer intentions to complain, it is reasonable to expect that this trait also affects the initial consumer responses to the service failure and recovery, i.e. customer satisfaction. For this reason, it is expected that:

*H5a: Consumer attitudes toward complaining will moderate the effects of service failure on initial satisfaction.*

*H5b: Consumer attitudes toward complaining will moderate the effects of service failure on final satisfaction.*

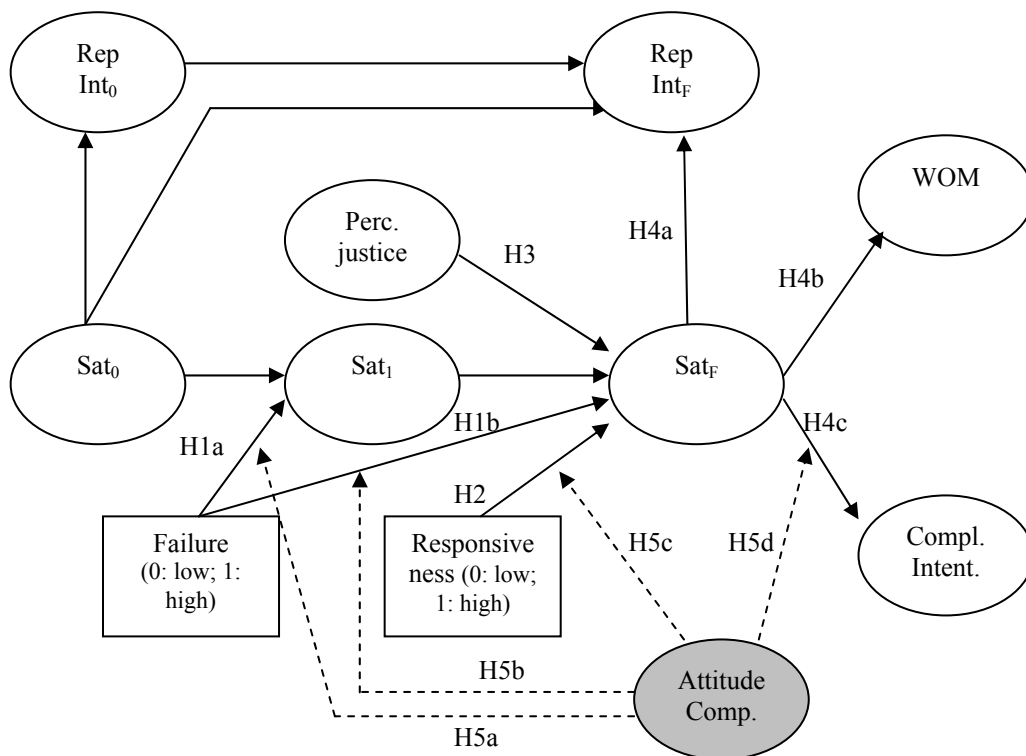
*H5c: Consumer attitudes toward complaining will moderate the effects of service recovery on final satisfaction.*

As proposed by Voorhees and Brady (2005, p.195), the predisposition toward complaining may also affect the effects of customer satisfaction on future complaining intentions. Although these authors predict this relationship based on empirical studies of the service failure/recovery literature, their findings did not support the moderating effect (Voorhees and Brady, 2005, p.199), as the regression coefficient in the satisfaction-complaint intentions relationship was *not* statistically different across the groups (i.e. low attitude toward complaining x high attitude toward complaining). More recent research (Fernandes and Santos, 2006), however, has found a significant difference for these groups, supporting the moderating effect and suggesting that the link dissatisfaction-complaining intentions is stronger for customers with higher attitude toward complaining, when compared to those with lower predisposition to complain. Because of that, it is predicted that:

H5d: Consumer attitudes toward complaining will moderate the effects of satisfaction after service recovery on complaint intentions.

Based on these theoretical discussions, the model in Figure 1 synthesizes the proposed relationships. This model extends Smith and Bolton's (1998) research, by (i) considering prior cumulative satisfaction, satisfaction after service failure and satisfaction after service recovery, (ii) including word-of-mouth and complaining intentions as new constructs and (iii) testing the moderating effects of attitude toward complaining.

FIGURE 1: The Research Model



Notes – Sat<sub>0</sub>: Prior Cumulative Satisfaction, Rep<sub>0</sub>: Prior repatronage intentions, Sat<sub>1</sub>: Satisfaction after service failure, Perc. Just.: Perceived Justice, Sat<sub>F</sub>: Satisfaction after service recovery, Rep<sub>F</sub>: Repatronage Intentions, WOM: Positive Word-of-Mouth, Comp.Int.: Future Complaint Intentions, At. Comp.: Attitude toward complaining

## Method

This study used an experimental design. A 2x2 between-subjects factorial experiment was conducted, manipulating service failure (low problem severity x high problem severity) and service recovery (low firm responsiveness x high firm responsiveness). Most of the previous research on the subject of service failure and recovery are based on a descriptive approach (e.g. self reports by customers experiencing service failures), using an *ex-post* approach (i.e. one asks consumers to report a recent experience of service failure). Because the main objective was to test which factors have a significant effect on consumers' evaluations of the service failure and recovery, an experimental design was more appropriate, since this method makes possible the manipulation and control of the important factors (Kirk, 1968).

Four different scenarios were used to manipulate problem severity and firm responsiveness. Scenarios have been a common method of manipulating service failure in the services marketing literature (e.g. Maxham, 1998; Smith and Bolton, 1998; Mattila, 2001; Maxham, 2001; Harris et al., 2006.), especially because of the undesirability of managers in creating real situations of service failure on customers. Also, the use of scenarios avoids response biases due to memory lapses, rationalization tendencies, and consistency factors (Smith and Bolton, 1998), which is a limitation of the recall-based studies that ask customers to report on experiences of service failure. The problem with the recall-based approach, according to these authors, is that customers might report experiences that are unusually important to them in some way (e.g. one that involves extreme dissatisfaction).

**Subjects.** A non-probabilistic sample was used. Graduate and undergraduate students taking the Business course in different universities were invited to join the experiment. Students from both public and private schools were included in order to have a more broad profile of the participant. Moreover, only those subjects who had used airline services in the last 12 months were retained in the final sample. Even though this is not a probabilistic sample, it is composed only by respondents that have used airline services. Also, most of the participants are experienced customers (i.e. 61% of the sample were MBA students and 39% were undergraduates). This effort was necessary for the external validity of the results (Campbell and Stanley, 1963; Winner, 1999). Each participant was randomly assigned to one of the four experimental groups.

**Measurement of Covariates.** After being assigned to one group and before reading the stimulus, respondents answered some questions regarding: (i) gender; (ii) frequency of use of airline service in the last 12 months; (iii) prior cumulative satisfaction with the last service provider (4 items adapted from Smith and Bolton, 1998); (iv) prior repatronage intentions with this company (3 items adapted from Smith and Bolton, 1998; Zeithaml, Berry and Parasuraman, 1996) and (v) attitude toward complaining (3 items adapted from Blodgett, Granbois and Walters, 1993; Voorhees and Brady, 2005). These questions were not dependent variables but were included in order to be controlled as covariate (i.e. prior satisfaction and repatronage intentions) and moderator (i.e. attitude toward complaining), following recommendation by Wildt and Ahtola (1976) that they be measured before the dependent variables. Items for each of these scales are presented in appendix.

**Stimuli.** After these questions, the stimulus of service failure was presented. This scenario manipulates an experience of flight service and creates a situation of delay of the flight. In the high severity situation, the participant is informed that it is *Monday*, he/she has a job interview in another city on this day at 11:00 AM. As he/she knows that the time flight is of 2 hours, he/she has bought the ticket for 08:00 AM. However, when s/he arrives at the airport, s/he is informed that the airplane will take-off only at 10:00 AM.

In the low severity situation, another scenario is used. Participant is informed that it is *Sunday* and he/she has a job interview in another city on *Monday* at 11:00 AM. S/he has bought the ticket for Sunday at 04:00 PM so as to avoid problems with delays and also have time to get to know the city. However, when s/he arrives at the airport, at 03:00 PM, s/he is informed that the airplane will take-off only at 06:00 PM.

These scenarios were pre-tested, as it is commonly recommended in experimental studies (Perdue and Summers, 1986), and showed significant differences in terms of severity of the problem. Those receiving the *high* severity scenario agreed more ( $n = 37$ ;  $M = 6.14$ ) with the question “how do you evaluate the severity of this problem?” (measured in a scale varying from 1, not severe at all to 7, very severe), when compared to those receiving the *low* severity scenario ( $n = 36$ ;  $M = 4.64$ ), with significant difference ( $F_{1,71}=11.185$ ;  $p < 0.001$ ).

After the service failure stimulus and its manipulation check, respondents answered a question asking how guilty the company was for the problem and items for the satisfaction after the service failure (i.e. the same items used for prior cumulative satisfaction).

Then, the stimulus for service recovery was presented, manipulating how responsive the company was to the problem presented in the first stimulus. In the high responsive condition, participant was informed that the company was offering a ticket exchange so that the passenger could fly on the same time as before, although using another firm. On the other hand, in the low responsive situation, the participant was informed that the company could not do anything to solve the problem and that passengers would have to wait for the new stipulated time.

These two scenarios of recovery were also pre-tested in an exploratory study. Those participants receiving the *high* responsive stimulus agreed *more* ( $n = 39$ ;  $M = 5.08$ ) with the question “how do you evaluate company worry in solving the problem?” (measured in a scale varying from 1, not worried at all to 7, very worried), when compared to those receiving the *low* responsive stimulus ( $n = 34$ ;  $M = 4.09$ ), with significant difference ( $F_{1,71}=5.353$ ;  $p < 0.024$ ).

**Dependent Variables.** After this stimulus of service recovery and its manipulation check, participant answered his/her perceived justice about the way the company dealt with the problem. Perceived justice was adapted from Blodgett, Granbois and Walters (1993) and Santos (2001) and measured by four items in a Likert scale varying from 1 (strongly disagree) to 7 (strongly agree).

Satisfaction after the recovery effort was the next measured construct. The same items used for prior cumulative satisfaction was answered by the participant again (i.e. just as the procedure used by Smith and Bolton, 1998, with the exception that they measure satisfaction on only two moments – prior satisfaction and satisfaction after service failure and recovery – and we measured satisfaction on three moments – prior satisfaction, after service failure and after service recovery).

Repatronage intentions were measured for the second time in the sequence, using the same items as in the first moment. After that, participants answered questions about their chances to engage in positive word-of-mouth, using three items adapted from Zeithaml, Berry and Parasuraman (1996). Finally, respondents were asked about their future complaining intentions, measured by three items adapted from Voorhees and Brady (2005) and Kim et al. (2003). Data analysis was performed using SPSS 11.0 and AMOS 4.0.

## Results

A sample of 248 participants completed the questionnaire. The total sample was purified excluding those participants (i) who had not used an airline service company in the last 12 months (51 cases) and (ii) those with any missing value (12 cases). Outlier analysis was performed by computing the Mahalanobis Distance as suggested by Hair et al. (1998, p.69). Considering each of the four experimental groups as a separate sample, no significant outlier was found in any of the groups (i.e. the greatest value of  $D^2/df$  was significant only at 0,09, when the authors suggested a conservative level of 0,001). After this process, the final sample was composed of 185 participants. This number is used in the subsequent analysis.

Of the total sample, 112 (60%) were male and 73 (40%) female. About the frequency they had used this service in the last 12 months, 119 (64%) marked from 1 to 4 times, 34 (18%) from 5 to 8 times, 8 (4%) from 9 to 12 times and 22 (12%) used more than 12 times. They also answered which company they used as service provider. Most had used GOL (72 or 39%), followed by TAM (68 or 37%), VARIG (32 or 17%) and others (13 or 7%).

### Manipulation Checks

Although stimuli had been pre-tested in a exploratory study, they were checked again in the main study. Those receiving the *high* severity scenario agreed more ( $n = 93$ ;  $M = 6.59$ ) with the question “how do you evaluate the severity of this problem?” when compared to those receiving the *low* severity scenario ( $n = 92$ ;  $M = 5.08$ ), with significant difference ( $F_{1,183} = 85.63$ ;  $p < 0.000$ ).

In a similar fashion, those participants receiving the *high* responsive stimulus agreed more ( $n = 92$ ;  $M = 6.29$ ) with the question “how do you evaluate company worry in solving the problem?” when compared to those receiving the *low* responsive stimulus ( $n = 93$ ;  $M = 3.00$ ), with significant difference ( $F_{1,183} = 264.51$ ;  $p < 0.000$ ). Hence, results indicate that participants perceived stimuli in accordance with expectations. The sample size obtained for each experimental group is presented in Table 1.

Table 1 – Number of participants in each group

		Company Responsiveness		Total
		Low	High	
Problem severity	Low	48	44	92
	High	45	48	93
Total		93	92	185

### Measurement

Reliability of the scales was assessed both by the internal consistency index, using Cronbach’s alpha, and the composite reliability, using Confirmatory Factor Analysis (Fornell and Larcker, 1981). Results presented in table 2 indicate that reliabilities are in acceptable levels (Nunnally, 1967). Only two constructs presented alpha lower than the recommended threshold of 0.70, namely future complaint intentions (0.65) and attitude toward complaining (0.61).

Table 2 - Summary of constructs’ measures

Constructs	Items	Cronbach’s alpha ( $\alpha$ )	Composite reliability	Average variance extracted (AVE)
Prior Cumulative Satisfaction ( $Sat_0$ )	4	0.91	0.91	0.71
Prior repatronage intentions ( $Rep_0$ )	3	0.95	0.95	0.87
Satisfaction after service failure ( $Sat_f$ )	4	0.92	0.92	0.74
Perceived Justice (Perc. Just.) <sup>a</sup>	3	0.82	0.83	0.62
Satisfaction after service recovery ( $Sat_r$ )	4	0.96	0.96	0.87
Repatronage Intentions ( $Rep_r$ )	3	0.96	0.97	0.91
Positive Word-of-Mouth (WOM)	3	0.97	0.98	0.94
Future Complaint Intentions (Comp.Int) <sup>b</sup>	2	0.65	0.65	0.48
Attitude toward complaining (At. Compl) <sup>c</sup>	2	0.61	0.65	0.49

Notes – (a) after exclusion of item j2; (b) after exclusion of item c2; (c) after exclusion of item q3. See items labels in appendix 1. Constructs with 2 indicators were run in the full measurement model (i.e. considering all constructs correlated with each other).

The regression weights found for each item in the measurement model and the average variance extracted (AVE) were used as indication of convergent validity. This analysis, together with the reliability results presented above, was used to purify the constructs’ measures. Items with lower regression weights were excluded from the scale and the Cronbach’s alpha, composite reliability and AVE were recalculated.

The constructs perceived justice, future complaint intentions and attitude toward complaining were purified with the exclusion of one item in each construct. In the cases of future complaint intentions and attitude toward complaining, even after the purification process, AVE remained relatively low (i.e. below 0.50, Fornell and Larcker, 1981). However,



since attitude toward complaining is a moderator variable in the model, these low reliability values does not endanger the results. Attitude toward complaining was measured only to produce the groups with low and high attitude toward complaining (i.e. an index of items q4 and q5 [see appendix] was computed for that purpose). Also, the construct future complaint intentions was initially transformed to an observable variable, but as there were no changes in the main results (i.e. similar fit indexes and parameters), we decided to keep this construct as latent with two indicators (i.e. c1 and c3, see appendix).

Discriminant Validity was conducted by comparing the shared variance between each pair of construct with the average variance extracted in each one of the pair (Fornell and Larcker, 1981). Absolute values of correlation ranged from 0.003 (Rep<sub>0</sub> and complaint intentions) to 0.839 (Rep<sub>f</sub> and word-of-mouth). However, even in this last case of high correlation, with a shared variance of 0,70, a higher average variance was extracted in both constructs (i.e. 0.91 in Rep<sub>f</sub> and 0.94 in Wom), indicating discriminant validity.

Table 3 – Correlations, Squared Correlations and Average Variance Extracted

	Sat <sub>0</sub>	Rep <sub>0</sub>	Sat <sub>1</sub>	Perc.Just.	Sat <sub>f</sub>	Rep <sub>f</sub>	WOM	Comp. Int.	At. Compl.
Sat <sub>0</sub>	<b>0.71</b>	0.75	0.38	0.08	0.30	0.37	0.36	-0.05	0.28
Rep <sub>0</sub>	0.56	<b>0.87</b>	0.33	0.01	0.23	0.43	0.30	0.00	0.16
Sat <sub>1</sub>	0.14	0.11	<b>0.74</b>	0.21	0.52	0.50	0.50	-0.24	0.06
Perc.Just.	0.01	0.00	0.04	<b>0.62</b>	0.76	0.60	0.65	-0.25	0.05
Sat <sub>f</sub>	0.09	0.05	0.27	0.58	<b>0.87</b>	0.77	0.76	-0.30	0.09
Rep <sub>f</sub>	0.14	0.18	0.25	0.36	0.60	<b>0.91</b>	0.84	-0.19	0.18
WOM	0.13	0.09	0.25	0.42	0.58	0.70	<b>0.94</b>	-0.20	0.09
Comp. Int.	0.00	0.00	0.06	0.06	0.09	0.04	0.04	<b>0.48</b>	0.47
At. Compl.	0.08	0.03	0.00	0.00	0.01	0.03	0.01	0.22	<b>0.49</b>

Notes – values in diagonal are the AVE of each construct, values above the diagonal are the correlation and values below the diagonal are the squared correlations (i.e. shared variance).

### Direct Effects

Hypotheses H1 to H4 were tested by checking the direction and significance of the regression coefficient in each relationship of the research model. Results indicated that the higher the severity of the failure, the smaller was the satisfaction after the failure, supporting H1a (see table 4). However, either the degree of severity of the problem or the degree of company responsiveness did not affect the final satisfaction, failing to support H1b ( $p < 0.154$ ) and H2 ( $p < 0.188$ ). It will be presented in the next section that there was an influence of a moderating effect in the recovery-Sat<sub>f</sub> relationship (H2), i.e. this link has a different pattern when different groups of attitude toward complaining is considered. However, the link failure-Sat<sub>f</sub> remained not significant even after considering the moderator variable. A possible explanation might be that failure alone has no influence on the final satisfaction because this construct was measured after the service failure and the recovery were presented. Because of this, participants assess their final satisfaction with the influence of both failure and recovery.

The effects of perceived justice on final satisfaction was positive and significant, meaning that the more the consumer perceived the company as acting with justice and fairness, the more satisfied he/she would be. This result supports H3. The high value for the standardized coefficient ( $\beta=0.60$ ) suggests the importance of this variable as predictor of customer final satisfaction in the situation of service failure/recovery.

Hypotheses H4a to H4c deal with the consequences of satisfaction after service failure/recovery. Consumers with higher final satisfaction indicated a higher level of

repatronage intentions ( $\beta=0.73$ ) and word-of-mouth ( $\beta=0.77$ ), as indicated by the positive regression coefficients in table 4. These results support H4a and H4b. It was expected in H4c that the higher the final satisfaction, the smaller should be the propensity of the consumer to complain. This assumption was supported because a significant negative regression coefficient was found ( $\beta=-0.32$ ). Results also revealed that the relationship between the covariates (e.g. prior cumulative satisfaction and prior cumulative repatronage intentions) were also positive and significant.

Table 4 – Parameter Estimation for the Direct Effects

H/C <sup>a</sup>	Relations	Regression weights	Standard errors	Standardized weights ( $\beta$ )	Critical ratios ( $t$ )	<i>p</i>
H1a	Failure → Sat <sub>i</sub>	-0.739	0.18	-0.29	-4.15	0.000
H1b	Failure → Sat <sub>f</sub>	-0.218	0.15	-0.07	-1.43	0.154
H2	Recovery → Sat <sub>f</sub>	0.353	0.27	0.11	1.32	0.188
H3	Perc. Just → Sat <sub>f</sub>	0.526	0.08	0.60	6.24	0.000
H4a	Sat <sub>f</sub> → Rep <sub>f</sub>	0.689	0.05	0.73	13.50	0.000
H4b	Sat <sub>f</sub> → Wom	0.827	0.06	0.77	13.74	0.000
H4c	Sat <sub>f</sub> → Complain	-0.229	0.09	-0.32	-2.67	0.008
C	Sat <sub>0</sub> → Sat <sub>i</sub>	0.428	0.09	0.36	4.77	0.000
C	Sat <sub>0</sub> → Rep <sub>0</sub>	0.927	0.09	0.75	10.78	0.000
C	Sat <sub>i</sub> → Sat <sub>f</sub>	0.557	0.07	0.45	8.41	0.000
C	Rep <sub>0</sub> → Rep <sub>f</sub>	0.332	0.05	0.29	6.16	0.000

Notes – (a) H: hypothesis; C: covariate; R<sup>2</sup>: Sat<sub>i</sub>=0.22; Rep<sub>0</sub>=0.56; Sat<sub>f</sub> =0.72; Complain (complaining intentions)=0.10; Wom=0.60; Rep<sub>f</sub> =0.70. Fit indexes: GFI=0.75; AGFI=0.70;  $\chi^2/df=2.56$ ; CFI=0.91; RMSEA=0.09.

### Moderating Effects

The moderating effects predicted in hypotheses 5a, 5b, 5c, and 5d were tested by using multigroup analysis in structural equation modeling. The full sample was divided in two groups using a median split of the attitude toward complaining scale, which is a common procedure in this literature (e.g. Voorhees and Brady, 2005). These two groups include those consumers with low attitude toward complaining (i.e. those who do not like to complain,  $n=79$ , which are named here as “non-complainers”) and those with high attitude toward complaining (i.e. those who consider themselves as more predisposed to complain,  $n=91$ , named here as “complainers”). Results are summarized in table 5.

Table 5 – Parameter Estimation for the Moderating Effects

H	Relations	Low attitude: ‘non-complainers’			High attitude: ‘complainers’		
		$\beta$	<i>t</i>	<i>p</i>	$\beta$	<i>t</i>	<i>p</i>
H5a	Failure → Sat <sub>i</sub>	-0.104	-1.044	<b>0.297</b>	-0.359	-3.735	<b>0.000</b>
H5b	Failure → Sat <sub>f</sub>	0.238	2.448	<b>0.014</b>	-0.108	-1.828	<b>0.068</b>
H5c	Recovery → Sat <sub>f</sub>	-0.363	-3.555	<b>0.000</b>	0.258	2.817	<b>0.005</b>
H5d	Sat <sub>f</sub> → Complain	0.998	0.0005	<b>0.999</b>	-0.339	-2.055	<b>0.040</b>

Note – ML estimation;  $\beta$ : Standardized coefficient.

In the relationship between failure and initial satisfaction (Sat<sub>i</sub>), there is significance only for the complainers group, meaning that the effect of service failure on satisfaction is significant only for people who are more predisposed to complain. For these ‘complainers’, the higher the severity of the problem, the smaller is their satisfaction (see figure 2: fai-sat1). The test of difference in chi-square value for both models (i.e. restricted and unrestricted) produced significant difference ( $\Delta\chi^2=12.40$ ,  $\Delta df=1$ , sig=0.000). These results support H5a.

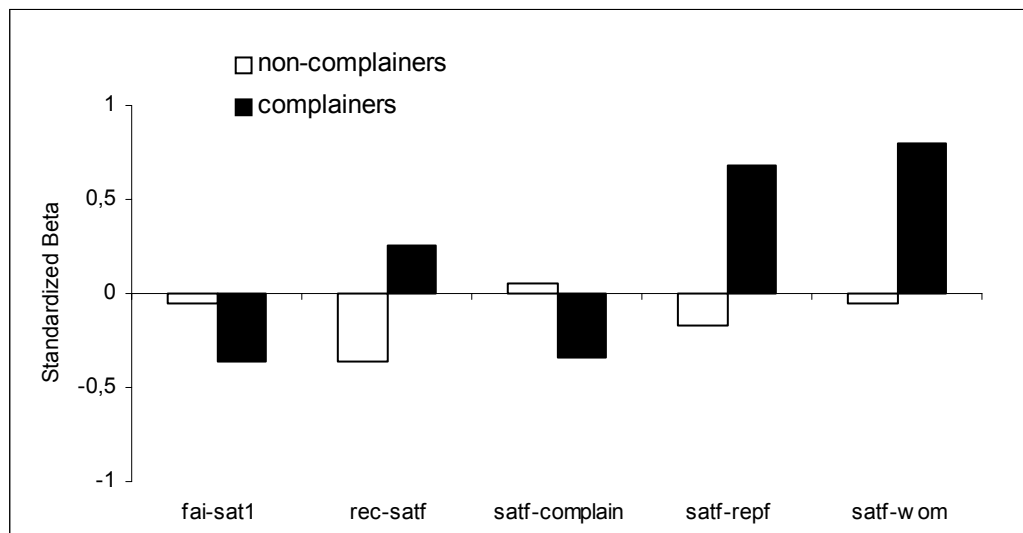
Concerning the effects of failure on the final satisfaction ( $Sat_f$ ), results from table 5 suggest a positive relationship for the ‘non-complainers’ and a negative relationship for the ‘complainers’. However, the test of difference in chi-square value for both models did not produce significant result ( $\Delta\chi^2=2.22$ ,  $\Delta df=1$ ,  $sig=0.136$ ), failing to support H5b.

On the other hand, it was found a significant *negative* relationship between recovery and satisfaction for the ‘non-complainers’ ( $p<0,000$ ), but a significant *positive* relationship for the ‘complainers’ ( $p<0.005$ ), with significant difference between these groups ( $\Delta\chi^2=18.67$ ,  $\Delta df=1$ ,  $sig=0.000$ ). This result is a clear suggestion of moderating effect (see figure 2: rec-satf), i.e. for non-complainers, the *higher* the company responsiveness the *smaller* their final satisfaction, while for the complainers the opposite is true (i.e. the *higher* the company responsiveness the *higher* their final satisfaction). These results support H5c.

Regarding the effects of final cumulative satisfaction ( $Sat_f$ ) on complaint intentions, a significant difference was found between complainers and non-complainers ( $\Delta\chi^2=248.61$ ,  $\Delta df=1$ ,  $sig=0.000$ ), supporting H5d. A significant relationship was found only for the complainers group ( $p<0.04$ ), with a *negative* coefficient indicating that the *higher* the satisfaction after recovery the *smaller* is the consumer propensity to complain (see satf-complain in figure 2).

Although not hypothesized, the moderating effect of attitude toward complaining was also tested in the relationship of final satisfaction with repatronage intentions and with word-of-mouth. A significant difference was found in the  $Sat_f - Rep_f$  relationship ( $\Delta\chi^2=84.06$ ,  $\Delta df=1$ ,  $sig=0.000$ ), with a significant positive coefficient for the ‘complainers’ ( $\beta = 0.69$ ) and a non-significant coefficient for the ‘non-complainers’ ( $\beta = -0.17$ ,  $p<0.083$ ). A similar pattern was also found in the relationship  $Sat_f - WOM$  ( $\Delta\chi^2=64.62$ ,  $\Delta df=1$ ,  $sig=0.000$ ), with a positive relationship for the complainers ( $\beta = 0.79$ ,  $p<0.000$ ) and a null relationship for the non-complainers ( $\beta = -0.11$ ,  $p<0.353$ ). See figure 2.

FIGURE 2 - Moderating Effects of Attitude Toward Complaining



Note – non-significant coefficients are shown as close to zero (e.g. in the satf-complain relationship)

## Discussion and Conclusions

Service Failure and Recovery is an important research subject in the services marketing literature. Studies on this topic have investigated how customers react to service failure and recovery as well as how situational variables affects the outcome variables (e.g. satisfaction and repatronage intentions) of this process (Maxham, 1998; Smith and Bolton, 1988; Mattila,

2001; Voorhees and Brady, 2005; Harris et al., 2006). In this context, the purpose of this research was to test the effects of problem severity and company responsiveness on customers' evaluations of satisfaction, repatronage intentions, complaining intentions and word-of-mouth. Specifically, the research model extends the Smith and Bolton's (1998) model by (i) considering prior cumulative satisfaction, satisfaction after service failure and satisfaction after service recovery, (ii) including word-of-mouth and complaining intentions as new constructs and (iii) testing the moderating effects of attitude toward complaining. This extension was motivated by recent developments in the service failure/recovery literature (e.g. Voorhees and Brady, 2005).

Based on this theoretical background, a synthesis of the literature was presented with the proposed relationships among the considered constructs. The hypothesized links were tested by (i) collecting data in an experimental study that used scenario based service failure and recovery experiences, (ii) analyzing the data with Structural Equation Modeling and multi-group analysis (Byrne, 2001).

First, results were analyzed in terms of manipulations check of the experimental stimuli. The ANOVA results indicated that the four scenarios of high/low/severity/responsiveness were perceived as expected. Based on this, the proposed hypotheses were submitted to the analysis. The tests of the direct effects (i.e. the one that considered all the sample together) found that the severity of the problem had a significant influence on satisfaction after the failure (H1a), but did not have a significant effect on final satisfaction (H1b), which is different from Smith and Bolton's (1998) study, that found a significance in the link recovery-final satisfaction. Even when we considered non-complainers and complainers groups (i.e. as a result of the moderating test), the influence of failure on final satisfaction remained not significant, with no support for H5b.

The same non-significant pattern was found in the relationship between responsiveness (high x low) and final satisfaction (H2), different from the result found by Smith and Bolton (1998). One possible explanation is that these last authors measured prior cumulative satisfaction and then measured this construct only after service recovery. Because of this, the customer evaluations of satisfaction comprised both failure and recovery. On the other hand, in the present research, satisfaction was measured after failure and again after recovery, trying to separate the effects of failure and recovery. Interestingly, the final satisfaction is not influenced either by the level of failure or the level of responsiveness, at least when the effects of the attitude toward complaining is not considered.

Another significant direct effect was found in the perceived justice-final satisfaction link (H3), with findings indicating that customers who perceive the company as having a fair behavior in the problem solving process tend to have a greater final satisfaction. This result is in agreement with previous findings from this literature (e.g. Tax, Brown and Chadrashekar, 1998). This result is also convergent with that found by Santos (2001), although this author considered 'satisfaction *with* the complaint handling process' and we used the approach of 'satisfaction *after* the complaint handling (i.e. after service recovery), following Smith and Bolton' (1998) study.

Results also indicated that final satisfaction are (i) positively correlated with repatronage intentions (H4a) and word-of-mouth (H4b), in agreement with previous studies (Maxham and Netemeyer, 2002, Santos and Fernandes, 2005), but (ii) negatively correlated with complaining intentions, in agreement with Voorhees and Brady (2005) and Fernandes and Santos (2006).

However, the most prominent findings are those revealing a moderating effect of the construct attitude toward complaining (i.e. H5a, H5c and H5d). This result is interesting because it corroborates recent propositions of this construct as an important moderator in the consumer reactions to service failure and recovery (e.g. Voorhees and Brady, 2005 and

Fernandes and Santos, 2006). This moderating test indicates that, after dividing the sample in two groups (i.e. those less predisposed to complain – the non-complainers – and those more predisposed to complain – the complainers), the previous results presented for H1 to H4 change their patterns. For example, the effect of the severity of the problem on the satisfaction after failure, that was found not significant when the entire sample was considered together, now shows a difference when comparing complainers and non-complainers, with the former having a more negative strength in the links failure-sat1 and failure-satf, suggesting that the effect of the severity of the problem on the satisfaction was greater for the complainers (i.e. they are more sensitive to service failures).

On the other hand, these complainers are also more sensitive to the company responsiveness, as a positive coefficient was found for this group, indicating that the higher the company responsiveness the higher their final satisfaction. This link was negative and significant for the non-complainers, suggesting that the higher the company responsiveness the smaller their satisfaction (i.e. once this group becomes dissatisfied, they are difficult to be retained by the company, because regardless of the company effort to correct the problem, they tend to keep dissatisfied). Indeed, these consumers require special attention by the managers, because they do not provide the company with information about their dissatisfaction, they just go away.

In a similar fashion, the link final satisfaction-complaining intentions was significant only for the complainers, indicating that the higher their satisfaction the smaller their propensity to complain. This result is consistent with the proposition adopted by Voorhees and Brady (2005), although these authors did not find empirical support in their sample. It is also convergent with Fernandes and Santos' (2006) study, although these authors investigated the link dissatisfaction-complaining intentions and found a stronger positive relationship for the complainers (positive attitude toward complaining). Additional tests of moderation also demonstrated that complainers have a stronger final satisfaction–repatronage intentions relationship and also final satisfaction–word-of-mouth link.

These results suggest that studies dealing with service failure and recovery should take into account the consumers propensity to complain (i.e. attitudes toward complaining) as a way to improve explanation in the proposed models and to understand the boundary conditions of the investigated relationships. In the extension that researchers are successful in finding new moderators, they extend previous models, enhancing their external validity (Lynch, 1999), and also contribute to the Marketing Knowledge advancement.

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**Appendix:** scales used for the dependent variables and covariates

**Prior cumulative satisfaction** (7 point, semantic differential scale)

Based on your experience, how do you evaluate this company?

1. a terrible choice ----- a wonderful choice
2. I am very unsatisfied ----- I am very satisfied
3. Service is awful ----- Service is great
4. I feel very unhappy with this service ----- feel very happy with this service

**Prior repatronage intentions** (7 point, *Likert* like scale)

Based on your experience, what are the chances that you...

1. Choose this company the next time you travel.
2. Keep using the services of this company.
3. Use the services of this company more often in the future.

**Attitude toward complaining** (7 point, *Likert* scale)

- Q3. It bothers me if I do not complain about an unsatisfactory purchase.  
 Q4. I am not reluctant to complain when I am unsatisfied with a purchase.  
 Q5. In general, I am *more* likely to complain than most people I know.

**Stimulus for Service Failure**

Manipulation Check: How do you evaluate the severity of this problem? (7 point, semantic differential scale)

1. not at all severe/very severe

**Satisfaction after service failure** (7 point, semantic differential scale)

Based on this specific situation, how do you evaluate your decision to choose this company?

1. a terrible choice ----- a wonderful choice
2. I am very unsatisfied ----- I am very satisfied
3. Service is awful ----- Service is great
4. I feel very unhappy with this service ----- feel very happy with this service

**Stimulus for Service Recovery**

Manipulation Check: How do you evaluate the worry of the company to solve this problem? (7 point, semantic differential scale)

1. not at all worried/very worried

**Perceived Justice** (7 point, *Likert* scale)

- J1. Overall, the company action toward the problem was guided by a sense of justice.  
 J2. The company was arbitrary in the way it solved the problem (reverse coded)  
 J3. The company used the logic to solve the problem.  
 J4. Overall, the way the problem was solved by the company was not fair (reverse coded)

**Satisfaction after service recovery** (7 point, semantic differential scale)

Based on the company response, how do you evaluate your decision to choose this service provider?

1. A terrible choice ----- A wonderful choice
2. I am very unsatisfied ----- I am very satisfied
3. Service is awful ----- Service is great
4. I feel very unhappy with this service ----- I feel very happy with this service

**Repatronage Intentions** (7 point, *Likert* like scale)

After this experience with this company, what are the chances that you:

1. Choose this company the next time you travel.
2. Keep using the services of this company.
3. Use the services of this company more often in the future.

**Positive Word-of-Mouth** (7 point, *Likert* like scale)

After this experience with this company, what are the chances that you:

- W1. Say positive things about this company to other people.  
 W2. Recommend to friends and relatives that they use the services of this company.  
 W3. Recommend this company if someone ask you information about airline companies.

**Future Complaint Intentions** (7 point, *Likert* like scale)

If a problem as this one presented here happens with you, what are the chances that you:

- C1. Complain directly to the company.
- C2. Tell your friends and relatives about your bad experience.
- C3. Make a formal complaint to the consumer agency.