Severe service failure recovery revisited: Evidence of its determinants in an emerging market context

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ARTICLE INFO

ABSTRACT

Research on severe service failure underlines the importance of distributive, interactional, and procedural justice (Weun, Beatty, & Jones, 2004). Since most of the research is based on a developed country context, it is unclear what drives service failure recovery in severe circumstances in emerging markets. Thus, we replicated the justice model in the airline industry in Brazil and found differences in the effects of the three justice dimensions. While interactional justice is important in both contexts, distributive justice is much less relevant in this emerging market, and only procedural justice was able to aide in the failure recovery.

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1. Motivation for replication study

The potential for service failure in the Brazilian airline industry due to the recent FIFA World Cup was exceptionally high because of an estimated 1 million international fans from 202 countries and 3 million Brazilian fans traveling to and within Brazil during the tournament (Passarinho & Mataso, 2014). Airlines that successfully handle these service failures may be in a more competitive position to win the tremendous amount of business expected for the 2016 Olympics, which will be held in the same country. Service failure in the airline industry includes having a flight canceled, overbooked, or delayed. The severity of the service failure could be particularly acute in a country whose airports are "famous for its queues and grim cramped concrete structure…and previously ranked among the world's most-hated airports" (Pearson, 2014, p. 1). Service failure severity has been shown to have a significant influence on satisfaction, trust, commitment, and negative word-of-mouth (WOM). Further, customers' justice perceptions appear to moderate the influence of service failure severity (Weun, Beatty, & Jones, 2004).

The justice literature has produced one stream of research regarding how firms can recover from service failure. Perceived justice is an evaluative judgment about the rightness of a person's fate or treatment by others (Furby, 1986). The three components of justice are distributive justice (decision outcomes), procedural justice (decision-making procedures), and interactional justice (interpersonal behavior) (Tax, Brown, & Chandrashekaran, 1998). While the positive direct effect of perceived justice on customer satisfaction has been well established (Tax et al., 1998), justice may also have a moderating role in the relationship between failure severity and customer satisfaction. The interaction between perceived justice and severity has been relatively underexplored in the literature.

One notable exception, and the study we are replicating was conducted by Weun et al. (2004) who used a clinical experiment to demonstrate that failure severity moderates the perceived justice–customer satisfaction relationship. The authors found that failure severity had a direct effect on satisfaction, trust, commitment, and negative WOM. They also found that severity additionally moderated the relationship between satisfaction and commitment (but not trust or negative WOM). Finally, they established that failure severity had a moderating effect on the relationship between distributive (but not interactional) justice and satisfaction. The lack of consistency within the general justice literature partially underlies the need for more replications of this important scenario.

Although research on service failure, recovery, and perceived justice has advanced, it often relies on data collected in the USA and other

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developed countries. Research in emerging markets has been relatively neglected even though their cultural and economic differences may influence perceived justice and its outcomes (Smith, Bolton, & Wagner, 1999). Further, since most service failure studies focus on students using an experimental design, it is uncertain whether individuals who have recently experienced a service failure react differently to recovery attempts by the service provider.

Since the Weun et al. (2004) study, Wang, Wu, Lin, and Wang (2011) have replicated part of their study with Taiwanese e-tailing clients. They changed the moderating relationship to reflect a more causal relationship between failure severity and loyalty. Thus, while Weun et al. (2004) used severity as the moderator, Wang et al. (2011) used the three perceived justices as the moderators. Surprisingly, only interactional justice was found to significantly reduce the negative direct effect of failure severity on loyalty. Our replication extends the Wang et al. (2011) study by testing all three justice dimensions as moderators to not only the failure severity–loyalty relationship but also the failure severity–satisfaction, trust, negative WOM, and intent to complain relationships.

In summary, we attempt to answer the call from Weun et al. (2004, p. 141) stating that it is "important to replicate these findings in other service industries…as well as surveying actual customers experiencing a service failure and recovery would provide a more realistic setting to test the hypotheses." Therefore, we replicated the perceived justice model within the airline industry by surveying passengers in a Brazilian airport regarding their perceptions of failure severity, justice, and satisfaction. In line with Weun et al. (2004), we also included negative WOM and trust as outcomes of customer satisfaction. We extend the Weun et al. (2004) study on the failure severity–customer satisfaction relationship by including all three justice perceptions. We also included the intent to complain and loyalty as other dependent variables. Finally, we analyzed the mediating role of customer satisfaction between failure severity and our outcome variables.

2. Procedure

In order to better understand the service failure environment within the Brazilian airline industry, we first conducted an exploratory study with three focus groups containing five participants. These results were used to make adjustments to the selected scales. Next, we collected data from 736 travelers (86% response rate) who had recently experienced a service failure in a Brazilian airport using customer surveys. We approached passengers that appeared to be over 20 years old and were flying any of the five domestic airlines that operated in that airport (TAM, GOL, TRIP, AZUL, and OCEANAIR). The survey was completed in the gate area before they boarded their flight. A sample of 589 remained (80%) after discarding invalid questionnaires (partially or incorrectly completed).

We measured perceived justice (procedural, interactional, and distributive), failure severity, customer satisfaction, negative WOM, trust, loyalty, and intent to complain with established scales from the service marketing literature (see Appendix A for the respective scales and items). Age, gender, level of education, the objective of the trip (business or leisure), and frequency of travel were used as control variables.

In order to assess the overall model fit, we ran a confirmatory factor analysis (CFA) with the relevant constructs (severity, distributive justice, interactional justice, procedural justice, satisfaction, trust, loyalty, negative WOM, and intent to complain). The measurement model showed good fit (X^2 (629) = 2001.96, $p < 0.05$, RMSEA = 0.06, CFI = 0.98, NFI = 0.97, RFI = 0.97). Furthermore, all constructs reflected internal consistency (AVE > 0.50) (Fornell & Larcker, 1981) and reliability (CRs > 0.80, Cronbach's alpha > 0.70) (Bagozzi & Yi, 1988; Nunnally & Bernstein, 1978) (Appendix A). Discriminant validity was established since the square root of the average variance extracted by each construct exceeded the correlation between all pairs of constructs (Fornell & Larcker, 1981) (Correlation matrix and AVE are available upon request).

3. Method and results

To assess the impact of failure severity on customer satisfaction and the moderating effects of the three justice dimensions, we conducted a hierarchical regression analysis (see Table 1). As expected, high service failure severity was negatively related to customer satisfaction ($\beta = -0.34$, $p < 0.001$). Next, although all three dimensions of justice had a positive direct effect on customer satisfaction, the moderation tests showed that only procedural justice minimized the negative impact of failure severity on satisfaction ($\beta = 0.08$, $p < 0.05$). While only procedural justice was statistically significant at the $p < 0.05$ level, both distributive ($\beta = 0.07$, $p > 0.05$) and interactional justice ($\beta = 0.05$, $p > 0.05$) were in the predicted direction and relatively close to being significant.

Next, we assessed whether customer satisfaction mediated the service failure severity–negative WOM, loyalty, trust, and intent to complain relationships with the SPSS Process procedure and the Sobel test. Customer satisfaction mediated the effect of failure severity on the four dependent variables: loyalty (point estimate = -0.14, 95% percentile, CI -0.20 to -0.08; $Z = -4.22$, $p < 0.001$), trust (point estimate = -0.23, 95% percentile, CI -0.30 to -0.17; $Z = -6.39$, $p < 0.001$), negative WOM (point estimate = 0.26, 95% percentile, CI 0.19 to 0.34; $Z = 7.04$, $p < 0.001$), and intent to complain (point estimate = -0.06, 95% percentile, CI -0.10 to -0.03; $Z = -3.48$, $p < 0.001$). This means that if the service provider can increase customer satisfaction, then the outcomes will be significantly improved.

In order to assess the similarities and differences of our replication study to the Weun et al. (2004) study, we compared the standardized Betas (see Table 2). In line with Weun et al. (2004), failure severity (negatively) and distributive and interactional justice (positively) affected customer satisfaction. Additionally, our results showed that procedural justice had a positive effect on customer satisfaction. Further, failure severity had a comparable effect on trust and negative WOM. However, the moderation results revealed that while distributive justice and interactional justice were important in both contexts, procedural justice stood out as the most important in the air travel market of an emerging economy. This is contrary to Weun et al. (2004) and the

Table 1
Customer satisfaction regressed on failure severity and justice (β values).

Customer satisfaction							
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Severity	−0.34***	−0.29***	−0.33***	−0.25***	−0.31***	−0.24***	−0.33***
Distributive justice		0.21***	0.03				
Procedural justice				0.28***	0.07		
Interactional justice						0.35***	0.19
Distributive justice × severity			0.07				
Procedural justice × severity					0.08*		
Interactional justice × severity							0.05

Notes: * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$. $n = 589$.

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Table 2
Comparison of studies (β values).

Predictor variables	Satisfaction		Trust		Negative WOM	
	Weun et al. (2004)	Replication study	Weun et al. (2004)	Replication study	Weun et al. (2004)	Replicationstudy
Severity	−0.10***	−0.34***	−0.16***	−0.28***	0.21***	0.31***
Interactional justice	0.26***	0.35***				
Distributive justice	0.80***	0.29***				
Procedural justice	n/a	0.28***				
Interactional justice × severity	0.02	0.05				
Distributive justice × severity	−0.03*	0.07				
Procedural justice × severity	n/a	0.08*				
Satisfaction			0.78***	0.72***	−0.72***	−0.73***

Notes: * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.
$n = 1070$ (Weun et al., 2004); $n = 589$ (replication study).

majority of findings which suggest that distributive justice has the highest positive impact on customer satisfaction. Further, the results highlight the importance of procedural justice which has been excluded or neglected in previous studies (e.g., Weun et al., 2004). Finally, when comparing the effects of severity, we found that in the case of the Brazilian airline industry, failure severity had a greater effect on customer satisfaction, trust, and negative WOM than what was found in the Weun et al. (2004) context. We were unable to statistically evaluate those differences due to data restrictions.

4. Discussion, limitations, and future research

The findings of our replication study have several important implications for research and practice. Whereas the negative impact of failure severity on customer satisfaction is not a novelty in the literature, our findings extend the generalizability of this relationship to the context of the Brazilian airline industry. Next, we extend the Weun et al. (2004) study by testing the moderating role of all three perceived justice dimensions on the relationship between failure severity and customer satisfaction, and by surveying actual service failures as opposed to experimental incidents. Finally, we tested whether customer satisfaction mediated the failure severity effect on our outcome variables.

First, our results show that only procedural justice significantly moderates the relationship between failure severity and customer satisfaction. Brazilian airline customers seem to be more concerned about the processes of service recovery than getting compensation (distributive justice) or good treatment (interactional justice). This suggests that firms can mitigate the negative impact of a severe failure on customer satisfaction by assuming responsibility, acting quickly, and taking individual circumstances into account. While this finding may be useful in various contexts, it is especially relevant for similar industries and collectivistic cultures. Airlines that ask passengers how they can rectify the problem after a failure seem to be more successful in regaining customer satisfaction. This may be particularly relevant in a Brazilian setting, where equal treatment is not always expected or valued by customers (Motta & Caldas, 2007). Further, Brazilian customers value firms that take their individual circumstances into account. For instance, when a flight is canceled in Brazil, passengers that have a "priority situation" (e.g., connecting flight, people with illnesses, or even people with personal connections to the airline staff) are expected to receive "special" treatment from their service providers. This may be explained by the concept of "jeitinho" (Duarte, 2006), which reflects the societal structure in Brazil based on interpersonal relationships.

Second, while the service marketing literature has shown a direct effect of failure severity on trust, commitment, and negative WOM (Weun et al., 2004), most studies omit an examination of customer satisfaction as a mediator. Our results show that customer satisfaction mediates the relationship between failure severity and loyalty, trust, negative WOM, and intent to complain. Airlines that recover customer satisfaction may be able to reduce those negative effects.

Finally, failure severity had the highest impact on negative WOM than on the other three outcomes we examined (intent to complain, loyalty, and trust). Note that we excluded the mediator, customer satisfaction, from this analysis. These results may be interpreted in light of Brazilian collectivist culture, where customers usually like to warn others about failures but avoid direct confrontations with the firm (Cheung, Anitsal, & Anitsal, 2007). Another possible explanation that was revealed in our focus groups is that the inefficiency of Brazilian airlines' complaint handling policies discourages formal complaints since customers have little distributive justice expectations.

Despite the aforementioned contributions to this replication study, it is not without limitations. While this project was focused on one large country in South America, its findings may not be generalizable to other nations. Thus, we encourage future researchers to test these relationships in other countries in order to further understand under what circumstances each dimension of justice has implications for the failure severity–customer satisfaction relationship. Additionally, our survey may suffer from common method bias, and future research should attempt to obtain more than one source of data. It would also be interesting for future studies to compare the results of different industries and types of failure.

Notwithstanding its limitations, our replication study is an important first step to determining the generalizability of customer service constructs in a high failure severity context such as the current scenario in the Brazilian airline industry. Our results suggest that spending money in order to resolve a problem (distributive justice), as well as making a genuine effort to address the issue (interactional justice) go a long way towards increasing customer satisfaction. Yet in this context, airlines should especially focus their efforts on improving service failure processes (procedural justice).

Acknowledgment

Appendix A. Scales, items, Cronbach's alphas, AVE, SQRT AVE, and CR

Constructs (0 = strongly disagree to 5 = strongly agree)	Scale adapted from
Severity (Cronbach's alpha = 0.80, AVE = 0.52, SQRTAVE = 0.72, CR = 0.83)	Liao (2007)
The problem affected me in a negative way	
I consider the problem very severe	
The problem resulted in insignificant consequences to me (reverse)	
I consider the problem little severe (reverse)	

(*continued*)

Distributive justice (Cronbach's alpha = 0.80, AVE = 0.67, SQRTAVE = 0.82, CR = 0.85)	Tax and Brown (1998), Mattila (2001)
This airline offered me a fair compensation for the failure	
This airline offered me the compensation I deserved for the failure	
This airline offered me an explanation for the failure	
Procedural justice (Cronbach's alpha = 0.81, AVE = 0.62, SQRTAVE = 0.79, CR = 0.87).	
The airline assumed responsibility for the failure	
The airline acted quickly to solve the problem	
The airline provided a flexible system and took individual circumstances into account	
The airline asked my opinion about the best way to solve the problem	
Interactional justice (Cronbach's alpha = 0.86, AVE = 0.72, SQRTAVE = 0.85, ICR = 0.88).	
The airline's employees were polite with me	
The airline's employees seemed really interested in solving the problem	
The airline's employees were courteous with me	
Satisfaction (Cronbach's alpha = 0.95, AVE = 0.82, SQRTAVE = 0.91, CR = 0.95)	Oliver (1997)
I am satisfied with my decision to fly with this airline	
My decision to fly with this airline was a wise one	
I think I did the right thing when I decided to fly with this airline	
I am happy with my decision to fly with this airline	
Trust (Cronbach's alpha = 0.95, AVE = 0.72, SQRTAVE = 0.85, CR = 0.95)	Morgan and Hunt (1994)
This airline always does what is right	
This airline has integrity	
This airline is competent	
This airline is honest	
This airline has credibility	
This airline is transparent	
This airline is trustable	
Loyalty (Cronbach's alpha = 0.76, AVE = 0.52, SQRTAVE = 0.72, CR = 0.84).	Fullerton (2005); Caceres and Paparoidamis (2007)
I will certainly choose this airline in my next trip	
Next time I travel, this airline will be my first choice	
If I have a choice, I will not fly with this airline again (reverse)	
If this airline offers me more benefits, I will always choose it in my travels	
I will keep on flying with this airline due to the frequent flyer program that it offers me	
Negative word-of-mouth (Cronbach's alpha = 0.96, AVE = 0.85, SQRTAVE = 0.92, CR = 0.96).	Gosling and Matos (2007)
After this experience with this airline, it is very likely that I will	
…say negative things about the airline to others	
…not recommend the airline to friends and relatives and …not indicate this airline if anyone asks for an indication	
…not defend the airline to others	
…convince others that the airline is not ideal	
Intent to complain (Cronbach's alpha = 0.93, AVE = 0.77, SQRTAVE = 0.88, CR = 0.93).	Gosling and Matos (2007)
In case I have a similar problem with this airline in the future, it is very likely that I will	
…engage in a formal complaint with the airline's administration	
…engage in a formal complaint with ANAC (National Civil Aviation Agency)	
…engage in a formal complaint with INFRAERO (Brazilian Airport Infra-Structure Company)	
…engage in a formal complaint with Brazilian Justice (court).	

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