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**Examining the impact of service recovery on customer satisfaction and loyalty in the Indian Aviation Sector**

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**Abstract**

Customer service pressures are now higher in service organisations than ever before. No matter how excellent a company's service is, it might still not meet consumers' increasingly high expectations, as today's consumers are more demanding yet less loyal. The airline industry in particular is very complex, requiring airport, airline, and ground staff to collaborate closely to provide services to passengers. This study investigates how service recovery affects customer satisfaction and loyalty in the Indian aviation sector. Structural equation modelling (SEM) was used to analyse the relationships. A well-structured questionnaire was used to collect information from 388 passengers who had experienced service failure in the recent past. Data was analysed using SPSS and AMOS. Before the application of SEM, Various tests were employed to check the reliability (Cronbach's alpha) and validity (Convergent and discriminant) of the data. The findings confirm that service recovery positively affects customer satisfaction and loyalty.

**Keywords:** Procedural justice, Distributive justice, Interactional justice, Service recovery, Customer satisfaction, Customer loyalty

**Introduction**

A service failure happens when issues arise during the service process, leading customers to develop negative perceptions of their experience (Gelbrich and Roschk, 2011). The airline industry in particular is vulnerable to such failures due to the specific nature of its service delivery processes (Palmer and Bejou, 2016). In airline services, various causes of service failure have been identified, including flight cancellations, overbooking, airport strikes, diversions, delays in foreign countries, issues with the attitude of ground and cabin crew, and reservations-related problems (Bamford and Xystouri, 2005). Previous research, using a cross-sectional survey of various American airlines, found that service quality failures are linked to seven key service dimensions: oversales, tour complaints, delays, mishandled baggage, advertising complaints, baggage complaints, and flight problems (Gursoy et al., 2005).

After a service failure, a positive service recovery experience can boost customer commitment (Nusair, 2011). Cheng et al. (2019) highlight customer satisfaction as a key factor that enhances loyalty. Satisfied customers are more likely to repurchase, demonstrate stronger brand loyalty, and file fewer complaints. If customers are satisfied with service recovery, they are more likely to share positive word of mouth about the company's service and encourage others to do business with it (Sciarelli et al., 2017). Therefore, the service provider should continually assess where, what, and how customer satisfaction is being achieved.

Customer loyalty is defined as a deep commitment to repeatedly repurchase or remain with a favoured product or service. Loyalty is when a consumer feels they must remain in a personal relationship with the organisation under all circumstances, good and evil (Reynolds & Arnold, 2000). Loyal customers with whom the company has a partnership are a powerful marketing asset for recommending and generating positive word of mouth. As partners, they are an organisation's best advertising (Johnston & Michel, 2008). Firms must be effective at addressing problems and solving them correctly for the company to maintain the relationship (Morgan and Hunt, 1994).

The Indian aviation sector is on the brink of significant expansion. By 2047, approx. 3 billion to 3.5 billion people will travel by air, with international travel accounting for 10% to 12% of this volume. This growth underscores the need for robust infrastructure to meet future aviation demands. In today's business landscape, the airline industry faces numerous challenges, including fierce competition and declining demand for air travel due to global economic downturns in recent years (Fodness and Murray, 2007). To remain competitive in this challenging market, airlines need to prioritise service recovery and improve their services to meet customer expectations. When handling service failures, the three service recovery dimensions (Interactional, procedural, and distributive justice) must be considered to address customer concerns effectively.

**Literature Review**

A significant amount of research has examined service encounters, service failures, and recovery. This wide-ranging research spans across various industries, including restaurants, hotel services, airlines, healthcare, self-service technology, and online platforms. Researchers have explored service failures and recovery strategies from customers' perspectives in service industries such as airlines, hotels, restaurants, public transport, cruise lines, theme parks, and retail banking (Nwokorie, 2016; Matikiti et al., 2017). Some researchers examine service recovery efforts from the standpoint of employees (Bitner et al., 1990; Chung-Herrera et al., 2004; Luria et al., 2012), while others examine from the customers' viewpoint (Grove and Fisk, 1997; Cheng et al., 2019)

The existing literature over the past few years has devoted increasing attention to service recovery. Service recovery is simply an organisation's response towards service failure. Service failure can occur for all sorts of reasons - non-availability at the right moment, delay of service delivery or service outcome, or employee carelessness (Zeithaml et al., 2010). It is also argued that an effective service recovery process identifies and addresses issues, prevents discontent, and encourages customers to voice grievances. When customers seek redress, but the company fails to recover sufficiently, they are going to be doubly disappointed by the "double deviation" of two failures (Magnini & Ford, 2004). Bell and Zemke (1987) proposed five components of service recovery quality: apology, immediate correction, empathy, compensation, and continuity of concern. They claimed that for customers who suffered damage, a combination of empathy, compensation and ongoing concern is required, and cautioned that the fastest way to redress the problem is through immediate correction and an apology.

Kim et al. (2009) postulated that satisfaction with service recovery reflects customers' perceptions during the service recovery process and its outcomes. They suggested that all three aspects of perceived justice affect customers' perceptions of service recovery. Chang and Chang (2010) demonstrated that perceptions of justice have a substantial effect on recovery satisfaction. Service recovery can improve customer satisfaction with the quality of purchased goods and services, thereby increasing customer loyalty. Satisfaction is relevant to companies only to the extent that it triggers a positive financial response. Subsequent service management research has indicated that loyalty bonds are a key to bottom-line prosperity and success, suggesting that behavioural loyalty derives directly from customer satisfaction (Morrisson & Huppertz, 2010).

**Research Methodology**

In this study, domestic airline passengers travelling in north India who have experienced service failures during their travel over the past five years are considered. Respondents include travellers using eight major airlines operating in India. The data were gathered from 388 passengers using a well-structured questionnaire and a purposive sampling approach. The background of respondents is presented in table 1.1.

**Table 1.1 Background information of respondents**

Variable		Frequency	Percent
Gender	Male	203	52.3
	Female	185	47.7
Age	Less than 30 years	98	25.3
	30 to 40 years	127	32.7
	40 to 50 years	106	27.3
	More than 50 years	57	15.7
Educational Qualification	Bachelor's degree	171	44.1
	Master's degree	115	29.6
	Professional degree	57	14.7
	Other	45	11.6

The objective of the study is to examine the impact of service recovery on customer satisfaction and customer loyalty in the Indian aviation sector. In view of the above-mentioned objective, the following hypothesis has been tested.

H1: There is no significant impact of procedural justice on service recovery in the Indian aviation sector.

H2: There is no significant impact of interactional justice on service recovery in the Indian aviation sector.

H3: There is no significant impact of distributive justice on service recovery in the Indian aviation sector.

H4: There is no significant impact of service recovery on customer satisfaction in the Indian aviation sector.

H5: There is no significant impact of service recovery on customer loyalty in the Indian aviation sector.

Various statistical tools, such as SPSS and AMOS, were used to achieve the research aim. For data analysis, confirmatory factor analysis (CFA) was performed to assess the internal consistency of the constructs. The reliability and validity (discriminant and convergent) of the items were reported in accordance with the recommendations of Hair et al. (2006). Next, structural equation modelling (SEM) was employed to analyse the causal links among the constructs.

**Analysis**

**Validity and reliability tests**

The Cronbach alpha for the constructs in this study ranges from 0.819 to 0.911, indicating strong internal consistency of each construct. To address both validity and reliability concerns, CFA using maximum likelihood estimation was employed. The composite reliability (CR) is well above the generally acceptable range of 0.7, as explained by Hair et al. (2011) and Becker et al. (2012). Convergent validity is satisfied, as the Average Variance Extracted (AVE) is greater than 0.5. Discriminant validity has been assessed using Maximum shared variance (MSV) and Average shared variance (ASV). Discriminant validity explains the differences and uniqueness between the constructs. Table 1.2 shows that the AVE values for all constructs are greater than their ASV and MSV values, thus demonstrating discriminant validity.

**Table 1.2 Discriminant Validity Values**

Construct	CR	AVE	MSV	ASV	CS	DJ	PJ	IJ	CL
CS	0.913	0.636	0.230	0.156	0.798				
DJ	0.819	0.501	0.402	0.245	0.425	0.691			
PJ	0.853	0.538	0.402	0.160	0.266	0.634	0.734		
IJ	0.858	0.504	0.289	0.186	0.480	0.384	0.276	0.710	
CL	0.917	0.690	0.289	0.194	0.379	0.501	0.301	0.538	0.830

**Model fit indices**

According to Hair et al. (2006), a model with good fit will have a Comparative fit index (CFI) greater than 0.90, a Root Mean Square Error of Approximation (RMSEA) less than 0.08. As shown in Table 1.3, with  $\chi^2 = 820.787$  ( $df = 312$ ,  $p < 0.001$ ), the actual (S)RMR in the study is 0.045, which falls within the acceptable range of less than 0.08. Incremental fit is measured by CFI (0.920) and RMSEA (0.065), which fall within acceptable norms. This indicated measurement model is a good fit model.

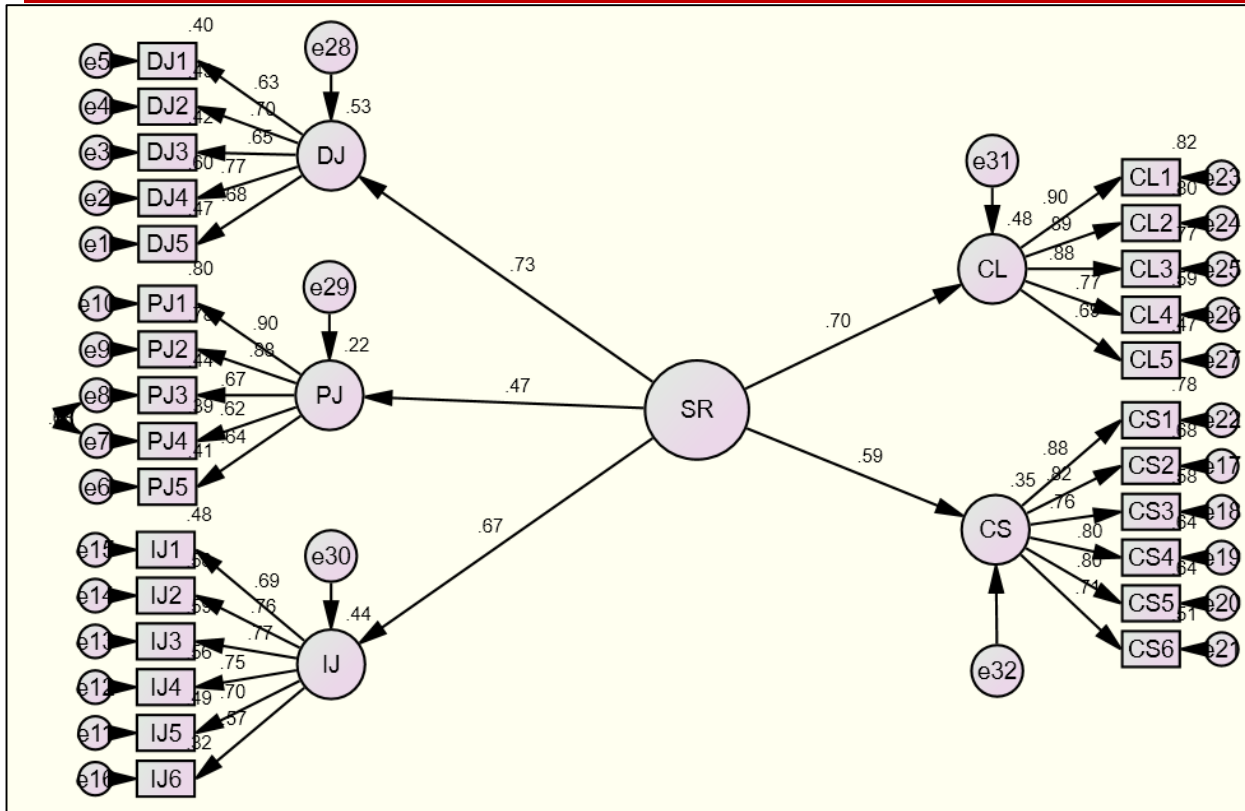
**Table 1.3 Model fit indices values**

Name of criteria	Index	Actual Values	Acceptance Level	Literature
Incremental Fit	CFI	0.920	CFI>0.90	Bentler (1990) and Awang (2012)
Absolute Fit	RMSEA	0.065	RMSEA<0.08	Browne et al (1993), Kline (2005), Hooper (2008)
	CMIN	2.631	CMIN<3	Marsh and Hocevar (1985), Kline (2005), Hooper (2008) and Awang (2012),
	(S)RMR	0.045	SRMR<0.08	Kline (2005) & Hooper (2008)

**Structural Equational Modelling**

Structural Equation Modelling (SEM) is an applied mathematical tool that establishes the connections among various variables. SEM plays a significant role in determining the structural relationships among variables and their latent constructs. SEM allows investigators to examine factors whose direct measurement has not been feasible; however, these factors can be examined through the association of multiple variables. Figure 1.1 presents a structural model. The model was built between the dimensions of service recovery, customer satisfaction and customer loyalty.

**Figure 1.1 Structural model of dimensions of service recovery, customer satisfaction and customer loyalty**



**Table 1.4 Regression path coefficient and its significance values**

Structural Path	Standardised Regression coefficient ( $\beta$ )	S.E	C.R. (t-value)	P	Null Hypothesis
PJ ← SR	0.471	0.127	6.066	***	Rejected
IJ ← SR	0.667	0.282	6.002	***	Rejected
DJ ← SR	0.730	0.214	6.066	***	Rejected
SR ← CS	0.591	0.237	5.998	***	Rejected
SR ← CL	0.696	0.390	6.409	***	Rejected

**Note: Significance at P<0.001 level**

PJ=Procedural Justice, IJ= Interactional Justice, DJ= Distributive justice, SR= Service Recovery, CS= Customer satisfaction, CL= Customer Loyalty

Table 1.4 signifies that all the null hypotheses are rejected. Procedural Justice (H1), Interactional Justice (H2), and Distributive Justice (H3) were found to have a significant impact on service recovery. Further, Service Recovery (H4, H5) has a significant impact on customer satisfaction and loyalty. Among the variables of Service recovery, distributive justice ( $\beta = 0.730$ ) has the highest beta value, followed by interactional justice ( $\beta = 0.667$ ) and procedural justice ( $\beta = 0.471$ ). Customer satisfaction and customer loyalty have beta values of ( $\beta = 0.591$ ) and ( $\beta = 0.696$ ), respectively. All values reported were significant at the 0.001% level. These outcomes are also supported by earlier research (Cheng et al., 2019; Mohd-Any et al., 2019; Liat et al., 2017; Tran, 2024; Zaid et al., 2021).

**Conclusion**

Findings from this study confirm that interactional, procedural and distributive justice have a direct impact on service recovery. Furthermore, service recovery directly affects customer satisfaction and customer loyalty. Service recovery is an intricate process where each dimension contributes positively to customer satisfaction and loyalty. Customers view these three dimensions as a unified whole; the absence of any one of them can result in customer disappointment. This confirms prior research's findings that when customers perceive justice in service recovery, they feel satisfied.

Furthermore, service recovery has a positive impact on customer loyalty in airline services, underscoring its importance not only for restoring customer satisfaction but also for enhancing loyalty. Customers tend to be satisfied and build trust in a company when it responds to an initial service failure with effective recovery measures. Examples include explaining the reason for the flight delay (interactional justice), helping resolve the issue quickly (procedural justice), and offering compensation, such as a free meal or drink (distributive justice). To promote customer loyalty to a single airline, the services offered must meet their expectations, and service failures should be minimised. Only through this approach can customers feel satisfied and develop loyalty to the airline. In summary, effective service recovery is crucial for regaining customer satisfaction and fostering positive loyalty towards the airline. This study's findings offer valuable managerial insights. When customers see service recovery as fair, their satisfaction and trust increase, which can lead to more referrals and repeat purchases.

## References

- Bamford, D., & Xystouri, T. (2005). A case study of service failure and recovery within an international airline. *Managing Service Quality: An International Journal*, 15(3), 306-322.
- Becker, J. M., Klein, K., & Wetzels, M. (2012). Hierarchical latent variable models in PLS-SEM: guidelines for using reflective-formative type models. *Long range planning*, 45(5-6), 359-394.
- Bell, C. R., & Zemke, R. E. (1987). Service breakdown: the road to recovery. *Management review*, 76(10), 32.
- Bitner, M.J., Booms, B.H. and Tetreault, M.S. (1990), "The service encounter: diagnosing favorable and unfavorable incidents", *The Journal of Marketing*, Vol. 54 No. 1, pp. 71-84.
- Chang, Y. W., & Chang, Y. H. (2010). Does service recovery affect satisfaction and customer loyalty? An empirical study of airline services. *Journal of air transport management*, 16(6), 340-342.
- Cheng, B. L., Gan, C. C., Imrie, B. C., & Mansori, S. (2019). Service recovery, customer satisfaction and customer loyalty: evidence from Malaysia's hotel industry. *International Journal of Quality and Service Sciences*, 11(2), 187-203.
- Chung-Herrera, B. G., Goldschmidt, N., & Doug Hoffman, K. (2004). Customer and employee views of critical service incidents. *Journal of Services Marketing*, 18(4), 241- 254.
- Fodness, D., & Murray, B. (2007). Passengers' expectations of airport service quality. *Journal of Services Marketing*, 21(7), 492-506.
- Krishna, A., Dangayach, G. S., & Jain, R. (2011). Service recovery: Literature review and research issues. *Journal of Service Science Research*, 3, 71-121.
- Gelbrich, K., & Roschk, H. (2011). A meta-analysis of organisational complaint handling and customer responses. *Journal of Service Research*, 14(1), 24-43.
- Grove, S. J., & Fisk, R. P. (1997). The impact of other customers on service experiences: a critical incident examination of —getting along. *Journal of Retailing*, 73(1), 63-85.
- Gursoy, D., Chen, M. H., & Kim, H. J. (2005). The US airlines' relative positioning based on attributes of service quality. *Tourism management*, 26(1), 57-67.
- Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E. and Tatham, R.L. (2006), *Multivariate Data Analysis*, Vol. 6, Pearson Prentice Hall, Upper Saddle River, NJ.
- Johnston, R., & Michel, S. (2008). Three outcomes of service recovery: Customer recovery, process recovery and employee recovery. *International Journal of Operations & Production Management*, 28(1), 79-99.
- Kim, T.T., Kim, W.G. and Kim, H.-B. (2009), "The effects of perceived justice on recovery satisfaction, trust, word-of-mouth, and revisit intention in upscale hotels", *Tourism Management*, Vol. 30 No. 1, pp. 51-62.
- Liat, C.B., Mansori, S. and Huei, C.T. (2014), "The associations between service quality, corporate image, customer satisfaction, and loyalty: evidence from the Malaysian hotel industry", *Journal of Hospitality Marketing and Management*, Vol. 23 No. 3, pp. 314-326.
- Luria, G., Gal, I., & Yagil, D. (2009). Employees' willingness to report service complaints. *Journal of Service Research*, 12(2), 156-174.
- Magnini, V. P., & Ford, J. B. (2004). Service failure recovery in China. *International Journal of Contemporary Hospitality Management*, 16(5), 279-286.
- Matikiti, R., Mpinganjira, M., & Roberts-Lombard, M. (2017). Social media in Tourism: Establishing factors influencing attitudes towards the usage of social networking sites, 17(1), 1–13
- Mohd-Any, A. A., Mutum, D. S., Ghazali, E. M., & Mohamed-Zulkifli, L. (2019). To fly or not to fly? An empirical study of trust, post-recovery satisfaction and loyalty of Malaysia Airlines passengers. *Journal of Service Theory and Practice*, 29(5/6), 661-690.
- Morgan, R.M. and Hunt, S.D. (1994), "The commitment-trust theory of relationship marketing", *The Journal of Marketing*, Vol. 58 No. 3, pp. 20-38.
- Morrisson, O., & Huppertz, J. W. (2010). External equity, loyalty program membership, and service recovery. *Journal of Services Marketing*, 24(3), 244-254.
- Nusair, K. (2010). Examining the relationship among service recovery, affective commitment, calculative commitment, and trust for e-travel retailers. *Information Technology & Tourism*, 12(4), 317-330.
- Nwokorie, E. C. (2016). Service recovery strategies and customer loyalty in selected hotels in Lagos state, Nigeria. *Net Journal of Business Management*, 4(1), 1–8.
- Palmer, A., & Bejou, D. (2016). Retrospective: service failure and loyalty: an exploratory empirical study of airline customers. *Journal of Services Marketing*, 30(5), 480-484.
- Grove, S. J., & Fisk, R. P. (1997). The impact of other customers on service experiences: a critical incident examination of —getting along. *Journal of Retailing*, 73(1), 63-85.
- Sciarelli, M., Nagm, A. A., Dakrory, M. I., Tani, M., & Khashan, M. A. (2017). Mediating service recovery satisfaction in the relationship between internet service recovery and customer loyalty. *International Journal of Business and Management*, 12(10), 24-42.
- Johnston, R., & Michel, S. (2008). Three outcomes of service recovery: Customer recovery, process recovery and employee recovery. *International Journal of Operations & Production Management*, 28(1), 79-99.
- Zaid, S., Palilati, A., Madjid, R., & Bua, H. (2021). Impact of service recovery, customer satisfaction, and corporate image on customer loyalty. *The Journal of Asian Finance, Economics and Business*, 8(1), 961-970.
- Zeithaml, V. A., Bitner, M. J., & Gremler, D. D. (2010). *Services marketing strategy*. Wiley international encyclopedia of marketing.