

Service recovery efforts' influence on consumers' desire to reciprocate and forgiveness: the mediating role of perceived justice

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Abstract

Purpose – This paper investigated the impact of firms' service recovery efforts on consumers' desire to reciprocate and forgiveness in the hospitality industry of Pakistan. Additionally, this study examined the mediating role of perceived justice between service recovery efforts and their outcomes.

Design/methodology/approach – Using snowball sampling technique, an online survey was administered and 259 responses were collected from casual-dining restaurant customers. A partial least squares structural equation modeling (PLS-SEM) and multivariate analysis of covariance (MANCOVA) were used to examine the hypotheses.

Findings – The results indicate that perceived justice significantly mediates the effect of service recovery efforts on the consumers' desire to reciprocate and forgiveness. Moreover, high (vs. low) service recovery efforts lead to high consumer forgiveness.

Practical implications – The study provides insights for managers into how optimal recovery efforts predict consumers' positive responses and minimize the effect of service failure in South Asian consumers.

Originality/value – This research is among the early endeavors to examine consumers' desire to reciprocate in service recovery context. Also, this is the first study to validate the impact of service recovery efforts on consumers' desire to reciprocate and consumer forgiveness in a South Asian country.

Keywords Desire to reciprocate, Perceived justice, Consumer forgiveness, Service recovery efforts, Casual-dining restaurants

Paper type Research paper

1. Introduction

Due to human involvement in services, it is difficult to avoid errors in service delivery process (Wen and Chi, 2012). Therefore, service providers remain highly concerned about the negative effects of service failures. Converging evidence shows that devoting appropriate recovery efforts can mitigate the negative effect of service failures (Jeong and Lee, 2017; Muhammad and Gul-E-Rana, 2019; Riaz and Khan, 2016). Service recovery efforts refer to the perceived energy and resources dedicated by service employees (Mostafa *et al.*, 2014) and organizations (De Matos *et al.*, 2007). Since the service recovery efforts are aimed to achieve customers' positive evaluation of service recovery, previous studies provide mixed findings on the effectiveness of service recovery efforts (Harun *et al.*, 2018). Also, studies show that a large sum of consumers remains dissatisfied with service recovery (Ma and Zhong, 2021). To this end, it is crucial to examine how service recovery efforts can be better evaluated by consumers.



Prior research suggests that consumers assign different meanings to different recovery efforts, which reflect in their responses (less vs. more favorable) toward service providers (Roschk and Gelbrich, 2017). Therefore, consumer reciprocity is getting the increased attention of service researchers. Consumers' desire to reciprocate is an affective motivational state (Do and Seo, 2016), which refers to "a desire to do (something) in an effort to reward an organization for something they have done" (Langan, 2014, p. 35). In addition, in service failure and recovery context, consumer forgiveness is considered a fundamental human emotion (Wei *et al.*, 2020) that emerges from service recovery efforts (Muhammad and Gul-E-Rana, 2020). Thus, this study assumes that consumers' desire to reciprocate and forgiveness are potentially favorable outcomes of service recovery. For instance, appropriate investment in failure handling can trigger feelings of reciprocity (Fierro *et al.*, 2014), which promotes future patronage (Dutta *et al.*, 2019). Similarly, consumer forgiveness promotes an enhanced brand attitude, purchase intention, satisfaction (Tathagata and Amar, 2018) cognitive loyalty, affective loyalty, conative loyalty (Ghosh, 2017) and recovery satisfaction (Ma *et al.*, 2020), etc.

In addition, Borah *et al.* (2019) claimed that most of the research on service recovery is carried out in developed markets, while little is known about whether the findings are replicable in developing countries with different cultures. The south Asian market has a rich culture and history, and research scholars are interested to examine how companies can win over consumers' minds and hearts (Dewasiri *et al.*, 2021). Despite a recognized potential of consumers' desire to reciprocate, consumer forgiveness, and the unique characteristics of South Asian consumers, to the best of the author's knowledge previous research provides us with a limited understanding of how service recovery efforts influence consumers' desire to reciprocate and consumer forgiveness in South Asian markets.

Since firms dedicate resources to recovering service failures, resource exchange theory suggests that individuals prefer to exchange the resources which are proximal in terms of concreteness and particularism (Foa and Foa, 1974). Moreover, it is recommended that consumers evaluate service recovery efforts on the framework provided by justice theory (Kwon and Jang, 2012; Smith *et al.*, 1999). Therefore, this study draws upon resource exchange theory and justice theory and assumes that consumers' desire to reciprocate and consumer forgiveness are the means by which consumers express their affectionate regard to service providers who try to restore their comfort after a service failure (Foa and Foa, 1974).

Thus, the main purpose of this study is to investigate the effect of service recovery efforts on consumers' desire to reciprocate and consumer forgiveness through a mediating role of perceived justice in the hospitality industry of Pakistan. Pakistan is a developing country with a consumer base of approximately 200 million, where the food industry is the second largest industry, and food-related outlets and restaurants warrant great importance (Burhan *et al.*, 2021). The restaurant sector in Pakistan is a rapidly growing sector (Satti *et al.*, 2022). The business environment in the restaurant sector remains competitive since local restaurant chains try to compete with foreign restaurant chains by offering good food at reasonable prices (Asadullah *et al.*, 2021). Hospitality literature classifies restaurants into various categories, such as fine dining, casual dining, fast food, etc. Each type of restaurant contains different service norms in terms of food, service, price and atmosphere (Lee *et al.*, 2020). The present study focuses on casual dining restaurants because casual dining restaurants in Pakistan provide a variety of quality food at moderate prices and are commonly visited by the general population such as businessmen, public servants, housewives, teachers, students, etc. (Kamran and Attiq, 2011).

Subsequently, this study contributes to the hospitality literature in several ways. First, this study examines the relationship of service recovery efforts with consumers' desire to reciprocate and consumer forgiveness. Second, this study empirically examines perceived justice as an underlying mechanism to understand how service recovery efforts influence

consumers' desire to reciprocate and consumer forgiveness. Third, this study has a strong contextual significance. The context of service recovery in the hospitality industry of a developing country in South Asia (i.e. Pakistan) provides a significant contribution to hospitality literature. Previous researchers claimed that the volume of service failures in developing markets is higher than in developed markets, while much of the literature is based on developed countries (Borah *et al.*, 2019). Additionally, it is noted that emotional regulations and forgiveness are shaped by culture (Ho and Fung, 2011) and activation of the desire to reciprocate also depends on the context (Hydock *et al.*, 2020). Fourth, this study extends the application of resource exchange theory in the hospitality industry in developing markets in south Asia by suggesting a fair and proximal exchange of resources leads to successful service recovery. The findings of this study will provide important guidelines to hospitality managers who aim to deliver effective service recovery. Using appropriate recovery efforts, hospitality managers can earn consumers' perceptions of justice, which result in a desire to reciprocate and forgiveness. The paper is further organized in the following manner. First, we begin with a literature review and hypotheses development. This is followed by the research method and subsequent data analysis, testing hypotheses and reporting results. At the end of the study, we discuss research findings, theoretical and practical implications, limitations and future research directions.

2. Literature review

2.1 Recovery efforts and perceived justice

Service failures result in consumer losses of resources (e.g. time and money) and subsequently, recovery efforts mitigate those losses by providing money, goods and social resources (e.g. apology) (Chuang *et al.*, 2012). Customers scrutinize the service provider's recovery efforts in terms of honesty, trustworthiness and responsibility (La and Choi, 2019). Perceived justice in service recovery provides the customers with a strong feeling that resources are fairly exchanged (Mathew *et al.*, 2020). Therefore, perceived justice is considered a significant indicator of successful service recovery (Smith *et al.*, 1999). Consequently, service recovery scholars put an increased emphasis on perceived justice as an evaluative mechanism for service failure and recovery encounters (Ma and Zhong, 2021; Matikiti *et al.*, 2019; Muhammad and Gul-E-Rana, 2019).

Perceived justice is defined as "the customer's expectation of receiving justice through the service recovery process measured using fairness, speed of resolution, and genuineness of effort" (Mathew *et al.*, 2020, p. 1,961). Sparks and Fredline (2007) claimed that service recovery efforts have many kinds, ranging from an explanation of the failure to reimbursing money. Many scholars argued that firms' recovery efforts result in positive perceptions of justice. For example, Liu *et al.* (2019) claimed that the recovery efforts (e.g. compensation and prompt response) are manifestations of perceived justice. In other words, justice perceptions reflect consumers' assessment of service recovery efforts (Ampong *et al.*, 2020; Nuansi and Ngamcharoenmongkol, 2021; Rifi and Mostafa, 2022). Subsequently, the literature suggests that recovery efforts should be designed in a way that they should evoke perceived fairness in consumers (Tahir, 2021). In addition, justice theory suggests that service recovery efforts are examined based on perceived justice in service recovery (McColl-Kennedy and Sparks, 2003). Drawing upon the above discussion it can be argued that service recovery efforts are positively associated with perceived justice. The present study focuses on the perceived justice construct where service failure has occurred followed by a consumer complaint and an ensuing response from the service provider. Hence, we have hypothesized the following relationship.

H1. Service recovery efforts have positive relationship with perceived justice.

2.2 Recovery efforts and desire to reciprocate

Consumers' desire to reciprocate refers to "a desire to do (something) in an effort to reward an organization for something they have done" (Langan, 2014, p. 35). Previous research found that remarkably satisfactory services result in favorable reciprocal actions from consumers (Boateng *et al.*, 2019). For example, consumers express positive views about firms to reciprocate the benefits they receive from them (Berger, 2014). Moreover, consumers' desire to reciprocate inspires their long-term commitment to firms (Jin and Merkebu, 2015). Therefore, the role of consumers' desire to reciprocate is crucial to study in service recovery research. Previous literature suggests that consumers demonstrate a desire to reciprocate in return to different benefits received from firms (Palmatier *et al.*, 2009). However, to the best of the author's knowledge, the link between service recovery efforts and consumers' desire to reciprocate is rarely established in the literature.

The resource exchange theory primarily organizes the six types of resources, e.g. love (an expression of affectionate regard, warmth or comfort), status, information, money, goods and services into two broader categories, concreteness (the degree of tangibility) and particularism (who deliver them). The theory contends that the resources proximal to one another with respect to concreteness and particularism are more likely to be exchanged (Foa and Foa, 1974). Building on the theory we argue that consumers' desire to reciprocate is a means by which they express their affectionate regards to service providers for their recovery efforts. Hence, we assumed that firms' service recovery efforts have a positive relationship with consumers' desire to reciprocate.

In addition, companies at large prefer to deliver high recovery efforts after service failures. However, some companies are noted to deliver only mediocre recovery efforts (Cai and Qu, 2018). Such differences in service recovery efforts may lead to variation in consumer behavior. For instance, high recovery efforts bring positive (Maxham III, 2001), while inappropriate service recovery efforts bring a negative impact on the evaluation of service recovery (Michel and Meuter, 2008). Drawing an inference from previous literature, the present study categorized recovery efforts into high versus low recovery efforts. High recovery efforts included short waiting time, employee empowerment, monetary compensation, explanation and sincere apology (Cai and Qu, 2018). While low recovery efforts involved long waiting times, a simple apology and no monetary compensation (Cai and Qu, 2018). Consequently, it can be expected that the excessive resources allocated to high (vs. low) recovery efforts will result in a higher desire to reciprocate. Hence, we hypothesized the following relationships.

H2a. Service recovery efforts have positive relationship with desire to reciprocate.

H2b. High recovery efforts (vs. low recovery efforts) lead to high desire to reciprocate.

2.3 Recovery efforts and consumer forgiveness

Consumer forgiveness is a complex process that involves cognitive and emotional evaluation of service recovery (Tsarenko and Tojib, 2011). Many studies have focused on consumer forgiveness as a psychological mechanism to let go of the effect of service failure (Casidy and Shin, 2015; Hur and Jang, 2019; Ma *et al.*, 2020; Wei *et al.*, 2020). Muhammad and Gul-E-Rana (2020, p. 2) claim that "a service failure is said to be forgiven if a customer let go the revengeful destructive behaviour and respond in a constructive way towards the service firm on perceiving recovery efforts". Though consumer motivation leads to the forgiveness of omission and errors that cause service failure, also the forgiveness of bigger failure indeed requires corrective efforts by service providers (Yagil and Luria, 2016). Therefore, several scholars argued that service recovery efforts have a positive influence on consumer forgiveness (Babin *et al.*, 2021; Latif and Uslu, 2019; Shuqair *et al.*, 2021; Tsarenko and Tojib,

2011; Xie and Peng, 2009). Previous studies have shown that recovery efforts such as compensation, apology (Shin *et al.*, 2018), prompt response etc. (Liu *et al.*, 2019) result in consumer forgiveness. Following previous studies (e.g. Cai and Qu, 2018; De Matos *et al.*, 2007; Mostafa *et al.*, 2014) this study aims to extend the knowledge by examining the underlying mediator in firms' service recovery efforts and consumer forgiveness and how varying levels of recovery efforts lead to consumer forgiveness.

As service failure wastes away consumers' resources like time, money and/or emotions, while firm recovery efforts make up for the shortfall of resources. According to resource exchange theory, a social resource (consumer forgiveness) can be earned by offering a social resource like an apology in the form of service recovery (Harrison-Walker, 2019). Cai and Qu (2018) have emphasized that offering only an apology is regarded as low recovery effort whereas the recovery efforts are regarded as high if service providers offer a sincere apology within a short waiting time, provide an explanation and use concrete resources. Drawing upon these explanations it can be expected that high recovery efforts will result in higher consumer forgiveness. We hereby hypothesize the following relationships.

H3a. Service recovery efforts have positive relationship with consumer forgiveness.

H3b. High recovery efforts (vs. low recovery efforts) lead to high customer forgiveness.

2.4 Perceived justice and desire to reciprocate

In recent literature, perceived justice has emerged as a salient mediator between firms' service recovery efforts and their outcomes (Mody *et al.*, 2020). For instance, a congruency between recovery type and consumer status leads to favorable consumer responses, and perceived fairness underlies this relationship (Lu *et al.*, 2021). Similarly, perceived justice performs a mediating role in the relationship between apology (by CEO vs. employees) and consumer forgiveness (Hill and Boyd, 2015). Resource exchange theory suggests that the similar and equitable resources offered by service providers have significant implications for service recovery (Borah *et al.*, 2019). According to social exchange notions, individuals try to restore equity in exchanges (Regan, 1971). Hence, it can be argued that the social resources offered can earn social resources (Harrison-Walker, 2019) and justice perceptions of individuals lead them to a desire to reciprocate (Erdogan, 2002; Gouldner, 1960). In the context of this study, when employee efforts focus on justice in recovery, the consumers try to sustain the justice by a desire to reciprocate. Recently, Umashankar *et al.* (2016) noted that if service recovery efforts meet or exceed consumers' expectations, they feel justice and subsequent satisfaction. Customer satisfaction further leads to feelings of gratitude and reciprocity. Given the above theoretical background, we expect that the recovery efforts from the service organization lead to consumers' desire to reciprocate through an underlying mediating mechanism of perceived justice. Therefore, we have hypothesized the following relationships.

H4a. Perceive justice has positive relationship with consumers' desire to reciprocate.

H4b. Perceived justice mediates the relationship between service recovery efforts and desire to reciprocate.

2.5 Perceived justice and consumer forgiveness

Davidow (2003) claimed that consumers carefully evaluate the resources provided in service recovery and their perceptions of sincere apology, communication and resources are paramount to consumer forgiveness. Extant research studies found that perceived recovery justice has a positive effect on consumer forgiveness (Babin *et al.*, 2021; Latif and Uslu, 2019; Tsarenko and Tojib, 2011; Wei *et al.*, 2020). Perceived recovery justice helps individuals forgive service providers by substituting undesirable emotions with positive ones (Tsarenko

et al., 2018). In other words, when resources consumed in recovery are valuable enough, including the desired product, compensation (economic resources) and prompt response, explanation of the problem and apology (socio-economic resources), consumers perceive higher justice in recovery (Smith *et al.*, 1999), and subsequently, forgive the transgressor firm (Babin *et al.*, 2021). Based on the above it can be argued that consumers' perceived justice underlies the relationship between service recovery efforts and consumer forgiveness. Thus, we hypothesized the following relationships.

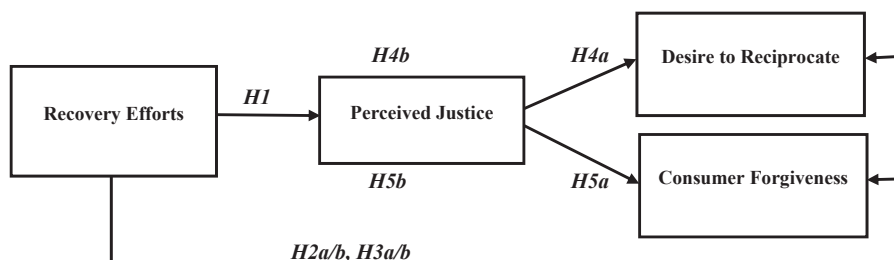
H5a. Perceived justice has positive relationship with consumer forgiveness.

H5b. Perceived justice mediates the relationship between service recovery efforts and consumer forgiveness.

3. Methodology

Dewasiri *et al.* (2018) suggest that a causal and comparative research question/objective needs quantitative inquiry. Given a variety of recovery efforts involved in restaurant service failures, such as several employee service behaviors and compensations (Leong and Kim, 2002) and the treatment of service recovery efforts in previous research (Cai and Qu, 2018), we considered a single factor between-subjects design with two conditions of service recovery efforts: high vs. low, in conjunction with self-administered online survey. Figure 1 presents the theoretical framework of the study. Between-subject experimental design is considered effective when scholars intend to compare different interventions to find out which intervention is more effective (Abrahamse, 2016). Given these characteristics, between-subject experiment is largely used in service recovery studies, where scholars use different treatments to recover one service failure and examine which treatment is more effective (Cai and Qu, 2018).

Dewasiri *et al.* (2018) suggest a mixed method approach when a study incorporates treatments or interventions in research design; it helps to ensure the integrity of treatments. Hence, we considered a mixed method research design with a concurrent embedded strategy. We collected survey data to address the primary objective, in conjunction with additional information on the resources involved in recovery efforts, to examine how resources embedded in high (vs. low) recovery efforts influence consumer responses (Dewasiri *et al.*, 2018). Accordingly, we designed our survey in the following manner. A hypothetical scenario was designed that illustrates one service failure but different recovery efforts. For instance, participants were asked to imagine that they visited a casual dining restaurant (a restaurant that serves moderately priced food in a casual atmosphere) to celebrate a special event with



Note(s): *H2b:* High recovery efforts (vs. low recovery efforts) -> high desire to reciprocate
H3b: High recovery efforts (vs. low recovery efforts) -> high consumer forgiveness

Figure 1.
Theoretical framework

their family members. After waiting about 15 min, a hostess seated their group. Shortly after, a waiter took the order. They ordered a medium-cooked steak but were served an “overcooked” steak. They informed the waiter about the problem.

Thereafter, the respondents in high recovery efforts condition read the following scenario: *“The waiter took a good look at the steak and said that he/she could take care of the problem. The waiter took the dish back immediately. In 2–3 min, the manager approached you. He/she already knew the problem so you did not need to explain the situation again. The steak was served again. This time it was ‘medium’ cooked. The waiter sincerely apologized and 20% discount on the item was offered. The manager provided an explanation for the problem and asked if there was anything else that he/she could do to serve you better”* (Cai and Qu, 2018, p. 344).

On the contrary, the participants in the low recovery efforts condition read the following scenario: *“The waiter responded very matter of fact and asked you to confirm that you ordered a ‘medium’ steak. Then the server said that he/she could not do anything about the problem and would have a manager to resolve it. In about 10 min, the manager approached and asked you what the problem was. You explained the situation again. The manager took the dish back. The steak was served again. This time it is ‘medium’ cooked. The waiter simply apologized”* (Cai and Qu, 2018, p. 345).

After reading the scenario respondents were asked to mention their level of desire to reciprocate, forgiveness, justice perceptions and employees’ recovery efforts.

Following previous studies Google forms was considered to administer the online survey in English language (e.g. Saima and Khan, 2020) among casual dining consumers in Pakistan. English is the official language in Pakistan, also in previous studies; respondents have not reported any concerns (Sarwar *et al.*, 2021). A snowball sampling technique was employed, firstly we contacted a few participants at convenience then the selected participants recruited further participants (Noyal and Pandey, 2022). Previous literature suggests that snowball sampling reduces experimenter selection bias (Jackson *et al.*, 1996). Moreover, it helps in identifying the consumers who often visit a specific type of restaurant (Vo-Thanh *et al.*, 2022). This study is based on experimentation that focuses on internal validity rather than external validity (Mattila *et al.*, 2021). Thus, following extant experimental research in the hospitality industry, this study also used snowball sampling (Taşçıoğlu and Yener, 2021; Yang *et al.*, 2022). Subsequently, a total of 259 useable responses were included in the final analysis. Among 259 responses, 120 responses were based on high level of service recovery efforts while 139 responses were based on low level of service recovery efforts. Prior researchers recommend that the sample size for PLS-SEM should be five to 10 cases per variable (Hair *et al.*, 2018). Accordingly, our observations per variable were more than 60. Similarly, Mattila *et al.* (2021) recommended recruiting more than 30 participants per treatment in the experimental designs in an online setting. The observations per treatment for the present study were more than 110, which is sufficiently higher than the minimum threshold. Therefore, the sample size was considered satisfactory for further analysis.

3.1 Measurements

We measured perceived justice with nine items adopted from (Cai and Qu, 2018), desire to reciprocate with three items adopted from (Hydock *et al.*, 2020), and consumer forgiveness with four items adopted from (Hur and Jang, 2019) and employee recovery efforts with three items were adopted from (Mohr and Bitner, 1995). All the constructs were measured with seven-point Likert scale. The realism of the scenario was measured with two items adopted from (Basso and Pizzutti, 2016) on a bipolar scale from 1 = not at all to 7 = completely. Demographic characteristics of respondents were collected at the end of survey.

4. Results

First, the realism of the scenario was assessed by considering the *t*-test. Participants rated the scenarios as realistic with the following values ($M = 5.08$). Table 1 shows the demographic information of the respondents. Accordingly, 62.2% of respondents were male and 52.9% were between the age of 25–39. 41.3% of respondents had a master’s degree; 74.1% had a monthly income of 59,999 PKR or below, and 46% of respondents dine out one to two times per month.

We considered Harman’s single-factor test to check common method bias (Podsakoff and Organ, 1986), this research study has reported no common method bias. Since our theoretical framework includes two outcome variables of consumers’ desire to reciprocate and consumer forgiveness, one mediating variable of perceived justice and one independent variable of recovery efforts, we used PLS-SEM as an evaluation model which is appropriate for the evaluation of complex models (Hair et al., 2014).

4.1 Measurement model

Measurement model assessed the reliability and validity (Hair et al., 2014). Composite reliability was considered to estimate the reliability. Loading of one item (EF2) of recovery efforts and one item (PJ3) of perceived justice was remarkably below than threshold value (0.70). Therefore, we deleted two items and re-assessed the measurement model. After re-assessment, minimum values of composite reliability were increased to greater than the threshold value of 0.70 (Hair et al., 2014).

Convergent validity was assessed through average variance extracted (AVE). A minimum threshold value for AVE is 0.50; as shown in Table 2. Our study has demonstrated higher AVE than the minimum threshold of 0.50. Loading of a few items (=0.68, 0.69) was a bit lower than the threshold of 0.70. Since these values are close to threshold value and AVE is greater than 0.50, these values were retained instead of deleting (Sarwar and Muhammad, 2019).

Variables		Distribution	Percentage
Gender	Male	161	62.2
	Female	98	37.8
Age	18–24	93	35.9
	25–39	137	52.9
	40–64	28	10.8
	65-Above	1	4
	High school	7	2.7
Education	Intermediate	30	11.6
	Bachelors	33	12.7
	Masters	107	41.3
	MS/M.Phil	77	29.7
	PhD	5	1.9
	Income (PKR)	20,000	85
20,000–39999		50	19.3
40,000–59999		57	22.0
60,000–99999		44	17.0
100,000–149,000		15	5.8
150,000 or above		8	3.1
Casual dining frequency	Less than once per month	86	33.2
	1–2 times per month	120	46.3
	More than three times per month	53	20.5

Table 1.
Demographic
measures

We used heterotrait-monotrait ratio (HTMT) as a criterion to assess discriminant validity (Henseler *et al.*, 2015). Though researchers used previously the Fornell-Larcker criterion for the assessment of discriminant validity, HTMT criterion is more rigorous to assess discriminant validity (Henseler *et al.*, 2015; Muhammad and Gul-E-Rana, 2019). Hence this study considered HTMT criterion for discriminant validity. The results show that all values were below 0.90; hence discriminant validity is acceptable (for details see Table 3).

4.2 Structural model

We evaluated the structural model by assessing *t*-value, effect size f^2 , predictive relevance Q^2 and coefficient of determination R^2 (Hair *et al.*, 2014). A bootstrapping procedure with 5,000 replications was employed to assess *t*-values (Hair *et al.*, 2014; Muhammad and Gul-E-Rana, 2019). The effect of service recovery efforts on perceived justice (H1) was supported ($\beta = 0.73, p = 0.000$). Effect of recovery efforts on desire to reciprocate (H2a) was not supported ($\beta = 0.033, p = 0.73$). Effect of recovery efforts on consumer forgiveness (H3a) was supported ($\beta = 0.37, p = 0.014$). Effect of perceived justice on desire to reciprocate (H4a) was supported ($\beta = 0.71, p = 0.000$). Effect of perceived justice on consumer forgiveness (H5a) was supported ($\beta = 0.51, p = 0.000$) (for details see Table 4).

For mediating hypotheses, we employed Preacher and Hayes (2008) approach to assess *t*-values and confidence intervals with sub samples 5,000 bootstrapping procedure for mediating hypotheses. Table 5 shows that H4b and H5b were supported as confidence intervals have no zero (Preacher and Hayes, 2008).

4.3 Multivariate analysis of covariance (MANCOVA)

To examine hypotheses H2b and H3b, we considered a multivariate analysis of covariance (MANCOVA) with recovery efforts groups as fixed factors, and age, gender, education and income as covariates. First, we run a preliminary MANCOVA to assess homogeneity of variance-covariance matrix (Box’s Test of Equality of Covariance Matrices, Box’s M) and homogeneity of regression (interaction between fixed factors and covariates). Preliminary

Constructs	Indicators	Factor loading	Cronbach’s alpha	rho_A	Composite reliability (CR)	Average variance extracted (AVE)
Perceived justice	PJ1	0.67	0.89	0.89	0.89	0.51
	PJ2	0.63				
	PJ4	0.70				
	PJ5	0.79				
	PJ6	0.69				
	PJ7	0.80				
	PJ8	0.71				
	PJ9	0.70				
	Desire to reciprocate	DR1				
DR2		0.80				
DR3		0.65				
Consumer forgiveness	CF1	0.65	0.86	0.87	0.86	0.61
	CF2	0.81				
	CF3	0.86				
	CF4	0.82				
Service recovery efforts	EF1	0.92	0.82	0.84	0.83	0.71
	EF3	0.75				

Table 2. Results of measurement model

Source(s): Authors’ compilation

MANCOVA revealed that Box's Test of Equality of Covariance Matrices (Box's M) was insignificant. Furthermore, we considered [Tabachnick et al. \(2007\)](#) criterion to assess the significance ($p = 0.01$) for homogeneity of regression. Accordingly, the interactional effects between factors and covariates were also found insignificant, suggesting that the assumptions underpinning the MANCOVA are met.

Since Box's test was insignificant, we used Wilk's λ as multivariate test statistics. Accordingly, the results of one-way MANCOVA demonstrate that group variable of recovery efforts (Wilk's $\lambda = 0.971$, $F(1,251) = 3.772$, $p < 0.05$, partial $\eta^2 = 0.029$) presents an insignificant effect on desire to reciprocate ($F = 0.83$, $p > 0.05$, $\eta^2 = 0.003$, observed power = 0.14). Providing that the two groups demonstrated no significant difference in their desire to reciprocate with high recovery efforts ($M = 5.1$) vs low recovery efforts ($M = 5.0$). Hence [H2b](#) was not supported. However, group variable of recovery efforts presents a significant effect on consumer forgiveness ($F = 7.47$, $p < 0.05$, $\eta^2 = 0.029$, observed power = 0.77). This means the consumers are more forgiving toward high recovery efforts ($M = 5.4$) as compared to low recovery efforts ($M = 4.9$). Therefore, [H3b](#) was supported. Since both means values are above four, both groups show agreement to forgive service provider with a minor but significant difference (for details see [Table 6](#) and [Figure 2](#)).

5. Discussion

The main purpose of this study was to examine the influence of service recovery efforts on consumers' desire to reciprocate and consumer forgiveness through an underlying mechanism of perceived justice. The study demonstrates several interesting findings. Firstly, this study revealed that service recovery efforts influence consumers' perceptions of recovery justice. Which support the idea that consumer evaluates recovery efforts on perceived justice ([Smith et al., 1999](#)). In addition, the study found that the direct relationship

Constructs	PJ	CF	DR	EF
PJ				
CF	0.79			
DR	0.74	0.56		
EF	0.74	0.76	0.56	

Table 3. Discriminant validity of measure model Heterotrait-Monotrait ratio (HTMT) of correlations

Hypotheses	Relationships	β	t -values	p -values	f^2	R^2	Q^2	Decision
H1	EF → PJ	0.73	13.109	0.000	0.69	0.41	0.23	Supported
H2a	EF → DR	0.033	0.328	0.743	0.009	0.39	0.26	Not Supported
H3a	EF → CF	0.37	2.453	0.014	0.15	0.55	0.38	Supported
H4a	PJ → DR	0.71	7.048	0.000	0.30	0.39	0.26	Supported
H5a	PJ → CF	0.51	3.503	0.000	0.31	0.55	0.38	Supported

Table 4. Results of structural model analysis (hypothesis testing)

Hypotheses	Relationships	β	t -values	p -values	CI. 95		Decision
					2.50%	97.50%	
H4b	EF → PJ → DR	0.525	6.27	0.000	0.376	0.708	Supported
H5b	EF → PJ → CF	0.38	3.036	0.002	0.19	0.671	Supported

Table 5. Mediation analysis

between service recovery efforts and consumers' desire to reciprocate was insignificant. Subsequently, high vs. low recovery efforts did not create significant variation in consumers' desire to reciprocate as well. However, perceived justice was found as a significant mediator between recovery efforts and consumers' desire to reciprocate. This finding demonstrates that service recovery efforts facilitate the rational scheme in consumers' minds, which results in the desire to reciprocate. Therefore, our findings complement the previous literature that perceived justice is a salient cognitive mediator of the service recovery process (Mody *et al.*, 2020; Umashankar *et al.*, 2016).

The findings further demonstrate that recovery efforts have a significant direct influence on consumer forgiveness, as well as an indirect influence through perceived justice. Moreover, high (vs. low) recovery efforts lead to high consumer forgiveness. These findings are aligned with the predictions of previous researchers, e.g. service recovery increases the level of consumer forgiveness, and perceived justice underlies the relationship between

Table 6.
Results of between-subject effects for H2b and H3b

Source	Dependent variables	Type III sum of squares	df	F	p-values	Partial η^2	Decision
Recovery efforts: high vs. low	DR	1.201	1	0.838	0.361	0.003	Not Supported
	CF	14.780	1	7.472	0.007	0.029	Supported

Note(s): H2b: High recovery efforts (vs low recovery efforts) → high desire to reciprocate (Not Supported)
H3b: High recovery efforts (vs low recovery efforts) → high consumer forgiveness (Supported)

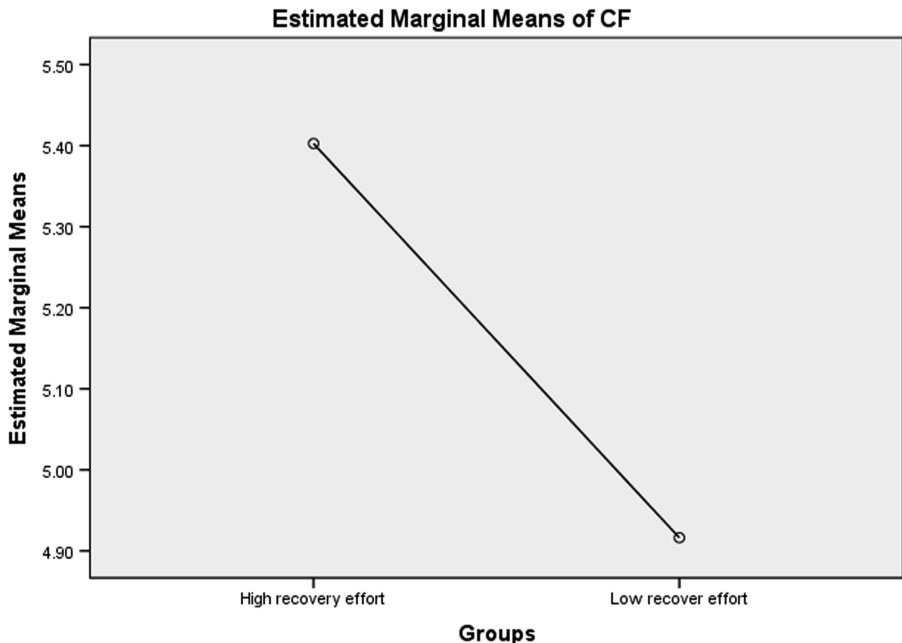


Figure 2.
Multivariate analysis of covariance

Note(s): Covariates appearing in the model are evaluated at the following values: Gender = 1.3784, Age = 1.7568, Education = 3.8958, Income = 2.5290

service recovery and consumer forgiveness (Latif and Uslu, 2019; Muhammad and Gul-E-Rana, 2020). Moreover, these findings are congruent with our theorizing that high (vs. low) recovery efforts produce high forgiveness. However, a small difference in the forgiveness towards high vs. low recovery efforts indicates that consumer forgiveness is largely predicted by social resources, e.g. apology (Harrison-Walker, 2019), additional resources might generate additional outcomes for service providers rather than consumer forgiveness. The result that perceived recovery justice significantly predicts consumer forgiveness also validates the previous empirical work (Babin *et al.*, 2021; Latif and Uslu, 2019; Wei *et al.*, 2020). The present research study differs from the previous studies by providing the following contributions in theory and practice.

5.1 Theoretical and practical implications

Borah *et al.* (2019) emphasized that the service recovery strategies in emerging markets should be re-examined due to different cultural and structural realities. They claimed that emerging markets have scarce universalistic resources (money) and abundant particularistic resources (politeness). Previous research shows that consumers' desire to reciprocate is a significant outcome of social exchanges (Sungu *et al.*, 2019). Accordingly, to the best researcher's knowledge, the present study is a pioneer attempt to examine consumers' desire to reciprocate as an outcome of service recovery. The study found an insignificant variation in consumers' desire to reciprocate for low vs. high recovery efforts, which denotes consumers' desire to reciprocate even for a simple apology. Previous research studies show that high vs. low recovery efforts including compensation, apology (Shin *et al.*, 2018) and prompt response (Liu *et al.*, 2019), may have a differential effect on consumer forgiveness. The present study revealed that high (vs. low) recovery efforts result in high consumer forgiveness. Hence present study contributes to hospitality literature that, first, in emerging and collectivistic economies like Pakistan a particularistic resource like an apology or courtesy is considered a large part of service recovery. Second, the study empirically examined the under-researched relationship of service recovery efforts with consumers' desire to reciprocate and consumer forgiveness through perceived recovery justice in the South Asia economy of Pakistan.

Finally, another salient contribution of our study is that it explains how resource exchange principles help us understand the influence of service recovery efforts on consumer evaluation and recovery outcomes in a South Asian country. For instance, service scholars associate psychological compensation with resource exchange theory based on "love" and "status". They claimed that psychological compensation comes from an apology, which demonstrates an affectionate concern for the customers and restores their self-esteem. Therefore, according to resource exchange principles, love and status are two fundamental resources that consumers exchange with service providers (Roschk and Gelbrich, 2014). Due to the high weight of love and status, apology becomes a large part of service recovery. Accordingly, Pakistani consumers give priority to particularistic resources.

In terms of practice, this study enhanced our understanding of the relationship between service recovery and its results (Yani-de-Soriano *et al.*, 2018). Our findings on consumers' desire to reciprocate suggest that managers should be cautious about fairness in recovery. Hospitality managers should channelize their efforts to create justice perceptions rather than a direct desire to reciprocate. Sometimes good behaviors of frontline employees' may provoke a negative emotion like indebtedness, instead of eliciting gratitude and subsequent desire to reciprocate (Bock *et al.*, 2016). While focusing on justice perceptions can eventually result in consumers' desire to reciprocate.

To earn consumer forgiveness, managers should focus on recovery strategies that largely include particularistic resources. Such strategies also help managers promote perceived justice

in service recovery. Although monetary efforts can play a significant role in recovery satisfaction, precise human efforts are crucial for service recovery management through consumer forgiveness. Therefore, managers should train their frontline employees in prosocial behavior, including sincere apologies and helping consumers in the transformation of negative emotions into positive ones (Tsarenko and Tojib, 2011). This would be likely to stimulate the perceptions of justice and forgiveness without incurring very high recovery costs.

6. Limitations and future research directions

Our study has certain limitations; firstly we considered a scenario-based online experiment. Although we adopted the scenarios from previous literature and realism was also found good, discrepancies between actual experiences and hypothetical scenarios may exist. Future studies could enrich the results by performing the experiment in a real setting. Secondly, our sample size was relatively small. The generalizability of the research can be increased with a large sample. Thirdly, the study was conducted in casual dining restaurants in Pakistan. Hence, generalizability is possible in casual dining restaurants in similar cultures. Future researchers can test the model in other countries before implementation.

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