

Rao, Abhishek S. et al.

Article

Service recovery system and service recovery in retail banks: a multilevel analysis

Cogent Business & Management

Provided in Cooperation with:

Taylor & Francis Group

Suggested Citation: Rao, Abhishek S. et al. (2024) : Service recovery system and service recovery in retail banks: a multilevel analysis, Cogent Business & Management, ISSN 2331-1975, Taylor & Francis, Abingdon, Vol. 11, Iss. 1, pp. 1-20, <https://doi.org/10.1080/23311975.2024.2349260>

This Version is available at:

<https://hdl.handle.net/10419/326263>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



<https://creativecommons.org/licenses/by/4.0/>

Service recovery system and service recovery in retail banks: a multilevel analysis

Abhishek S. Rao, Yogesh Pai P, Pallavi R Kamath, Lakshminarayanan Sethumadhavan, Nandan Prabhu & Rashmi Yogesh Pai

To cite this article: Abhishek S. Rao, Yogesh Pai P, Pallavi R Kamath, Lakshminarayanan Sethumadhavan, Nandan Prabhu & Rashmi Yogesh Pai (2024) Service recovery system and service recovery in retail banks: a multilevel analysis, Cogent Business & Management, 11:1, 2349260, DOI: [10.1080/23311975.2024.2349260](https://doi.org/10.1080/23311975.2024.2349260)

To link to this article: <https://doi.org/10.1080/23311975.2024.2349260>



© 2024 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group



Published online: 03 Jun 2024.



Submit your article to this journal [↗](#)



Article views: 1611



View related articles [↗](#)



View Crossmark data [↗](#)



Citing articles: 2 View citing articles [↗](#)

Service recovery system and service recovery in retail banks: a multilevel analysis

Abhishek S. Rao^a , Yogesh Pai^b , Pallavi R Kamath^c, Lakshminarayanan Sethumadhavan^a , Nandan Prabhu^d  and Rashmi Yogesh Pai^a 

^aDepartment of Commerce, Manipal Academy of Higher Education (MAHE), Manipal, India; ^bDepartment of Humanities and Management, Manipal Institute of Technology (MIT), Manipal Academy of Higher Education (MAHE), Manipal, India; ^cManipal Institute of Management, Manipal Academy of Higher Education (MAHE), Manipal, India; ^dT A Pai Management Institute (TAPMI), Manipal Academy of Higher Education (MAHE), Manipal, India

ABSTRACT

Previous research on customer loyalty primarily viewed it within the framework of constructs at the individual level of analysis. Consequently, prior research has ignored service recovery performance and customer loyalty nested within the branch-level studies of retail banks. However, this multilevel analysis examined how the service recovery system influences customer-level outcomes. Multilevel analysis determined the relationship between the Level 2 and Level 1 constructs. A sample of 1514 responses was drawn from Indian branch heads, frontline employees, and customers of retail banks. This study used a multilevel approach to understand the macro- and micro-level dynamics of service recovery in retail banking. These findings emphasize the importance of effective service recovery systems, standardized definitions, and standardized measurements. This approach allows for a comprehensive examination of the impact of the service recovery system on service recovery performance, recovery satisfaction, and customer service loyalty by considering the nested structure of the data and the influence of higher-level variables on lower-level variables. This study calls for retail banks to invest in well-managed service recovery, recognize and reward employees for exceptional performance, and continuously monitor customer complaints to identify areas for improvement.

ARTICLE HISTORY

Received 24 November 2023
Revised 4 April 2024
Accepted 24 April 2024

KEYWORDS

Service recovery system; service recovery performance; recovery satisfaction; customer loyalty; service recovery; multilevel analysis

REVIEWING EDITOR

Len Tiu Wright, De Montfort University Faculty of Business and Law, United Kingdom of Great Britain and Northern Ireland

SUBJECTS

Banking; Business & Planning; Environment & Business; Customer Relationship Management (CRM); Asian Business

Introduction

Existing literature on service recovery notes that keeping the existing customers who show dissatisfaction and the possibility of overcoming the mistakes of service delivery are the benefits of service recovery (Cheng et al., 2019). The service recovery process aims to return customers to the state before service failure (Huang et al., 2020). Service recovery is an organizational response to service failure (Muralidharan et al., 2021). However, a word of caution may not have been outside this context. Customers would be more concerned with outcome failures, viz., non-availability of service, than process failure and the absence of attention while providing service (Ozuem et al., 2021; Rao et al., 2023). In addition, customer dissatisfaction overrides service recovery strategies such as apologies and compensation. The idea that customer dissatisfaction can supersede service recovery methods, like empirical findings and examples in the literature, corroborates the importance of apologies and compensation. For example, Ozuem et al. (2021) investigated customers' reactions to online service failures and recovery strategies amidst the Covid-19 pandemic. This study shows how customer dissatisfaction can outweigh conventional service

CONTACT Yogesh Pai P  yogesh.pai@manipal.edu  Department of Humanities and Management, Manipal Institute of Technology (MIT), Manipal Academy of Higher Education (MAHE), Manipal, India

© 2024 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group

This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. The terms on which this article has been published allow the posting of the Accepted Manuscript in a repository by the author(s) or with their consent.

recovery strategies, particularly in online service settings. Recent research by Muralidharan et al. (2021) delves into how companies handle feedback on shortcomings and how cultural aspects impact views on fairness and customer happiness. The study thus highlights the importance of grasping how customers respond to service lapses and recovery actions along with how discontent can affect the success of service recovery plans.

In this connection, Albrecht et al. (2019) study investigates the impact of compensation size on recovery satisfaction after group service failures, shedding light on the intricate relationship between service recovery strategies and customer satisfaction. These findings demonstrate the need for a comprehensive approach to service recovery that considers the limitations of traditional strategies in addressing customer dissatisfaction.

Against this background, frontline employees in retail banks must ensure customer satisfaction and justice to restore dissatisfied customers to their pre-service failure state. Frontline employees' dyadic roles with customers Homburg et al. (2010) and social exchange processes determine customer evaluations of employee and company performance (Bharadwaja et al., 2018) and the increase in repeat visits and repurchase intentions (Rao et al., 2023). Scholars define customer loyalty as the 'customer's behaviour to repurchase because they like a particular brand or service' (Tabrani et al., 2018, p. 9). This study investigates the underlying mechanisms by which the service recovery system influences customer service loyalty. Grégoire and Mattila (2021) critically assessed the service failure and recovery research. In addition, a more holistic approach to service recovery research is necessary to advance the field and ensure its relevance and impact. It emphasizes the importance of expanding the examination of static 'customer-firm' dyads, studying new contexts and theories that challenge the assumption of recovery, collecting better data, using more robust analytics, and building on synthesized knowledge bases. The ultimate goal is to reclaim the field's rightful place as an essential subfield of service science by addressing critical problems and recommending future research on service recovery systems that affect customer responses in retail banks. This study addressed these unresolved research issues.

The study's theoretical framework is rooted in multilevel analysis, which is informed by environment-fit and systems theories. The study conceptualizes service recovery system, service recovery performance, recovery satisfaction, and service loyalty within a multilevel framework, acknowledging the hierarchical nature of these constructs within the retail banking context. In this research, we have considered Service Quality and Service Performance, which will underline the significance of service quality and the protagonist of a well-designed service recovery system to bridge the connection between anticipated and perceived service quality. Further, this study also emphasizes the earlier research, which analyzed the impact of institution-level and single-level factors on recovery satisfaction and customer loyalty. It is essential to recognize the requirement of cross-level interactions and the influence of the various factors at multiple levels to gain a holistic knowledge of service recovery on retail banks. Incorporating these theoretical perspectives will build the study to gain nuanced knowledge of the multilevel changing aspects of service recovery, recovery satisfaction, and service loyalty. In contrast Homburg et al. (2010) study only emphasis on the complaint evaluation as the organizational level but not the organization service recovery system as a comprehensive model. These theoretical foundations enlighten the conceptualization of service recovery, recovery satisfaction, and service loyalty within a multilevel framework, providing an inclusive understanding of multilevel relationships between these variables in the context of retail banks. It is necessary to examine customer service loyalty by conducting a multilevel analysis for several reasons. Due to several potential biases and limitations, a single-level analysis may be inadequate for understanding complex social phenomena such as service recovery in retail banks. When analyzing data closely, the single-level focus may not account for how the data is organized, such as grouping variables under more significant categories, such as individual customers, within specific bank branches. Single-level analysis can violate the assumption of independence of errors, potentially biasing results. It may also overlook the influence of higher-level variables on lower-level variables or moderating effects, essential for understanding service recovery in retail banks. Furthermore, it may not capture cross-level interactions among variables, limiting the understanding of the impact of different levels of analysis on the endogenous variable. This may lead to misspecification, spurious relationships, and misinterpreting variable impacts at different levels.

In contrast, a multilevel approach addresses these issues by considering the hierarchical structure of the data and accounting for the interdependence of observations within higher-level units. It allows for examining cross-level interactions and the influence of higher-level variables on lower-level variables, providing a more comprehensive understanding of the complex relationships within the service recovery process. Additionally, the multilevel approach helps disperse the outcome variance within and between group components, providing insights into the degree of interdependence within each level of analysis. Therefore, the multilevel approach offers a more nuanced and comprehensive understanding of service recovery in retail banks compared to a single-level analysis. Recovery satisfaction, service recovery performance, and service loyalty are nested within their respective branches. Therefore, running a single-level analysis among these constructs will likely violate the assumption of error independence, which calls for multilevel analysis. By implication, it is methodologically incumbent to conduct a multilevel analysis. Hence, in this study, we propose a system for handling customer service issues at the branch level, incorporating customer satisfaction after issue resolution, the effectiveness of resolving service problems and customer loyalty towards the service.

The distinctive impact of this study in connection to the literature lies in its analysis of hierarchical level analysis to recognize the problematic changing aspects of service recovery in retail banks. This method arranges for new perceptions of the relationship between macro and micro-level variables, contributing to a more all-inclusive theoretical framework for service recovery. Moreover, this study addresses the impact of the service recovery system on customer-level outcomes, addressing the limitations of previous research that mainly applied individual-level analysis to determine service management occurrences.

The study's focus on the impact of the service recovery system on customer-level outcomes in the retail banking context contributes to the literature by addressing the limitations of prior research, which predominantly applied single-level analysis to understand service management phenomena. Overall, the research brings new knowledge to the field by providing a deeper understanding of the factors influencing service recovery performance, recovery satisfaction, and customer service loyalty in retail banks, thereby advancing the service recovery and customer loyalty literature in retail banking.

Literature review and hypotheses development

In this research, we draw from the environment fit theory and the systems theory to articulate the phenomenon of service recovery system and service recovery performance in retail banks. This highlights the connections between levels within an organization. Environment-fit and systems theories provide a robust theoretical foundation for understanding social phenomena at multiple levels. The environment-fit theory emphasizes that individuals are part of the societal actions, in which their behaviour relates to the hierarchical setting with the organizational context. This theory indicates the importance of matching individual behaviour with the organizational setting in which it relates. This theory indicates that the appropriateness between the individual and the environment influences their behaviour and outcome. This theory appropriately indicates the connection between the single-level constructs, such as service recovery performance, with the higher-order service recovery system, which provides clear evidence of the theoretical basis for this study.

On the other hand, systems theory seeks to explain the developed hypothesis around characteristics within complex systems that seemingly could not arise in any single system. This research gives a theoretical framework for synthesizing the effect of a service recovery system as a higher order construct impacts single level construct such as service recovery performance, recovery satisfaction and service loyalty. This indicates the interdependence and connections between various levels of analysis within the organizational system. Accordingly, this research endeavour bridges this methodological gap in the research on service recovery performance by conceptualizing and testing a multilevel model in which the effect of the macro-level construct of the service recovery system is tested on employee-level constructs of employee service recovery performance, recovery satisfaction and service loyalty. Therefore, this requires a multilevel design to address the building relationships among constructs, which exist at different levels of analysis. This avoids the probability of postulating the confounding effects of either organization-level variables on group-level or individual-level variables or vice versa.

Previous studies in banking have mainly concentrated on loyalty models from the customer's viewpoint, focusing on judgments and relational aspects. Existing studies have investigated evaluative judgments through variables such as service recovery satisfaction (Albrecht et al., 2019), distributive, interpersonal, and procedural justice (Iii & Marchand, 2018), service recovery, and perceived value (El-Adly, 2019). In contrast, studies exploring the latter class of antecedents have emphasized trust among employees and companies (Liu et al., 2020). An observation of the use of predictors in hitherto explored loyalty models shows that prior research has paid little attention to service recovery from the perspective of frontline employees within a multilevel framework (Lu et al., 2020; Mjhed Hammami et al., 2021). This study bridges this gap in current research on service recovery in retail banks.

Individual level approach

Research on service performance has been extensively examined at the individual level (Frei & Mcdaniel, 1998), which accounts for employee differences. Most of the studies focus on the behaviours and characteristics of frontline employees in service delivery. The literature explores how employee empathy, communication skills and problem-solving abilities influence service recovery outcomes (Van Vaerenbergh et al., 2019). Furthermore, studies have shown that proactive service recovery efforts, such as providing timely and personalized responses to customer complaints, have become critical in enhancing customer satisfaction and loyalty (Khamitov et al., 2020). Additionally, extensive training and empowerment of frontline employees have been linked to improved service delivery and customer outcomes (Afsar & Asad Shahjehan, 2018).

Unit level approach

Unit-level factors, such as 'climate' as a construct, are considered organization-level factors that influence service performance (Johnson, 1996). These unit-level factors focus on the broader organizational context of service delivery. Factors such as organizational culture, leadership style and reward system have been found to impact employee behaviours and customer outcomes (Kamath et al., 2020). A service recovery system is a structured procedure organizations implement to address service failures. It is a critical unit-level factor influencing service recovery performance (Leticia Santos-Vijande et al., 2013). This system will strengthen the organizational environment by promoting rewards, recognition, empowerment, and extensive training for frontline employees (Kamath et al., 2020).

The importance of a multilevel approach

Focusing exclusively on either individual- or unit-level factors may result in overlooking situational factors (Kozlowski & Klein, 2000) or failing to account for individual differences (Hui Liao & Chuang, 2004). Scholars argue that a multilevel approach is necessary to comprehend service management phenomena fully (Wong, 2016). This approach recognizes that a given social phenomenon is embedded at multiple levels of analysis (Kozlowski & Klein, 2000). For example, the service recovery system, a macro-level construct, affects employee-level variables such as service recovery performance (Rao et al., 2023). Therefore, it is crucial to integrate both micro- and macro-perspectives in service recovery research to develop a comprehensive understanding of the phenomenon (Molloy et al., 2011).

Theoretical foundation

The environment-fit theory posits that individuals are essentially social actors, and their behaviour is nested within multiple levels of hierarchy in a social or organizational setting. This theory emphasizes the importance of aligning individual behaviour with the environmental context in which it occurs. It suggests that the fit between an individual and their environment influences their behaviour and outcomes. In the context of service recovery in retail banks, environment-fit theory provides a theoretical basis for

understanding how individual-level variables, such as employee service recovery performance, are influenced by higher-level variables, such as the service recovery system implemented at the organizational level.

Systems theory emphasizes the interconnectedness and interdependence of various elements within a system. It views organizations as complex systems comprising interconnected components that influence each other. In the context of service recovery in retail banks, systems theory provides a theoretical framework for understanding how the service recovery system, as a macro-level construct, influences individual-level constructs such as employee service recovery performance and customer justice perceptions. It highlights the interdependence and interactions between different levels of analysis within the organizational system. Therefore, a multilevel design is required to build relationships among constructs at different analysis levels (Chiang et al., 2020). This avoids the probability of postulating the confounding effects of organization-level variables on group- or individual-level variables or vice versa. Accordingly, this proposed research endeavour seeks to bridge this methodological gap in the research discourse on service recovery performance by conceptualizing and testing a multilevel model.

Against this background, we posit that a service recovery system can predict service loyalty in retail banking. In this connection, Lee and Hur (2019) established that various complaint-management procedures positively affect customer loyalty in hospitality (Morgeson et al., 2020). We believe that including frontline employees' service recovery performance in a service loyalty model will probably provide a new perspective on the formation of service loyalty in service recovery. This study also posits that service recovery performance results from a service recovery system instituted by retail banks. Additionally, we propose recovery satisfaction among customers in retail banks as an outcome of an organizationally instituted service recovery system at the branch level. Scholars define post-recovery satisfaction as 'the degree to which a customer is satisfied with a service firm's transaction-specific service recovery effort following a service failure' (Kamath et al., 2020, p.7). Thus, in this study, we examined the following conceptual framework (Figure 1).

Service recovery system

A service recovery system is defined as 'the ability of firms to anticipate and prevent failures, react efficiently to recovery needs, maximize the quality of the long-term client relationship, and enhance the firm's organizational learning processes to improve its future provision of services (Leticia Santos-Vijande et al., 2013, p. 935). The service recovery system strengthens the atmosphere of rewards and recognition, greater empowerment, and extensive training for frontline employees (Kamath et al., 2020). The service recovery system is a unit-level construct. This implies that the unit-level factors devoted to executing the service recovery process are conceptualized at the organizational level and operationalized at the unit level. Therefore, this is a Level 2 construct. Prior research has shown that a top-down process initiates the interaction of the service recovery construct, which is the Level 2 construct, with job resources and demands, which are Level 1 constructs.

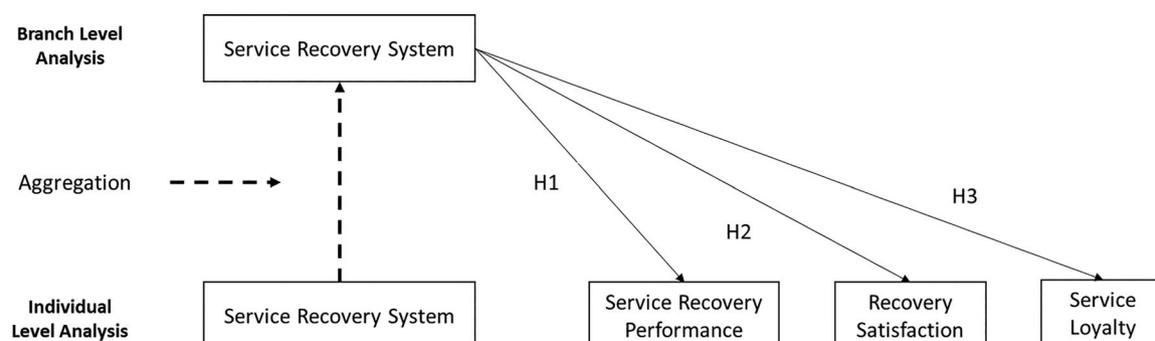


Figure 1. Conceptual Framework.

Service recovery performance

Service recovery performance captures ‘the behaviours in which customer service employees who directly handle customer complaints engage to recover customer satisfaction and loyalty after service failures’ (Liao, 2007; p. 476). Making an apology, problem-solving, demonstrating courteous behaviour, providing an explanation, and prompt handling of complaints are the five dimensions of this construct. Service recovery performance (SRP) involves the steps taken by customer service representatives to regain customer satisfaction and loyalty after a service mishap, as Liao (2007) explained. This includes how a bank handles and resolves customer complaints and service interruptions. The effectiveness of SRP can be evaluated by looking at aspects like customer satisfaction, loyalty, and retention rates, as well as minimizing the effects of service failures on the overall customer experience. The upcoming section offers backing for understanding the connections among these elements.

Banks prioritize building lasting relationships with customers to succeed in relationship marketing. Handling and resolving service issues promptly is critical to achieving this goal as it helps build customer trust and loyalty. An effective service recovery system plays a role in nurturing the bond between a bank and its clientele. According to the service recovery paradox, customers who face resolved service mishaps tend to become more loyal and satisfied than those who never encounter problems. This highlights the importance of having a system designed to address issues and turn customers into loyal supporters. The theory of learning emphasizes that banks can learn from their errors through a service recovery system offering insights into the causes of service failures. Banks can use this feedback to prevent failures in process enhancements and enhance their long-term service recovery performance. A well-designed service recovery system positively affects service recovery performance (Liao, 2007). Service recovery systems bridge the gap between customer expectations and actual service delivery by promptly addressing service failures and resolving customer complaints (Leticia Santos-Vijande et al., 2013). This alignment increases the effectiveness of service recovery efforts and contributes to customer satisfaction and loyalty (Kamath et al., 2020). Therefore, we hypothesize as follows:

H1: The service recovery system is positively related to the service recovery performance.

Recovery satisfaction

Recovery satisfaction is ‘the degree to which a customer is satisfied with a service firm’s transaction-specific service recovery effort following a service failure’ (Boshoff, 1999, p. 237). Customer satisfaction is paramount in the highly competitive and customer-focused banking industry, directly impacting a bank’s long-term success. However, service failures or complications such as transaction errors, processing delays, or misunderstandings may arise. How banks address these issues plays a significant role in determining customer satisfaction. This is commonly referred to as a ‘service recovery system.’ A bank’s service recovery system encompasses methodologies and strategies to rectify and address service failures or customer grievances effectively. This includes actions taken by the bank to resolve the issue, establish communication with the customer, and provide compensation for any inconvenience or dissatisfaction caused by initial service failure. A well-executed service recovery can help restore customer confidence, trust, and overall satisfaction with the bank. Research suggests that a carefully designed and effectively implemented service recovery system positively influences bank recovery satisfaction. Several factors supported this hypothesis. A prompt response to service failures demonstrates a bank’s commitment to address customer concerns, leading to increased customer satisfaction. In this context, service quality focuses on the gap between customers’ expectations and perceptions of service quality, emphasizing the importance of meeting or exceeding customer expectations to achieve service excellence. On the other hand, service performance shifts the focus from customer expectations to customer perceptions of service performance, suggesting that customers evaluate service quality based on their experiences rather than preconceived expectations.

These models are relevant as they provide a theoretical basis for understanding the impact of service quality on customer satisfaction and loyalty in the banking sector. The discrepancy between perceived

and anticipated service quality, as highlighted by the service quality, underscores the importance of a well-designed service recovery system in bridging this gap and enhancing service quality. This aligns with the study's focus on the correlation between the service recovery system and service recovery performance, recovery satisfaction, and loyalty in retail banks.

The chosen service quality and performance are most appropriate for potential alternative theories or models due to their widespread application in service quality research. These have been extensively validated and utilized in the service industry, including the banking sector, making them well-established and relevant to the study's context. Alternative theories may lack the empirical support and applicability that the service quality and service performance offer, making them less suitable for the study's theoretical framework.

An effective service recovery system positively influences recovery satisfaction by promptly addressing service failures and implementing well-executed recovery (Afsar & Asad Shahjehan, 2018). The system facilitates empathetic communication with customers and provides appropriate solutions, increasing satisfaction with the recovery process (Boshoff, 1999). Furthermore, the interdependence between banks and customers requires practical service recovery efforts to maintain positive outcomes for both parties (Paul et al., 2012). Therefore, we hypothesize as follows:

H2: The service recovery system is positively related to satisfaction with recovery.

Service loyalty

Service loyalty is defined as 'the degree to which a customer exhibits repeat purchasing behaviour from the service provider, possesses a positive attitudinal disposition toward the provider, and considers using only this provider when a need for this service arises' (Gremler and Brown, 1996, p. 173). According to Khamitov et al. (2020) and Van Vaerenbergh et al. (2019), proactive service recovery actions and employee empathy shape customer satisfaction and loyalty. In this connection, Khamitov et al. (2020) emphasized the significance of timely and personalized responses in proactive service recovery strategies. Van Vaerenbergh et al. (2019) highlighted the positive impact of employee empathy on customer satisfaction and loyalty, emphasizing the importance of training and empowerment. Rebuilding trust is the primary reason for the absence of service loyalty among customers in banks, as service failure can erode a customer's confidence in the bank. By skillfully executing a service recovery framework, a bank can demonstrate its unwavering commitment to rectifying the issue and accept responsibility for mistakes. This show of accountability helps restore trust that may have been lost because of initial service failure.

Furthermore, it enhances a bank's reputation for customer-centricity, as customers value banks that prioritize their needs and concerns. Effective service recovery demonstrates that the bank values its customers and is willing to go the extra mile to resolve issues and ensure customer satisfaction. In retail banking, a well-designed service recovery system incorporating proactive measures and promoting employee empathy is positively associated with service loyalty and overall recovery outcomes. By integrating these insights, we propose the following hypothesis:

H3: Service recovery systems are positively associated with service loyalty.

Method

Research design

We collected information on the service recovery system from branch managers. We gathered data from 134 branches of seven public- and private-sector banks. Branch heads were the reference points for collecting information on the service recovery system. We identified customers for our survey by sourcing data from complaint registers maintained in these branches. We collected data on customer recovery, satisfaction, and service loyalty. In addition, we selected customers for the final data collection by adopting a systematic random sampling method. Similarly, we collected data on service recovery performance from frontline employees in these branches.

Sampling design

Although we collected data for this study using a cross-sectional design, we adopted a multi-source method for our data collection. While we collected data on the service recovery system adopted by seven retail banks, we sourced the data from branch managers. The data was collected between November 2018 to June 2019. To maximize the response rate and assess the status of survey administration, we contacted all designated employees once a week. When the questionnaires were filled in, we collected back the questionnaires from the designated employees. The selection of 134 branches from the seven banks was based on several criteria to ensure diversity, representation, and practical considerations. Geographical diversity was prioritized to capture differences in customer demographics and economic conditions in different regions. Branches of different sizes and reputations within the industry were included to examine service recovery practices in different organizational contexts. The diversity of customer bases ensured representation across different segments, whereas the consideration of service volume and complexity accounted for variations in operational challenges. The selection process also considered historical branch performance, management support for service recovery efforts, and logistical feasibility. Overall, the criteria aimed to achieve a balanced and representative sample that reflects the diversity of the service recovery contexts within the banking industry, thereby enhancing the generalizability of the study's findings.

The data for this study was collected through pretested and validated questionnaires from prior research studies, and the data was tabulated using MS – Excel. According to the regulations and requirements, the nature of the study was aligned with institutional research ethics policy. We have adopted the policy of the constituent institutes bearing registration number 'ECR/146/Inst/KA/2013/RR' and DHR registration number 'EC/NEW/INST/2019/374, which is the official recognition and compliance document for the institutional ethics committee (IEC). We aimed to maintain transparency while respecting ethical boundaries. As researchers, we uphold journals' policy and acceptable practices that meet the open-access data and ethical policy while maintaining the integrity of the research.

During the data collection, informed consent was obtained from all the participants. Before the survey, the participants were given detailed information about the study's objectives, procedure, potential risks, and benefits. They were given the independence to withdraw from the survey without penalty and were assured of the confidentiality of their data collected initially (Table 1).

Level of analysis

In this study, the service recovery system was a level 2 construct. Service recovery performance, recovery satisfaction, and service loyalty are Level 1 constructs. While the service recovery system is a predictor variable at Level 2, all Level 1 constructs are outcome variables.

As a macro-level construct, the service recovery system is positioned as a Level 2 predictor variable, influencing the outcome variables at Level 1, including service recovery performance, recovery satisfaction, and service loyalty. This hierarchical arrangement reflects the nested structure of the data, where the service recovery system operates at a higher organizational level, impacting the lower-level constructs related to individual customer experiences and perceptions.

The decision to position the service recovery system at Level 2 aligns with the theoretical underpinnings of the study, which emphasize the impact of higher-level variables on lower-level variables. Additionally, the multilevel analysis aims to capture the interdependence and interactions between the service recovery system and customer-level outcomes, necessitating the differentiation of constructs at different levels of analysis.

Furthermore, the choice of Level 1 for service recovery performance, recovery satisfaction, and service loyalty reflects their status as outcome variables influenced by the service recovery system. This hierarchical arrangement allows for examining how the service recovery system at the organizational level influences customer-level outcomes, providing a comprehensive understanding of the multilevel relationships within the retail banking context.

We designed a model to disperse the outcome variance encompassing the within- and between-group components. By employing this null model, we calculated three effects: baseline, variability in intercepts among branches, and individual scores for service loyalty, recovery satisfaction, and service recovery

Table 1. Data definition of this study's constructs at individual and branch-levels.

Variable	Level	Description	Values	Measurement
Branch code	Branch	Branch identifier (134 branches)	Integer	Ordinal
Rid	Individual	This is a within-group level identifier, which represents a sequential identifier for each customer within 134 branches	1- Integer	Ordinal
IdC	Individual	Customer identifier	Integer	Ordinal
IdE	Individual	Employee identifier	Integer	Ordinal
SRS	Branch	Predictor variable (grand-mean centered) that captures service recovery system at branches	1–5	Scale
SRP	Branch	The variable (grand-mean centered) that captures service recovery performance The variable (grand-mean centered) that captures recovery satisfaction among customers	1–5	Scale
RS	Individual	The outcome variable (grand-mean centered) that captures the service loyalty among customers	1–5	Scale
SL	Individual		1–5	Scale

SRS: Service Recovery system; SRP: Service Recovery Performance; RS: Recovery Satisfaction; SL: Service loyalty.

performance within the branches. The null models also provided insight into the degree of interdependence within each Level 2 unit, and intraclass correlation (ICC) was used to quantify this interdependence. An ICC value higher than the commonly used threshold of 0.05 suggests the need for multilevel analysis, as it indicates increased between-group variability.

We built a level 1 random intercept model to understand the association between (i) service recovery system and service loyalty, (ii) service recovery system and service recovery performance, and (iii) service recovery system and recovery satisfaction. These models show that the branch-level intercept exhibits intercept variation. The branch-level intercept is the grand mean in addition to a random parameter that captures individual branch means from the grand mean. Furthermore, the model captures the within-branch slope, which varies randomly across branches in the sample. The number of branches in the sample helps determine the significance of the parameters.

Suppose a predictor variable is positively related to its corresponding outcome variable. In this case, we investigate whether the slope varies across branches, facilitating the identification of similar branches and leading to the outcomes for branches with varying backgrounds. If the slopes varied randomly across branches, we examined whether there was an association between specific features of the branch environment and the corresponding strength of the slope relationship. Branch composition, type, and environment may interact with the size of the within-branch slope. Therefore, we intended to find settings in which it is possible to reduce the effects of the predictor variables on their corresponding outcomes. Consequently, we investigated whether the slopes varied randomly across branches when constructing the random-slope model.

Measures

Service recovery system

We adopted the scale developed by Smith et al. (2009). The service recovery system's sample items include 'Our employees are expected to fix any problems they encounter when delivering the service' and 'Employees are recognized for outstanding recovery efforts.' A 7-point Likert-type response format was used, with strongly disagree (1) and strongly agree (7) as the anchors.

Service recovery performance

We adopted the scale Liao (2007) developed to measure this construct. A sample item is 'The bank adapted its complaint handling procedures to satisfy my needs.' The response options varied from strongly disagree (1) and strongly agree (7).

Recovery satisfaction

This construct measurement is derived from Boshoff (2005) and consists of 10 items. This scale is widely used to assess satisfaction with service recovery for specific transactions. Its reliability and relevance are

reinforced by its extensive application in previous research and its capacity to capture customer satisfaction following recovery efforts.

Service loyalty

This scale for measuring was adapted from Jones and Taylor (2007). This scale provides a comprehensive assessment of the conceptual domain of service loyalty. The validity and appropriateness of this scale are supported by its extensive use in literature and its ability to capture the multidimensional nature of service loyalty.

Data analysis

We used PROCESS in SPSS 26.0. We performed a multilevel analysis before performing the multilevel analysis. We ran the multilevel analysis because of the possibility of heterogeneity of observations concerning service recovery performance within and between branches because customers nest themselves within banks. Consequently, the assumption of independence of errors is likely to be violated. To verify this, we developed a non-predictor model. Therefore, we partitioned the outcome variance into within- and between-group components and used an intraclass correlation coefficient to measure the between-group variance against the total variance. An increase in the intraclass correlation coefficient also revealed an increase in between-group variability. Scholars have noted that the cut-off value of the intraclass correlation coefficient is 0.05 (Raykov and Marcoulides, 2015). An intraclass correlation coefficient value higher than 0.05 requires multilevel analysis. After building the null model, we determined the intraclass correlation coefficient as 0.015. Thus, the results show no need for a multilevel analysis.

Data cleaning

We began data screening by examining the possible straight-lining patterns and missing values. We did not find any missing values or straight-lining patterns in this dataset. In addition, we tested for the presence of multivariate outliers in the dataset. We found that there were no multivariate outliers. The possibility of common method bias was low because we collected data on the study's constructs from different sources. For instance, we collected data on service recovery systems from the bank branch managers. In addition, we collected data on recovery satisfaction and service loyalty from bank-branch customers.

Additionally, we collected data on service recovery performance from frontline employees. We conducted two tests to investigate whether the possible presence of common method bias is potentially problematic for meaningful interpretation of the study's results. We conducted a full collinearity test and Herman's single-factor test to assess the effect of the common method bias. The inner VIFs were less than the threshold value of 3.3 (Kock, 2015). Moreover, no single factor accounted for more than 50% of the variance. Thus, we conclude that common method bias was not an issue in this study.

Reliability

The constructs used in this study have demonstrated acceptable reliability. For instance, composite reliability values for the service recovery system, service recovery performance, recovery satisfaction, and service loyalty were 0.80, 0.72, 0.68, and 0.75, respectively.

Convergent validity

The AVE values for RS, SL, SRP, and SRS range from 0.541 to 0.738, indicating that these constructs effectively capture substantial variance in the observed variables. This suggests that the measures are reliable in representing the underlying constructs and distinct from each other per the Fornell-Larker criterion for discriminant validity assessment (Table 2).

Descriptive statistics

We checked these constructs' means, standard deviations, and correlation matrices. Service recovery system was associated with service recovery performance ($r=0.174^{***}$), recovery satisfaction ($r=0.255$), and service loyalty ($r=0.406$). Table 3 presents the descriptive statistics and correlations between the constructs.

Results

Effect of service recovery system on service recovery performance (H1)

Table 4 presents the results for the hypothesized relationships.

Null model: a statistical test of heterogeneity across branches

We conducted a null model analysis to examine the variability in service recovery performance across different branches. The results of Model 1, which had an ICC (2) value of 0.064, indicated moderate heterogeneity across branches. This finding is consistent with the need for multilevel analysis, as advocated by Heck et al. (2014). The statistically significant variation in intercepts across branches (Wald $Z=2.787$, $p < .001$) suggests differences in service recovery performance across branches. Furthermore, the residual estimate indicates that individual differences in service recovery performance within branches contribute to overall variability (Wald $Z=21.418$, $p < .001$).

Statistical significance of fixed-effects coefficients

Model 2 investigates the purported association between the service recovery system and service recovery performance by constructing a random-intercept model. The results demonstrate that the intercept and service recovery system's fixed effects coefficients are statistically significant. Additionally, the fixed effects coefficients of Model 3 were statistically significant. The fixed effects coefficients of the random intercept and random slope models were statistically significant.

Statistical significance of within- and between-branch variability in the random intercept model

The residual estimate of Model 2 was lower than that of Model 1, indicating that Model 2 accounted for a minor variance in service recovery performance at the branch level compared to Model 1. The service recovery system-service recovery performance relationship results suggest that the service recovery

Table 2. Fornell Larker criterion for discriminant validity assessment.

Variables	CR	AVE	RS	SL	SRP	SRS
RS	0.682	0.738	0.859			
SL	0.757	0.635	0.709	0.797		
SRP	0.726	0.655	0.522	0.646	0.809	
SRS	0.802	0.541	0.554	0.673	0.568	0.736

SRS: Service Recovery system; SRP: Service Recovery Performance; RS: Recovery Satisfaction; SL: Service loyalty.

Table 3. Descriptive statistics and correlations.

	Service Recovery System	Service Recovery Performance	Recovery Satisfaction	Service Loyalty
Service Recovery System	—			
Service Recovery Performance	0.174*	—		
Recovery Satisfaction	0.255**	0.106	—	
Service Loyalty	0.406***	0.265**	0.435***	—
Mean	3.82	4.16	4.15	4.1
S.D	0.645	0.477	0.437	0.37

* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 4. Taxonomy of multilevel models that predict SRP resulting from SRS.

Predictor	Null (Model 1)	Model 2	Model 3
Fixed Effects			
Intercept	4.19***	4.19***	4.19***
SRS	—	0.49***	0.503***
Variance Components			
Residual Estimate	0.064***	0.044***	0.039***
Residual estimate significance (Wald-Z values)	21.418***	21.398***	21.032***
Intercept estimate	0.009***	0.007***	0.009***
Intercept estimate significance (Wald-Z values)	2.787***	2.744***	2.722***
SRS	—	—	0.072**
Goodness of fit			
–2LL	118.642	–232.905	–294.159
Deviance statistic	-----	114.263	61.254

N: Branches; SRS: Service Recovery System; SRP: Service Recovery Performance; –2LL = –2 Log-Likelihood ratio; ***implies $p < .01$, **implies $p < .05$ and *implies $p < .10$.

system significantly contributes to the variance in service recovery performance at the branch level (31.25%). The covariance parameters also indicated significant variability within (Wald $Z = 21.398$; $p < .001$) and between (Wald $Z = 2.744$; $p < .001$) branches. Therefore, it is possible to add predictors that explain employee service recovery.

Statistical significance of the random slope model

We investigated the presence of random variation in the slopes between the branches and observed a decrease in the residual estimates, from 0.044 in Model 2 to 0.039 in Model 3. The significant intercept variance (Wald $Z = 2.722$; $p < .001$) suggests the addition of predictors to account for between-branch variance in service recovery performance. Additionally, the significant slope variance (0.072**) indicates that it is possible to explain the variance in service recovery performance from a branch-specific perspective of bank characteristics.

Validation tests

We observed a statistically significant reduction in deviance in models 2 (114.263; Table 4) and 3 (61.254; Table 4). The fixed-effects coefficients of Models 2 and 3 were statistically significant, and the covariance parameters of the residual and intercept estimates of both models were also statistically significant. These findings suggest that the random intercept and slope models were statistically significant. Therefore, we cannot reject the hypothesis that a service recovery system is positively related to the service recovery performance. In addition, the results show that branch-specific characteristics explain the positive association between service recovery and performance. Thus, Hypothesis 1 is supported.

Effect of service recovery system on recovery satisfaction (H2)

Table 5 presents the results of the hypothesized association between the service recovery system and recovery satisfaction.

We seek to ascertain whether sufficient variability exists within individual customer experiences in different branches. We tested this using Model 1, which found that the proportion of variance explained by the model was 0.1172 or 11.72%. This suggests considerable variability in recovery satisfaction across branches, necessitating multilevel analysis (Heck et al., 2014). The results also revealed statistically significant differences across branches (Wald $Z = 2.630$, $p < .001$; see Table 5). The covariance parameters indicate that the residual estimate is statistically significant (Wald $Z = 21.387$; $p < .001$; see Table 5), indicating variability in branch recovery satisfaction. These findings provide statistical evidence to support the need for a multilevel analysis.

Statistical significance of fixed-effects coefficients

We evaluated the influence of the service recovery system on customer satisfaction with the recovery process. We find that the fixed effects in this model are statistically significant. However, in Model 3, a random-slope model, the impact of the service recovery system was not statistically significant. Furthermore, the intercept coefficient was found to be important in this model.

Statistical significance of within-team and between-team variabilities in the random intercept model

The multilevel relationship between the service recovery system and recovery satisfaction, as illustrated in Models 1 and 2, suggests that the branch-level service recovery system accounts for only a tiny percentage of the variability in customer service loyalty. Specifically, the branch-level system accounted for 0.39% of the variability in service loyalty, with significant within-branch variability (Wald $Z=21.390$, $p < .001$) and between-branch variability (Wald $Z=2.744$, $p < .001$). These observations imply that additional variables can be incorporated into the model to explain recovery satisfaction better.

Statistical significance of the random slope model

In Model 3, we explored the possibility of random variance between branches. The results show a decrease in variance at Level 1, from 0.255 in Model 2 to 0.249 in Model 3. Furthermore, the intercept variance decreases from 0.034 to 0.033. This decline in the residual estimate is statistically significant (Wald $Z=21.208$, $p < .001$; See Table 5), indicating that adding more predictors to the model is a viable option. Additionally, the significant reduction in the intercept estimate (Wald $Z=2.583$, $p < .05$; See Table 5) suggests that the model can explain the variability in recovery satisfaction across branches. However, the slope variance (0.065) was not statistically significant, indicating no variability in the slopes across branches.

Validation tests

We observed a decrease in the -2LL deviance statistic in Model 2, suggesting that the service recovery system has a statistically significant effect on recovery satisfaction ($p=4.257$; See Table 5). The fixed-effects coefficients of the intercept and service recovery system in Model 2 are also statistically significant. Furthermore, the coefficients of the residual and intercept estimates of the covariance parameters were statistically significant, indicating that the hypothesis that the service recovery system is related to recovery satisfaction is supported (H2). However, the fixed effects coefficients of the service recovery and service recovery systems in Model 3 were not statistically significant. Therefore, we cannot conclude the probability of adding additional predictors to explain recovery satisfaction from branch-specific characteristics.

Table 5. Taxonomy of multilevel models that predict RS resulting from SRS.

Predictor	Null (Model 1)	Model 2	Model 3
Fixed Effects			
Intercept	3.74***	3.74***	3.74***
SRS	—	0.120**	0.109
Variance Components			
Residual Estimate	0.256***	0.255***	0.249***
Residual estimate significance (Wald-Z values)	21.387***	21.390***	21.208***
Intercept estimate	0.034***	0.034***	0.033**
Intercept estimate significance (Wald-Z values)	2.630***	2.744***	2.583**
SRS	—	—	0.065
Goodness of fit	1430.811	1426.554	1418.767
-2LL			
Deviance statistic	-----	4.257	7.787

N: Branches; SRS: Service Recovery System; SRP: Service Recovery Performance; -2LL = -2 Log-Likelihood ratio; ***implies $p < .01$, **implies $p < .05$ and *implies $p < .10$.

Effect of service recovery system on service loyalty (H3)

Table 6 presents the multilevel analysis of the hypothesized relationship between the service recovery system and loyalty.

The ICC (2) value for the Null model or Model 1 was 0.11 or 11% ($0.302+0.034=0.336$; $0.034/0.336=0.1011$ or 10.11%). An ICC (2) value of 10.11% suggests sufficient variability across branches, making it statistically feasible to develop a multilevel model. The threshold values of ICC (2) were above 5%, which necessitated a multilevel analysis (Heck et al., 2014). Intercept variation across branches was statistically significant (Wald $Z=2.565$, $p <.05$; See Table 6). The residual estimate shows the variance resulting from the differences in customer service loyalty within their branches. This variation was statistically significant (Wald $Z=21.392$, $p <.001$; See Table 6). Therefore, we conclude that substantial variability in service loyalty across branches warrants a multilevel analysis.

Statistical significance of fixed effects coefficients

Model 2 examines the association between service recovery and loyalty. To test this hypothesis, we built a random intercept model. The test results are presented in Table 6. The fixed effects of the model parameters were statistically significant. The fixed effects of intercept and service recovery systems were statistically significant.

Statistical significance of within- and between-branch variability in the random intercept model

The results of the multilevel models on the relationship between the service recovery system and service loyalty, shown in the residual estimates of Models 1 and 2, demonstrate that the branch-level service recovery system accounts for approximately 0.66% variability in customer service loyalty ($0.302-0.300=0.002/0.302=0.66$). After adding the service recovery system, the between-branch variance in service loyalty did not decrease, implying that the within-branch service recovery system did not account for the variance in between-branch variability in service loyalty. There was no reduction in ICC even after adding the service recovery system to the model. However, there was significant within-branch variability (Wald $Z=21.393$, $p <.001$; See Table 6) and between-branch variability (Wald $Z=2.577$, $p <.05$; See Table 6), as shown by the covariance parameters, suggesting the addition of other predictors to explain the residual variability in intercepts.

Statistical significance of the random slope model

We examined whether the slopes varied randomly between the branches. This was tested using Model 3. The results reveal that defining the service recovery system–service loyalty slope as randomly varying changes the variance at Level 1 (i.e. from 0.302 to 0.299). There was no difference in the intercept

Table 6. Taxonomy of multilevel models that predict SL resulting from SRS.

Predictor	Null (Model 1)	Model 2	Model 3
Fixed Effects			
Intercept	3.75***	3.75***	3.75***
SRS	—	0.126**	0.109
Variance Components			
Residual Estimate	0.302***	0.300***	0.299***
Residual estimate significance (Wald-Z values)	21.392***	21.393***	21.234***
Intercept estimate	0.034**	0.034**	0.034**
Intercept estimate significance (Wald-Z values)	2.565**	2.577**	2.097**
SRS	—	—	0.016
Goodness of fit	1583.112	1579.149	1578.598
–2LL			
Deviance statistic	-----	3.963	0.551

N: Branches; SRS: Service Recovery System; SL: Service Loyalty; –2LL = –2 Log-Likelihood ratio; ***implies $p <.01$, **implies $p <.05$ and *implies $p <.10$.

variance (i.e. it remained 0.034). However, the intercept variance was significant (Wald $Z=2.097$, $p < .05$; Table 6), suggesting that the variability remains explained in the intercepts across bank branches by adding additional variables. Furthermore, the slope variance was insignificant; therefore, the slopes did not vary across branches. Thus, the effect of the service recovery system on service loyalty remains the same across the branches.

Validation tests

The -2LL deviance statistic was reduced in Model 2 (3.93; See Table 6). The reduction in the deviance statistic is more significant than the critical value. We also observed the statistical significance of the fixed effects coefficients of the random intercept model and the residual and intercept estimates. Therefore, we cannot reject the hypothesis that loyalty is positively associated with service recovery. Thus, H3 is supported. However, no evidence supports the possibility that the effect of a service recovery system on service loyalty varies across branches. Therefore, this study did not find an option for adding predictors to capture the impact of branch-specific characteristics on service loyalty.

Discussion

This study highlights the central role of service recovery systems in improving recovery satisfaction and fostering customer loyalty within the retail banking sector. Our findings resonate with previous research highlighting the impact of complaint management procedures on customer satisfaction, repeat patronage, and word-of-mouth recommendations (Cai & Chi, 2018). Furthermore, our research highlights a direct positive relationship between the effectiveness of a service recovery system and its performance.

Theoretical implications

Our study contributes to theoretical advances in several key areas. First, it clarifies the operational framework of service recovery and loyalty in retail banks, highlighting the need to optimize all structural components of the service recovery system. This optimization is essential for fostering lasting customer relationships, as Smith et al. (2012) highlighted.

Second, this study highlights the importance of employee performance and behaviour in shaping customer perceptions. Frontline employees play a pivotal role in fostering positive customer experiences, highlighting the importance of fostering a supportive employee-employer relationship (Chen et al., 2019).

Third, although multilevel analysis provides valuable insights, its complexity and resource-intensive nature challenge researchers. Future studies should scrutinize the hierarchical relationship depicted by multilevel analysis to ensure its alignment with the dynamics of retail banking. Despite these merits, researchers should be aware of these limitations.

Fourth, given the variability in the conceptualization of service recovery systems across retail banks, our study argues for standardized definitions or measurements to facilitate meaningful comparisons. This approach improves the consistency and clarity of the research findings.

Research implications

Future research could benefit from a comprehensive literature review or an empirical investigation to address the lack of research on the components of an effective service recovery system. Parasuraman et al. (2005), McCole et al. (2010), Johnson and Mislin (2011), and Gummesson (2008) provide valuable insights into critical components such as responsiveness, assurance, empathy, reliability, employee training, organizational culture, and holistic approaches. Synthesizing the findings from these studies would provide a nuanced understanding of the factors that contribute to the effectiveness of service recovery systems in the retail banking context, thereby enriching both theoretical understanding and practical strategies for banks seeking to improve customer service.

Our study highlights the importance of employee performance in shaping customers' perceptions of retail banking service recovery systems. However, we recognize the limitations of relying solely on self-reported data from frontline staff. To increase the robustness of future studies, it is essential to incorporate customer feedback into the evaluation process directly. By incorporating the voice of customers, researchers can provide a more comprehensive and objective assessment of service recovery performance, thus enriching our understanding of the dynamics at play. This shift towards customer-centric approaches aligns with industry trends and provides banks with actionable insights to improve overall customer satisfaction and loyalty.

Managerial implications

This study's findings have several managerial implications. First, although service failures are inevitable, retail banks should try eliminating or minimizing their occurrences. They should monitor service quality, train frontline employees to improve performance and establish well-accepted working standards. Intense competition among retail banks makes customers more demanding and unlikely to forgive their mistakes (Nadiri, 2016). Customers consciously expect retail banks to render more delightful, secure, and error-free services as these services involve their wealth. Thus, banks must implement well-executed service recovery to drive loyalty. Hence, service recovery is more vital than ever (Nadiri, 2016) as it addresses service failure to regain favourable perceptions of disgruntled customers. Retail banks must design and implement effective service recovery that blends all elements, which implies that banks must deliver well-managed service recoveries and rewards and recognize employees who render exceptional service recoveries. They must continually monitor customer complaints to identify areas of repetitive service failure and opportunities for improvement; as customers invest more in service recovery than in regular service delivery (Nadiri, 2016), banks must leverage their employees' service recovery performance to build stronger bonds.

Retail banks need to have monitoring systems in place to keep track of service quality consistently. This includes setting up ways to gather customer feedback and conducting performance assessments to pinpoint areas that need improvement and ensure uniform service standards across all branches. Investing in training programs is crucial for banks to boost the performance of their frontline staff. These programs should focus on equipping employees with the skills for service recovery, such as communication, problem-solving and conflict resolution.

Limitations and future research directions

This study has several limitations. First, it adopted a cross-sectional design. This cross-sectional research design was based on the inherent issue of a common method bias. Therefore, future studies will do well if a longitudinal research design is adopted. Second, this study did not investigate the differences between public- and private-sector banks. Therefore, there is a probability of unobserved heterogeneity in the sample data collected for this study. Therefore, future research may consider examining the potential differences in the relationship between the study's constructs across public sector and private sector banks to explore the generalizability of the study's model. Third, this study used self-reporting to capture data on frontline employees' service recovery performance. However, future research should consider customers' data on frontline employees' service recovery performance. This study emphasizes the need for retail banks to invest in effective service-recovery systems. A critical perspective involves discussing the challenges and barriers that banks may encounter when implementing such systems. These challenges include resource constraints, organizational resistance to change, and difficulty establishing uniform systems in diverse retail banking contexts. A more comprehensive analysis should explore the practical feasibility of implementing the theoretical implications. Fourth, while the study aligns with prior research, a critical perspective would involve evaluating the potential limitations of existing research in this domain. This evaluation may include a review of the methodologies employed in previous studies and any potential biases or gaps in the existing literature. A critical analysis could also explore the broader implications of incorporating service recovery into a customer relationship management framework in retail banking.

Authors contribution

Abhishek S Rao K P

Roles: Writing – Review & Editing

Yogesh Pai P

Roles: Writing – Review & Editing

Pallavi R Kamath

Roles: Revising the manuscript critically for content accuracy

Lakshminarayanan Sethumadhavan

Roles: Supervision, Validation

Nandan Prabhu K P

Roles: Analysis and Interpretation of the Data

Rashmi Yogesh Pai

Roles: Manuscript preparation

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

There is no funding for this paper.

About the authors

Abhishek S. Rao is Assistant Professor Senior Scale, Department of Commerce, Manipal Academy of Higher Education. He is pursuing his PhD at the Manipal Academy of Higher Education in Service Operations. Abhishek is a Graduate with an MBA (HR) and ten years of teaching experience. He has presented various papers at national and international conferences in India and abroad. He has been a visiting faculty member at constituent institutions of the Manipal Academy of Higher Education. He has several papers to his credit that have been published in different national and international journals under Scopus and ABDC-listed journals. His nature of thinking and habit of actively getting involved in multiple projects has led him to partner with the CII Institute of Logistics, which has resulted in beginning the course of Logistics and Supply chain at the Undergraduate and Graduate levels.

Yogesh Pai P is currently a Professor and Head, Department of Humanities and Management, Manipal Institute of Technology, Manipal Academy of Higher Education, Manipal. He has completed a Bachelor of Engineering (B.E.) and a Master of Business Administration (M.B.A.). His research interests are in service operations and pursued a doctoral (Ph.D. in Management Science) in healthcare. He was appointed as Guest Editor for special issues. He is also a review board member for various international journals of Emerald, Sage, Taylor, and Francis publishers. He has presented various papers at national and international conferences in India and abroad. He has several papers to his credit that have been published in national and international journals under Scopus and ABDC-listed journals.

Pallavi R Kamath has completed her PhD in Management from Manipal Institute of Management, Manipal Academy of Higher Education, Manipal. Her research areas include service operations management, recovery, and customer experience. She has published her research papers in top-rated referred International journals (ranked 'A' in ABDC) and presented her research at National and International conferences. She also has an MBA from the School of Management, Manipal University and a BBM from Poornaprajna College (under Mangalore University).

Lakshminarayanan Sethumadhavan has 24 years of experience in academics and research and around five years of industry experience. He is a Professor at the Department of Commerce, Manipal Academy of Higher Education, Manipal, Karnataka. His areas of research interest include work-life balance, emotional intelligence, employee engagement, and employee branding. His teaching interests are Organizational Behaviour, Human Resource Management, Training and Development, Labour Laws, Industrial Relations, Compensation Management, International Human Resource Management, Competency Management, HR Analytics and Talent Management. He has contributed several papers in reputed national and international management journals. He has also presented papers in international national-level conferences and chapters in edited volumes. He has organized several seminars and conferences in human resource management. He has been a resource person for various outreach activities.

Nandan Prabhu works as an Associate Professor at T.A. Pai Management Institute (TAPMI), Manipal Academy of Higher Education (MAHE), Manipal. His teaching interests are corporate valuation, financial statements analysis, financial accounting, and financial management. He has 40 publications, including accepted and forthcoming papers in leadership, managerial psychology, and corporate finance journals. His current research focuses on mindfulness in

the workplace, organizational politics, team effectiveness and corporate governance. He has conducted over 30 faculty development programs on writing research papers. He has participated as a panellist in the academic conferences held at several management institutes.

Rashmi Yogesh Pai has 21 years of experience in academia and research and is currently an Associate Professor at the Department of Commerce, Manipal Academy of Higher Education (MAHE) in Karnataka. Her research interests span organizational behaviour, work-life balance, emotional intelligence, employee engagement, and employer branding. Dr. Pai has made significant contributions to esteemed national and international management journals and has presented papers at various international and national conferences. Moreover, she has organized numerous seminars and international conferences focusing on human resource management, global business development, and sustainability. She has also actively participated as a resource person in various outreach initiatives.

ORCID

Abhishek S. Rao  <http://orcid.org/0000-0002-1951-2132>
 Yogesh Pai P  <http://orcid.org/0000-0002-9711-9336>
 Lakshminarayanan Sethumadhavan  <http://orcid.org/0000-0002-9248-8327>
 Nandan Prabhu  <http://orcid.org/0000-0003-3964-317X>
 Rashmi Yogesh Pai  <http://orcid.org/0000-0002-2688-6239>

Data availability statement

Data supporting the findings of this study are available from the corresponding author upon reasonable request.

References

- Afsar, B., & Asad Shahjehan, S. I. S. (2018). Frontline employees' high performance work practices, trust in supervisor, job-embeddedness and turnover intentions in hospitality industry. *The Electronic Library*, 34(1), 1–19.
- Albrecht, A. K., Schaefer, T., Walsh, G., & Beatty, S. E. (2019). The effect of compensation size on recovery satisfaction after group service failures: The role of group versus individual service recovery. *Journal of Service Research*, 22(1), 60–74. <https://doi.org/10.1177/1094670518802059>
- Bharadwaja, S., Lee, L., & Madera, J. M. (2018). Customer evaluations of service-oriented organizational citizenship behaviors: Agentic and communal differences. *International Journal of Hospitality Management*, 70, 120–129. <https://doi.org/10.1016/j.ijhm.2017.10.021>
- Boshoff, C. (1999). Recovsat: An instrument to measure satisfaction with transaction-specific service recovery. *Journal of Service Research*, 1(3), 236–249. <https://doi.org/10.1177/109467059913005>
- Boshoff, C. (2005). A re-assessment and refinement of RECOVSAT: An instrument to measure satisfaction with transaction-specific service recovery. *Managing Service Quality*, 15(5), 410–425. <https://doi.org/10.1108/09604520510617275>
- Cai, R., & Chi, C. G. Q. (2018). The impacts of complaint efforts on customer satisfaction and loyalty. *The Service Industries Journal*, 38(15–16), 1095–1115. <https://doi.org/10.1080/02642069.2018.1429415>
- Chen, K. Y., Chang, C. W., & Wang, C. H. (2019). Frontline employees' passion and emotional exhaustion: The mediating role of emotional labor strategies. *International Journal of Hospitality Management*, 76, 163–172. <https://doi.org/10.1016/j.ijhm.2018.05.006>
- 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. <https://doi.org/10.1108/IJQSS-09-2017-0081>
- Chiang, H. H., Han, T. S., & C. McConville, D. (2020). A multilevel study of brand-specific transformational leadership: Employee and customer effects. *Journal of Brand Management*, 27(3), 312–327. <https://doi.org/10.1057/s41262-019-00182-6>
- El-Adly, M. I. (2019). Modelling the relationship between hotel perceived value, customer satisfaction, and customer loyalty. *Journal of Retailing and Consumer Services*, 50, 322–332. <https://doi.org/10.1016/j.jretconser.2018.07.007>
- Frei, R. L., & Mcdaniel, M. A. (1998). Validity of customer service measures in personnel selection: A review of criterion and construct evidence, human performance, 11, 37–41. <https://doi.org/10.1207/s15327043hup1101>
- Grégoire, Y., & Mattila, A. S. (2021). Service failure and recovery at the crossroads: Recommendations to revitalize the field and its influence. *Journal of Service Research*, 24(3), 323–328. <https://doi.org/10.1177/1094670520958073>
- Gremler, D. D., & Brown, S. W. (1996). Service loyalty: Its nature, importance, and implications. *Advancing Service Quality: A Global Perspective*, 5(1), 171–181.
- Gummesson, E. (2008). Quality, service-dominant logic and many-to-many marketing. *The TQM Journal*, 20(2), 143–153. <https://doi.org/10.1108/17542730810857372>
- Heck, R. H., Thomas, S. L., & Tabata, L. N. (2014). *Multilevel and longitudinal modeling with IBM SPSS* (2nd ed.). Routledge. <https://doi.org/10.4324/9780429060274>

- Homburg, C., Fürst, A., & Koschate, N. (2010). On the importance of complaint handling design: A multi-level analysis of the impact in specific complaint situations. *Journal of the Academy of Marketing Science*, 38(3), 265–287. <https://doi.org/10.1007/s11747-009-0172-y>
- Huang, Y., Zhang, M., Gursoy, D., & Shi, S. (2020). An examination of interactive effects of employees' warmth and competence and service failure types on customer's service recovery cooperation intention. *International Journal of Contemporary Hospitality Management*, 32(7), 2429–2451. <https://doi.org/10.1108/IJCHM-01-2020-0028>
- Iii, V. Y. H., & Marchand, A. (2018). Systemic justice and burnout: A multilevel model. *Human Resource Management Journal*, 28, 92–111. <https://doi.org/10.1111/1748-8583.12166>
- Johnson, J. W. (1996). Linking employee perceptions of service climate to customer satisfaction. *Personnel Psychology*, 49(4), 831–851. <https://doi.org/10.1111/j.1744-6570.1996.tb02451.x>
- Johnson, N. D., & Mislin, A. A. (2011). Trust games: A meta-analysis. *Journal of Economic Psychology*, 32(5), 865–889.
- Jones, T., & Taylor, S. F. (2007). The conceptual domain of service loyalty: How many dimensions? *Journal of Services Marketing*, 21(1), 36–51. <https://doi.org/10.1108/08876040710726284>
- Kamath, P. R., Pai, Y. P., & Prabhu, N. K. P. (2020). Determinants of recovery satisfaction and service loyalty: The differing effects of service recovery system and service recovery performance. *Journal of Service Theory and Practice*, 30(6), 643–679. <https://doi.org/10.1108/JSTP-12-2019-0251>
- Khamitov, M., Grégoire, Y., & Suri, A. (2020). A systematic review of brand transgression, service failure recovery and product-harm crisis: Integration and guiding insights. *Journal of the Academy of Marketing Science*, 48(3), 519–542. <https://doi.org/10.1007/s11747-019-00679-1>
- Kock, N. (2015). Common method bias in PLS-SEM. *International Journal of e-Collaboration*, 11(4), 1–10. <https://doi.org/10.4018/ijec.2015100101>
- Kozlowski, S. W. J., & Klein, K. J. (2000). A multilevel approach to theory and research in organizations: Contextual, temporal, and emergent processes. In K. J. Klein & S. W. J. Kozlowski (Eds.), *Multilevel theory, research and methods in organizations: Foundations, extensions, and new directions* (pp. 3–90). Wiley. <https://doi.org/10.1177/001872679504800703>
- Lee, C., & Hur, Y. (2019). Service quality and complaint management influence fan satisfaction and team identification. *Social Behavior and Personality*, 47(2), 1–15. <https://doi.org/10.2224/sbp.7566>
- Leticia Santos-Vijande, M., María Díaz-Martín, A., Suárez-Álvarez, L., & Belén del Río-Lanza, A. (2013). An integrated service recovery system (ISRS): Influence on knowledge-intensive business services performance. *European Journal of Marketing*, 47(5/6), 934–963. <https://doi.org/10.1108/03090561311306994>
- Liao, H. (2007). Do it right this time: The role of employee service recovery performance in customer-perceived justice and customer loyalty. *Journal of applied psychology*, 92(2), 475. <https://doi.org/10.1037/0021-9010.92.2.475>
- Liao, H., & Chuang, A. (2004). A multilevel investigation of factors influencing employee service performance and customer outcomes. *Academy of Management Journal*, 47(1), 41–58. <https://doi.org/10.5465/20159559>
- Liu, S. X., Zhou, Y., Cheng, Y., & Zhu, Y. Q. (2020). Multiple mediating effects in the relationship between employees' trust in organizational safety and safety participation behavior. *Safety Science*, 125, 104611. <https://doi.org/10.1016/j.ssci.2020.104611>
- Lu, T.-E., Lee, Y.-H., & Hsu, J.-W. (2020). Does service recovery really work? The multilevel effects of online service recovery based on brand perception. *Sustainability*, 12(17), 6999. <https://doi.org/10.3390/su12176999>
- McCole, P., Ramsey, E., & Williams, J. (2010). Trust considerations on attitudes towards online purchasing: The moderating effect of privacy and security concerns. *Journal of Business Research*, 63(9–10), 1018–1024. <https://doi.org/10.1016/j.jbusres.2009.02.025>
- Mjahed Hammami, S., Souiden, N., & Bennour, K. (2021). Knowledge-based resources in explaining service recovery performance: A multilevel investigation. *Journal of Marketing Theory and Practice*, 29(2), 189–209. <https://doi.org/10.1080/10696679.2020.1812084>
- Molloy, J. C., Ployhart, R. E., Wright, P. M., & Wright, P. M. (2011). The myth of “the” micro–macro divide: Bridging system-level and disciplinary divides. *Journal of Management*, 37(20), 581–609. <https://doi.org/10.1177/0149206310365000>
- Morgeson, F. V., Hult, G. T. M., Mithas, S., Keiningham, T., & Fornell, C. (2020). Turning complaining customers into loyal customers: Moderators of the complaint handling–customer loyalty relationship. *Journal of Marketing*, 84(5), 79–99. <https://doi.org/10.1177/0022242920929029>
- Muralidharan, E., Guo, W., Fazel, H., & Wei, W. (2021). Organizational response to goods failure complaints: The role of culture on perceptions of interactional justice and customer satisfaction. *Global Business Review*, 22(6), 1327–1344. <https://doi.org/10.1177/0972150919861783>
- Nadiri, H. (2016). Diagnosing the impact of retail bank customers' perceived justice on their service recovery satisfaction and post-purchase behaviours: An empirical study in financial centre of middle east. *Economic Research-Ekonomska Istraživanja*, 29(1), 193–216. <https://doi.org/10.1080/1331677X.2016.1164925>
- Ozuem, W., Ranfagni, S., Willis, M., Rovai, S., & Howell, K. (2021). Exploring customers' responses to online service failure and recovery strategies during Covid-19 pandemic: An actor–network theory perspective. *Psychology & Marketing*, 38(9), 1440–1459. <https://doi.org/10.1002/mar.21527>
- Parasuraman, A., Zeithaml, V. A., & Malhotra, A. (2005). E-S-QUAL: A multiple-item scale for assessing electronic service quality. *Journal of Service Research*, 7(3), 213–233. <https://doi.org/10.1177/1094670504271156>
- Paul, A., Lange, V., & Rusbult, C. (2012). Interdependence theory. In P. A. M. Van Lange, A. W. Kruglanski, & T. Higgins (Eds.), *Handbook of theories of social psychology* (Vol. 2, pp. 251–272). SAGE Publishing.

- Rao, A. S., Pai P, Y., & Sethumadhavan, L. (2023). Linkages between service recovery system and customer justice perceptions: A multilevel model of employee service recovery performance [version 1; peer review: awaiting peer review]. *F1000Research*, 12, 947. <https://doi.org/10.12688/f1000research.135103.1>
- Raykov, T., & Marcoulides, G. A. (2015). A direct latent variable modeling based method for point and interval estimation of coefficient alpha. *Educational and Psychological Measurement*, 75(1), 146–156. <https://doi.org/10.1177/0013164414526039>
- Smith, J. S., Karwan, K. R., & Markland, R. E. (2009). An empirical examination of the structural dimensions of the service recovery system. *Decision Sciences*, 40(1), 165–186. <https://doi.org/10.1111/j.1540-5915.2008.00220.x>
- Smith, J. S., Karwan, K. R., & Markland, R. E. (2012). An empirical investigation of the effectiveness of an integrated service recovery system. *Operations Management Research*, 5(1-2), 25–36. <https://doi.org/10.1007/s12063-012-0063-0>
- Tabrani, M., Amin, M., & Nizam, A. (2018). Trust, commitment, customer intimacy and customer loyalty in Islamic banking relationships. *International Journal of Bank Marketing*, 36(5), 823–848. <https://doi.org/10.1108/IJBM-03-2017-0054>
- Van Vaerenbergh, Y., Varga, D., De Keyser, A., & Orsingher, C. (2019). The service recovery journey: Conceptualization, integration, and directions for future research. *Journal of Service Research*, 22(2), 103–119. <https://doi.org/10.1177/1094670518819852>
- Wong, I. A. (2016). Linking firms, employees, and customers. *Cornell Hospitality Quarterly*, 57(1), 7–20. <https://doi.org/10.1177/1938965515578715>