

Relationship between Customer Satisfaction and Loyalty to Bank Financial Performance: Insights from PMJDY Account Holders

Bharat Chandra Sahoo^{1*}, Vishal Sood²

^{1&2} Faculty of Management Studies, Sri Sri University, Odisha, India

*Corresponding Author

To cite this paper

Sahoo, B. C., & Sood, V. (2025). Relationship between Customer Satisfaction and Loyalty to Bank Financial Performance: Insights from PMJDY Account Holders. *Orissa Journal of Commerce*. 46(2), 16-28.

Keywords

Financial Inclusion; Pradhan Mantri Jan-Dhan Yojna; Digital Banking; Customer Loyalty; Financial Performance

JEL Classification

G21; D12; O16; M31

Abstract: This study investigates the relationship between satisfied and loyal clients and the profitability of Indian banks serving PMJDY account holders. The connection has been examined using multivariate techniques, specifically Partial Least Squares Structural Equation Modelling (PLS-SEM), to explore the complex interplay between customer satisfaction, loyalty, and financial performance. A significant gap in the literature on financial inclusion and banking outcomes in India has been addressed. The fundamental links between customer satisfaction and loyalty, as well as their influence on banks' financial success, have been analysed. A clear association has been identified between customer satisfaction and financial outcomes, with customer loyalty recognised as a pivotal mediating factor. The impact of satisfaction and loyalty on bank performance has been explored, particularly in the context of financial inclusion initiatives such as PMJDY. Valuable insights have been generated for policymakers and banking institutions, enabling the development of strategies focused on customer retention to enhance both inclusion and financial performance.

1. Introduction

Significant changes have been observed in the Indian banking sector in recent years. These changes have been driven by technological progress and the rise of digital financial services. As highlighted by Iqbal et al. (2021), the traditional banking structure has been transformed, with cashless transactions becoming increasingly common due to the adoption of internet banking and e-commerce. This shift has been facilitated by the widespread availability of mobile phones and internet access, through which financial opportunities have been extended to previously unbanked populations. One major initiative contributing to this transformation has been the Pradhan Mantri Jan-Dhan Yojana (PMJDY). This national program has been designed to promote financial inclusion by offering basic banking services, such as savings accounts, remittance facilities, credit, insurance, and pensions to underserved communities (Kusuma et al., 2023; Shaikh et al., 2024). Although access to formal banking has been significantly expanded through PMJDY, several challenges have yet to be addressed. These include the enhancement of financial literacy, the improvement of credit delivery mechanisms, and the integration of excluded populations into the broader financial system (Malpani et al., 2024). Despite the extensive outreach achieved by PMJDY, a notable gap in research has been identified regarding the impact of customer satisfaction and loyalty among PMJDY account holders on the financial performance of banks. Most existing studies have concentrated on financial inclusion metrics or localised service evaluations. For example, customer satisfaction based on account usage duration was assessed in Chennai by Palamalai et al. (2021). Rahman (2013) examined perceptions related to service reputation and cost, while Bijoy (2018) attempted to establish a link between satisfaction, loyalty, and bank profitability but did not identify a clear causal relationship. Patnaik et al. (2016) evaluated the program's effectiveness in Orissa without considering the financial implications of customer behaviour. This body of literature has revealed an essential gap. A detailed analysis connecting customer satisfaction and loyalty to bank performance within the PMJDY framework has not been conducted. Understanding this connection has become increasingly

important. It has been observed that satisfied and loyal customers are more likely to maintain long-term banking relationships, utilise additional services, and contribute to stable revenue streams. Recent studies employing multivariate analysis and Partial Least Squares Structural Equation Modelling (PLS-SEM) have begun to investigate these complex relationships (Kamath et al., 2019; Omoregie et al., 2019). These analytical methods have provided valuable tools for examining how constructs such as trust, satisfaction, and loyalty influence measurable financial outcomes for banks. In the context of PMJDY, such analysis holds particular relevance. Although individual account holders from lower-income groups may not generate substantial revenue, their collective engagement has the potential to significantly influence a bank's financial health. Accordingly, this study has been undertaken to explore how the satisfaction and loyalty of PMJDY customers affect profitability and to establish a link between financial inclusion policy and performance-based banking strategy.

2. Theoretical Foundation and Review of Literature

The relationship between customer satisfaction, loyalty, and financial performance has long been a central focus in banking research. However, applying this framework to financial inclusion programs like the Pradhan Mantri Jan-Dhan Yojana (PMJDY) has received limited attention. Recent studies are starting to close this gap, providing insights into how satisfaction and loyalty among PMJDY account holders affect bank financial health. Sahoo and Sood (2024) conducted an in-depth study using Partial Least Squares Structural Equation Modelling (PLS-SEM) to explore the relationships between customer satisfaction, loyalty, and bank performance within the PMJDY context. Their findings show that customer satisfaction strongly influences loyalty. Loyalty, in turn, partly mediates the connection between satisfaction and financial performance. This supports the notion that retaining satisfied customers can lower acquisition costs and boost profitability. Customer satisfaction is increasingly recognised as a strategic asset in inclusive banking. Studies by Sharma and Gupta (2022) and Reddy and Divya (2025) highlight that satisfaction among PMJDY beneficiaries is influenced by service accessibility, staff empathy, and digital literacy. Mishra and Sahoo (2020) found that mobile banking features significantly enhance satisfaction, especially among younger users. Loyalty in PMJDY banking is shaped by trust, service consistency, and perceived value. Aripin (2025) identifies service quality and grievance redressal as crucial factors boosting loyalty. Singh and Mehta (2024) argue that loyalty leads to reduced churn and increased cross-selling, particularly in semi-urban branches. Recent studies confirm a positive link between customer experience and bank performance. Kumar and Singh (2021) demonstrate that engaged PMJDY customers enhance operational efficiency and profitability. Jain and Patel (2023) report that banks with higher satisfaction scores have better financial KPIs, including deposit growth and lower account dormancy. The mediating role of loyalty has gained attention in recent empirical models. Verma and Kapoor (2024) used structural equation modelling to show that loyalty significantly enhances the impact of satisfaction on financial performance. Das and Rout (2023) support this view, noting that trust-based loyalty promotes repeat usage and long-term engagement. Choudhury and Sen (2022) stress that loyalty must be earned through consistent service delivery and open communication. Their longitudinal study shows that sustained satisfaction leads to lasting loyalty, which drives profitability. Bansal & Kaur (2020) suggest that inclusive banking models can be financially viable when customer experience is a priority. Joshi & Thakur (2022) note that customer-focused innovations, such as biometric authentication and multilingual support, enhance loyalty by improving usability and reducing friction. Sinha and Mohanty (2023) further illustrate that financial literacy programs strengthen loyalty by empowering users to make informed decisions. Verma & Kapoor (2024) emphasize that satisfaction is not just transactional but also emotionally tied to trust, dignity, and perceived fairness. These findings align with broader frameworks on service quality, where responsiveness and reliability are key drivers (Roy & Dasgupta, 2021). Mittal et al. (2023) review over 40 years of research through a meta-analysis of 245 studies, confirming that customer satisfaction positively relates to both individual outcomes (like retention, word-of-mouth, and spending) and firm-level outcomes (such as accounting and market performance). Though not specific to PMJDY, their work reinforces the theoretical basis connecting satisfaction and loyalty to financial success. Kumar & Peerzade (2021) examined changes in Indian banking post-liberalization. They noted that customer satisfaction has become a critical differentiator, especially as banks compete based on service quality rather than just products. Their study shows how

private sector banks have used customer-focused strategies to outperform public sector banks, a relevant insight for PMJDY, largely implemented through public banks. The Balanced Scorecard (Kaplan & Norton, 1992) provides a strategic framework connecting non-financial metrics like customer satisfaction and loyalty with financial outcomes. In the context of PMJDY, this framework is relevant as it allows banks to gauge how improvements in service quality and customer experience among financially included populations translate into profitability and sustainability. Studies by Jamal & Naser (2003), Murphy et al. (1996), and Speth et al. (1977) underscore that customer satisfaction serves not only as a performance benchmark but also as a driver of loyalty and repeat engagement. In banking, particularly among PMJDY account holders, satisfaction fosters long-term relationships, reduces churn, and creates cross-selling opportunities, enhancing financial performance. The changing expectations of banking customers (Lewrick et al., 2010; EY Report, 2017) and the commoditization of banking services (Gilbert & Royne Stafford, 2022) underscore the necessity for banks to stand out through superior service. For PMJDY beneficiaries, who often represent first-time formal banking users, service quality and perceived value are crucial in building loyalty and ongoing usage.

While financial inclusion initiatives like the PMJDY have greatly increased access to banking, current literature largely emphasises quantitative outreach measures like account penetration and transaction volumes over the quality of customer experience.

Specifically, there is a lack of empirical studies examining how customer satisfaction and loyalty among PMJDY beneficiaries affect banks' financial performance. Moreover, the role of customer loyalty as a mediator in this relationship has been insufficiently explored, particularly within the socio-economic context of low-income and rural populations. Previous research often overlooks the behavioural and attitudinal factors that drive sustained engagement with banking services, which are vital for the long-term success of financial inclusion efforts. This study addresses these gaps by integrating customer-focused variables into a performance-oriented framework, offering a deeper understanding of how satisfaction and loyalty contribute to bank profitability and operational success within the PMJDY scheme. The study has the following objectives:

- To examine the direct impact of customer satisfaction on the financial performance of a bank serving PMJDY account holders.
- To measure the relationship between customer satisfaction and customer loyalty among PMJDY beneficiaries.
- To evaluate the effect of customer loyalty on the financial performance of banks operating under the PMJDY scheme.
- To analyse the mediating role of customer loyalty in the relationship between customer satisfaction and bank financial performance.

2.1. Customer Satisfaction and Loyalty

How clients perceive and expect the quality of services from a bank is essential for its success. Bitner et al. (2000) state that financial institutions looking to gain and maintain a competitive edge must consider these views. This helps them assess the market, create a service delivery system that meets customer expectations, and improve service performance. Many people are interested in this topic because of the strong connections between service quality and factors like spending, profitability, satisfied clients, and loyalty. The literature mainly focuses on face-to-face interactions between customers and employees, examining the relationship between service quality and customer satisfaction, and financial performance. Technology improvements have also affected service marketing (Paul et al., 2016; Dabholkar & Bagozzi, 2002). This has led to more ways of delivering services. When service companies use technology, they gain competitive advantages like improved efficiency, fewer barriers to entry, and increased revenue from new products (Bitner, 2001). These are just a few of the benefits. The quality of services offered is key to determining whether an effort will succeed. Both academics and marketing professionals consistently focus on customer satisfaction and loyalty. Research shows a strong link between high-quality service and satisfied, loyal customers, which boosts a company's profits. There are various ways to assess service quality, including how well it meets clients' needs (C. Banerjee, 2021). In today's business climate, providing top-quality service is critical, especially given the intense competition. Zeithaml et al. (2001) suggest that a

company that consistently delivers high-quality services earns a better reputation. This makes it easier to keep existing customers and attract new ones through positive word of mouth. A company's ability to thrive and maintain its market position heavily relies on the quality of its services. Banks can stand out from competitors by offering high-quality service (Gao et al., 2008). The satisfaction level of customers in retail banking has been widely studied (Utkarsh, 2022). Service quality is a crucial element in this industry. Research (Zeithaml et al., 2001) indicates that to succeed today, a company must provide excellent customer service. Customer service matters for any business, whether it's online or in a brick-and-mortar store. A. Banerjee & Gupta (2019) highlight the importance of understanding what makes consumers happy in today's fast-paced business environment. Chitturi et al. (2008) found that if a customer's actual purchasing experience falls short of their expectations, it negatively affects their satisfaction with the product or service. After using and paying for a product or service, their satisfaction also relates to their feelings about it. Feedback from customers after using a product or service shows that their needs have been met (Oliver, 1991). Research demonstrates that customer satisfaction plays a crucial role in linking happy customers to repeat business. Customers with PMJDY accounts who are satisfied with their services, such as financial inclusion initiatives, ease of use, and product options, are more likely to build trust and loyalty toward the bank. As customers see that their relationship with the bank continues to provide value, they are more inclined to stay loyal.

2.2. Customer Satisfaction and Financial Performance

When assessing a bank's financial performance, one of the most important factors is customer satisfaction. Happy customers are more likely to return for additional services, engage in repeat transactions, and deepen their relationship with the bank. For PMJDY account holders, their level of engagement closely relates to how accessible, reliable, and responsive they find the bank's services. Drawing from the Service-Profit Chain framework, satisfied customers help build a stable client base. They also contribute to increased revenue by using a wider range of banking products. Higher customer retention lowers the cost of acquiring new clients and boosts overall profitability. This indicates a strong positive link between customer satisfaction and a bank's financial success. PMJDY beneficiaries are particularly receptive to efforts that promote financial inclusion and improve services. This is especially true for banks serving economically vulnerable groups. When these banks provide services that meet customer needs, they not only fulfil their social responsibility but also improve their financial results. In summary, investing in customer satisfaction is not only a good practice but also a smart strategy that pays off.

2.3. Customer Loyalty and Financial Performance

Customer loyalty is crucial for a bank's financial success. Loyal clients often use financial services more often, connect more deeply with the institution, and are less likely to switch to other banks. For banks that serve PMJDY account holders, loyalty leads to consistent revenue, lower customer turnover, and a stronger brand image, often enhanced through positive word-of-mouth. The Satisfaction-Loyalty-Profit Chain provides a helpful way to understand this relationship. When customers are satisfied, they are more likely to remain with the bank and try additional services, going beyond basic offerings like savings accounts. This not only creates more opportunities to cross-sell but also improves long-term profitability and sustainability. For PMJDY, loyal customers are more likely to engage financially, benefiting both themselves and the bank. As their trust builds, so does their eagerness to adopt broader financial products, which in turn leads to better financial results for the bank. In summary, fostering loyalty among PMJDY account holders is not only good for customer relations; it is a strategic tool for financial growth.

2.4. Customer Loyalty among Customer Satisfaction and Financial Performance

Customer loyalty plays a key role in connecting customer satisfaction and a bank's financial success. When clients have positive experiences, they are more likely to stay loyal, resulting in stronger relationships and a steadier revenue stream. According to Relationship Marketing Theory, loyalty strengthens the link between satisfaction and financial performance by promoting long-term

engagement and boosting customer lifetime value. For banks serving PMJDY account holders, loyalty offers several benefits: increased use of banking products, repeat transactions, and greater client involvement. These behaviours reinforce the customer-bank relationship and contribute to ongoing profitability. Satisfied PMJDY customers, who feel their needs are met, are more likely to continue banking with the institution and explore additional services. In this context, customer loyalty serves as a crucial link, transforming satisfaction into real financial results. It's through this pathway that banks can achieve consistent success, especially when serving financially vulnerable populations. Therefore, institutions focused on PMJDY initiatives can reasonably expect that enhancing customer satisfaction will lead to greater loyalty, which in turn drives financial performance.

Based on the above the following hypothesis are developed:

- H1: Customer satisfaction positively influences the financial performance of banks serving PMJDY account holders.
- H2: Customer satisfaction positively influences customer loyalty among PMJDY account holders.
- H3: Customer loyalty positively influences the financial performance of banks serving PMJDY account holders.
- H4: Customer loyalty mediates the relationship between customer satisfactions and influences the financial performance of banks serving PMJDY account holders.

3. Research Methodology

A stratified random sampling technique will be employed to ensure representation across different regions (urban, semi-urban, and rural) and banking institutions (public and private sector banks). This approach helps capture diverse customer experiences under the PMJDY scheme. Based on Cochran's formula for large populations, a sample size of approximately 220 respondents will be targeted to achieve statistical significance and generalizability. Data collection will be conducted over three months, from different cities in Odisha, like Cuttack, Berhampur, Sambalpur, and Bhubaneswar etc., allowing for seasonal variations in banking activity and customer engagement to be accounted for. The study will focus on PMJDY account holders, specifically: Individuals from low-income households who have opened accounts under the financial inclusion initiative Customers who have actively used their accounts for transactions (e.g., deposits, withdrawals, DBT receipts) Respondents aged 18 and above, capable of providing informed consent Inclusion Criteria: Must have held a PMJDY account for at least six months Must have interacted with banking services (branch visits, mobile banking, etc.) at least once in the past three months Exclusion Criteria: Dormant account holders Respondents unwilling to participate or unable to comprehend the survey.

During the course of the studies that were carried out, both SEM and CFA were used. SEM is a statistical method that is used for the purpose of examining the intangible aspect of business. These aspects include the amount of customer satisfaction and loyalty as well as the financial performance of these companies. For measurement, the structural equation model (SEM) makes use of both formative and reflective approaches. The findings were validated not only by the factor loading, but also by several reliability tests that were carried out with the help of CFA. Joseph F. Hair and colleagues (2018) and Sarstedt and colleagues (2020). In complex models with small sample sizes, the PLS-SEM approach may be used to identify the factors that have an impact on the correlations that exist between variables. Through the process of determining the components that affect the connections, this may be done. With the aid of this method, it is possible to determine the features that affect the connection that exists between variables. One further use that may be made of this method is the determination of correlations between the various variables that are being studied. For the purpose of gathering information from each of the research sites, a mix of anonymous online surveys and in-person interviews is used.

Table 1: Variable Description

Component	Description
Approach	Quantitative, using survey-based data collection
Population	PMJDY account holders across selected regions in India
Sampling Method	Stratified random sampling to ensure representation across demographics.
Data Collection	Structured questionnaire measuring satisfaction, loyalty, and service usage
Analysis Technique	PLS-SEM (Partial Least Squares Structural Equation Modelling)
Framework	Balanced Scorecard (Kaplan & Norton, 1992)

Source: Authors' collection.

4. Results and Discussion

Table 2: Reliability and Validity Study Measures

Constructs	Item	Factor Loading	Cronbach's Alpha	CR	AVE
PMJDY Customer Loyalty	CL1	0.794	0.836	0.889	0.666
	CL2	0.792			
	CL3	0.706			
	CL4	0.785			
PMJDY Customer Satisfaction	CS1	0.734	0.770	0.853	0.593
	CS2	0.808			
	CS3	0.721			
	CS4	0.715			
Bank Financial Performance	FP1	0.838	0.732	0.833	0.555
	FP2	0.850			
	FP3	0.785			
	FP4	0.789			

Sources: Author's calculation.

To confirm the strength of the constructs in this study, PMJDY customer loyalty, PMJDY customer satisfaction, and bank financial performance reliability and validity analyses were conducted. In Table 2, the psychometric properties of each construct are presented, including factor loadings, Cronbach's alpha, composite reliability, and average variance extracted. Satisfactory loadings (>0.70) were observed for all items, indicating strong item reliability. Cronbach's alpha values for customer loyalty (0.836), customer satisfaction (0.770), and financial performance (0.732) were found to exceed the recommended threshold of 0.70, thereby confirming good internal consistency (Nunnally & Bernstein, 1994). Furthermore, composite reliability (CR) scores ranging from 0.833 to 0.889 were recorded for all constructs, surpassing the minimum requirement of 0.70 and confirming construct reliability. The average variance extracted (AVE) values for customer loyalty (0.666), customer satisfaction (0.593), and financial performance (0.555) met the standard cutoff of 0.50, thereby establishing convergent validity (Fornell & Larcker, 1981). Through these results, the reliability and validity of the measurement model were affirmed, providing a robust foundation for subsequent structural analysis and hypothesis testing.

Table 3: Heterotrait-Monotrait Ratio (HTMT) Matrix

Construct	Banking Financial Performance	PMJDY Customer Loyalty	PMJDY Customer Satisfaction
Banking Financial Performance			
PMJDY Customer Loyalty	0.384		
PMJDY Customer Satisfaction	0.325	0.931	
Fornell-Larcker criterion			
Banking Financial Performance	0.816		
PMJDY Customer Loyalty	0.326	0.770	
PMJDY Customer Satisfaction	0.272	0.703	0.745

Sources: Author's calculation.

Discriminant Validity Assessment: To ensure that the constructs in the study, PMJDY customer satisfaction, PMJDY customer loyalty, and bank financial performance were conceptually distinct and non-overlapping, discriminant validity was assessed using two widely accepted methods: the Fornell-Larcker criterion and the HTMT ratio.

Fornell-Larcker Criterion: According to the Fornell-Larcker criterion, the square root of the average variance extracted (AVE) for each construct was compared with its correlations to other constructs. Discriminant validity was confirmed when the square root of the AVE (diagonal values) was found to be greater than the inter-construct correlations (off-diagonal values).

Table 4: Fornell-Larcker

Construct	AVE (Diagonal)	Highest Correlation (Off-Diagonal)
Bank Financial Performance	0.816	0.326 (with Customer Loyalty)
PMJDY Customer Loyalty	0.770	0.703 (with Customer Satisfaction)
PMJDY Customer Satisfaction	0.745	0.703 (with Customer Loyalty)

Sources: Author's calculation.

The Fornell-Larcker criterion was met by all constructs, indicating that more variance was shared with their own indicators than with other constructs. Adequate discriminant validity was thereby confirmed.

Heterotrait-Monotrait (HTMT) Ratio: The HTMT ratio is a more stringent test of discriminant validity, especially in structural equation modelling. Values below 0.85 (or 0.90 in some contexts) suggest that constructs are empirically distinct.

Table 5: HTMT Ratio

Construct Pair	HTMT Value
Bank Financial performance & Customer Loyalty	0.384
Bank Financial Performance & Customer satisfaction	0.325
Customer Loyalty & Customer Satisfaction	0.931

Sources: Author's calculation.

While most HTMT values are well below the threshold, the value between Customer Loyalty and Customer Satisfaction (0.931) slightly exceeds the conservative cutoff of 0.90. This suggests a strong association between the two constructs, which may be expected given their theoretical linkage. However, further testing (e.g., cross-loadings or model re-specification) may be warranted to confirm construct distinctiveness. The discriminant validity results largely support the distinctiveness of the constructs used in this study. The Fornell-Larcker criterion confirms that each construct is sufficiently unique, while the HTMT ratio highlights a strong but theoretically justifiable relationship between customer satisfaction and loyalty. These findings validate the measurement model and support its use in subsequent structural analysis.³⁹

Structural Model Assessment: The structural model was evaluated to test the hypothesised relationships among the constructs: PMJDY customer satisfaction, PMJDY customer loyalty, and bank financial performance. Standardised path coefficients and p-values were examined to determine the strength and statistical significance of these relationships.

Table 6: Path Coefficients and Hypothesis Testing

Hypothesized Path	Path Coefficient	P-value	Interpretation
Customer Satisfaction → Customer Loyalty	0.703	0.000	Strong, significant Positive relationship
Customer Loyalty → Bank Financial	0.266	0.000	Moderate, significant

Performance				positive relationship.
Customer Satisfaction→ Bank Financial Performance	0.084	0.134		Weak, non-significant direct relationship

Sources: Author’s compilation.

H1: Customer Satisfaction positively influences Customer Loyalty. Supported. The path coefficient of 0.703 with a p-value < 0.001 indicates a strong and statistically significant relationship. This suggests that higher satisfaction among PMJDY account holders leads to increased loyalty toward their banking institution.

H2: Customer Loyalty positively influences Bank Financial Performance. Supported. The coefficient of 0.266 and p-value < 0.001 confirm a significant positive impact. Loyal customers contribute to improved financial outcomes, possibly through repeat transactions, reduced churn, and positive word-of-mouth.

H3: Customer Satisfaction directly influences Bank Financial Performance. Not Supported. Although the path coefficient is 0.084, the p-value of 0.134 indicates that this direct effect is not statistically significant. This implies that satisfaction alone may not directly translate into financial performance unless mediated by loyalty

Implications: The model suggests a mediated pathway where Customer Satisfaction enhances Bank Financial Performance indirectly through Customer Loyalty. This aligns with service marketing literature, which posits that satisfaction fosters loyalty, and loyalty, in turn, drives financial outcomes. The structural model confirms that Customer Loyalty plays a pivotal mediating role between Customer Satisfaction and Bank Financial Performance in the context of PMJDY account holders. While satisfaction alone does not directly impact financial performance, its influence is channeled effectively through loyalty behaviours. These findings underscore the strategic importance of nurturing customer loyalty to achieve sustainable financial outcomes in inclusive banking initiatives.

Path Analysis and Hypothesis Testing

H4: To evaluate the structural relationships among the constructs PMJDY Customer Satisfaction, PMJDY Customer Loyalty, and Bank Financial Performance, a path analysis was performed using standardized coefficients, t-statistics, and p-values. The results have been summarized in Table 3 and interpreted as follows.

Direct Relationships Customer Loyalty → Bank Financial Performance A path coefficient of 0.266 was recorded, with a t-statistic of 4.556 and a pvalue of 0.000, indicating a statistically significant relationship at the 1% level. The hypothesis that loyal PMJDY account holders contribute positively to bank financial performance was supported. This contribution is likely facilitated through sustained engagement, reduced churn, and increased uptake of banking services.

Customer Satisfaction → Bank Financial Performance A coefficient of 0.084 was observed, with a t-statistic of 1.498 and a p value of 0.134, suggesting that the direct effect of satisfaction on financial performance was not statistically significant. It was implied that satisfaction alone may not directly enhance financial outcomes unless its influence is mediated by loyalty.

Customer Satisfaction → Customer Loyalty The strongest direct relationship in the model was identified, with a coefficient of 0.703, a t-statistic of 22.032, and a p-value of 0.000. This confirmed that customer satisfaction significantly drives loyalty among PMJDY account holders. The result aligns with service marketing theory, in which satisfaction is regarded as a key antecedent of loyalty.

Implications: Customer Satisfaction → Customer Loyalty → Bank Financial Performance An indirect effect of 0.187 was recorded, with a statistic of 4.378 and a p-value of 0.000, indicating a statistically significant mediation. It was confirmed that customer loyalty acts as a mediator, channeling the influence of satisfaction into improved financial performance. In essence, satisfied customers were found to be more likely to become loyal, and it is this loyalty that ultimately enhances bank profitability. Through path analysis, the conceptual model was validated by confirming that customer loyalty serves as a critical link between customer satisfaction and bank financial

performance in the PMJDY context. Although satisfaction alone does not directly impact financial outcomes, its influence was effectively transmitted through loyalty behaviours. These findings underscore the strategic importance of fostering loyalty among financially included populations to achieve sustainable banking performance.

The findings support existing literature that identifies loyalty as a strategic lever for financial success in inclusive banking contexts. Mediation analysis further confirms that loyalty serves as a vital conduit through which satisfaction drives financial outcomes. The study emphasizes the importance of cultivating both satisfaction and loyalty among PMJDY account holders in Odisha, where drivers such as service accessibility, trust, and transparent communication significantly enhance satisfaction. By aligning customer experience metrics with financial goals under the Balanced Scorecard framework, banks in these cities can strengthen their competitive advantage and ensure long-term sustainability. Ultimately, the study contributes to both academic theory and practical banking strategy by demonstrating that inclusive finance initiatives like PMJDY are not only socially transformative but also financially viable when customer-centric approaches are prioritized.

The Pradhan Mantri Jan Dhan Yojana (PMJDY) is a key financial inclusion initiative introduced by the Government of India to bring individuals previously excluded from the formal banking system into the financial mainstream, encouraging poverty reduction and enabling access to essential banking services such as savings, insurance, credit, and money transfer facilities. Research indicates that customer satisfaction and loyalty play a vital role in the success of banking services, and this holds true for PMJDY beneficiaries as well. In line with the findings of the study, it is recommended that banks offering PMJDY services focus on strengthening the drivers of satisfaction and loyalty, as these factors have a positive association with the financial performance of banks serving PMJDY account holders.

5. Conclusion

The relationship between customer satisfaction, loyalty, and bank financial performance within the framework of the Pradhan Mantri Jan Dhan Yojana (PMJDY) was investigated in this study, with a focus on financial institutions located in the Odisha cities of Cuttack, Berhampur, Sambalpur, and Bhubaneswar. A critical research gap was addressed by examining how behavioural dynamics among financially included populations, often underrepresented in mainstream banking literature, translate into measurable institutional outcomes. Guided by well-defined objectives and hypotheses, structural equation modelling was employed to test both direct and mediated relationships. It was revealed that customer satisfaction does not directly influence financial performance, but significantly enhances customer loyalty, which in turn positively affects bank profitability. Future research may extend this work by exploring longitudinal trends, regional comparisons across other states, and the role of digital engagement in strengthening customer relationships within financially underserved communities. The study's results indicate a strong link between customer satisfaction and loyalty among PMJDY account holders. Individuals who feel satisfied with their banking experience tend to maintain stronger ties with their banks and are more inclined to utilize the available products and services.

References

- Agarwala, N., Maity, S., & Sahu, T. N. (2023). Efficiency of Indian banks in fostering financial inclusion: An emerging economy perspective. *Journal of Financial Services Marketing*. <https://doi.org/10.1057/s41264-022-00203-7>
- Al-Okaily, A., Al-Okaily, M., Ai Ping, T., Al-Mawali, H., & Zaidan, H. (2021). An empirical investigation of enterprise system user satisfaction in Jordanian commercial banks. *Cogent Business & Management*, 8(1), 1918847. <https://doi.org/10.1080/23311975.2021.1918847>.
- Al-Hawari, M., & Ward, T. (2006). The effect of automated service quality on the financial performance of Australian banks and the role of customer satisfaction. *Marketing Intelligence & Planning*, 24(2), 127–147. <https://doi.org/10.1108/02634500610653991>

- Arbore, A., & Busacca, B. (2009). Customer satisfaction and dissatisfaction in retail banking: Exploring the different impacts of attribute performances. *Journal of Retailing and Consumer Services*, 16(4), 271–280. <https://doi.org/10.1016/j.jretconser.2009.02.002>
- Banerjee, A., & Gupta, A. (2019). Pradhan Mantri Jan Dhan Yojana as a financial inclusion initiative: A case study of West Bengal. *Decision*, 46(4), 335–352. <https://doi.org/10.1007/s40622-019-00226-5>
- Banerjee, C. (2021). Integrating MSMEs into the digital economy is important. *Confederation of Indian Industry*.
- Bijoy, K. (2018). Financial inclusion in India and PMJDY: A critical review. *Proceedings of the First International Conference on Information Technology and Knowledge Management*, 14, 39–46. <https://doi.org/10.15439/2017km32>
- Bitner, M. J. (2001). Guru's view: Service and technology, opportunities and challenges. *Managing Service Quality*, 11(6), 375–379. Bitner, M. J., Brown, S. W., & Meuter, M. L. (2000). Technology infusion in service encounters. *Journal of the Academy of Marketing Science*, 28(1), 138–149. <https://doi.org/10.1177/0092070300281013>.
- Chitturi, R., Raghunathan, R., & Mahajan, V. (2008). Delight by design: The role of hedonic versus utilitarian benefits. *Journal of Marketing*, 72(3), 48–63. <https://doi.org/10.1509/JMKG.72.3.048>
- Dabholkar, P. A., & Bagozzi, R. P. (2002). An attitudinal model of technology-based self-service: Moderating effects of consumer traits and situational factors. *Journal of the Academy of Marketing Science*, 30(3), 184–201. <https://doi.org/10.1177/0092070302303001>
- Farooq, M. S., Salam, M., Fayolle, A., Jaafar, N., & Ayupp, K. (2018). Impact of service quality on customer satisfaction in Malaysia airlines: A PLS-SEM approach. *Journal of Air Transport Management*, 67, 169–180. <https://doi.org/10.1016/j.jairtraman.2017.12.008>
- Gao, S., Mokhtarian, P. L., & Johnston, R. A. (2008). Nonnormality of data in structural equation models. *Transportation Research Record: Journal of the Transportation Research Board*, 2082(1), 116–124. <https://doi.org/10.3141/2082-14>
- Gilbert, J. R., & Royne Stafford, M. (2022). A stitch in time saves nine: Redressing a (dis)service to advertising. *Journal of Advertising*, 51(3), 276–293. <https://doi.org/10.1080/00913367.2022.2043796>
- Government of India. (2022). Pradhan Mantri Jan-Dhan Yojana - Department of Financial Services. Ministry of Finance. <https://pmjdy.gov.in/>
- Hsu, S.-H., Chen, W., & Hsieh, M. (2006). Robustness testing of PLS, LISREL, EQS and ANN-based SEM for measuring customer satisfaction. *Total Quality Management & Business Excellence*, 17(3), 355–372. <https://doi.org/10.1080/147833360500451465>
- Izogo, E. E., & Ogba, I.-E. (2015). Service quality, customer satisfaction and loyalty in automobile repair services sector. *International Journal of Quality & Reliability Management*, 32(3), 250–269. <https://doi.org/10.1108/IJQRM-05-2013-0075>
- Jamal, A., & Naser, K. (2003). Factors influencing customer satisfaction in the retail banking sector in Pakistan. *International Journal of Commerce and Management*, 13(2), 29–53. <https://doi.org/10.1108/eb047465>
- Jena, A., Jena, D., Mishra, S., & Panigrahi, R. R. (2020). Corporate social responsibility in selected Indian companies—An assessment. *International Journal of Scientific and Technology Research*, 9(3), 4682–4685.

- Jena, J. R., Biswal, S. K., Panigrahi, R. R., & Shrivastava, A. K. (2024). Investigating the potential areas in artificial intelligence and financial innovation: A bibliometric analysis. *Journal of Scientific Research*, 13(1), 71–80. <https://doi.org/10.5530/jscires.13.1.6>
- Jena, J. R., Biswal, S. K., Shrivastava, A. K., & Panigrahi, R. R. (2023). A bibliographic overview of financial engineering in the emerging financial market. *International Journal of System Assurance Engineering and Management*, 14(6), 2048–2065. <https://doi.org/10.1007/s13198-023-02123-8>
- Jena, J. R., Panigrahi, R. R., & Shrivastava, A. K. (2023). A bibliometric analysis on financial engineering studies. *International Journal of Financial Engineering*. <https://doi.org/10.1142/S2424786322500396>
- Kamath, P. R., Pai, Y. P., & Prabhu, N. K. P. (2019). Building customer loyalty in retail banking: A serial-mediation approach. *International Journal of Bank Marketing*, 38(2), 456–484. <https://doi.org/10.1108/IJBM-01-2019-0034>
- Kusuma, K., Sheela, P., Panigrahi, R. R., & Shaikh, Z. H. (2023). Blockchain technology and Islamic finance. In *Fintech applications in Islamic finance: AI, machine learning, and blockchain techniques* (pp. 59–79). IGI Global. <https://doi.org/10.4018/979-8-3693-1038-0.ch004>
- Lewrick, M., Omar, M., Raeside, R., & Sailer, K. (2010). Education for entrepreneurship and innovation: Management capabilities for sustainable growth and success. *World Journal of Entrepreneurship, Management and Sustainable Development*, 6(1/2), 1–18. <https://doi.org/10.1108/20425961201000001>
- Maity, S., & Sahu, T. N. (2020). Role of public sector banks towards financial inclusion during pre and post introduction of PMJDY: A study on efficiency review. *Rajagiri Management Journal*, 14(2), 95–105. <https://doi.org/10.1108/RAMJ-03-2020-0009>
- Malpani, R., Baral, M. M., Panigrahi, R. R., & Chittipaka, V. (2024). Unveiling the dynamic nexus between corporate social responsibility, innovations and financial performances in 21st-century Indian start-ups. *International Journal of Organizational Analysis*. Advance online publication.
- Murphy, G. B., Trailer, J. W., & Hill, R. C. (1996). Measuring performance in entrepreneurship research. *Journal of Business Research*, 36(1), 15–23. [https://doi.org/10.1016/0148-2963\(95\)00159-X](https://doi.org/10.1016/0148-2963(95)00159-X)
- Oliver, C. (1991). Strategic responses to institutional processes. *Academy of Management Review*, 16(1), 145–179. <https://doi.org/10.2307/258610>
- Omeregic, O. K., Addae, J. A., Coffie, S., Ampong, G. O. A., & Ofori, K. S. (2019). Factors influencing consumer loyalty: Evidence from the Ghanaian retail banking industry. *International Journal of Bank Marketing*, 37(3), 798–820. <https://doi.org/10.1108/IJBM-04-2018-0099>
- Palamalai, S., Kumar, M., Delina, G., Maity, B., & Kumar, K. (2021). Effectiveness of financial inclusion through Pradhan Mantri Jan Dhan Yojana (PMJDY): A case experience from PMJDY beneficiaries in Coimbatore, Tamil Nadu. *Indian Journal of Economics and Business*, 20(3), 73–88.
- Panigrahi, R. R., Singh, N., & Muduli, K. (2024). Digital technologies and food supply chain: A scoping view from 2010 to 2024. *International Journal of Industrial Engineering and Operations Management*. <https://doi.org/10.1108/IJIEOM-05-2024-0030>
- Patnaik, B. C. M., Satpathy, I., Pani, M. R., & Mohanty, S. (2016). A comparative study on performance of Pradhan Mantri Jan-Dhan Yojana (PMJDY) in Ganjam and Nayagarh districts of Odisha. *International Journal of Economic Research*, 13(8), 3515–3529.

- Paul, J., Mittal, A., & Srivastav, G. (2016). Impact of service quality on customer satisfaction in private and public sector banks. *International Journal of Bank Marketing*, 34(5), 606–622. <https://doi.org/10.1108/IJBM-03-2015-0030>
- Rahman, H. (2013). Customer satisfaction and loyalty: A case study from the banking sector. *Central European Business Review*, 2(4), 15–23. <https://doi.org/10.18267/j.cebr.60>
- Reddy, N. S., & Thanigan, J. (2022). Antecedents of customer mortgage shopping satisfaction: The mediating role of search intensity, evidence from the NSMO survey. *International Journal of Housing Markets and Analysis*. <https://doi.org/10.1108/IJHMA-06-2022-0094>
- Shaikh, Z., Irfan, M., Sarea, A., & Panigrahi, R. R. (2024). The emergence of Islamic fintech and Bahrain: Prospect for global financial sectors. In *The emergence of Islamic fintech and Bahrain: Prospect for global financial sectors* (pp. 669–683). Springer. https://doi.org/10.1007/978-3-031-43490-7_52
- Singh, N., Panigrahi, R., Panigrahi, R. R., & Shrivastava, A. K. (2024). An integrated total interpretive structural modeling and MICMAC model for uncovering enterprise agility barriers in the insurance industry. *Decision Analytics Journal*, 10, 100421. <https://doi.org/10.1016/j.dajour.2024.100421>
- Speth, J., Werner, E., & Wild, W. (1977). Theory of finite Fermi systems and application to the lead region. *Physics Reports*, 33(3), 127–208. [https://doi.org/10.1016/0370-1573\(77\)90042-4](https://doi.org/10.1016/0370-1573(77)90042-4)
- Utkarsh. (2022). Tangible and intangible quality cues in service advertising: A construal level theory perspective. *Journal of Global Scholars of Marketing Science*, 1–17. <https://doi.org/10.1080/21639159.2022.2062023>
- Zeithaml, V. A., Rust, R. T., & Lemon, K. N. (2001). The customer pyramid: Creating and serving profitable customers. *California Management Review*, 43(4), 118–142. <https://doi.org/10.2307/41166104>
- Kaplan, R. S., & Norton, D. P. (1992). The balanced scorecard: Measures that drive performance. *Harvard Business Review*, 70(1), 71–79.
- Accenture. (2025). Banking consumer study 2025: How advocacy drives loyalty and organic growth in banking.
- Aripin, Z. (2025). Service quality and customer loyalty in inclusive banking: A systematic review. *Journal of Financial Inclusion Research*, 7(1), 45–62.
- Bansal, S., & Kaur, H. (2020). Customer satisfaction and bank performance: A PMJDY case study. *Journal of Applied Banking Research*, 8(3), 115–130.
- Bhattacharya, D., & Ghosh, S. (2021). Inclusive banking and customer experience: Evidence from PMJDY. *Journal of Social Banking*, 5(1), 49–65.
- Choudhury, N., & Sen, A. (2022). Customer retention in PMJDY banking: A longitudinal study. *Journal of Financial Services Marketing*, 8(2), 66–80.
- Das, M., & Rout, S. (2023). Trust and loyalty among PMJDY beneficiaries: A behavioural analysis. *Odisha Economic Review*, 18(1), 56–70.
- Jain, S., & Patel, R. (2023). Evaluating PMJDY's impact on bank profitability: A customer-centric approach. *Indian Journal of Economic Policy*, 10(3), 101–118.
- J. D. Power. (2025). 2025 U.S. retail banking satisfaction study. <https://www.jdpower.com/business/press-releases/2025-us-retail-banking-satisfaction-study>

Relationship between Customer Satisfaction and Loyalty to Bank Financial Performance: Insights from PMJDY Account Holders

- Joshi, M., & Thakur, D. (2022). Customer-centric innovation in PMJDY banking. *Journal of Financial Technology*, 9(1), 58–74.
- Kumar, A., & Singh, P. (2021). Financial performance of banks under PMJDY: Role of customer engagement. *Journal of Inclusive Finance*, 9(2), 89–104.
- Mishra, T., & Sahoo, B. (2020). Digital banking and satisfaction in PMJDY accounts. *Journal of Rural Banking Innovation*, 6(4), 33–47.
- Mittal, V., Han, K., Frennea, C., Blut, M., Shaik, M., Bosukonda, N., & Sridhar, S. (2023). Customer satisfaction, loyalty behaviors, and firm financial performance: What 40 years of research tells us. *Marketing Letters*, 34(2), 171–187. <https://doi.org/10.1007/s11002-023-09671-w>
- Rao, K., & Iyer, S. (2020). Customer satisfaction in financial inclusion schemes: A comparative study. *Journal of Development Finance*, 6(3), 88–102.
- Reddy, V., & Divya, K. (2025). Empathy and reliability in PMJDY banking: Impact on customer satisfaction. *Journal of Service Quality*, 11(1), 22–39.
- Renascence. (2024). Customer experience (CX) for financial services in 2025: 40 case studies. <https://www.renascence.io/journal/customer-experience-cx-for-financial-services-in-2025-40-case-studies>
- Roy, A., & Dasgupta, P. (2021). Service quality dimensions in PMJDY banking. *Journal of Public Sector Banking*, 4(2), 93–109.
- Sharma, R., & Gupta, S. (2022). Customer satisfaction and loyalty in PMJDY accounts: A rural perspective. *Indian Journal of Banking Studies*, 14(3), 112–128.
- Sinha, P., & Mohanty, R. (2023). Financial literacy and satisfaction in PMJDY accounts. *Journal of Banking Education*, 7(4), 71–86.
- Singh, R., & Mehta, A. (2024). Customer loyalty and financial performance in inclusive banking. *Journal of Banking and Finance Research*, 13(2), 77–93.
- Verma, N., & Kapoor, A. (2024). Loyalty as a mediator between satisfaction and performance in PMJDY banks. *Journal of Consumer Behaviour in Finance*, 12(1), 39–55.