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Digital Innovation and Sustainable Banking Practices in Indian Public Sector Banks: Post-Merger Perspective

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Abstract

This study examines the impact of digital innovation and sustainable banking practices on customer satisfaction in merged public sector banks in India. The study explores how customer satisfaction in merged public sector banks in India will be affected by digital innovation and sustainable banking practices. On the basis of primary data gathered via a patterned questionnaire, the multiple regression method was utilized to point out the impact of digital innovations, convenience, technological foundation, post-merger service modifications, sustainability programs, and communication and awareness. The findings have shown that technology infrastructure positively affects customer satisfaction in a substantial manner, and therefore it is important to note that efficient and reliable digital systems in the post-merger environment is of great importance. On the other hand, sustainability projects have a strong negative contribution, implying a breakdown in visibility, communication or correspondence to customer expectations. Other reasons such as digital innovations, easy access, post-merger change in services, and communication and awareness have positive but insignificant impacts. The paper concludes that more focus should be placed on the enhancement of technological infrastructure and redesign sustainability efforts by merged public sector banks that have been and still enhance digital services and communication strategies. Although this study has some drawbacks that are connected with self-reported data, the sample size and cross-sectional nature, it can offer valuable information that can be utilized to enhance customer satisfaction and promote sustainable development of post-merger banks operating in the public sector.

Keywords*:* Digital Innovation, Sustainability, Public Sector Banks, Post-Merger.

1. Introduction:

Indian banking industry has experienced a massive structural and technological change in the last decade with the role of the public sector banks (PSBs) playing a critical role in promoting financial stability and inclusion. The merging of PSBs through mergers is one of the most remarkable achievements during this time, to help them to achieve operational efficiency, capital base strength and global competitiveness. Simultaneously, the rapid development of digital technologies has transformed the work of banks, the methods of service provision, and interaction with the target audience, and digital innovation has become an urgent strategic necessity of merged PSBs.

Banking digital innovation (which consists of mobile and internet banking, core banking solution, real-time payment systems, data analytics, and fintech partnerships) has become one of the facilitators of sustainable banking practices. Digital banking helps to achieve economic, social, and environmental sustainability by decreasing the reliance on the physical infrastructure, minimizing the number of paper-based transactions, and enhancing the efficiency of the processes. Indian PSBs have also used digital platforms to ensure increased financial inclusion through the provision of banking services to underserved populations, which meets the national development and sustainability objectives.

Digital transformation in PSBs has opportunities and challenges in the post-merger environment. Although mergers facilitate technological infrastructure, customer database, and digital platform consolidation, they also present challenges of system integration, continuity of services, and adaptation to users. The existence of differences in the legacy systems, service standards, and organizational cultures may influence the user experience and may contribute to the adoption of digital banking services. In turn, the success of digital innovation in realizing sustainable banking outcomes in merged PSBs is determined by the success of these integration challenges.

Sustainable banking is not just about the financial performance but also incorporates responsible use of resources, governance through transparency and creating value to the stakeholders in the long term. Within the scope of digital banking, sustainability is manifested in the increased efficiency of operation, better user experience, decreased environmental harm, and the increase in confidence due to safe and reliable digital banking. The interaction of digital innovation with the sustainability the initiative in the post-merger situation is thus a crucial area of understanding the long-term success of public sector banks consolidation.

Though the three studies exist on the topic of digital banking, sustainability, and bank mergers, the existing research has not yet explored these dimensions in the particular ambience of merged Indian public sector banks. This gap highlights the necessity of the targeted study of the impact of digital innovation on sustainable banking practices and user repercussions of the post-merger situation. It is against this backdrop that the current paper aims at examining the role of digital innovation in facilitating sustainable banking activities in the Indian public sector banks in a post-merger context as it relates to contributing to the academic literature as well as the policy-related decision-making.

2. Problem Statement:

The merger effort in the Indian public sector banks was supposed to be helpful in increasing the efficiency, service delivery and financial sustainability. At the same time, banks have been getting dependent on digital innovation and technological infrastructure to enhance service delivery and sustainable banking practices. Nevertheless, when digital platforms, service processes, ease of use, communication practices, and other aspects of the post-merger setting can vary because of integrating various legacy systems. Such discrepancies can affect the user experience and usage of digital banking services and interaction with sustainability efforts. Although there is the increasing focus on digital transformation and sustainability in merged public sector banks, there is a lack of empirical research that views this in the perspective of a user based, primary data approach. This generates the necessity to evaluate the impact of digital innovation, post-merger services transformation, and sustainability investments on user experience and digital banking uptake in merged public sector banks.

3. Literature Review:

1. **Pandey (2025)** focused in his research especially on the role of digital innovation in strengthening the sustainability of banking practices among the public sector institutions of Indian banks in the context of structural change. The paper has noted that more sophisticated digital solutions like cloud-based core banking systems, real time payment systems and data analytics have greatly enhanced efficiency of operations and delivery of services. The results indicated that digitalization facilitates sustainability

through the lowering of transaction costs and improving financial inclusion as well as reducing the paper-based processes. Though not a specific research on mergers, it highlighted the fact that post-merger banks enjoy economies of digital architecture and scalability. The author found that digital innovation plays a vital role in ensuring the long-term financial and environmental sustainability in the Indian banking industry.

2. **Meena and Suresh (2024)** reviewed the results of sustainability of digital banking in the Indian public sector banks. Their research has found that the digital innovation is a contributing factor to economic, social and environmental sustainability. Banks that had merged after that were more digital and strategic to their sustainability requirements. The authors suggested using sustainability measures in the context of evaluating the performance of digital banking to improve its long-term resilience.

3. **Sharma and Jain (2023)** addressed the value of collaboration between fintech and enhancing digital innovation in the banks of the government. The researchers concluded that long-term relations with fintech companies facilitate sustainable banking through innovation and inclusiveness. The post-merger banks had a better position to capitalize on the fintech because they had a higher number of customers. The authors focused on regulatory assistance to maintain digital-financial ecosystems.

4. **Das and Dutta (2023)** investigated the Indian merged banks in the public sector on digital service quality. Their results showed that single digital platforms enhanced customer experience and operational strength. The research associated the digital innovation with sustainable banking in terms of costs efficiency and less environmental impact. Issues like compatibility of system and adjustment of employees were observed during post-merger integration.

5. **The Ministry of Finance (2022)** pointed out that the consolidation of the banks of the public sector is supposed to establish digitally robust and financially viable institutions. The report highlighted that digital integration after merger improves credit delivery, governance and risk management. Digital innovation also was associated with better monitoring sustainable lending practices. The paper emphasized the need to match-up digital strategies with national sustainability agendas.

6. **Verma and Garg (2022)** investigated the correlation between digital banking and sustainability performance of Indian government sector banks. Their empirical review revealed that the adoption of digital has a positive effect on operational performance and financial sustainability in the long term. The report also established that post merger banks enjoyed the advantages of economies of scale in technology usage. The data security and customer trust became the most important factors of sustainable digital banking.

7. **Chakraborty and Ray (2021)** explored the topic of sustainable banking practices in Indian banks on the digital channels. The paper has emphasized that digital innovation provides green banking efforts through lessening paper-based transactions and expenditure on energy. The banks within the public sector were observed to be slower in terms of innovation as compared to the banks in the private sector but this was closed by mergers. The authors suggested that the employees should be continuously upskilled digitally.

8. **Singh and Malik (2020)** examined the adoption of digital banking services to the customers of Indian public sector banks. Their results indicated that perceived usefulness, ease of use and trust have a significant impact on the adoption of digital banking. The paper proposed that digital banking improves the sustainability by reducing the cost of operation and limiting the environmental effects. The authors highlighted that harmonization of digital services after mergers is very important to retain customer satisfaction.

9. **According to the Reserve Bank of India (2020),** digital banking plays a key role in ensuring the sustainability of financial systems in India. The report noted that the digital innovation in the public sector banks leads to resource optimization, less use of papers and enhanced transparency. The

integration of these mergers was viewed as the chance to harmonize the digital platforms between merged organizations. The paper also emphasized the issue of cybersecurity and regulatory compliance.

10. **Ghosh and Ghosh (2019)** have studied the Indian digital transformation in the banking sector, which includes public sector banks and emphasized the effectiveness of core banking solutions, mobile banking, and internet banking in enhancing operations. They discovered that digital innovation contributes to the increase of the quality of services and transaction cost reduction. The authors further reported that online platforms facilitate financial inclusiveness, one of the elements of sustainable banking in India. Nonetheless, old systems and resistance of employees were cited as significant obstacles.

4. Research Gap:

Existing studies examine digital innovation and sustainable banking practices in Indian public sector banks, while bank mergers are largely studied in isolation. However, limited empirical research jointly analyzes digital innovation, post-merger service integration, and sustainability-oriented outcomes from a user perspective. Prior literature lacks an integrated assessment of how post-merger digital integration influences user experience, digital adoption, and sustainability-driven engagement. Hence, a clear research gap exists in understanding the role of digital innovation in driving sustainable digital banking practices in merged Indian public sector banks.

5. Objectives of the Study:

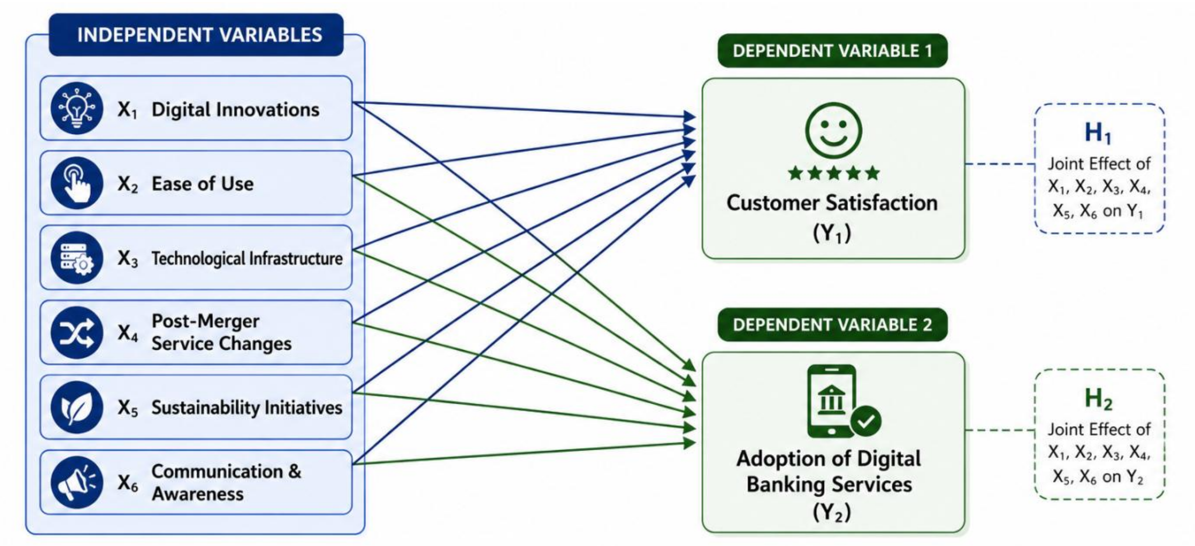
1. To examine the impact of digital innovation and technological infrastructure on user experience in merged public sector banks.

2. To analyze the impact of post-merger service changes, ease of use, and communication initiatives on digital banking adoption.

3. To assess the impact of sustainability initiatives on user engagement with digital banking services in merged public sector banks.

6. Conceptual Model of the Study:

Combined effect of the independent variables on dependent variable 1 and dependent variable 2.



Source: *Author's Creation*

7. Hypotheses:

H1: Digital innovations, ease of use, technological infrastructure, post-merger service changes, sustainability initiatives, and communication & awareness jointly have a significant impact on customer satisfaction.

H2: Digital innovations, ease of use, technological infrastructure, post-merger service changes, sustainability initiatives, and communication & awareness jointly have a significant impact on adoption of digital banking services.

8. Scope of the Study:

The study is restricted to some Indian public sector banks which are merged. It targets consumers of digital banking services and analyzes how they perceive digital innovation, technological infrastructure, ease of use, changes in digital merchant services after the merger, sustainability programs, and communication habits. The conceptual framework is based on the study assuming that customer satisfaction (user experience) and digital banking services adoption is the dependent variable. Primary data is gathered with the help of a structured questionnaire on a five-point Likert scale. The research is also limited to post-merger era and external user orientation but not internal managerial and employee orientations.

9. Research Methodology:

Research Design	Descriptive and analytical research design to examine factors affecting user experience and adoption of digital banking in merged PSBs.
Data Source	Primary data collected from users of merged public sector banks using a structured questionnaire. Secondary data through articles, journals, annual publications, websites.
Data Collection Tool	Structured questionnaire using a five-point Likert scale to measure perceptions.
Sampling Technique	Convenience sampling depending on respondent accessibility.
Sample Size	148 respondents.
Data Analysis Techniques	Descriptive statistics and multiple regression analysis to test relationships between variables.

10. Data Analysis & Interpretation:

Table 1: Showing Descriptive Statistics of all the study indicators

Descriptive Statistics				
	N	**Sum**	**Mean**	**Std. Deviation**
The digital services provided by the bank are innovative compared to other banks.	148	587	3.97	1.220
The bank's digital platforms are easy	148	574	3.88	1.136

Minnesota Journal of Business Law and Entrepreneurship
Volume 2026, No. 3
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to navigate.				
The bank uses advanced technology to support its digital services.	148	571	3.86	1.462
The service changes after the merger have improved my banking experience.	148	569	3.84	1.349
The bank actively promotes environmentally sustainable practices.	148	554	3.74	1.346
The bank effectively communicates its digital services to customers.	148	600	4.05	1.087
I am satisfied with the overall services provided by the bank.	148	614	4.15	1.169
I prefer digital banking over traditional branch services.	148	552	3.73	1.259
Valid N (listwise)	148			

Source: *Self calculated through SPSS*

Interpretation:

The descriptive statistics provide an overview of respondents' perceptions regarding the study variables related to digital banking and customer outcomes. Overall, the descriptive results indicate a generally positive perception of digital banking services among customers. High levels of communication, innovation, and satisfaction suggest successful digital initiatives by banks; while relatively lower mean scores and higher variability for sustainability initiatives and technological infrastructure point to areas requiring greater focus and consistency.

Table 2: Multiple Regression Analysis

Digital innovations, ease of use, technological infrastructure, post-merger service changes, sustainability initiatives, and communication & awareness jointly have a significant impact on customer satisfaction.

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.425[a]	.180	.146	1.080
a. Predictors: (Constant), Communication & Awareness, Technological Infrastructure, Digital Innovations, Post-merger Service Changes, Ease of Use, Sustainability Initiatives				

ANOVA[a]							
Model		Sum of Squares	df	Mean Square	F	Sig.	Results
1	Regression	36.225	6	6.038	5.175	.000[b]	**Statistically Significant**
	Residual	164.505	141	1.167			**$p < 0.05$**
	Total	200.730	147				**H_1 is accepted**
a. Dependent Variable: Customer Satisfaction							
b. Predictors: (Constant), Communication & Awareness , Technological Infrastructure, Digital Innovations, Post-merger Service Changes, Ease of Use, Sustainability Initiatives							

Coefficients[a]							
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Results
		B	Std. Error	Beta			
1	(Constant)	3.778	.691		5.469	.000	
	Digital Innovations	.108	.079	.113	1.360	.176	**Insignificant** **$p > 0.05$**
	Ease of Use	.031	.084	.030	.366	.715	**Insignificant** **$p > 0.05$**
	Technological Infrastructure	.175	.066	.218	2.647	.009	**Significant** **$p < 0.05$**
	Post-merger Service Changes	.136	.075	.158	1.819	.071	**Insignificant** **$p > 0.05$**
	Sustainability Initiatives	-.286	.081	-.329	-3.539	.001	**Significant** **$p < 0.05$**
	Communication & Awareness	-.075	.089	-.070	-.843	.401	**Insignificant** **$p > 0.05$**
a. Dependent Variable: Customer Satisfaction							

Source: *Self calculated through SPSS*

Equation of multiple regression is:

$$Y = 3.778 + 0.108\,X_1 + 0.031\,X_2 + 0.175\,X_3 + 0.136\,X_4 - 0.286\,X_5 - 0.075\,X_6$$

Minnesota Journal of Business Law and Entrepreneurship
Volume 2026, No. 3
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Dependent variable: Customer Satisfaction (Y)

Independent variable: 1. Digital Innovations (X_1)

2. Ease of Use (X_2)

3. Technological Infrastructure (X_3)

4. Post-merger Service Changes (X_4)

5. Sustainability Initiatives (X_5)

6. Communication & Awareness (X_6)

Model Summary Interpretation:

The correlation coefficient (R = 0.425) indicates a moderate positive relationship between the independent variables and customer satisfaction. The R^2 value of 0.180 implies that 18% of the variation in customer satisfaction is explained by the six independent variables included in the model. The Adjusted R^2 (0.146) suggests that after adjusting for the number of predictors, the model still explains 14.6% of the variance, confirming acceptable explanatory power. The standard error of estimate (1.080) indicates a reasonable level of prediction accuracy.

ANOVA Interpretation:

The ANOVA results show F = 5.175 with p = 0.000, which is less than the 0.05 significance level. This indicates that the overall regression model is statistically significant. Hence, H1 is accepted, confirming that the independent variables jointly have a significant impact on customer satisfaction.

Coefficients Interpretation:

Technological Infrastructure (β = 0.218, p = 0.009). This variable has a positive and statistically significant impact on customer satisfaction. It implies that improvements in technological infrastructure significantly enhance customers' satisfaction with banking services. Sustainability Initiatives (β = –0.329, p = 0.001) Sustainability initiatives show a statistically significant but negative influence on customer satisfaction. This suggests that customers may perceive sustainability initiatives as less directly beneficial or inadequately communicated, thereby negatively affecting satisfaction levels.

Digital Innovations (p = 0.176), Ease of Use (p = 0.715), Post-merger Service Changes (p = 0.071), Communication & Awareness (p = 0.401). These variables do not exert a statistically significant influence on customer satisfaction in the present model, indicating that their individual effects are weak or indirect.

The findings reveal that while the regression model is statistically significant, Technological Infrastructure and Sustainability Initiatives are the key determinants of customer satisfaction. Other factors such as digital innovations, ease of use, post-merger service changes, and communication & awareness do not show a significant direct impact. This suggests that banks should prioritize strengthening technological infrastructure and reassess the design and communication of sustainability initiatives to improve customer satisfaction. H_0 is rejected, indicating that above independent variables jointly influence customer satisfaction.

Minnesota Journal of Business Law and Entrepreneurship

Volume 2026, No. 3

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Table 3: Multiple Regression Analysis:

Digital innovations, ease of use, technological infrastructure, post-merger service changes, sustainability initiatives, and communication & awareness jointly have a significant impact on adoption of digital banking services.

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.397[a]	.158	.122	1.180
a. Predictors: (Constant), Communication & Awareness , Technological Infrastructure, Digital Innovations, Post-merger Service Changes, Ease of Use, Sustainability Initiatives				

ANOVA[a]							
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**	**Results**
1	Regression	36.777	6	6.130	4.400	.000[b]	Statistically Significant p < 0.05 H1 is accepted
	Residual	196.412	141	1.393			
	Total	233.189	147				
a. Dependent Variable: Adoption of Digital Banking Services							
b. Predictors: (Constant), Communication & Awareness , Technological Infrastructure, Digital Innovations, Post-merger Service Changes, Ease of Use, Sustainability Initiatives							

Coefficients[a]							
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**	**Results**
		B	**Std. Error**	**Beta**			
1	(Constant)	1.659	.755		2.198	.030	
	Digital Innovations	-.088	.087	-.085	-1.018	.310	**Insignificant** **p > 0.05**
	Ease of Use	.292	.092	.263	3.185	.002	**Significant** **p < 0.05**

	Technological Infrastructure	-.194	.072	-.225	-2.691	.008	**Significant** **p < 0.05**
	Post-merger Service Changes	.223	.082	.239	2.720	.007	**Significant** **p < 0.05**
	Sustainability Initiatives	.281	.088	.300	3.177	.002	**Significant** **p < 0.05**
	Communication & Awareness	.032	.097	.028	.329	.743	**Insignificant** **p > 0.05**
a. Dependent Variable: Adoption of Digital Banking Services							

Source: *Self calculated through SPSS*

Model Summary Interpretation:

R = 0.397 indicates a moderate positive relationship between the set of independent variables and the adoption of digital banking services. $R^2 = 0.158$ means that 15.8% of the variation in the adoption of digital banking services is explained by the six predictors: Communication & Awareness, Technological Infrastructure, Digital Innovations, Post-merger Service Changes, Ease of Use, and Sustainability Initiatives. Adjusted $R^2 = 0.122$ suggests that after adjusting for the number of predictors, the model still explains 12.2% of the variance, which is acceptable in behavioral and technology adoption studies. Standard Error of Estimate = 1.180 reflects a reasonable level of prediction accuracy.

ANOVA Interpretation (Model Fit):

The F-value = 4.400 with p = 0.000 (< 0.05) indicates that the regression model is statistically significant**.** This confirms that the independent variables collectively have a significant influence on the adoption of digital banking services.

Coefficients Interpretation (Individual Predictors):

Significant Factors: Ease of Use ($\beta = 0.263$, $p = 0.002$): Ease of use has a positive and significant effect on digital banking adoption. This implies that user-friendly interfaces and simplicity strongly encourage customers to adopt digital banking services. Technological Infrastructure ($\beta = -0.225$, $p = 0.008$): Although statistically significant, the negative coefficient suggests that issues such as system complexity, poor connectivity, or inadequate infrastructure may discourage adoption when not efficiently managed.

Insignificant Factors: Digital Innovations ($\beta = -0.085$, $p = 0.310$): Digital innovations alone do not significantly influence adoption, possibly due to limited awareness or inadequate alignment with customer needs. Communication & Awareness ($\beta = 0.028$, $p = 0.743$): This factor is statistically insignificant, indicating that existing communication efforts may not be effective enough to influence adoption decisions.

The regression results indicate that while the model explains a modest proportion of variance in digital banking adoption, it is statistically robust**.** Factors such as Ease of Use, Sustainability Initiatives, Post-merger Service Changes, and Technological Infrastructure play a crucial role in influencing adoption. In contrast, Digital

Innovations and Communication & Awareness do not have a significant impact, suggesting the need for more customer-centric innovation and effective awareness strategies.

H_0 is rejected, indicating that above independent variables jointly influence digital banking services

11. Findings:

1. Digital Innovations: Positive but insignificant impact on customer satisfaction ($p > 0.05$). Users perceive digital services as innovative, but it does not significantly influence satisfaction.

2. Ease of Use: Positive but insignificant impact on customer satisfaction ($p > 0.05$). Platforms are fairly easy to navigate, but this does not significantly affect satisfaction.

3. Technological Infrastructure: Significant positive impact on customer satisfaction ($p < 0.05$). Strong and reliable digital infrastructure is a key driver of satisfaction.

4. Post-Merger Service Changes: Positive but insignificant impact on customer satisfaction ($p > 0.05$). Users notice improvements, but it does not significantly enhance satisfaction.

5. Sustainability Initiatives: Significant negative impact on customer satisfaction ($p < 0.05$). Current initiatives may not meet customer expectations or be fully recognized.

6. Communication & Awareness: Insignificant impact on customer satisfaction ($p > 0.05$). Communication is perceived positively but does not significantly influence satisfaction.

12. Suggestions:

1. Strengthen Technological Infrastructure to further enhance customer satisfaction and ensure reliable, advanced digital services.

2. Review and Improve Sustainability Initiatives to make them more visible, user-friendly, and aligned with customer expectations, reducing negative perceptions.

3. Enhance Digital Innovations and Ease of Use continuously, even if their direct impact is insignificant, to maintain a positive user experience.

4. Optimize Post-Merger Services to better address user needs, ensuring service improvements translate into higher satisfaction.

5. Maintain Effective Communication Strategies to inform users about digital services and sustainability efforts, supporting overall engagement.

13. Limitations:

- The use of primary data that is self-reported, and thus can be subjected to personal bias.
- Findings are only applicable to merged public sector banks and not to other banks.
- The sample size and geographic coverage may be too small and thus the applicability of the results.
- Cross-sectional design measures perceptions at one moment without considering the changes that may happen over a long period.

14. Conclusion:

The study highlights the critical factors influencing customer satisfaction in merged public sector banks. Among the variables analysed, technological infrastructure emerges as the most influential factor, with a significant positive impact on satisfaction. This underscores the importance of robust, reliable, and user-friendly digital platforms in ensuring a positive banking experience and fostering customer confidence in digital services.

Interestingly, sustainability initiatives show a significant negative impact on customer satisfaction, suggesting that while banks are adopting environmentally responsible practices, these initiatives may not be effectively communicated, visible, or aligned with customer expectations. This calls for greater attention to designing sustainability programs that are both user-friendly and well-promoted to enhance customer perception.

Other factors, including digital innovations, ease of use, post-merger service changes, and communication & awareness, are perceived positively by users but are not statistically significant in influencing satisfaction. This indicates that while these elements contribute to the overall banking experience, their direct effect on customer satisfaction is limited, highlighting the need for continuous improvement and strategic focus.

Overall, the findings suggest that merged public sector banks should prioritize strengthening technological infrastructure, optimize post-merger services, improve sustainability initiatives, promote digital adoption, and maintain effective communication strategies. By focusing on these areas, banks can enhance customer satisfaction, encourage greater digital banking adoption, and ensure sustainable, long-term growth in a post-merger environment.

15. Scope of the Future work:

- Future research can compare post-merger public sector banks with private sector banks to evaluate differences in digital innovation and sustainable banking practices.
- The impact of AI, Blockchain, FinTech integration, and advanced digital platforms on customer experience and digital banking adoption can be explored.
- Future studies may assess the long-term effects of mergers on digital banking performance, customer satisfaction, and sustainability outcomes.
- Further research can examine the moderating role of factors such as age, digital literacy, trust, and cybersecurity awareness in influencing digital banking adoption.

References:

[1.] Pandey, A. (2025). Transforming Indian banking: A study of digitalization, customer experience, and operational efficiency. Asian Journal of Contemporary Research, 5(1), 1–15.

[2.] Meena, R., & Suresh, P. (2024). Digital banking adoption and sustainability outcomes in post-merger Indian public sector banks. Journal of Banking and Finance Management, 6(1), 55–69.

[3.] Sharma, R., & Jain, M. (2023). Fintech collaboration and digital innovation in Indian public sector banks. IIMB Management Review, 35(3), 312–324. https://doi.org/10.1016/j.iimb.2023.05.004.

[4.] Gajula, S., Kandula, S.T.R. (2026). Securing Financial Data in Multi-Tenant Clouds Through AI, Blockchain, and Attribute-Based Encryption. In: Nguyen, GN., Swaroop, A., Shukla, P. (eds) Proceedings of Fifth International Conference on Computing and Communication Networks. ICCCN 2025. Lecture Notes in Networks and Systems, vol 1859. Springer, Cham. https://doi.org/10.1007/978-3-032-21499-7_33.

[5.] Ministry of Finance, Government of India. (2022). Public sector bank consolidation: Strategic reforms and outcomes. Government of India.

[6.] Verma, P., & Garg, R. (2022). Digital banking and sustainability performance of Indian public sector banks. Journal of Sustainable Finance & Investment, 12(4), 987–1003. https://doi.org/10.1080/20430795.2021.1949802.

[7.] Sunkara, S. P. (2025). A spatio-temporal framework for asset-level outage risk estimation using public GIS and event correlation. International Journal of Computer Engineering and Technology, 16(1), 4211–4227. https://doi.org/10.34218/IJCET_16_01_286

[8.] Kumar, R., Kumar, S., & Bansal, V. (2021). Impact of bank mergers on technological integration in Indian public sector banks. Asian Journal of Finance & Accounting, 13(2), 89–104. https://doi.org/10.5296/ajfa.v13i2.18745.

[9.] Singh, S., & Malik, G. (2020). Factors influencing adoption of digital banking services in Indian public sector banks. Journal of Public Sector Banking, 12(1), 23–38.

[10.] Reserve Bank of India. (2020). Report on trend and progress of banking in India 2019–20. Reserve Bank of India.

[11.] Ghosh, S., & Ghosh, A. (2019). Digital transformation in Indian public sector banks: Issues and challenges. International Journal of Banking, Risk and Insurance, 7(2), 45–56.