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Impact of Digital Banking Services on Customer Satisfaction: A Study of Banks in Jamshedpur

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Abstract: ***The rapid expansion of digital banking services has significantly transformed the banking sector by improving the delivery of financial services through mobile banking, internet banking, ATMs, and UPI-based platforms. The present study examines the impact of digital banking services on customer satisfaction among bank customers in Jamshedpur. A descriptive and quantitative research design was adopted, and primary data were collected from 390 respondents using a structured questionnaire. The data were analyzed using SmartPLS 4, and the hypothesis was tested through structural equation modeling with bootstrapping. The results reveal that digital banking services have a significant positive impact on customer satisfaction ($\beta = 0.499$, $t = 10.943$, $p < 0.001$). The findings indicate that improvements in convenience, accessibility, security, and efficiency of digital banking services lead to higher customer satisfaction. The study concludes that effective digital banking services play a crucial role in enhancing customer experience and fostering long-term customer satisfaction in the banking sector of Jamshedpur.***

Keywords: Digital Banking Services, Customer Satisfaction, Mobile Banking, Internet Banking, UPI, Service Quality.

I. INTRODUCTION

The rapid advancement of information and communication technology has revolutionized the banking sector by facilitating the delivery of banking services through digital platforms such as internet banking, mobile banking, automated teller machines (ATMs), and digital payment systems. Digital banking services offer customers greater convenience, accessibility, speed, and flexibility in conducting financial transactions, thereby improving their overall banking experience. According to Davis (1989), the adoption of technology is largely influenced by perceived usefulness and perceived ease of use, while Rogers (2003) emphasized the role of innovation characteristics in technology acceptance. Previous studies have shown that convenience, accessibility, reliability, and security significantly influence customers' adoption of digital banking services (Karjaluoto et al., 2002; Pikkarainen et al., 2004; Laforet & Li, 2005). Moreover, electronic service quality dimensions such as efficiency, responsiveness, system availability, and privacy have been found to positively affect customer satisfaction (Parasuraman et al., 2005; Jun & Cai, 2001). Trust also plays a critical role in shaping customer perceptions and satisfaction with digital banking services (Yousafzai et al., 2009; Flavián et al., 2006). Empirical studies have further demonstrated that high-quality digital banking services contribute to customer satisfaction and loyalty by enhancing service efficiency and customer experience (Amin, 2016; Ganguli & Roy, 2011; George & Kumar, 2014). Additionally, factors such as perceived security, service quality, and technological innovation have been found to significantly influence customers' willingness to use digital banking services (Alalwan et al., 2016; Singh & Srivastava, 2018; Safeena et al., 2011; Lin, 2011). As digital banking adoption continues to increase in India due to growing internet penetration, smartphone usage, and digital payment initiatives, understanding its impact on customer satisfaction has become increasingly important. Therefore, this study seeks to examine the impact of digital banking services on customer satisfaction among bank customers in Jamshedpur.

II. REVIEW OF LITERATURE AND HYPOTHESIS DEVELOPMENT

Digital banking services have transformed the banking industry by providing customers with convenient, accessible, and efficient banking solutions. Previous studies have identified convenience, ease of use, security, and service quality as important factors influencing customers' adoption of digital banking services (Martins et al., 2014; Sharma, 2019). Research has further shown that high-quality digital banking services enhance customer satisfaction by improving transaction efficiency, accessibility, and overall customer experience (Hammoud et al., 2018; Kaura et al., 2015).

Trust and security are also critical determinants of customer satisfaction in digital banking environments. Merhi et al. (2019) found that customer trust significantly influences satisfaction and continued use of digital banking services. Similarly, Al-Jabri and Sohail (2012) reported that perceived security positively affects customers' attitudes toward mobile banking. Furthermore, Aboobucker and Bao (2018) and Makanyeza (2017) concluded that reliable and user-friendly digital banking services contribute significantly to customer satisfaction. Studies in other service sectors also emphasize the importance of service quality in shaping customer satisfaction. Gupta and Vanitha (2015) found that service quality significantly influences passenger satisfaction and loyalty in bus transportation services, while Gupta (2025) highlighted the importance of understanding customer expectations and preferences for improving service delivery. These findings reinforce the critical role of service quality in enhancing customer satisfaction across different service industries.

Overall, the literature suggests that digital banking services play an important role in enhancing customer satisfaction through improved convenience, security, reliability, and service quality.

A. Hypothesis Development

Prior studies indicate a positive relationship between digital banking services and customer satisfaction (Hammoud et al., 2018; Aboobucker & Bao, 2018; Makanyeza, 2017). Customers who perceive digital banking services as convenient, secure, and efficient are more likely to be satisfied with their banking experience. Therefore, the following hypothesis is proposed:

H_0: Digital Banking Services do not have a significant impact on Customer Satisfaction.

H_1: Digital Banking Services have a significant positive impact on Customer Satisfaction.

III. STATEMENT OF THE PROBLEM

The banking sector has undergone significant transformation with the rapid adoption of digital technologies. Banks are increasingly offering digital banking services such as mobile banking, internet banking, UPI transactions, and ATM facilities to enhance customer convenience and improve service delivery. These services enable customers to perform banking transactions efficiently without visiting physical branches. Despite the growing availability and usage of digital banking services, customer satisfaction remains a critical concern for banks. Factors such as ease of use, reliability, security, accessibility, and transaction speed can influence customers' perceptions and satisfaction levels. While banks continue to invest in digital platforms, it is important to determine whether these services effectively contribute to customer satisfaction. In the context of Jamshedpur, limited empirical evidence exists regarding the impact of digital banking services on customer satisfaction. Therefore, there is a need to examine the relationship between digital banking services and customer satisfaction among bank customers in Jamshedpur. This study seeks to address this gap by investigating whether digital banking services significantly influence customer satisfaction and by providing insights that may help banks improve their digital service offerings.

IV. OBJECTIVES OF THE STUDY

1) To analyze the demographic profile and digital banking usage patterns of bank customers in Jamshedpur.

2) To investigate the impact of digital banking services on customer satisfaction.

V. RESEARCH METHODOLOGY

Table 1: Research Methodology

Particulars	Description
Research Design	Descriptive and Quantitative Research
Nature of Data	Primary & Secondary Data
Data Collection Method	Structured Questionnaire
Target Population	Bank customers using digital banking services
Study Area	Jamshedpur, Jharkhand
Sampling Technique	Convenience Sampling
Sample Size	390 Respondents
Measurement Scale	Five-Point Likert Scale (1 = Strongly Disagree to 5 = Strongly Agree)
Independent Variable	Digital Banking Services
Dependent Variable	Customer Satisfaction
Data Analysis Tool	SmartPLS 4
Statistical Technique	Descriptive Statistics, Partial Least Squares Structural Equation Modeling (PLS-SEM)

VI. DATA ANALYSIS

Table 2: Demographic Profile and Digital Banking Usage of Respondents

Variable	Category	Number of Respondents	Percentage (%)
Gender	Male	220	56.41%
	Female	170	43.59%
Total		390	100.00%
Age Group	Below 25 years	95	24.36%
	25–35 years	155	39.74%
	36–45 years	85	21.79%
	Above 45 years	55	14.11%
Total		390	100.00%
Educational Qualification	Higher Secondary	70	17.95%
	Graduate	165	42.31%
	Postgraduate	120	30.77%
	Doctorate	35	8.97%
Total		390	100.00%
Most Frequently Used Digital Banking Service	Mobile Banking App	145	37.18%
	UPI Payment Apps	125	32.05%
	Internet Banking	75	19.23%
	ATM Services	45	11.54%
Total		390	100.00%
Frequency of Digital Banking Usage	Daily	185	47.44%
	Weekly	120	30.77%
	Monthly	55	14.10%
	Occasionally	30	7.69%
Total		390	100.00%

Table 2 presents the demographic characteristics and digital banking usage patterns of the respondents. The majority of respondents were male (56.41%), while females constituted 43.59% of the sample. Most respondents belonged to the 25–35 years age group (39.74%), indicating that young adults are the primary users of digital banking services. Graduates represented the largest educational category (42.31%), followed by postgraduates (30.77%). Regarding digital banking usage, mobile banking applications emerged as the most frequently used service (37.18%), followed by UPI payment applications (32.05%), reflecting the growing preference for smartphone-based banking transactions. Nearly half of the respondents (47.44%) reported using digital banking services daily, indicating a high level of digital banking adoption among bank customers in Jamshedpur. The findings suggest that digitally active and educated customers extensively utilize digital banking services, which may positively influence their overall satisfaction with banking services.

Table 3: Outer loadings – Matrix

	Customer Satisfaction	Digital Banking Services
CS1	0.744	
CS2	0.850	
CS3	0.711	
CS4	0.633	
CS5	0.802	
DBS1		0.559
DBS10		0.726
DBS11		0.728
DBS12		0.839
DBS2		0.702

DBS3		0.540
DBS4		0.704
DBS5		0.505
DBS6		0.651
DBS7		0.753
DBS8		0.694
DBS9		0.851

Note: CS = Customer Satisfaction; CS1–CS5 = Measurement items of Customer Satisfaction; DBS = Digital Banking Services; DBS1–DBS12 = Measurement items of Digital Banking Services.

Table 3 presents the outer loading values for the constructs of Digital Banking Services and Customer Satisfaction. According to Hair et al. (2022), indicator loadings above the minimum threshold of 0.50 are considered acceptable. The results show that all items have loadings ranging from 0.505 to 0.851, exceeding the recommended threshold. The highest loading was observed for DBS9 (0.851) and CS2 (0.850), indicating strong contributions to their respective constructs. Therefore, all indicators were retained, confirming satisfactory indicator reliability and supporting the validity of the measurement model.

Table 4: Path Coefficients - Mean, STDEV, T values, p values

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Digital Banking Services -> Customer Satisfaction	0.499	0.504	0.046	10.943	0.000

Table 4 presents the path coefficient results for the relationship between Digital Banking Services and Customer Satisfaction. The findings indicate that Digital Banking Services have a positive and significant impact on Customer Satisfaction ($\beta = 0.499$, $t = 10.943$, $p < 0.001$). The path coefficient of 0.499 suggests a moderate positive relationship, implying that improvements in digital banking services contribute to higher levels of customer satisfaction. The t-statistic value of 10.943 is substantially higher than the recommended threshold of 1.96, and the p-value of 0.000 is below the 0.05 significance level, confirming the statistical significance of the relationship. Therefore, the null hypothesis (H_0) is rejected and the alternative hypothesis (H_1) is accepted. This result supports the findings of Amin (2016), who reported that internet banking service quality positively influences customer satisfaction and loyalty. Similarly, Hammoud et al. (2018) found that e-banking service quality significantly enhances customer satisfaction, while Kaura et al. (2015) emphasized that service convenience and quality are important determinants of customer satisfaction in the banking sector. Thus, the present study confirms that effective digital banking services play a significant role in enhancing customer satisfaction among bank customers in Jamshedpur.

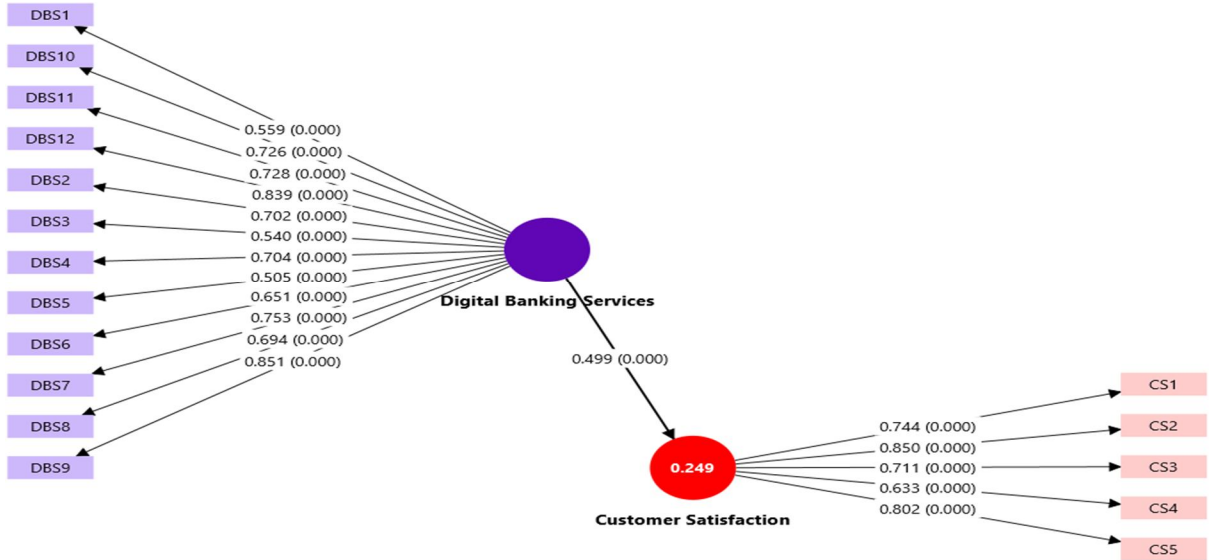

Figure 1: Measurement and Structural Model (Outer and Inner Model) showing factor loadings and path coefficients

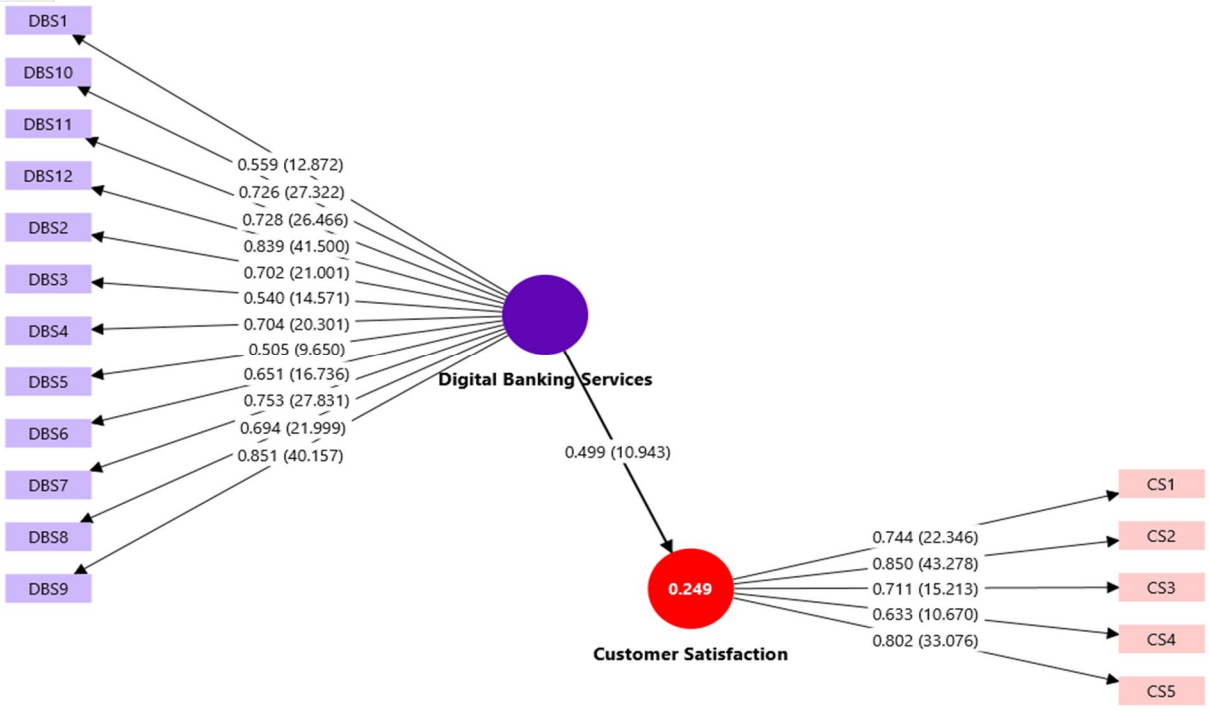

Figure 2: Measurement and Structural Model (Outer and Inner Model) showing factor loadings, t-values, and path coefficients

VII. SUGGESTIONS

Based on the findings of the study, banks in Jamshedpur should focus on further strengthening their digital banking platforms, as digital banking services have been found to significantly enhance customer satisfaction. Continuous improvement in mobile banking applications, internet banking facilities, UPI services, and ATM integration is necessary to ensure smooth, fast, and user-friendly transactions. Special emphasis should be placed on improving system reliability, ease of access, and transaction speed, as these factors directly influence customer experience. Since security and trust are crucial in digital banking, banks must adopt advanced cybersecurity measures such as two-factor authentication, encryption technologies, and real-time fraud monitoring systems to protect customer data and enhance confidence in digital transactions. In addition, banks should provide effective customer support through 24/7 helplines, chatbots, and digital assistance features to resolve technical issues promptly. Regular digital literacy programs and awareness campaigns should also be conducted to help customers, especially first-time users, adopt digital banking services more comfortably. Furthermore, incorporating customer feedback mechanisms within digital platforms can help banks continuously improve their services based on user expectations.

VIII. CONCLUSION

The study concludes that digital banking services have a significant positive impact on customer satisfaction among bank customers in Jamshedpur. The empirical results clearly indicate that improvements in digital banking facilities such as convenience, accessibility, security, and efficiency lead to higher levels of customer satisfaction. This finding is consistent with previous studies that highlight the importance of service quality in electronic banking environments. It can therefore be inferred that customers increasingly prefer digital banking channels due to their ease of use, speed, and flexibility compared to traditional banking methods. Overall, digital transformation in the banking sector has become essential for enhancing customer experience and maintaining competitiveness. Banks that continuously invest in secure, innovative, and user-friendly digital banking systems are more likely to achieve higher customer satisfaction and long-term customer loyalty.

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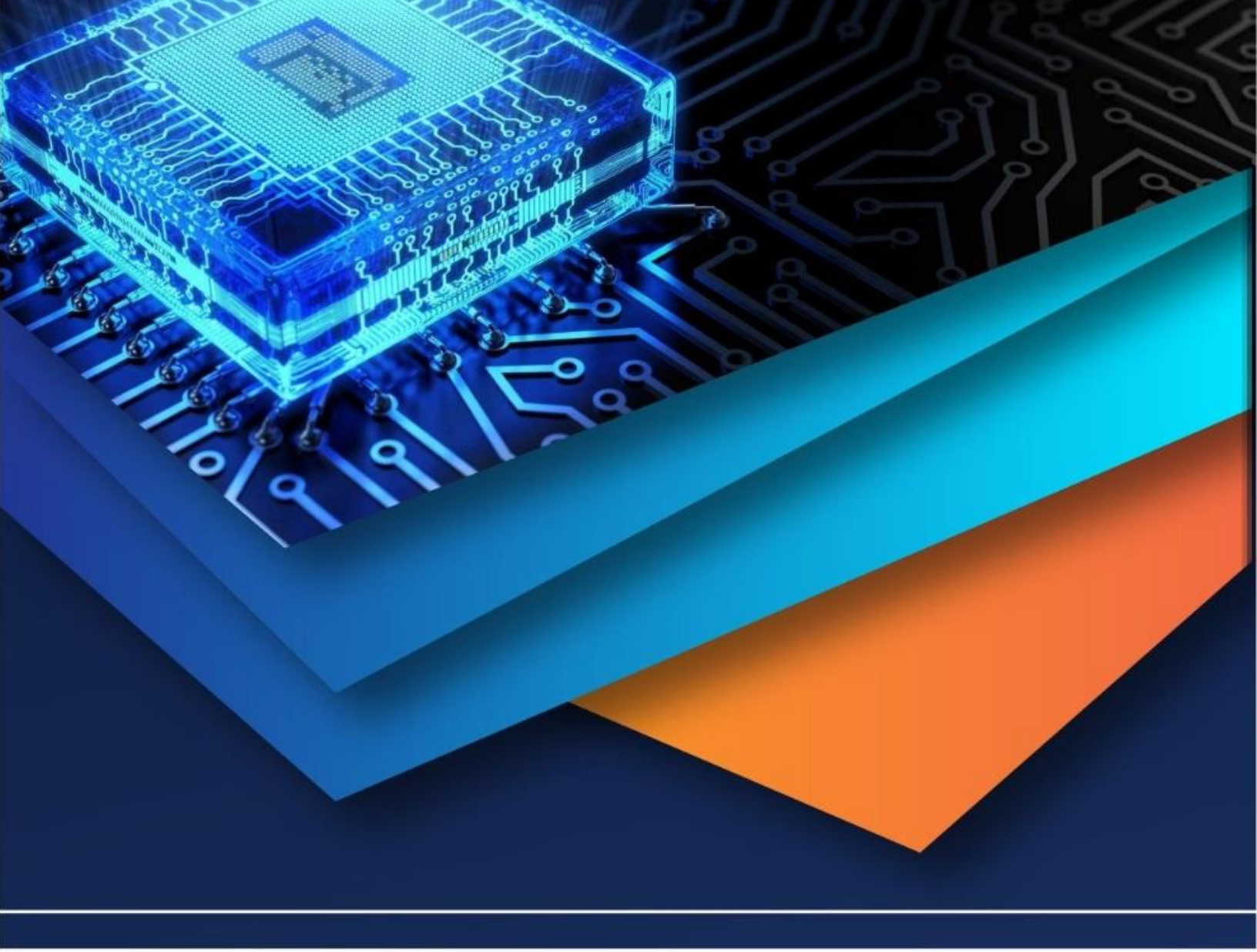

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