

Factors Affecting the Adoption of Digital Technology in the Banking Sector of Jammu and Kashmir

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Abstract

The financial services industry is undergoing a digital revolution, and there are fresh chances to reconsider how financial services are delivered, made available, and consumed via the use of digital technology. With a focus on the banking sector in Jammu and Kashmir, the author of this study aims to put into perspective the several variables that have impacted the adoption of digital technology in the banking industry. The survey takes into consideration a number of observable elements, including organisational support, security and privacy concerns, perceived utility, perceived ease of use, and the legal and regulatory framework around digital banking. These variables are examined in terms of how they affect the adoption of digital technology or its effective use in banking. A structured questionnaire was used to gather primary data from respondents, and JASP software was used to statistically tabulate the results. Two statistical methods—descriptive and multivariate statistics—were employed to investigate the connections between the variables that were found and to comprehend the motivations behind the uptake of digital technology. The results show that every organisational, technical, behavioural, security, and regulatory concern is crucial for digital banks. While organisational support facilitates the adoption and use of digital technologies, individuals' trust and desire to utilise digital banking platforms are impacted by security and privacy issues. In a similar vein, acceptability and continuous usage of digital financial services are influenced by their usability and convenience of use. It is also impossible to ignore the impact that institutional elements of the legal and regulatory framework play in protecting consumers and enhancing the legitimacy of online transactions. According to the authors' findings, effective digital transformation necessitates a mix of organisational and technological preparedness, usability and accessibility, security and controls, and a suitable regulatory environment. The results offer important insights that stakeholders, policymakers, and financial institutions may use to advance safe, effective, and inclusive digital banking in Jammu & Kashmir.

Keywords: Organisational Support, Security and Privacy, Digital Banking, Digital Technology Adoption, Perceived Usefulness, Perceived Ease of Use.

Introduction

The banking industry has been greatly impacted by digital technology, which has been around for a while. With the introduction of technology like online banking, mobile banking, ATMs, digital payment systems, artificial intelligence, cloud computing, and data analytics, the banking sector has changed dramatically. Banks are now able to provide services that are quicker, easier to obtain, and less dependent on conventional branch-based transactions thanks to digitalisation. In the meanwhile, banks now face additional difficulties with regard to

technology infrastructure, security protocols, consumer awareness, staff competencies, privacy, and regulatory constraints.

The increasing use of smartphones, the internet, digital payment programs, and the drive for financial inclusion in India have all contributed to the growth of digital banking. However, regional differences exist in the rate and scope of digital technology adoption. In this sense, the Jammu and Kashmir context is particularly pertinent as access to and acceptability of digital banking services can be impacted by geographic factors, differences in digital infrastructure, digital literacy, and urban and rural access.

The adoption of digital technology in the banking industry is influenced by a variety of interrelated issues. Before embracing new technologies, consumers should consider the utility, usability, dependability, and security of digital services. The successful implementation of digital banking systems may also be impacted by elements including organisational support, technological preparedness, personnel capabilities, consumer education, and regulatory frameworks. Technical difficulties, lack of digital literacy, and concerns about privacy and security may further discourage some customers from utilising digital banking services.

In light of this, the current study seeks to determine and investigate the variables affecting the adoption of digital technology in Jammu and Kashmir's banking industry. Understanding the major institutional, organisational, behavioural, and technological elements that influence the adoption of digital technology is the main goal of the study. The study's objective is to comprehend the potential and difficulties associated with the banking industry's digital transformation and to assist in developing effective plans to increase the use of digital banking in Jammu and Kashmir.

Literature Review

Mulabagula et al. (2022). Relationship banking, which emphasises long-term and personalised interactions between banks and their customers, holds significant prospects for the Indian banking system. As the Indian economy continues to grow, banks can leverage relationship banking to build trust and deepen customer engagement. By understanding individual customer needs and providing tailored financial solutions, banks can enhance customer loyalty. Moreover, relationship banking can play a vital role in financial inclusion efforts, reaching underserved populations and promoting economic stability. As technology advances, Indian banks can combine the benefits of relationship banking with digital innovations to create a more accessible and customer-centric banking experience, ultimately fostering a healthier financial ecosystem in the country.

Rashipaliwal, et al. (2022). This study of transformation in the Indian banking sector delves into the dynamic changes occurring in India's banking industry. This research explores the shift towards digitalisation, the adoption of innovative technologies, and changes in customer preferences. It also examines the impact of regulatory reforms, financial inclusion initiatives, and the role of fintech startups in transforming the sector. By analysing these factors, the study aims to provide valuable insights into the ongoing evolution of the Indian banking landscape and its implications for the broader financial ecosystem.

Sheikh, et al. (2021). Analysed that the assessment of demand for Islamic banking in Jammu and Kashmir through an empirical study is of paramount importance, given the region's unique socio-economic and cultural dynamics. This research aims to gauge the appetite for Islamic financial products and services within the local population, taking into account factors such as religious preferences, economic conditions, and financial literacy. Understanding the demand for Islamic banking in this context is not only crucial for the banking sector but also for policymakers, as it can pave the way for financial inclusion and the development of Sharia-compliant financial solutions that resonate with the specific needs and values of the people in Jammu and Kashmir. This study will contribute valuable insights to both the financial industry and regional development efforts, potentially fostering a more inclusive and responsive banking system in the region.

Andi, et al. (2020). The success of banking digital transformation depends on several critical factors. First and foremost, a clear and comprehensive digital strategy that aligns with the bank's business objectives is essential. Adequate investment in technology infrastructure, including secure and scalable systems, is also crucial. Furthermore, a customer-centric approach, with user-friendly interfaces and personalised services, enhances adoption and customer satisfaction. Effective data management, cybersecurity measures, and compliance with regulatory requirements are non-negotiable components for success. Lastly, a flexible and agile organisational culture that embraces change and innovation is pivotal in ensuring a successful digital transformation in the banking industry.

Indriasari et al. (2019). Studied: These technologies have enabled banks to harness vast amounts of customer data to personalise services, predict customer needs, and enhance the overall customer experience. By leveraging AI-powered chatbots and virtual assistants, banks can offer real-time support and streamline customer inquiries. Additionally, big data analytics help in risk assessment, fraud detection, and product development. This digital revolution not only makes banking more efficient but also ensures that customers in Indonesia receive tailored, seamless, and innovative financial solutions, ultimately strengthening their trust in the banking sector.

Harchekar et al. (2018). Digitalisation in the banking sector is a transformative force reshaping the industry. It involves the integration of advanced technology and digital tools to streamline operations, improve customer experiences, and enhance efficiency. From online banking platforms and mobile apps to blockchain technology and artificial intelligence, banks are leveraging digital solutions to offer convenient, secure, and personalised services. This shift not only benefits customers with easier access to financial services but also enables banks to optimise their processes, reduce costs, and stay competitive in an increasingly digital world.

Gautam, Rituraj. (2016). In this paper, "The banking and financial services industries have always been highly traditional and have adhered to long-standing customs". However, due to changes in customer demographics and behaviour that have altered how services are consumed, as well as the development of new services and apps that will necessitate more responsiveness from the participants, the sector has been upended and has grown more complicated. In addition, a number of new competitors have entered the market, increasing competition. In such a situation, this industry is seeing significant upheavals, one noteworthy example of which

is the infiltration of the Internet of Everything (IoE) into the industry's operations. The current and potential disruptions to the Indian banking system are covered in this essay.

N, Nayana. (2016). It is likely that "Trends in E-Banking: A Study on Indian Banking Scenario" offers a thorough analysis of the development and implications of electronic banking on the Indian financial scene, the e-banking trends and patterns with particular attention to the Indian banking industry. It is likely that this research explores the use of digital technology, internet banking, and how electronic channels are changing financial services. In order to address this expanding tendency, the author may examine topics including consumer behaviour, preferences, security concerns, and the calculated reactions of Indian banks. Through an analysis of the many aspects of e-banking in the Indian setting, this study should provide some understanding of the shifting dynamics.

Parimi, Sashikala. (2015). The Indian banking sector is undergoing a transformation marked by increasing competition, rapid digitalisation, and evolving customer preferences. In this dynamic landscape, managing customer churn and enhancing customer retention have become pivotal for the success and sustainability of banks. This paper explores the challenges and strategies associated with retaining customers in the Indian banking industry. It examines the role of personalised services, efficient issue resolution, and proactive communication in building lasting customer relationships. Furthermore, the paper delves into the use of data analytics and customer feedback to identify at-risk customers and offer customised solutions, ultimately reducing customer churn. By addressing these aspects, the Indian banking sector can navigate the competitive environment and secure its position in the evolving financial landscape.

Abrol, Varun. (2014). Analysed that Jammu & Kashmir Bank, often referred to as J&K Bank, stands as a unique and significant case study in the Indian banking landscape. It operates in the Union Territory of Jammu and Kashmir, India, and has played a pivotal role in the region's economic development. Established in 1938, the bank has navigated through challenging times, including periods of political unrest, to become a symbol of resilience and growth. Its focus on fostering financial inclusion, supporting local businesses, and adapting to evolving banking technologies makes it an intriguing example of how regional banks can contribute to the socio-economic progress of their areas of operation. The J&K Bank's journey continues to provide valuable insights into the intersection of banking, regional development, and the unique challenges posed by geopolitical factors.

Research Methodology

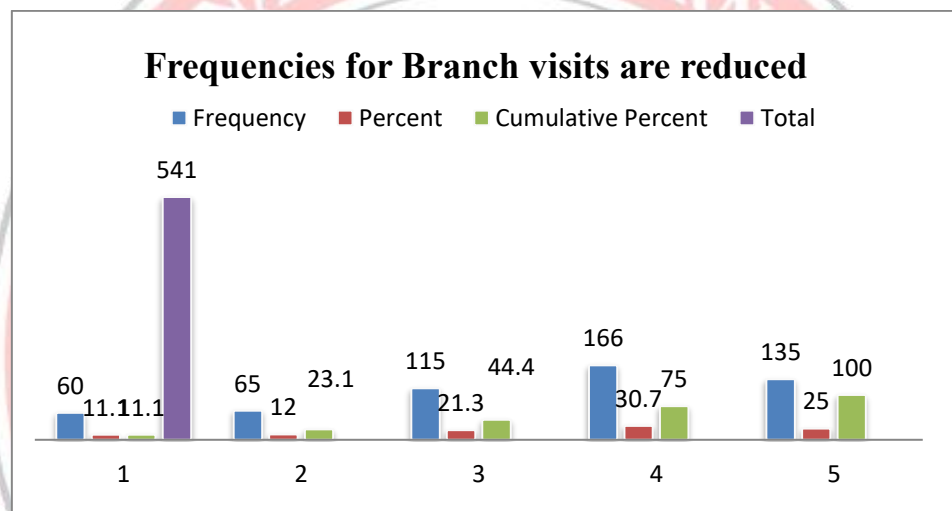
The study looks at a number of observed factors, including organisational support, security and privacy issues, perceived utility, simplicity of use, and legislative framework. JASP software was used to statistically analyse the primary data that was gathered from the respondents.

Table 1.1 Frequency table for Branch visits are reduced

Frequencies for Branch visits are reduced				
Branch visits are reduced	Frequency	Percent	Valid Percent	Cumulative Percent

1	60	11.1	11.1	11.1
2	65	12.0	12.0	23.1
3	115	21.3	21.3	44.4
4	166	30.7	30.7	75.0
5	135	25.0	25.0	100.0
Missing	0	0.0		
Total	541	100.0		

Graph 1.1: Frequencies for Branch visits are reduced



The graph shows that most of the people who answered (55.7%) chose disagreement categories (4 and 5). About 23.1% of the people who answered agreed with the statement, and 21.3% stayed neutral. This means that most people who answered the question don't agree with the statement.

Table 4.1 Kaiser–Meyer–Olkin (KMO) Measure of Adequacy of Sampling for Factors Affecting Adoption of Digital Technology

Kaiser-Meyer-Olkin Test	
	MSA
Overall MSA	0.560
Banking costs are reduced	0.534
Branch visits are reduced	0.574
Customer satisfaction has increased	0.565

Cyber fraud fear discourages use	0.539
Low literacy limits adoption	0.561
Transactions are more transparent	0.570

The feasibility of the data for exploratory factor analysis was evaluated using the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy. The data may be suitable for factor analysis, according to the overall KMO value of 0.560, which shows a modest degree of sampling adequacy. All variables have individual Measures of Sampling Adequacy (MSA) ranging from 0.534 to 0.574, which are higher than the 0.50 minimum acceptable criterion. This demonstrates that the chosen variables are suitable for factor analysis and that there are enough correlations between the variables to support the use of exploratory factor analysis to find factors impacting banks' adoption of digital technologies.

Table 4.3: Bartlett's Test of Sphericity for Factors Affecting Digital Technology Adoption

Test	Chi-Square (X ²)	Degrees of Freedom (df)	Significance (p-value)
Bartlett's Test of Sphericity	54.569	15.000	< .001

The significance of the difference between an identity matrix and a correlation matrix was assessed using Bartlett's Test of Sphericity. The statistical significance of the test result ($X^2 = 54.569$, $df = 15$, $p < 0.001$) suggests that there are enough correlations between the variables. This demonstrates that the data are appropriate for exploratory factor analysis and that significant underlying factors can be identified to explain banks' adoption of digital technologies.

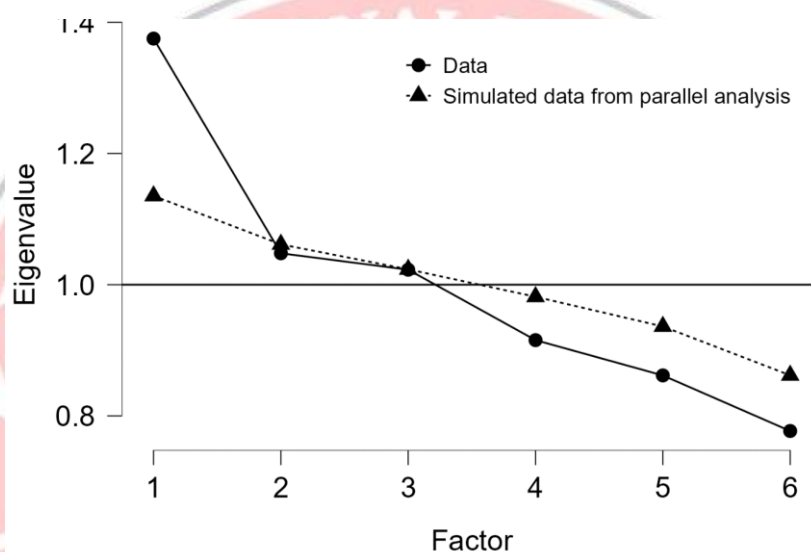
Table 4.4 Actor Characteristics and Variance Explained by Extracted Factors

Factor	Unrotated Solution			Rotated Solution (Promax)		
	Eigenvalue	Proportion of Variance	Cumulative Variance	Sum of Squared Loadings	Proportion of Variance	Cumulative Variance
Factor 1	1.141	0.190	0.190	1.040	0.173	0.173
Factor 2	0.944	0.157	0.347	1.000	0.167	0.340

Factor	0.654	0.109	0.456	0.699	0.117	0.456
3						

The factor characteristics from the exploratory factor analysis are shown in the table. Together, the three factors that were identified accounted for 45.6% of the variance. Factor 1 accounts for 17.3% of the variation in the rotational solution, followed by Factor 2 at 16.7% and Factor 3 at 11.7%. The rotational solution confirms the multiple character of factors influencing banks' adoption of digital technology by offering a clearer distribution of variance across factors.

Graph 4.2 Using a Scree Plot and Parallel Analysis to Calculate the Number of Factors



The right number of elements to keep was decided using the scree plot in conjunction with parallel analysis. The plot demonstrates that, up to the third factor, the eigenvalues from the real data are greater than the corresponding simulated eigenvalues from parallel analysis. After this, there is a decrease in explanatory power as the eigenvalues drop both below the reference line of unity and the simulated values. Because they represent significant underlying aspects impacting banks' use of digital technologies, three factors were kept.

Conclusion

The use of digital technology has already become a crucial component in the process of transforming the banking industry in Jammu and Kashmir, according to a summary of the study's conclusions. The findings demonstrate that a complex combination of organisational, technological, behavioural, security, and regulatory variables contributes to the adoption of digital banking. Therefore, the research emphasises the necessity to take into account digital transformation in its broadest meaning, as a technological competence and as the preparedness of the banks and consumers to embrace and effectively employ digital services. According to the empirical investigation, organisational support has a significant role in facilitating the adoption and efficient use of digital technology. Likewise, perceived usefulness and usability influence customers' acceptance and adoption of digital banking services. Security and privacy are also highlighted as important factors, with worries about cybercrime and safeguarding

personal and financial details potentially impacting users' trust in digital systems. Furthermore, low-level technological barriers and low-level digital literacy are of key importance in the context of limited adoption where digital literacy and skills are not widely known, are not sophisticated or easily accessible, or where customers lack access to reliable digital infrastructure. The factor analysis also corroborates the multidimensional aspect of digital technology adoption. Bartlett's test of Sphericity ($\chi^2 = 54.569$, $df = 15$, $p < 0.001$) and the KMO value (0.560) suggest that the data are appropriate to be analysed with exploratory factor analysis. Three factors were found, which together accounted for 45.6% of the variance, showing that a number of interrelated dimensions play a role in the use of digital technologies in banking. The findings hold significant implications in the context of Jammu and Kashmir, as geographical, digital infrastructure, digital literacy, and urban-rural differences could impact access to and adoption of digital banking services. Hence, banks need to go beyond simply launching digital platforms and build a digital ecosystem that is accessible, reliable, secure, easy to use and responsive to the needs of various customer segments. The study also highlights the need for the improvement of cybersecurity, raising awareness among customers, strengthening the capabilities of employees, expanding digital infrastructure and effective institutional and regulatory support. More collaboration between banks, legislators, regulators, and other stakeholders should be promoted in order to remove the obstacles to digital adoption and promote financial inclusion in the area. The research indicates that a mix of technology, organisational preparedness, consumer readiness, security, accessibility, and regulatory measures is necessary to achieve digital transformation in the banking sector in Jammu and Kashmir. Therefore, digitalisation is a strategy to improve the banking industry's efficiency, customer experience, accessibility, and financial inclusion rather than only a technological breakthrough. In order to build a safer, more effective, inclusive, and sustainable digital banking environment that supports the nation's goal of a cashless economy, the findings have important ramifications for Jammu and Kashmir's financial institutions and policymakers.

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