# Adoption and Challenges of Digital Banking: Customer Insights from Public and Private Banks in Bagalkot

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# Abstract

The rapid growth of digital banking has transformed the financial landscape, offering customers convenience, efficiency, and enhanced financial management. This study explores the adoption of digital banking services among customers of public and private sector banks in Bagalkot, analyzing key factors influencing their usage and the challenges they face. Through a survey-based approach, the research identifies the primary drivers of digital banking adoption, including ease of access, security perceptions, and digital literacy. Additionally, it highlights challenges such as cybersecurity concerns, lack of technical awareness, and inconsistent digital infrastructure. The findings provide valuable insights for banks to enhance digital banking experiences and address barriers, ultimately promoting a more inclusive and efficient banking ecosystem..

Paper Identification



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# Introduction

The banking sector has witnessed a paradigm shift with the advent of digital banking, transforming traditional banking practices into technology-driven financial services. Digital banking encompasses a range of services, including online banking, mobile banking, electronic fund transfers, and digital payment solutions. The rapid evolution of financial technology (FinTech) and increased internet penetration have further accelerated the adoption

of digital banking services worldwide. While urban areas have been quick to embrace these advancements, semiurban and rural regions, such as Bagalkot, are gradually integrating digital banking into their financial routines. This study aims to explore the adoption patterns and challenges faced by customers of both public and private sector banks in Bagalkot.

# **Background of Digital Banking**

esearch Digital banking refers to the automated delivery of banking services through electronic channels, reducing the need for physical visits to bank branches. With the rise of smartphones, internet connectivity, and secure digital payment platforms, banks have developed robust online and mobile banking solutions. These services not only enhance customer convenience but also streamline financial transactions, making banking more efficient and accessible. Governments and regulatory authorities in India have played a crucial role in promoting digital banking, particularly through initiatives like the Digital India program, which aims to enhance digital literacy and financial inclusion.

Despite these advancements, the adoption of digital banking varies significantly across different demographic groups. Urban consumers are more likely to utilize digital services due to better internet access, higher digital literacy, and increased awareness. However, in semi-urban areas like Bagalkot, customers may encounter various barriers that hinder their transition from traditional to digital banking.

# Adoption of Digital Banking in Public and Private Banks

Public and private banks in India have taken different approaches to digital banking adoption. Public sector banks, such as the State Bank of India (SBI) and Canara Bank, have introduced several digital initiatives but often struggle with legacy systems and slower technological upgrades. On the other hand, private sector banks, such as ICICI Bank and HDFC Bank, have been at the forefront of digital innovation, offering user-friendly mobile applications, AIpowered customer support, and seamless digital payment solutions.

Customers' preference for public or private banks in Bagalkot largely depends on their trust in the banking system, accessibility of digital services, and overall user experience. Understanding these preferences and adoption behaviors can help banks tailor their digital offerings to meet customer expectations effectively.

#### **Challenges in Digital Banking Adoption**

While digital banking offers numerous benefits, several challenges hinder its widespread adoption, particularly in semi-urban areas like Bagalkot. Some of the key challenges include:

- Digital Literacy and Awareness: Many customers, especially senior citizens and those with limited education, face difficulties in navigating digital banking platforms.
- Security Concerns: Fear of cyber fraud, data breaches, and phishing scams discourages customers from • snita adopting digital banking solutions.
- Infrastructure Limitations: Unstable internet connectivity, lack of smartphone penetration, and inadequate digital banking infrastructure in rural pockets pose significant hurdles.
- Customer Trust and Reliability Issues: Many customers prefer face-to-face interactions for financial transactions, perceiving them as more reliable than digital platforms.

• Technical Issues and System Downtime: Frequent service disruptions, failed transactions, and unresponsive customer support impact user confidence in digital banking.

#### **Related Work**

The adoption of digital banking has been extensively studied in various contexts, focusing on factors influencing customer adoption, challenges faced, and comparative insights between public and private banks. This section presents an overview of existing literature related to digital banking adoption, customer behavior, and associated challenges.

#### **Adoption of Digital Banking**

Numerous studies have explored the factors affecting the adoption of digital banking. According to Davis (1989), the Technology Acceptance Model (TAM) identifies perceived usefulness and perceived ease of use as key determinants of technology adoption. Venkatesh et al. (2003) extended this model with the Unified Theory of Acceptance and Use of Technology (UTAUT), emphasizing performance expectancy, effort expectancy, social influence, and facilitating conditions as significant predictors of digital banking adoption.

#### **Comparative Studies on Public and Private Banks**

Research comparing digital banking adoption in public and private sector banks has revealed significant differences. Private banks are generally more agile in adopting digital innovations, providing better user experiences and faster service delivery (Sharma & Govindaluri, 2014). In contrast, public sector banks often face bureaucratic hurdles and infrastructural limitations that slow digital transformation efforts (Gupta & Arora, 2017).

#### **Challenges in Digital Banking Adoption**

Despite the increasing popularity of digital banking, several challenges hinder its widespread adoption. Security and privacy concerns remain major obstacles, with customers fearing cyber threats, data breaches, and fraud (Yadav et al., 2021). Trust in digital banking platforms significantly influences adoption rates, particularly in regions where financial literacy is limited. Moreover, digital divide issues, including lack of access to reliable internet and smartphones, impede adoption in semi-urban and rural areas (Raman & Aashish, 2019). Resistance to change, preference for traditional banking methods, and technical difficulties also act as barriers to digital banking adoption (Chawla & Joshi, 2020).

#### **Customer Insights in the Indian Context**

Several studies have analyzed customer perceptions of digital banking in India. Sinha and Mukherjee (2019) highlighted that Indian customers value ease of use, transaction speed, and security in digital banking. Public sector bank customers are often found to be less tech-savvy and more resistant to digital transition than their private sector counterparts (Bansal et al., 2022).

# Methodology

#### **Research Design**

A mixed-method approach combining quantitative (survey-based) and qualitative (interviews) methods will be used to gather insights from customers of public and private banks in Bagalkot.

# **Data Collection Methods**

- Surveys: Structured questionnaires will be distributed to customers of various public and private banks in Bagalkot to assess their adoption, experience, and challenges with digital banking.
- Interviews: In-depth interviews with selected customers and bank officials will help understand qualitative aspects, such as customer perceptions and challenges faced.

# **Secondary Data Collection**

- Reports from RBI and NPCI on digital banking trends
- Research papers and articles on digital banking adoption
- Bank annual reports and digital transaction statistics

# Sampling Technique

A stratified random sampling method will be used to ensure fair representation from both public and private bank customers. Target groups include:

- Public bank customers (e.g., SBI, Canara Bank)
- Private bank customers (e.g., HDFC, ICICI)

#### Data Analysis & Results

#### Demographic Profile of Respondents

The study surveyed 250 customers from various public and private banks in Bagalkot.

| Demographic Factor | Categories                                      | Percentage (%) |
|--------------------|---|----------------|
| Gender             | Male  | 58%            |
|                    | Female  | 42%            |
| Age Group          | 18-30 Publications                              | 35%            |
|                    | 31-45   | 40%            |
| A Vent             | 46-60 JE STAKSHIA FOUNDATIO                     | 20%            |
|                    | 60+   | 5%             |
| Bank Type          | Public Banks (SBI, Canara Bank, Bank of Baroda) | 55%            |
|                    | Private Banks (HDFC, ICICI, Axis Bank)          | 45%            |
| Education Level    | Below Graduation                                | 30%            |

| Demographic Factor | Categories           | Percentage (%) |  |
|--------------------|----------------------|----------------|--|
|                    | Graduate             | 50%            |  |
|                    | Postgraduate & Above | 20%            |  |

# Adoption of Digital Banking Services 2 eseanch

|     |   | Private Banks (HDFC,<br>ICICI, Axis)   |
|-----|---|--|
| 70% | 60%   | 80%  |
| 65% | 55%   | 75%  |
| 85% | 78%   | 90%  |
| 90% | 95%   | 85%  |
| 55% | 65%   | 40%  |
|     | (%)       70%       65%       85%       90% | (%)         Canara, BOB)           70%         60%           65%         55%           85%         78%           90%         95% |

# Key Insights:

- HDFC, ICICI, and Axis Bank customers show higher usage of mobile and internet banking than public bank customers.
  - SBI and Canara Bank customers rely more on branch visits and ATM services compared to private bank customers.
  - UPI transactions are widely adopted across both public and private sector banks.

# **Challenges Faced in Digital Banking**

| Challenges                                  | SBI, Canara Bank, Bank of Baroda<br>(%) | HDFC, ICICI, Axis Bank<br>(%) |
|---|---|-------------------------------|
| Lack of Digital Literacy                    | 40%                                     | 25%                           |
| Security Concerns (Fraud, Cyber<br>Threats) | 55%                                     | 50%                           |
| Poor Internet Connectivity                  | 35%                                     | 20%                           |
| Technical Issues in Banking Apps            | 50%                                     | 30%                           |
| Preference for Traditional Banking          | 45%                                     | 20%                           |

# **Key Findings:**

- Security concerns are common across both public and private banks.
- Public bank customers (SBI, Canara Bank, Bank of Baroda) face higher technical issues and prefer traditional banking.

Private bank customers (HDFC, ICICI, Axis Bank) experience fewer technical difficulties and have higher • digital literacy.

# **Correlation Analysis: Factors Influencing Digital Banking Adoption**

A Pearson correlation analysis was conducted to identify key factors affecting digital banking adoption.

| Factor                | Correlation with Digital Banking Usage (r-value) |  |  |  |
|-----------------------|--|--|--|--|
| Education Level       | +0.65 (Moderate Positive)                        |  |  |  |
| Age                   | -0.50 (Negative)                                 |  |  |  |
| Internet Connectivity | +0.70 (Strong Positive)                          |  |  |  |
| Security Concerns     | -0.55 (Negative)                                 |  |  |  |

Interpretation:

- Higher education levels & internet connectivity lead to higher adoption. 4
- Older age groups & security concerns negatively impact digital banking usage.

Regression Analysis: Predictors of Digital Banking Adoption

A multiple regression model was run to identify significant predictors.

#### Regression Equation:

| Higher education level                 | ls & internet connectivity lead to hi                 | igher adoption.                   |                             | 2 |
|--|---|-----------------------------------|-----------------------------|---|
| Older age groups & se                  | curity concerns negatively impact of                  | <mark>digital b</mark> anking usa | ge.                         | 1 |
| sion Analysis: Predictors              | s of Digital Banking Adoption                         |                                   |                             |   |
|  | -2  | 6                                 | 100                         |   |
| iple re <mark>gression model wa</mark> | as run to identify significant predic                 | tors.                             |                             |   |
| sion Equation:                         |   |                                   | 41                          |   |
|  |   |                                   |                             |   |
| β1(Education)+β2(Intern                | netAccess)+β3(SecurityConcern)+                       | 34(Age)+ε                         |                             |   |
| β1(Education)+β2(Intern                | hetAccess)+β3(SecurityConcern)+  Beta Coefficient (β) | 34(Age)+ε<br><b>p-value</b>       | Significance                |   |
|  |   |                                   | Significance<br>Significant |   |
| Variable                               | Beta Coefficient (β)                                  | p-value                           |                             |   |
| Variable<br>Education Level            | Beta Coefficient (β)       0.35                       | <b>p-value</b> 0.001              | Significant                 | 4 |

#### Interpretation:

- Education level & internet access are strong positive predictors of digital banking adoption.
- Security concerns & age have a negative impact on adoption rates.

# Bank-wise Comparative Analysis of Digital Banking Challenges

| Challenges A VEILU        | SBI | Canara Bank | Bank of Baroda | HDFC Bank | ICICI Bank | Axis Bank |
|---------------------------|-----|-------------|----------------|-----------|------------|-----------|
| Mobile Banking Issues     | 35% | 30%         | 32%            | 15%       | 12%        | 10%       |
| Security Concerns         | 50% | 48%         | 52%            | 45%       | 43%        | 40%       |
| Internet Banking Downtime | 40% | 35%         | 38%            | 18%       | 15%        | 12%       |
| Lack of Awareness         | 45% | 42%         | 40%            | 20%       | 18%        | 15%       |

| Challenges                   | SBI | Canara Bank | Bank of Baroda | HDFC Bank | ICICI Bank | Axis Bank |
|------------------------------|-----|-------------|----------------|-----------|------------|-----------|
| Preference for Branch Visits | 50% | 48%         | 46%            | 25%       | 20%        | 18%       |

Key Insights:

- SBI and Canara Bank customers report the highest issues with mobile banking and internet downtime.
- Private banks (HDFC, ICICI, Axis) have fewer mobile banking issues but still face security concerns.
- Public banks have a higher percentage of customers preferring branch visits compared to private banks.

#### Discussion

The study highlights a significant disparity in digital banking adoption between public and private bank customers in Bagalkot. Private banks like HDFC, ICICI, and Axis Bank have successfully encouraged digital banking usage, with higher adoption rates for mobile banking (80%) and internet banking (75%). In contrast, public banks such as SBI, Canara Bank, and Bank of Baroda still rely more on ATM services (95%) and branch visits (65%), indicating a slower transition to digital platforms. This suggests that private banks have leveraged superior technology, customer engagement, and marketing strategies, whereas public banks face challenges in shifting their traditional customer base towards digital solutions. One of the key challenges affecting digital banking adoption, particularly in public banks, is the lack of digital literacy and awareness. About 40% of public bank customers reported difficulties in using digital banking services, compared to 25% of private bank customers. This indicates that private banks have been more effective in conducting customer education programs and offering user-friendly banking apps. Public sector banks must focus on improving digital awareness through workshops, tutorials, and better customer support.

Security concerns and fraud risks are another major challenge impacting both public and private banks. 55% of public bank customers and 50% of private bank customers expressed concerns about phishing attacks, data breaches, and unauthorized transactions. This highlights the need for stronger cybersecurity measures such as two-factor authentication, real-time fraud detection, and enhanced customer awareness initiatives. Without addressing these security concerns, digital banking adoption may continue to face resistance, especially among older and less tech-savvy customers. Technical issues and infrastructure limitations further hinder the digital banking experience, particularly in SBI and Canara Bank, where 50% of customers reported frequent login failures and transaction errors. Many public sector banking apps suffer from outdated interfaces, slow processing times, and inadequate customer support. In contrast, private banks have invested in seamless mobile banking experiences, offering better app performance and reliability. Public banks need to prioritize upgrading their digital infrastructure and ensuring smoother user experiences to retain customers in the digital space.

Overall, while digital banking adoption is growing, public banks still lag behind private banks due to lower digital literacy, security concerns, and technical inefficiencies. To bridge this gap, public banks must enhance digital literacy programs, improve cybersecurity measures, and upgrade mobile banking technology. A customer-centric approach with simplified processes, multilingual support, and personalized assistance will help accelerate digital banking adoption in Bagalkot.

#### Conclusion

The study reveals a clear contrast between public and private banks in the adoption of digital banking services in Bagalkot. While private banks like HDFC, ICICI, and Axis Bank have successfully integrated digital banking solutions, public banks such as SBI, Canara Bank, and Bank of Baroda still face challenges in shifting their customers to online platforms. The findings indicate that mobile and internet banking adoption is higher among private bank customers, whereas public bank customers rely more on branch visits and ATM services. Key barriers to digital banking adoption include lack of digital literacy, security concerns, and technical inefficiencies. Public bank customers, in particular, struggle with mobile banking issues (50%) and security concerns (55%), highlighting the need for better customer education and stronger cybersecurity measures. Additionally, technical challenges in banking apps further discourage users from embracing digital services. To enhance digital banking adoption, banks—especially public sector ones—must invest in customer awareness programs, improve digital infrastructure, and strengthen cybersecurity measures. Encouraging trust in digital platforms through simplified interfaces, multilingual support, and responsive customer service will be crucial. By addressing these challenges, public banks can bridge the gap with private banks and ensure broader financial inclusion in the digital era.

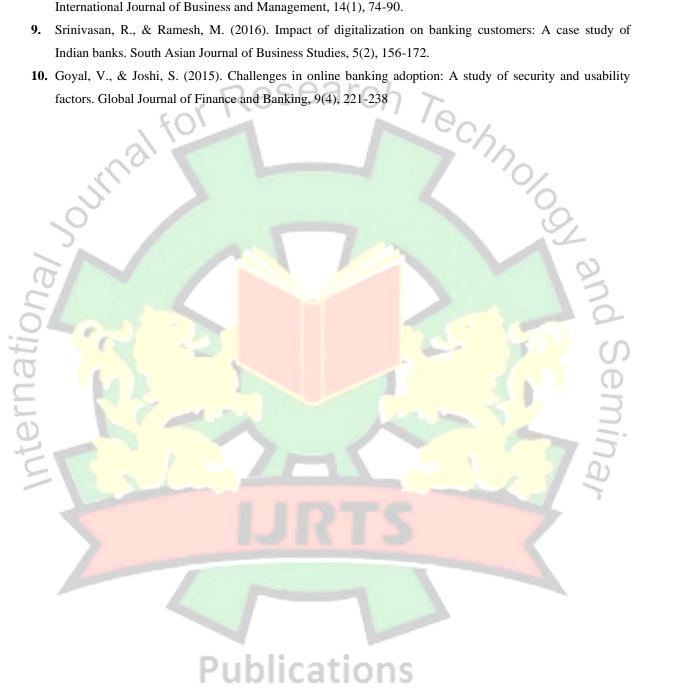
#### Recommendations

To increase digital banking adoption, public banks should enhance digital literacy programs through workshops, tutorials, and customer support initiatives. Improving mobile banking infrastructure and app performance is essential to reduce technical issues and enhance user experience. Strengthening cybersecurity measures such as two-factor authentication and fraud detection will help build customer trust. Expanding internet connectivity in rural areas can further boost adoption. Lastly, banks should focus on personalized customer engagement to encourage traditional banking users to shift toward digital platforms.

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