

# A Study On Present Status of E Banking Services in Tamil Nadu \*1 S. Suguna, <sup>2</sup>R. Nagalakshmi

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**Abstract:** E-banking has rapidly transformed the banking landscape in Tamil Nadu, driven by technological advancements and increasing internet penetration. This paper examines the current status of e-banking services in the state, highlighting key features such as mobile banking, online transactions, and digital wallets. The rise of fintech companies has introduced innovative solutions, enhancing customer experience and accessibility. Despite the growth, challenges remain, including cybersecurity threats and digital literacy gaps among certain demographics. The government's initiatives, such as the Digital India campaign, aim to promote e-banking and financial inclusion. Overall, Tamil Nadu is witnessing a robust adoption of e-banking, making it a crucial player in India's digital financial ecosystem.

Keywords: E-banking, Tamil Nadu, digital transformation, fintech, financial inclusion, cybersecurity...

# 1. INTRODUCTION TO E-BANKING IN TAMIL NADU

E-banking, or electronic banking, refers to the digital delivery of banking services, allowing customers to conduct financial transactions via the internet. In Tamil Nadu, e-banking has gained significant traction over the past two decades, driven by advances in technology, increased internet connectivity, and a growing tech-savvy population.

## **Historical Context**

The journey of e-banking in Tamil Nadu began in the late 1990s with the introduction of basic online banking services. The liberalization of the Indian economy and the advent of the internet paved the way for banks to offer digital services, such as online account access and fund transfers. The state's vibrant IT sector, particularly in cities like Chennai and Coimbatore, further facilitated this growth.

### **Current Landscape**

Today, Tamil Nadu boasts a wide array of e-banking services, including mobile banking apps, internet banking, and digital wallets. Major banks and fintech companies are competing to offer innovative solutions, enhancing customer convenience and streamlining operations. Features such as instant fund transfers, bill payments, and investment services are now commonplace.

### **Government Initiatives**

The Indian government's push for digital finance, exemplified by initiatives like Digital India, has significantly impacted the adoption of e-banking in Tamil Nadu. Efforts to improve digital literacy and infrastructure have contributed to a more inclusive financial ecosystem.

### **Challenges and Opportunities**

Despite its growth, e-banking in Tamil Nadu faces challenges, including cybersecurity threats and varying levels of digital literacy among consumers. However, the ongoing expansion of internet access and smartphone usage presents opportunities for further growth and innovation in the sector.

**General Definition:** E-banking, or electronic banking, refers to the online delivery of banking services and products through electronic channels, enabling customers to conduct financial transactions without visiting a physical bank branch.

Service Definition: E-banking encompasses a range of services provided by banks, including online account management, funds transfers, bill payments, and investment services, all accessible via computers or mobile devices.

**Technological Definition:** E-banking is the use of digital technology and the internet to facilitate banking transactions and services, allowing for real-time access to financial information and operations. These definitions highlight various aspects of e-banking, from its operational scope to its technological and customer-focused nature.

## 2. RESEARCH METHODOLOGY

This research utilized secondary data gathered from various sources, including databases of books, research papers, and relevant articles available on the Internet, focusing on the topic of e-banking. This approach allowed for a comprehensive analysis of existing literature and findings related to e-banking practices, trends, challenges, and opportunities

## 3. OBJECTIVES OF THE STUDY

- 1. To Understand the Concepts of E-Banking: Explore the fundamental principles and definitions associated with e-banking.
- 2. To Analyze the Current Status of Financial Innovations in the Indian Banking Sector: Examine the latest advancements and trends in digital banking services within India.
- 3. To Identify the Challenges Faced in E-Banking: Investigate the key obstacles and issues that hinder the growth and adoption of e-banking services.
- 4. To Explore the Opportunities in E-Banking: Assess the potential avenues for growth and innovation in the e-banking landscape

## 5. REVIEW OF LITERATURE ON E-BANKING

The review of literature on e-banking encompasses various dimensions, including technological advancements, user adoption, regulatory frameworks, and challenges. This section summarizes key findings from scholarly articles, reports, and studies in the field.

### **Technological Advancements**

Research highlights the role of technology in transforming traditional banking services into digital formats. Scholars such as Alalwan et al. (2017) emphasize the importance of user-friendly interfaces and mobile accessibility in enhancing customer engagement. Technologies like blockchain and artificial intelligence are also discussed as tools that can improve security and personalization in e-banking (Dahlberg et al., 2015).

### User Adoption and Behavior

The factors influencing the adoption of e-banking services have been widely studied. The Technology Acceptance Model (TAM) is frequently referenced, indicating that perceived ease of use and perceived usefulness significantly impact user acceptance (Davis, 1989). Studies in various contexts, including Tamil Nadu, suggest that demographic factors (age, education, and income) and trust in technology also play crucial roles in e-banking adoption (Rahi et al., 2020).

### **Financial Inclusion**

E-banking is recognized as a catalyst for financial inclusion, particularly in developing regions. Research by Muthusamy and Satya (2021) demonstrates how digital banking services can reach underserved populations, enhancing access to financial products and services. This literature underscores the potential of e-banking to bridge the gap between formal financial institutions and marginalized communities.

### **Impact of Government Initiatives**

Government initiatives play a pivotal role in promoting e-banking. The Digital India campaign, for instance, has been analyzed in various studies as a driving force behind the adoption of digital financial services in India (Kumar et al., 2022). These initiatives aim to improve digital literacy, infrastructure, and overall financial awareness among citizens.

### **Future Trends**

The future of e-banking is anticipated to be shaped by emerging technologies and changing consumer expectations. Research indicates a trend toward more personalized banking experiences through the use of data analytics and AI (Arora & Singh, 2023). The rise of fintech companies is also altering the competitive landscape, pushing traditional banks to innovate.

## 6. PRESENT STATUS IN E BANKING

E-banking, or electronic banking, has evolved significantly in recent years, transforming how consumers and businesses manage their finances. Here are some key aspects of its current status:

### Widespread Adoption

Mobile Banking: The use of mobile banking apps has surged, allowing users to conduct transactions, check balances, and manage accounts on-the-go.

Digital Wallets: Services like PayPal, Apple Pay, and Google Pay are increasingly popular for everyday transactions.

#### **Enhanced Security**

Biometric Authentication: Many banks now use fingerprint or facial recognition for secure access. Two-Factor Authentication (2FA): This is standard practice for adding an extra layer of security.

#### **Open Banking**

API Integration: Banks are using APIs to share data with third-party providers, enhancing services like budgeting apps and personal finance management tools.

#### **Customer Experience**

Personalization: Banks are leveraging AI and data analytics to offer personalized products and services. 24/7 Support: Many banks provide chatbots and virtual assistants to handle customer inquiries around the clock.

#### **Cryptocurrency Integration**

Some banks are exploring or already offering services related to cryptocurrencies, including trading and custody solutions.

#### **Regulatory Changes**

Regulations around data privacy (like GDPR) and financial practices are influencing how banks operate online, emphasizing transparency and consumer protection.

#### **Emerging Technologies**

Blockchain: Banks are investigating blockchain for secure transactions and record-keeping. AI and Machine Learning: These technologies are used for fraud detection, customer service, and risk assessment.

#### Challenges

Cybersecurity Threats: As e-banking becomes more prevalent, so do the risks of cyber attacks.

Digital Divide: Not everyone has equal access to digital banking, which can create disparities.

Overall, e-banking is poised for continued growth and innovation, focusing on security, user experience, and integration with emerging technologies.

## 7. OPPORTUNITIES IN E BANKING

E-banking in Tamil Nadu presents numerous opportunities for growth and innovation. Here are some key areas: **Increasing Digital Literacy** 

As digital literacy improves, more customers are likely to adopt e-banking services, creating a larger user base. **Mobile Payment Solutions** 

With a significant rise in smartphone usage, there is an opportunity to develop mobile payment apps tailored to local needs, including regional languages.

## **Financial Inclusion**

Targeting underserved populations in rural areas can expand access to banking services, fostering economic growth and development.

#### Microfinance and Small Loans

E-banking platforms can offer microloans and credit facilities to small businesses and entrepreneurs, supporting local economies.

**Integration of AI and Chatbots** 

Implementing AI-driven customer support can enhance user experience, helping customers with queries 24/7. **E-Wallets and Digital Transactions** 

Promoting e-wallets can facilitate seamless transactions for everyday purchases, reducing cash dependency. **Collaboration with Fintech Companies:** Partnerships with fintech startups can drive innovation in service offerings and improve operational efficiency.

**Investment in Cybersecurity:** With the rise in online transactions, there is a growing demand for robust cybersecurity solutions, presenting opportunities for specialized firms.

**Regulatory Support:** Government initiatives promoting digital finance can create a favorable environment for e-banking growth.

**Green Banking Initiatives:** Introducing eco-friendly banking solutions, such as paperless transactions, can attract environmentally conscious consumers.

The payment and settlement systems<sup>1</sup> recorded a robust growth of 57.8 per cent in terms of transaction volume during 2022-23 on top of the expansion of 63.8 per cent recorded in the previous year. In Cost terms, the growth was 19.2 per cent in 2022-23 as against 23.1 per cent in the previous year, mainly due to growth in the large value of remittance system, viz., Real Time Gross Settlement (RTGS). The share of digitalization in the total volume of non-cash retail payments increased to 99.6 per cent during 2022-23, up from 99.3 per cent in the previous year.

| Item                                   | Volume (lakh) |          |           | Value (₹ lakh crore) |          |          |
|--|---------------|----------|-----------|----------------------|----------|----------|
|  | 2020-21       | 2021-22  | 2022-23   | 2020-21              | 2021-22  | 2022-23  |
| 1                                      | 2             | 3        | 4         | 5                    | 6        | 7        |
| A. Settlement Systems                  |               |          |           |                      |          |          |
| CCIL Operated Systems                  | 28            | 33       | 41        | 1,619.43             | 2,068.73 | 2,587.97 |
| B. Payment Systems                     |               |          |           |                      |          |          |
| 1. Large Value Credit Transfers – RTGS | 1,592         | 2,078    | 2,426     | 1,056.00             | 1,286.58 | 1,499.46 |
| Retail Segment                         |               |          |           |                      |          |          |
| 2. Credit Transfers                    | 3,17,868      | 5,77,935 | 9,83,695  | 335.04               | 427.28   | 550.12   |
| 2.1 AePS (Fund Transfers)              | 11            | 10       | 6         | 0.01                 | 0.01     | 0.00     |
| 2.2 APBS                               | 14,373        | 12,573   | 17,898    | 1.11                 | 1.33     | 2.48     |
| 2.3 ECS Cr                             | 0             | 0        | 0         | 0.00                 | 0.00     | 0.00     |
| 2.4 IMPS                               | 32,783        | 46,625   | 56,533    | 29.41                | 41.71    | 55.85    |
| 2.5 NACH Cr                            | 16,465        | 18,758   | 19,267    | 12.17                | 12.82    | 15.44    |
| 2.6 NEFT                               | 30,928        | 40,407   | 52,847    | 251.31               | 287.25   | 337.20   |
| 2.7 UPI                                | 2,23,307      | 4,59,561 | 8,37,144  | 41.04                | 84.16    | 139.15   |
| 3. Debit Transfers and Direct Debits   | 10,457        | 12,189   | 15,343    | 8.66                 | 10.34    | 12.90    |
| 3.1 BHIM Aadhaar Pay                   | 161           | 228      | 214       | 0.03                 | 0.06     | 0.07     |
| 3.2 ECS Dr                             | 0             | 0        | 0         | 0.00                 | 0.00     | 0.00     |
| 3.3 NACH Dr                            | 9,646         | 10,755   | 13,503    | 8.62                 | 10.27    | 12.80    |
| 3.4 NETC (Linked to Bank Account)      | 650           | 1,207    | 1,626     | 0.01                 | 0.02     | 0.03     |
| 4. Card Payments                       | 57,787        | 61,783   | 63,345    | 12.92                | 17.02    | 21.52    |
| 4.1 Credit Cards                       | 17,641        | 22,399   | 29,145    | 6.30                 | 9.72     | 14.32    |
| 4.2 Debit Cards                        | 40,146        | 39,384   | 34,199    | 6.61                 | 7.30     | 7.20     |
| 5. Prepaid Payment Instruments         | 49,366        | 65,783   | 74,667    | 1.97                 | 2.79     | 2.87     |
| 6. Paper-based Instruments             | 6,704         | 6,999    | 7,088     | 56.27                | 66.50    | 71.63    |
| Total - Retail Payments (2+3+4+5+6)    | 4,42,180      | 7,24,689 | 11,44,138 | 414.86               | 523.94   | 659.04   |
| Total Payments (1+2+3+4+5+6)           | 4,43,772      | 7,26,767 | 11,46,563 | 1,470.86             | 1,810.52 | 2,158.50 |
| Total Digital Payments (1+2+3+4+5)     | 4,37,068      | 7,19,768 | 11,39,476 | 1,414.58             | 1,744.01 | 2,086.87 |

**TABLE 1.** Payment System Indicators - Annual Turnover (April-March)

APBS: Aadhar Payment Bridge System. ECS: Electronic Clearing Service. NEFT: National Electronic Funds Transfer. RTGS system customer and inter-bank transactions cover only. Arrangement of government securities and forex transactions are through the Clearing Corporation of India Ltd. (CCIL). Government Securities include outright trades and both legs of repo transactions and triparty repo transactions. The figures for cards are for payment dealings at Point of Sale (POS) terminals and online. Figures in the columns might not add up to the total due to rounding off of numbers. Digital Payments Among the digital modes of payments, the number of transactions using RTGS system increased by 16.7 per cent during 2022-23. In terms of value, RTGS transactions registered an increase of 16.5 per cent; transactions through the National Electronic Funds Transfer (NEFT) system also witnessed an increase of 30.8 per cent and 17.4 per cent in volume and value, respectively, reflective of the increase in large value corporate transactions, in line with rising economic activity. As at end-March 2023, RTGS services were available through 1,65,390 IFSCs<sup>2</sup> of 243 members, while NEFT services were available through 1,66,544 IFSCs of 230 member banks. During 2022-23, payment transactions carried out by way of credit cards increased by 30.1 per cent and 47.3 per cent in terms of volume and value, respectively. Transactions through debit cards decreased by 13.2 per cent in terms of volume, and 1.4 per cent in terms of value. Prepaid Payment Instruments (PPIs) recorded an increase in volume and value by 13.5 per cent and 2.9 per cent, respectively. The growth in digital payments can be attributed to increased accessibility of acceptance infrastructure, which witnessed substantial growth during the year benefitting from the Payments Infrastructure Development Fund (PIDF) scheme, operationalised in January 2021. The number of Points of Sale (PoS) terminals increased by 28.3 per cent to 77.9 lakh at ending-March 2023, while the number of Bharat Quick Response (BQR) codes deployed increased by 6.7 per cent to 53.8 lakh during the same period. Further, UPI QR increased by 48.4 per cent to 25.64 crore at end-March 2023. The number of Automated Teller Machines (ATMs) also increased to 2.59 lakh at end-March 2023 from 2.52 lakh at end-March 2022.

| (Number)                                 |      |      |
|--|------|------|
| Entities                                 | 2022 | 2023 |
| 1  | 2    | 3    |
| A. Non-Banks – Authorised                |      |      |
| PPI Issuers                              | 37   | 36   |
| WLA Operators                            | 4    | 4    |
| Instant Money Transfer Service Providers | 1    | 1    |
| BBPOUs                                   | 9    | 10   |
| TReDS Platform Operators                 | 3    | 3    |
| MTSS Operators                           | 9    | 8    |
| Card Networks                            | 5    | 5    |
| ATM Networks                             | 2    | 2    |
| B. Banks – Approved                      |      |      |
| PPI Issuers                              | 57   | 58   |
| BBPOUs                                   | 43   | 44   |
| Mobile Banking Providers                 | 648  | 725  |
| ATM Networks                             | 3    | 3    |
| Source: RBI.                             |      |      |

| TABLE 2. Authorisation of Payme | ent System Operators (end-March) |
|---------------------------------|----------------------------------|
|---------------------------------|----------------------------------|

Payment System Operators (PSOs) comprise PPI issuers, cross-border Money Transfer Service Schemes (MTSS), White Label ATM (WLA) operators, Trade Receivables Discounting System (Tre DS) platforms, ATM networks, Instant Money Transfer Service provider, card networks and Bharat Bill Payment Operating Units (BBPOUs), besides the Clearing Corporation of India Ltd. (CCIL) and the National Payments Corporation of India (NPCI) [Table IX.2]. Further, during the year, AMC Repo wipe Limited was granted Certificate of Authorisation to act as a Central Counter Party (CCP) for repo transactions in corporate debt guarantee. The Reserve Bank has prescribed guidelines to include Payment Aggregators (PAs) under its regulatory purview and some PAs have subsequently been provided in-principal authorisation

## 8. CONCLUSION AND SUGGESTIONS

Digitalization has become essential for the banking sector in India, significantly enhancing service delivery to customers. Internet banking stands out as a crucial channel, enabling consumers to perform a wide range of financial and non-financial transactions via bank websites. Key services include internet banking, SMS banking, ATMs, mobile banking, e-cheques, UPI, and debit/credit cards. In our increasingly globalized world, e-banking plays a pivotal role in addressing various challenges faced by the banking sector. It fosters customer loyalty and engagement, which can be further cultivated through training programs and simplifying the banking process for users. The younger generation is embracing the convenience and advantages of e-banking. In the future, it is likely to transition from an acceptable mode of banking to the preferred choice for many in India. Private sector banks currently dominate the point-of-sale terminal market compared to their public sector counterparts, while prepaid payment instruments are largely facilitated through mobile wallets. The Government of India, along with various agencies, is committed to enhancing the safety, security, and reliability of e-banking services through robust digital channels. As a result, fewer customers are visiting physical branches, opting instead for online and mobile

banking solutions. The trend toward e-banking is accelerating, positioning it as a vital component of India's financial landscape.

#### Suggestions

Banks should invest in comprehensive training programs to educate customers about e-banking services, ensuring they are comfortable and confident in using these platforms. Financial institutions must prioritize the development of intuitive and user-friendly interfaces to enhance the customer experience and accessibility of e-banking services. Continuous investment in advanced cybersecurity measures is crucial to protect customer data and build trust in digital banking channels. Collaborating with educational institutions and community organizations to promote digital literacy will help bridge the gap for less tech-savvy customers. Implementing robust feedback systems can help banks understand customer needs and pain points, leading to better service improvement and innovation. By embracing these suggestions, the banking sector in India can further leverage the benefits of e-banking, ensuring its growth and sustainability in the future.

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