



# Digitalization in Cooperative Banking for Enhanced Service Delivery: A Case of TNSCB

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## I. Background

Digitalization in cooperatives has emerged as a transformative approach to enhance efficiency, transparency, and member engagement across various sectors. By integrating digital technologies such as online banking, management information systems, and mobile platforms, cooperatives can streamline administrative processes, reduce operational costs, and improve service delivery to members (World Bank, 2021). For instance, digital record-keeping and automated accounting helps prevent fraud and ensure accurate financial reporting, thereby increasing trust among members and stakeholders.

The adoption of digital tools also facilitates better decision-making and data-driven strategies. Cooperatives can analyze real-time data to assess member needs, monitor financial health, and plan for future growth. Additionally, digital platforms enable wider outreach and communications, making it easier for members, especially in rural areas, to access information, participate in meetings, and avail services remotely. This increased accessibility is particularly important in the context of the COVID-19 pandemic, which accelerated the shift toward digital interactions (FAO, 2022).

Despite the benefits, challenges such as a lack of technological infrastructure, limited digital literacy, and resistance to change hinder the widespread digitalization of cooperatives. Many rural cooperatives struggle with poor internet connectivity and a lack of trained personnel to manage digital systems. To address these issues, governments and development agencies are implementing capacity-building programs and providing financial support for digital upgrades. The National Cooperative Development Corporation (NCDC) in India, for example, has initiated schemes to promote digital transformation within cooperative societies (NCDC, 2022).

Looking forward, digitalization is expected to play a pivotal role in shaping the future of cooperatives by fostering inclusive growth and sustainable development. Policy frameworks emphasizing digital empowerment, coupled with innovative technologies like block chain and mobile banking, can revolutionize cooperative operations. As highlighted by the International Cooperative Alliance (2023),

embracing digital transformation is essential for cooperatives to remain relevant, competitive, and resilient in an increasingly digital world.

Considering the significance of Digitalisation and its role in transforming the Cooperatives, for the betterment of the society at large, a centrally sponsored project is being implemented to computerize 63,000 functional Primary Agricultural Cooperative Credit Society (PACS) nationwide, with a budget of ₹2,516 crore. The initiative aims to integrate PACS into a unified Enterprise Resource Planning (ERP) system, connecting them to National Bank for Agriculture and Rural Development (NABARD) via State and District Cooperative Banks. So far, 58,383 proposals have been received from 24 States and 4 UTs, with ₹11.28 crore released to Uttar Pradesh for digitizing 1,539 PACS. NABARD has established Project Monitoring Units and initiated software development through a selected vendor. The project is expected to enhance operational efficiency, accelerate loan disbursal, reduce transaction costs, and improve transparency through CAS and MIS integration.

## II. Review of Literature

Some pertinent studies connected to the topic, are reviewed to have more research insights on the theme.

**Anjan A. Kalini (2020)**, in his study “Efficiency Escalation in Cooperatives through Digitalization”, explored employee perceptions of digitalization and its impact on the operational efficiency of cooperatives. The findings indicate that most employees believe digitalization enhances documentation and reporting systems. However, to overcome challenges associated with digital adoption, the majority of respondents emphasized the need for off-the-job training and education in office automation, as on-the-job training can disrupt daily operations. The study advocates for the comprehensive digitalization of cooperative activities to minimize confusion around transactions and record-keeping. It concludes that rural cooperatives in India lag in digital transformation due to limited managerial and staff capacity and a persistent reliance on traditional book-keeping methods. Although the government has intended to digitalize all cooperatives, the goal remains unmet.

**Apte and Nerleker (2020)** reviewed existing literature on the impact of digitalization on the financial performance of Urban Co-operative Banks (UCBs). Digitalization is reshaping business operations, introducing new channels for delivering banking products and services, such as Core Banking Systems (CBS), Unified Payment Interface (UPI), Automated Teller Machines (ATMs), Telephone Banking, PC Banking, Electronic Funds Transfer (EFT), and mobile app-based banking. Originally established to meet local banking needs, UCBs are now evolving into technology-driven institutions. Their primary goal is to enhance customer service while boosting profitability and competitiveness. Recognizing the importance of digitalization, UCBs view it as a strategic opportunity to improve operational efficiency and financial performance.

**Louis Cousin and Luc Andebrand (2019)**, in their study “Assessing the Future of Cooperative Associations in a Digital Era: Drivers and Barriers of Innovation”, examined how cooperatives navigate socio-economic challenges while striving for greater efficiency through digital solutions. The study highlights disparities in digital adoption among members, some proactively engaged in innovation

through working groups, the development of online collaborative platforms, and the creation of digital workspaces. It concludes that international cooperative associations are increasingly initiating innovation processes aimed at building digital knowledge platforms, positioning themselves for sustainable growth in the digital era.

**Conto et al. (2019)**, in their study “Digital Participation in Cooperatives: Governance and Democracy in Social Enterprises in the Digital Era”, explored how digital tools influence communication, transparency, service co-creation, and decision-making in both traditional and platform cooperatives. The study found that while some cooperatives are experimenting with digital initiatives, particularly in conducting assemblies and enhancing communication, these efforts are largely limited to social media use. Small-scale cooperatives often avoid digital participation due to high implementation costs compared to the ease of physical gatherings. Additionally, most platform cooperatives operate locally. The study concludes that as cooperatives grow in size and geographic reach, the adoption of digital participation tools is likely to increase, enhancing governance and democratic engagement.

**Veerakumaran and Vinaikumar (2018)**, in their study “Digitalization of Cooperative Business: A Case Study of PACS in Kerala”, explored the extent of digitalization in cooperative banking and its impact on financial performance. The study highlights that digital initiatives have positively influenced the bank’s capitalization, with reserve positions showing a strong compounded annual growth rate (CAGR) of 20.10%. The deposit base, which forms the core of the bank’s working capital, also demonstrated a healthy CAGR of 22.66%. As a result, the overall working capital achieved a CAGR of 24.33%, reflecting robust financial growth. Additionally, the increased issuance of loans indicates not only efficient fund utilization but also the bank’s success in fulfilling its organizational objectives by supporting its members.

**Jakanathan et.al. (2018)**, in their study “Unleashing the Potential of Block chain Technology for Cooperative Development”, explored how the digital revolution has reshaped the economy and opened new opportunities for innovation in the cooperative sector. The study highlights that Indian cooperatives have begun integrating into the digital economy through platforms like the Indian Cooperative Digital Platform. To remain competitive, cooperatives must redesign their business models by embracing technological advancements and understanding that digital tools offer a chance to build closer relationships with their members. The authors emphasize the importance of supporting cooperatives in adopting suitable technologies within their governance structures. Blockchain, in particular, is identified as a promising tool for enhancing integration, improving transparency, and streamlining transactions. The study concludes that while full adoption of digital technologies may pose challenges, blockchain can play a key role in overcoming them and driving sustainable digital transformation in the cooperative sector.

**Jegadeswaran & Jakanathan (2018)**, in their study “Digital Model for Cooperative Credit and Non-Credit Sector:” emphasized that digital transformation enhances service delivery, customer interaction, and satisfaction in cooperative institutions. With rising demand for “Anywhere Banking,” banks must adopt secure, innovative solutions to meet the expectations of tech-savvy customers. The study notes that technology evolves rapidly, requiring continuous investment and upgrades. While cooperatives are

preparing to implement Core Banking Solutions (CBS), the broader banking industry is already exploring block chain-based systems. The authors stress the need to educate cooperative societies about CBS migration and highlight emerging technologies like business analytics and robotics, which are expected to revolutionize banking services, particularly in customer service, investment advisory, and credit approval. The study concludes that digital banking will become the dominant model shortly.

**Patil (2018)**, in his study titled “Digitalization of Economy and Cooperatives: A Case of Maharashtra State”, observed that while the government has promoted the broader adoption of cashless transactions, the prevailing preference for cash remains strong across the country. Digital literacy levels are generally low, and both consumers and merchants are more comfortable with traditional cash-based exchanges. Cooperatives reflect this trend, with only financially stable ones able to afford and implement modern information technologies. This highlights a digital divide within the cooperative sector, where access to digital tools is closely tied to financial capacity.

### III. Objectives of the study

The following are the objectives framed for execution of the study.

- i. To understand the working profile of the TNSCB in the contemporary setting.
- ii. To explore the conditions necessary for the digitalization process initiated by the TNSCB.
- iii. To ascertain the infrastructure created investment of funds, and management of funds for the digitalization process by the TNSCB.
- iv. To understand software applications being used and up-gradation of skills of employees through training by the TNSCB.
- v. To ascertain the effectiveness of digitalization services extended by the TNSCB.

### IV. Methodology

Case study method is adopted for the study which describes the digitalisation process initiated by the TNSCB particularly to make the banking service delivery system more efficient and effective. The study covers the major aspects of the Digitalisation of TNSCB with a focus on conditions necessitated for digitalisation, banking services enabled with digitalisation; and the benefits accrued by the digitalisation.

### V. Analysis and Discussion

This part of the exercise is shedding its light on the core aspects of the topic, which are as follows.

- i. Profile of the sample Bank
- ii. Conditions necessitated for the Digitalisation of the bank
- iii. Infrastructure and Investments created for the Digitalisation
- iv. Digitalised services performed by the sample bank associated with effectiveness.

## **i. Profile of Tamil Nadu State Cooperative Bank**

The Tamil Nadu State Cooperative Bank (TNSC Bank), established in 1905, serves as the central institution for the cooperative banking sector in Tamil Nadu. It plays a crucial role in advancing the cooperative movement by providing financial support to Primary Agricultural Credit Societies through District Central Cooperatives Banks and State Level Cooperatives. These institutions, collectively known as Cooperative Credit Institutions, cater to the credit needs of farmers, weavers, rural artisans, and urban consumers.

Cooperative credit institutions in Tamil Nadu operate under two categories: short-term and long-term credit structures. The short-term structure follows a three-tier system: At the village level, Primary Agricultural Cooperative Credit Societies (PACS) operate. At the district level, Central Cooperative Banks (CCBs) function with headquarters in district capitals and branches across the region. At the state level, TNSC Bank, headquartered in Chennai, coordinates and oversees the entire short-term cooperative credit framework.


Originally launched as an Urban Cooperative Bank in November 1905, TNSC Bank transitioned into a District Central Cooperative Bank in July 1920. Today, it operates with 51 branches, an Extension Counter, and a Head Office in Chennai. The bank guides CCBs and PACSs and plays a significant role in Tamil Nadu's cooperative development.

TNSC Bank was founded in the same year as the cooperative movement in Tamil Nadu and has been instrumental in the state's economic progress for over a century. It began operations just a year after the cooperative movement was initiated in India, making it the first State Cooperative Bank to celebrate a centenary. It holds a banking license from the Reserve Bank of India (RBI) and is listed under the Second Schedule of the RBI Act, qualifying it as a Scheduled Cooperative Bank. It is also a member of the Deposit Insurance and Credit Guarantee Corporation (DICGC), ensuring deposit protection under the DICGC Act.

The Government of Tamil Nadu has contributed to its share capital, and the bank operates under the supervision of the RBI and NABARD, with regular inspections conducted as per RBI guidelines. The state government also periodically reviews the bank's performance, ensuring accountability and alignment with broader financial goals.



**Table 1**  
**A Glance of Key Information of the TNSCB**

Sl. No	Particulars	Key Information
1	Date of Registration	23rd November 1905
2	Date of Commencement * (as Urban Cooperative Bank)	26th November 1905
3	Membership ('A' class members - in Numbers)	88
4	Annual Ave. Share Capital (Rs. in Crores)	514.10
5	Annual Ave. Reserve Fund (Rs. in Crores)	395.26
6	Annual Ave. Deposits (Rs. in Crores)	12819.00
7	Annual Ave. Saving Deposit (Rs. in Crores)	1213.00
8	Annual Ave. Current Deposit (Rs. in Crores)	1748.00
9	Annual Ave. Term Deposit (Rs. in Crores)	9505.00
10	Annual Ave. Net Profit/ Net Loss (Rs. in Crores)	229.23
11	Annual Ave. Loans and outstanding (Rs. in Crores)	369885.48
12	Audit Classification ((Rs. in Crores)	A Class
13	Logo	

Source: Compiled from Reports of TNSCB, 2022

Table 1 shows that as of 2021–22, the bank had 88 'A' class members, indicating a focused membership base, comprising institutional stakeholders namely DCCBs and State level Cooperatives. Financially, the bank demonstrates robust capital strength with an average annual share capital of Rs.514.10 crore and a reserve fund of Rs.395.26 crore, reflecting sound financial management and retained earnings. Its average annual deposits stand at a substantial Rs.12,819 crore, with the majority held in term deposits (Rs.9,505 crore), suggesting depositor preference for long-term savings and the bank's ability to attract stable funds.

The bank's operational efficiency is further highlighted by its net profit of Rs.229.23 crore, indicating profitability and sustainable growth. With loans and outstanding credit totaling Rs.3,69,885.48 crore, TNSC Bank plays a significant role in credit disbursement across Tamil Nadu, especially within the cooperative framework. Its A' Class audit rating for 2021–22 highlights its compliance with financial standards and governance norms. The brand name reinforces its identity as the apex institution in the state's cooperative banking structure. Overall, TNSC Bank's financial indicators and audit classification reflect a stable, profitable, and well-governed institution central to Tamil Nadu's cooperative credit ecosystem.

## ii. Conditions Necessitating the Digitalization of Cooperatives

The drive toward digitalization of cooperatives is driven by a combination of internal organizational needs and external environmental factors. Internally, cooperatives face challenges relating to outdated manual processes, a lack of transparency, and inefficient service delivery, which hinder their growth and member trust. Digitization offers solutions such as automated record-keeping, online

transaction management, and real-time data access, thereby improving operational efficiency and governance (Suresh & Balaji, 2022).

Externally, technological advancements, changing member expectations, and regulatory pressures compel cooperatives to adopt digital tools. The proliferation of smartphones and internet connectivity, even in rural areas, has increased members' demand for convenient, timely, and transparent services. Additionally, government policies such as Digital India (2015) promote digital inclusion and innovation, compelling cooperatives to modernize to remain relevant and compliant (Rajan & Kumar, 2023). Global trends towards financial inclusion and transparency also influence local cooperatives to leverage digital platforms for broader outreach and improved accountability.

Furthermore, external challenges such as the COVID-19 pandemic underscored the need for remote access to services, accelerating digital adoption. The pandemic disrupted physical operations, making digital systems essential for continued service delivery and resilience (Vijayakumar & Senthil, 2022). In sum, internal inefficiencies and external technological, regulatory, and socio-economic shifts create a compelling environment that necessitates digital transformation within cooperative institutions.

### iii. Investments and Infrastructure for Digitalisation

The study unit being the state level financing Bank for Cooperatives, it had to necessarily be imbibed digitalization for ensuring efficiency, accuracy, and for managerial decisions. The year wise allocations on physical resources hardware's and software's are briefed below.

**Table 2**  
**Investments Made and Infrastructure Created for Digitalization by TNSCB**

(Rs.in Lakhs)

Year	Investment in ICT (Hard & Software)	Infrastructure (Building & Others)	Total
2010	10.00	1.00	11.00
2011	10.50	1.50	12.00
2012	11.00	2.00	13.00
2013	11.58	2.30	13.88
2014	12.32	2.80	15.12
2015	15.70	3.20	18.90
2016	30.85	3.60	34.45
2017	09.60	4.00	13.56
2018	23.65	4.50	28.15
2019	33.24	5.50	38.74
2020	23.32	7.50	30.82
2021	12.25	8.20	20.45
2022	15.87	10.23	26.10
2023	18.45	11.56	30.01
2024	22.65	12.50	35.15
<b>Total</b>	<b>260.98</b>	<b>80.39</b>	<b>341.37</b>
<b>Annual Average</b>	<b>17.399</b>	<b>5.359</b>	<b>22.758</b>

Source: Compiled from the Records of TNSCB

Table 2 shows that the Tamil Nadu State Apex Cooperative Bank (TNSCB) has demonstrated a consistent commitment to digital transformation and infrastructure development over the past 15 years. From 2010

to 2024, the bank invested a total of Rs.260.98 lakhs in Information and Communication Technology (ICT), including hardware and software upgrades. This steady increase in ICT investment, particularly notable in 2016 (Rs.30.85 lakhs) and 2019 (Rs.33.24 lakhs), reflects the bank's strategic focus on enhancing operational efficiency, digital banking capabilities, and service delivery. These spikes may correspond to major system upgrades or the implementation of new digital platforms. The relatively lower investment in 2017 (Rs.9.60 lakhs) suggests a period of consolidation or reduced technological expansion.

In parallel, TNSCB has also expanded its physical infrastructure, investing ₹80.39 lakhs in buildings and related facilities. The infrastructure investment shows a gradual upward trend, peaking in 2024 (Rs.12.50 lakhs), indicating ongoing efforts to modernize physical spaces, possibly to support digital operations and customer service. The combined investment of Rs.341.37 lakhs over the period underscores the bank's balanced approach to both digital and physical growth. This dual investment strategy positions TNSCB as a forward-looking institution, aligning with national priorities for financial inclusion, digital banking, and cooperative sector modernization.

#### **iv. Digitalized Services Performed by TNSCB**

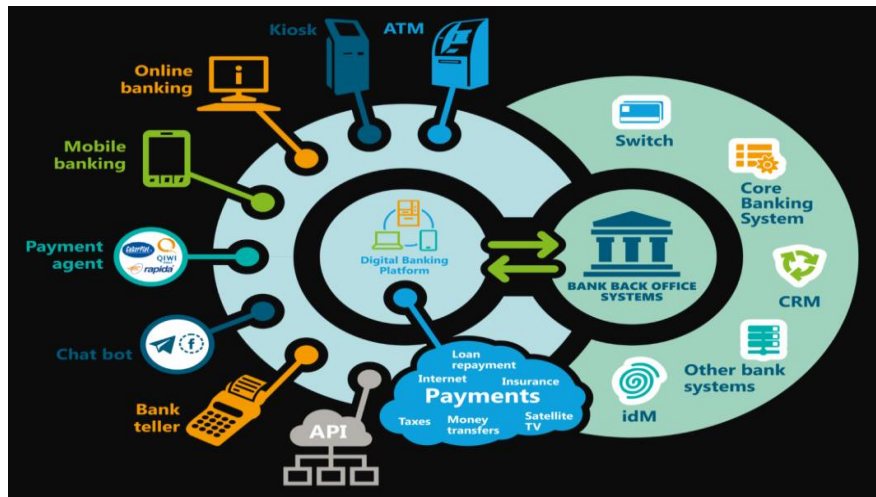
The Tamil Nadu State Apex Cooperative Bank, headquartered in Chennai, has adopted a range of digital initiatives aimed at elevating service quality and streamlining its operations. Its efforts are concentrated in the following key areas:

**a. Core Banking Solutions (CBS):** The Tamil Nadu State Cooperative Bank has embraced Core Banking Solutions (CBS) to modernize its operations and deliver seamless, real-time services to customers. CBS is a comprehensive software system that integrates key banking functions, such as account management, loan processing, and customer service, into a single, unified platform. With CBS in place, customers can access their accounts and perform transactions across any branch, anytime, ensuring convenience and flexibility. This real-time connectivity not only boosts operational efficiency but also minimizes manual errors and enhances service reliability. By adopting CBS, the bank has taken a significant leap forward in its digital transformation, positioning itself to meet evolving customer expectations with faster and more efficient banking solutions.

TNSCB has been a pioneer in adopting advanced banking technologies, notably serving as one of the pilot banks to introduce the Cheque Truncation System (CTS) clearing in the Southern Grid. To enhance customer convenience and promote digital banking, the bank offers a wide array of technological services. These include RTGS and NEFT for secure fund transfers, SMS alerts for real-time transaction updates, and both net banking and mobile banking with IMPS for on-the-go access. Customers can also pay their electricity bills and other utility charges through the Bharat Bill Payment System (BBPS), using features like Registered Pay and Insta Pay. Additionally, the bank provides Rupay debit cards, micro-ATM services with AEPS functionality, QR code-based payments, UPI integration, and BEPG for seamless digital transactions. These offerings reflect TNSCB's commitment to delivering modern, efficient, and customer-centric banking experiences.



Figure 1: Core Banking System



Source: TNSCB

**b. Mobile Banking:** Mobile banking has become a cornerstone of the TNSCB digital services, providing customers with the convenience of managing their finances on the go. Through a user-friendly mobile app, clients can access a range of banking services, including checking account balances, transferring funds, paying bills, and viewing transaction histories, all from their smartphones. This accessibility empowers customers, particularly those in remote areas, to engage with the bank without needing to visit a physical branch. Additionally, the app often includes features like security alerts and personalized notifications, enhancing the overall banking experience. By embracing mobile banking, the bank not only meets the evolving needs of its customers but also promotes greater financial inclusion and efficiency.

Figure 2: Mobile Banking



TNSC Bank excited to introduce you our user Friendly Mobile Banking App. We created it specifically for you, to make mobile banking quick and easy.

Source: TNSCB

**c. Internet Banking:** The bank offers internet banking services, providing customers with the ability to manage their accounts online, including viewing statements and initiating transactions. Internet banking is a vital service offered by the TNSCB, allowing customers to manage their finances from the comfort of their homes or offices. Through a secure online portal, users can perform a variety of transactions, including checking account balances, transferring funds, paying bills, and downloading account statements. The platform prioritizes security with robust encryption measures to protect sensitive information, ensuring peace of mind for customers. By facilitating easy access to banking services 24/7, internet banking enhances convenience and efficiency, reducing the need for physical branch visits. This digital approach not only streamlines banking operations but also fosters greater financial literacy and engagement among customers, aligning with the bank's goal of modernizing its services.

**Figure 3: Internet Banking**



Source: TNSCB

**d. Digital Payment Solutions:** Digital payment solutions play a crucial role in the TNSCB efforts to provide modern banking services. The bank supports various digital payment methods, including UPI (Unified Payments Interface), QR code payments, and mobile wallets, enabling customers to conduct transactions quickly and securely. These solutions facilitate seamless fund transfers, bill payments, and merchant transactions, making banking more accessible for users. By promoting digital payments, the bank not only enhances customer convenience but also contributes to the broader goal of financial inclusion, particularly in rural and underserved areas. Additionally, the implementation of these technologies reduces the reliance on cash, helping to streamline operations and improve overall transaction efficiency within the banking ecosystem.

**Figure 4:**  
**Digital Payment Systems**



Source: TNSCB

**e. Customer Relationship Management (CRM):** The bank supports various digital payment methods, including UPI, QR code payments, and mobile wallets, facilitating easier transactions for customers. Customer Relationship Management (CRM) systems are integral to the TNSCB's strategy for enhancing customer engagement and service delivery. By leveraging CRM technology, the bank can effectively track customer interactions, preferences, and feedback, enabling personalized communication and tailored offerings. This data-driven approach allows the bank to anticipate customer needs, provide timely support, and foster long-lasting relationships. With a centralized database, staff can access customer information quickly, improving response times and service quality. Additionally, CRM systems facilitate targeted marketing campaigns, helping the bank to reach specific segments with relevant products and services. Overall, the implementation of CRM enhances customer satisfaction and loyalty, driving the bank's growth in a competitive landscape.

**Figure 5: Customer Relationship Management**

Source: TNSCB

**f. Financial Inclusion Initiatives:** The bank promotes digital literacy and financial inclusion by offering training programs for rural and underserved populations, helping them access banking services digitally. The TNSCB is deeply committed to financial inclusion initiatives aimed at empowering underserved and rural communities. By promoting digital literacy and offering accessible banking services, the bank seeks to bridge the gap between traditional banking and those without easy access to financial resources. Programs include workshops and training sessions designed to educate individuals about using digital banking tools, such as mobile apps and online platforms. Additionally, the bank has developed tailored financial products to meet the specific needs of low-income populations, facilitating access to savings accounts, loans, and insurance. By prioritizing financial inclusion, the bank not only enhances economic participation but also fosters a culture of savings and financial planning among marginalized groups, ultimately contributing to sustainable community development.

Figure 6: Financial Inclusion Initiatives



Source: TNSCB

**g. Data Analytics:** Data analytics plays a pivotal role in the operations of the TNSCB, enabling the institution to harness valuable insights from customer data. By analyzing trends in customer behaviour, transaction patterns, and preferences, the bank can make informed decisions that enhance service offerings and operational efficiency. This data-driven approach allows for the customization of products and services to better meet the unique needs of various customer segments. Additionally, predictive analytics helps the bank identify potential risks and opportunities, allowing for proactive strategies in credit management and marketing. Ultimately, leveraging data analytics not only improves customer satisfaction and loyalty but also supports the bank's goal of achieving sustainable growth in a competitive banking landscape.

Figure 7: Areas of Using Data Analytics by TNSCB

- **Fraud detection**
- **Managing customer data**
- **Risk modelling for investment banks**
- **Personalized marketing**
- **Lifetime value prediction**
- **Customer segmentation**
- **Customer spending patterns**
- **Transaction channel identification**
- **Customer feedback analysis and application**

Source: TNSCB

**h. E-Governance:** E-governance is an essential aspect of the TNSCB efforts to align its operations with broader governmental initiatives aimed at enhancing transparency and efficiency. By integrating e-governance practices, the bank streamlines processes, making services more accessible to customers while reducing bureaucratic hurdles. This includes online applications for loans, grants, and other banking services, which not only accelerates processing times but also minimizes paperwork. The bank collaborates with various government agencies to ensure that its digital offerings comply with regulatory standards, promoting trust and accountability. Additionally, e-governance fosters greater citizen engagement by facilitating feedback and communication channels, thereby enhancing the overall



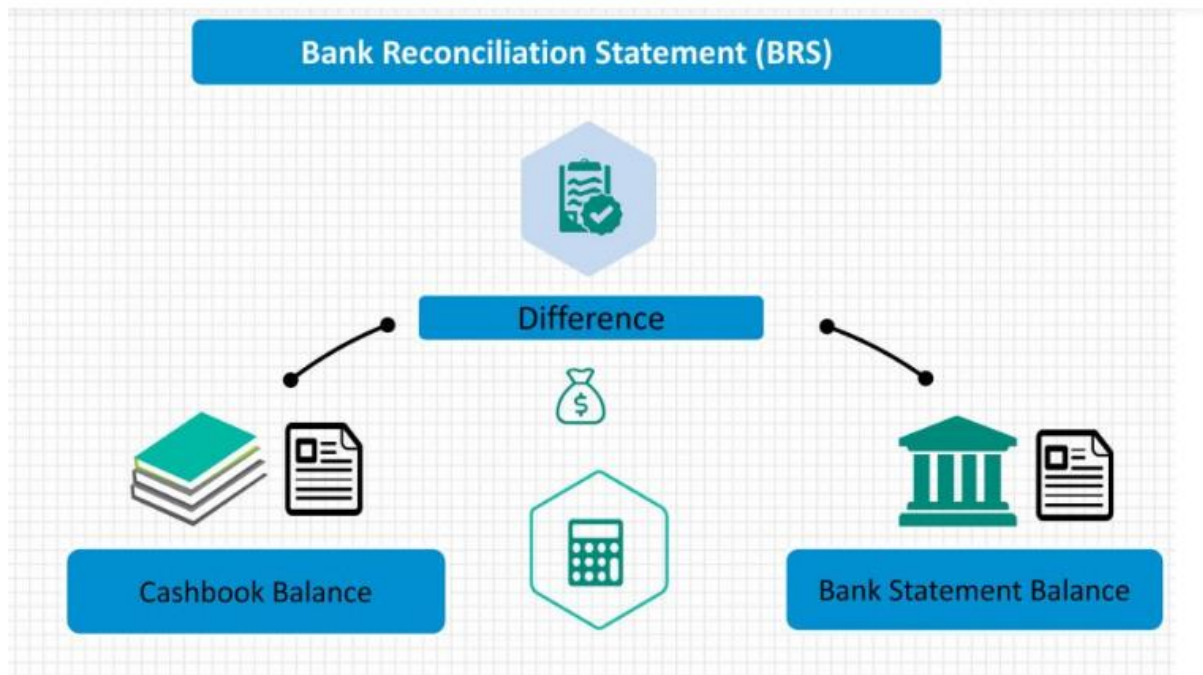
customer experience. Through these initiatives, the bank contributes to the larger goal of digital transformation within the public sector, driving progress and inclusivity in the financial landscape.

**Figure 8: E-governance in TNSCB**



Source: TNSCB

**i. Reconciliation:** Reconciliation is a vital accounting process that ensures financial accuracy and consistency by comparing two or more sets of records to confirm that figures are correct and in agreement. It serves as a powerful tool for promptly identifying errors or misappropriations in daily transactions, allowing institutions to take corrective measures proactively. In banking operations, reconciliation involves various files such as ATM-EJ scrolls, Switch files, CBS files, and NPCI files. For IMPS and POS transactions, a four-way reconciliation is required, covering Switch, CBS, and NPCI files, while bill payments through Bill Desk demand a three-way reconciliation involving CBS, Bill Desk, and Switch files. To maintain operational efficiency and avoid backlog, CBS entries must be updated daily. A robust reconciliation framework is essential for a healthy financial environment and should follow a two-step process involving both a 'Maker' and a 'Checker'. This dual control mechanism minimizes the risk of overlooking critical details that could compromise institutional integrity. Timely identification of discrepancies ensures swift action, safeguarding against potential financial losses and reputational damage.

**Figure 9: Reconciliation Statement of TNSCB**

Source: TNSCB

## VI. Key Findings

- The TNSCB has demonstrated a strong and sustained commitment to digitalization over the past decade and a half. Between 2010 and 2024, the bank invested approximately ₹260.98 lakhs in ICT infrastructure, including hardware and software, reflecting its strategic efforts to modernize its technological capabilities.
- The bank has implemented a comprehensive range of digital initiatives to improve customer service and operational processes. Key among these are the adoption of Core Banking Solutions (CBS), enabling real-time, seamless banking across branches; mobile banking apps for convenient on-the-go access; internet banking platforms with secure online transaction capabilities; and
- The bank leverages Customer Relationship Management (CRM), data analytics, and e-governance practices to personalize services, predict customer needs, and streamline administrative processes.
- Furthermore, the bank actively promotes financial inclusion through digital literacy programs targeted at rural and underserved communities, helping them access digital banking tools.

## VII. Conclusion

It is well understood from the foregoing analysis that Digitalization has widened the banking services of the study unit with innovative aspects, suiting to the requirements of the people in the modern era. Such digitalized services have enhanced the service delivery mechanism with efficiency features that have made the TNSCB to compete with nationalised and globalised banking sectors. Moreover and present days' digitalised customers and users prefer such services which are more of digitalised in nature.

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