

Digital Transformation Strategies of SBI & ICICI

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ABSTRACT

The Indian banking sector has witnessed a drastic transformation in recent years, digitalisation playing a significant role in reshaping or rebuilding traditional banking practices to compete with even foreign banks. The present research paper aims to present digitalisation strategies employed by two major Indian banks in both public and private sector, State Bank of India and ICICI Bank. To achieve this objective, a comprehensive literature review was made to study about emerging trends and practices in digital banking strategies in the Indian banking sector. The research study involved a detailed study of publicly available information, research articles, and annual reports of SBI and ICICI banks in understanding specific digitalisation practices undertaken by both banks. The findings of the study indicate that both SBI and ICICI banks have recognised the significance of digitalisation in improving their banking products and services. However, it is observed that they have adopted different approaches in implementation of digital banking services. SBI has focussed on enhancing digital banking infrastructure in expanding its digital services, and for promoting financial inclusion SBI has applied YONO (You Only Need One) platform. On the other hand ICICI bank has focussed on working with innovation and collaboration with fintech companies to introduce cutting-edge digital services and products, such as virtual assistant, mobile banking apps and personalized customer experiences. Bank has emphasized working with innovation and collaboration with fintech companies to introduce cutting-edge digital products and services, such as mobile banking apps, virtual assistants, and personalized customer experiences. Both banks provided digital banking services and witnessed increase in customer engagement, online banking etc. however banks also witnessed issues like cyber security, data privacy, etc.,. This research paper concludes by highlighting the digitalization strategies implemented by SBI and ICICI Bank. The study also made suggestions to other banks seeking to make improvements in their digital transformation journey, by emphasizing the need for focussing on customer-centric approach, robust security measures, collaboration with technology partners, and continuous innovative measures to sustain in this competitive digital era.

Keywords: Digitalization, Banking sector, State Bank of India, ICICI Bank, Digital transformation.

I. Introduction:

Today the whole world is using the Internet and even the technology has been updated in each and every sector, and there comes the banking sector. Banking has come from using traditional banking to Digital banking. Digitalisation in the banking sector made services more comfortable for customer ease. Every time the banks were adapting the latest technology to make their customers happy and easy. By demonetisation in the country it has become a cashless country by providing QR codes and Scanners for the APPS like Paytm, Phone Pe, G Pay. Even, the banks that provide their own respective apps by providing QR codes that made the customers comfortable. Today with the update of the technology in the banking sector, every customer sitting at their own place can transfer huge amounts to the other person by securing the customers accounts with the frauds. With the digitalization in the banking sector even the government has come up with certain schemes like Atal pension yojana, Pradhan mantri jan dhan yojana etc. With the digitalization, customers can detail information of their banking transaction online. Updating their passbooks has also made it easy for the customers who need it. With increased usage of smart phones and computers customers can do their banking transactions 24/7 by using the internet. Once the money is debited or credited a customer gets

a SMS for the transaction that has been done. Because of the digitalization in banking, the customers are able to use online products or services by providing the card details (debit/credit). The greater the adoption of technology, the higher the level of customer satisfaction, as it caters to their convenience and ease.

Traditional banking: In India, traditional banking is primarily branch based, customers used to visit the bank's branch and to know about all the services provided by the bank and to perform banking transactions. Banks rely more on paper based transactions like pass books, cheque books and other printed receipts of banks. The products and services offered to customers are limited in range like deposit accounts and loan accounts. Banks used to focus more on building long term relationships with their customers. Increase in use of digital technologies increased demand for digital banking services; traditional banks are undergoing a digital transformation to meet the changing needs of customers. Digital transformation includes internet banking, mobile banking, digital wallets and many other digital products and services to cater to the evolving needs of customers.

Digital Banking

Digital banking means usage of digital technologies in providing banking products and services to customers. Such as, mobile banking, digital wallets, and other electronic payment systems.

Digital banking is rapidly growing in India, many banks offering mobile banking and online banking services to their customers. The Indian government and the Reserve Bank of India (RBI) are promoting digital banking and increasing access to banking services.

II. Review of literature:

Rahmathulla, S. (2022), study is based on digital banking activities in karnataka. The study is conducted for six months. The study found that the usage of digitalisation graphs is showing an increasing trend. Research study concluded that digitalisation in banking has become a boon to all the beneficiaries.

Ipsita Paria and Dr. Arunangshu Giri (2018) focussed on digitalisation in Indian rural banking. The study mentioned that there is enormous potential for financial inclusion. The study found that features of low cost services and convenience in banking can accelerate growth of banking even in unbanked areas.

K. Hema Divya and K. Suma Vally (2018), The research study focussed on the acceptance of customers of digital payment systems. The study is based on primary data. The study was conducted in hyderabad. Researchers used the chi-square test in making analysis of the primary data collected through questionnaires. The study analysis concluded that the usage of digital payment systems enhanced the banking efficiency and made the country attain the objective of a cashless economy.

Anthony Rahul Golden S. (2017), mentioned that banks play a vital role in our lives. The research study is based on digitalisation innIndian banking sector. The analysis found that banks are integrating emerging technology in banking to provide continuously customer related services to boost customer's experience. The study also observed that banks are facing remarkable challenges in making changes in digitalisation banking. The analysis also found that as we are living in digital era, it is compulsory for customers to move from traditional banking to digital banking

The research paper discusses the varying development in digital transformation of banks in India in detail.

III. Objectives of the study:

- To understand the requirement of digital banking
- To know the present digital banking practices adopted in Indian banking sector

- To identify the digital banking strategies of State Bank of India and ICICI banks in developing digital banking.

IV. Scope of the study:

The scope of the study is limited to Digital banking activities in the Indian banking sector. The study includes digital banking strategies of State Bank of India and ICICI bank.

V. Research methodology:

The research study is based on secondary data only. Data was collected through research articles, banks annual reports, newspapers etc. The present study is exploratory study to identify the digitalization strategies in banking in both SBI and ICICI banks.

VI. Need for Digital banking:

1. **Convenience:** Digital banking is more convenient for customers to make banking transactions with more flexibility. This avoids visiting banks physically by using mobile or electronic devices.
2. **Speed:** Digital banking services enable customers to make easy and quick banking transactions.
3. **Security:** Digital banking is provided with advanced security measures such as two-factor authentication, finger prints, encryption, and also real-time fraud detection procedures.
4. **Integration:** Digital banking services are provided in integration with other digital services, such as apps, social media platforms and e-commerce platforms enabling customers to perform transactions smoothly.
5. **Accessibility:** Digital banking services are accessible even to remote areas, which traditional banking may not facilitate.
6. **Personalization:** Digital banking delivers customized services to customers regarding deposits, loans and other financial services.
7. **Financial inclusion:** In bridging the gap between banked and unbanked population, it allows population. This allows populations in remote and unbanking areas to access basic banking services through their digital devices like mobile phones. Digital banking empowers individuals with no or limited access to banking services in promoting financial inclusion and financial empowerment of the economy.
8. **Metamorphosis in digital banking:** Artificial intelligence, big data analytics, machine learning, block chain technology in developing new business models. This improves competition, innovation and overall efficiency of the digital banking sector.

VII. Types of Digital Banking:

- **Banking cards:** Cards are used to withdraw cash, making digital payments debit and credit cards for payments such as Point of Sale (PoS) transactions, swiping cards using wifi.
- **Aadhaar Enabled Payment System (AEPS):** This system allows customers to initiate banking instructions with successful verification of the Aadhaar number.
- **Unified Payments Interface (UPI):** presently UPI is the most popular form of digital banking. Customers in making UPI digital payments use UPI makes use of a virtual payment address (VPA) without using bank account details or an IFSC code. Customers can access UPI round the clock. UPI-based apps in India are PhonePe, BHIM, and Google Pay.
- **Mobile Wallets:** Mobile wallets store bank accounts and other card credentials to add funds to the wallet in making payments. Mobile wallets eliminated usage of four-digit card pins or

entering CVV details or carrying cash. Popular mobile wallets are Paytm, Amazonpay, Freecharge, Samsungpay, MobiKwik, etc.

- **PoS terminals:** PoS machines are portable devices that read cards and authorize and complete the digital payment.
- **Internet and Mobile Banking:** Internet banking, e-banking allow the operating of certain banking services over the Internet, such as transfer of funds, opening and closing bank accounts. Mobile banking is availing banking services through mobile-based applications allows customers to avail banking services.

VIII. Digital banking progress in India:

India has made a wonderful progress in digitalization in the banking sector in the recent past years. there are some remarkable improvements:

- With the introduction of UPI in digital banking this has safeguarded the amount of the customers when they transfer by using the UPI pin to one account to another or any other payments.
- The process of making Aadhar, it's a biometric identification of customers has made possible the growth of digitalization. It is linked to the account of the customer by using biometric instead of physical documentation.
- Wallet services like Gpay, Phone Pe, Paytm and BHIM apps have become popular to customers by scanning the QR codes to make the payments easily. These Apps are running successfully all over the world.
- The introduction of Bharat Bill Payment Services,has made the payments convenient to customers by using their mobiles.
- With the rapid growth in digitalization even the Government took initiatives and provided some schemes to customers like Pradhan mantri jan dhan yojana, Atal pension yojana & Stand Up India scheme so that they can promote digitalization in banking sector.
- Banks have a strong customer base and all-round digital platforms.
- Digital marketing and credit depends on data analytics
- Banks own tech stacks that are used to build a set of technologies and applications, which are 100% automated, and recording a strong digital performance backed by staff agility.
- Risk management in digital banking is higher in Banks.
- The usage of smart phones and greater usage of the internet has grown in the digitalization of banking. The banks are providing services to the customers through the apps by filling the application and making the payment online.

The advancements made in digital banking have made banking more convenient for uses of banking which also played a vital role in implementation of financial inclusion and cashless economy, and promoting a strong digital economy in India.

IX. Digital Banking strategies:

Digital banking strategies refer to the approaches and tactics that banks and financial institutions adopt to leverage digital technologies and channels to enhance their banking services, improve customer experience, and stay competitive in the digital era.

1. **Omni channel Banking:** Banks provide different channels to customers by mobile apps, websites and ATMs. By these channels customers can use banking services at their convenience whenever they are needed.

2. **Mobile Banking:** The rapid usage of smartphones banks has introduced banking apps.

By using these apps customers will be able to know about the fund transfers, account management, withdrawals and deposits transactions of their accounts.

3. Personalized Customer Experience: Banks are using Artificial intelligence and data analytics to gain into customer's preferences. This enables them to provide customized banking experiences based on customers' needs and preferences for personalized product recommendations, customized banking experiences, targeting marketing.

4. Enhanced Security Measures: As cyber crimes are increasing customers seek safety or security of their account data for real-time fraud monitoring in protection customers information and to prevent unauthorized customer access. To get rid of the hacking of customer accounts banks have provided security by OTPs, passwords and fingerprints.

5. Open Banking and APIs: As the introductory act of Open banking allows banks to firmly share the accounting data of the customer with outside vendors with APIs(Application Programming Interfaces). This permits banks to work in collaboration and integration with other financial service providers and fintech companies offering a wide range of services and innovative solutions to customers.

6. Advanced Analytics and AI: As in every sector, analytics and AI have gained popularity, even banks seeing inwards for the future needs of the customer like detecting the frauds. CIBIL scores and seeking advice in respect to select, purchase and sell the financial products.

7. Chatbots and Virtual Assistants: As in the earlier point regarding AI, even AI played a significant role in providing Chatbots and virtual assessment where a customer can seek the full instant support about all account information by freeing up human agents. This enables human agents to focus on more value added activities.

8. Blockchain and Distributed Ledger Technology: As the banking sector is marching through the blockchain technology for safeguarding and improving identity verification and crystal clear transactions. Blockchain can build up or strengthen the efficiency of the operations, decrease cost and refine the banking environment.

9. Banks adopting Robotic Process Automation (RPA): Banks are using advanced business automation tools to automate many mundane and repetitive tasks such as customer complaints, credit card applications and websites scraping. By introducing RPA it will analyze and flawlessly validate client information in order to save money and resources and also allow employees to concentrate on more complex activities.

10. Collaboration with Fintech Startups: Banking sector in association with fintech startups to fit into their innovatory results and flexibility. By partnering and investing in fintech industries enables banks to use modern technology and intently can focus on understanding the needs and expectations of the customers by offering more innovative services and products

X. The research study discusses about the strategies implemented by SBI and ICICI banks in detail:

X. (i) State Bank of India Digital strategies:

SBI envisioned an extensive online platform with four pillars: 1. Convenience 2. A financial superstore with a wide range of investments and financial services 3. An online marketplace with more lifestyle products from various partners. 4. Comprehensive digital transformation with analytics. SBI's Digital transformation strategy focuses on areas such as technology initiatives, technology introductions, ICT spending and investments. SBI has been diligently leveraging the capabilities of artificial intelligence in digital transformation of banking operations. Digital and transaction banking in SBI leveraged with latest technology to provide clients with comprehensive products and services related banking transactions. The objective of SBI is to adopt new technology initiatives like

customized MIS, integration with enterprise resource planning (ERP) initiatives. Bank has advanced development in technology towards backend processes and robust customer service delivery channels. For customer satisfaction and providing finest services the bank has introduced new solutions like VAB based cash and cheque collections, digi voucher etc. SBI also offered a multi-channel delivery model for customers to carry out transactions through any channel, anytime and at any place. SBI has got recognised as a “best cash management and transaction bank in India”. This was possible through effective digital banking.

SBI ePay: SBI is the only bank in India to have its own Payment Aggregator services which is having distinct cost advantage and security over other banks. Government departments, universities, merchants and institutions prefer having their data handled by SBIEpay over other private aggregators. This helped SBI digitally serve more customers who use debit cards, credit cards of VISA, Master card, Rupay, payment wallets, and are directly integrated with Paypal and Amex. Bank also has NEFT and UPI, and UPI QR code as a payment mode. This link-based payment option helped merchants accept online payments without needing a website.

1: SBI bank’s digital transformation strategies:

SBI total ICT spending in 2021	\$1.8 billion
ICT spending by function wise	Communications, data center, Network, application, end-user computing, Service desk, and Management
ICT spending by channel	Internal development and maintenance, technology vendors, local resellers, ICT services providers, Telcos, specialist outsourcers and system integrators.
External ICT spending by segment	ICT services, hardware, network and communications, consulting
Technology theme focus	Artificial intelligence, block chain, big data, cybersecurity and payments

Source: www.globaldata.com/store/report/state-bank-of-india-enterprise-tech-analysis

As part of modernization and digitalisation, SBI now has added another seven digital products to their customers:

- **SBI Digital Village:** Providing all the facilities to the village people in dealing with their accounts in the village and even they can use the village ATMs and by using the schemes which the government has initiated. Banks also can connect customers by mobile banking , Debit cards and other services in villages.
- **SBI Mingle:** The customer who ever has a social media account like face book and twitter etc can transfer the amount.
- **State Bank Buddy:** It is a wallet where one can send and receive the amount even if they don't have a SBI account.
- **State Bank Scribe:** it is different from the other services. By using a Jiffy account, customers can fill the application digitally in the bank. All the KYC documents need to be submitted in the bank and the customer will get an Account number.
- **SBI Digi Voucher.** It is a green initiative by SBI, where a customer can access the challans and receipts in the mobile APP.

- SBI Video Statement: This is particularly for visually challenged people where they get the audio will be narrated. Customer can view the account by using online analysis and Dashboards.
- SBI Smart watch: It is a SBI smart watch, where a customer can become involved in banking services by using a new technology which can be useful for the future also.

XI. (ii) ICICI Bank Digital strategies:

Digital banking in ICICI Bank:

- NEFT
- IMPS
- UPI
- Foreign Transfer
- ICICI Bank Pay
- CBCD: Discovering by securing the fastest way for sending money by a Digital Rupee Wallet.

Table 2: ICICI bank’s digital transformation strategies:

ICICI total ICT spending in 2021	\$760.7 million
ICT spending by function wise	Communications, data center, network, application, end-user computing, service desk, and management
ICT spending by channel wise	Internal development and maintenance, technology vendors, local resellers, ICT services providers / consulting firms, Telcos, specialist outsourcers and system integrators.
External spending segment	ICT by ICT services, software (Cloud SaaS), hardware (Cloud iaas), network and communications, consulting and others
Technology theme focus	Block chain, big data, and cloud

Source: www.globaldata.com/store/report/icici-bank-enterprise-tech-analysis

ICICI bank framed digitalisation strategies for implementing in future.

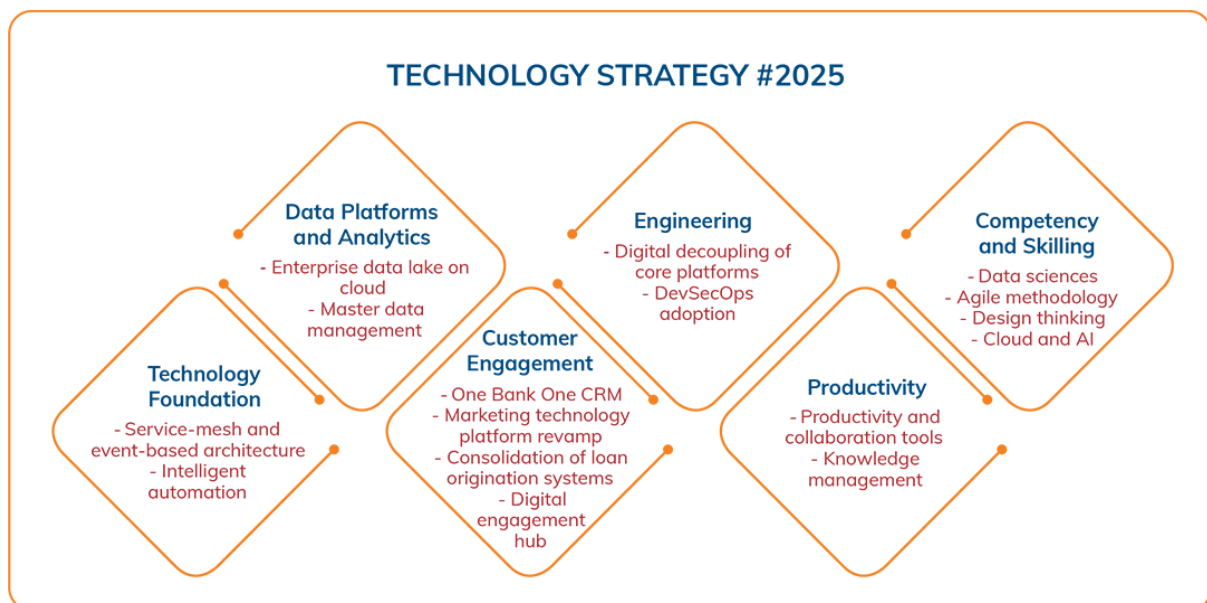
Figure 1: Future-ready technology of ICICI bank



Source: ICICI Bank Annual reports (Technology at the Core)

- ICICI bank deeply understands customer profiles, to identify the customers that the bank has and provide a clear understanding of who they are, what they want, and how they behave.
- Collective experience interacting with various points, including online banking systems, emails, call centers, and advertising in the social media, Customer interactions.
- A strong foundation and resilient banking system can sustain economic growth.

Figure 2: Technology strategy of ICICI bank - 2025



Source: ICICI Bank Annual reports (Technology at the Core)

ICICI bank framed digitalisation strategies in different segments of the bank like data platforms and analytics, customer engagement, productivity, competency and skilling etc.

Digital banking strategies of ICICI bank:

1. ICICI bank is persistently building digital and updated technology to furnish better services to the customer with cost effectiveness. Bank vigorously keeps a track on the customers digital transactions without any interruptions in providing services. During Covid-19 bank has adopted new information systems to create a new environment. With the transfer of traditional banking to digital banking, banks have given rise to electronic gateway to embark on a handful of innovative products and services.
2. According to the bank's future IT strategies, the bank is creating an architecture framework as a part of an online portal, data sciences, and architectural style for developing applications, utility computing and other evolving technologies. Based upon the ability of a system (sudden change in workload without negativity), rigidity, portability, dexterity, flexibility, credibility and with the presence of digital technology involvement of customers make possible and viable effective growth.
3. **Architecting for Tomorrow:** The rapid forefront advances like AI, Machine learning, Block chain and IOT integrated with Ecosystems and economics and preferences of the customers has been persistently reevaluating risks and alternatives in vigorous manner. Customer re envisioned points at contact with banks have completely affected and converted customers across many segments. The banking services are drastically increasing and totally concentrated on customer journey that makes rigidity, portability, dexterity, flexibility, credibility for the development.
4. **Security challenges:** Digital transformation is facing a new form of risk by account hackers or doing bank digital fraud, social frauds and cyber threats. To tackle this ICICI bank is taking all necessary precautions. Bank has adopted a new approach that enables us to respond to the changing dynamics in a responsible and agile approach.
5. **ICICI bank focuses on data, APIs, fintech and ecosystems:** ICICI bank has a dedicated team working on data science and analytics across all projects relating to decision strategies, business analytics, machine learning, forecasting models, performance monitoring and rule engines. ICICI Bank maintains a comprehensive enterprise-wide data warehouse and employs statistical modeling tools for leading edge analytics.
6. **Innovative drive and start-up mindset:** Bank is working with an innovation drive and start-up mindset. Bank has set up an innovation center to work in collaboration with and also to invest in fintech startups and also to co-develop aligned banks digital financial products. This engagement with startups is with an objective of focussing on revenue growth, digital lending and digital platforms in developing process efficiencies of the bank. Bank is working to focus on growing its own digital channels, and create an ecosystem through partnership to cover broad segments of customer and merchant payments. Bank is offering a host of SDKs (software developer kits) and launched 250 APIs, which facilitate third party apps to offer payment options to its retail customers.
7. **Cyber security measures:** Bank believes that cyber security is not an IT issue but it is a business issue. It is a challenge to protect banks and customers' assets and to build trust of bank stakeholders. ICICI bank has adopted a multi-dimensional approach for this cyber security issue. Bank is working with a CIA triad that is Confidentiality, Integrity and Availability. Banks keep customers' priorities as prime responsibility and follow a 'defense in depth' approach in implementing cyber security procedures. This is implemented through a multi-layered defensive mechanism with a combination of various tools and techniques to work in complement and augment each other. Bank has laid more emphasis on customer security aspects such as adaptive authentication, phishing and awareness initiatives. Bank enables customers to easily configure their card related information such as limits, international access and other aspects from the internet and mobile channels of ICICI bank. This protects customers from misuse of cards.

XI. Findings of the study: Challenges of digital banking - Measures to bridge the gap between traditional banking and digital banking:

- India is planning for effective digital banking in future, but still it need to cope up with problems faced in implementation process:

- SBI, as a public sector bank and ICICI bank as a private sector bank, both sector banks are working more innovatively in developing effective digital banking strategies to meet current needs of customers.
- Usage of smart devices and internet connection are prerequisites of effective implementation of digital banking services in India. With a low internet connections some of the customers are facing to problem with digital banking
- Security of customers: Customer fear factors are restricting the use of digital banking services. Customers are requiring proper security of their personal information from hackers and cyber crime.
- People are having a strong myth or notion that banks are not maintaining transparency in digital banking transactions and levying hidden charges on digital transactions.
- Illiteracy, poverty, lack of digital literacy is the major constraints in the development of digitalisation in banking.
- Difficulty in understanding: Most of the senior citizens and people who are not tech-savvy are having fear and finding it difficult to use digital banking and still following traditional banking.
- Fear factors creating resistance: Some customers with lack of knowledge on digitalization there are factors which make them fear of doing the online payment when telling their OTPs. So banks have to conduct customer awareness programs to get rid of these frauds. .
- Stay abreast with new technology: By adopting the new technology banks have to be updated with the financial products and services with the cut throat competition.
- Inclusion on Robotic Process Automation (RPA): As in every sector Machine learning and AI has an important role. The banks are providing well over performance in implementing them..

XII. Suggestions:

- Digital banking services are to be displayed on websites based on various needs of the customers
- Demo videos are to be uploaded and displayed on websites to create awareness to users.
- Customers are to be educated on cyber threats and cyber attacks and how to tackle or overcome from cyber attacks.
- Introducing a simpler form of digital operations in app usage.
- Technical defaults are to be completely avoided by monitoring procedures, expert technical support availability for efficient digital banking operations.
- Effective workshops are to be conducted especially in rural, semi urban areas and urban slum areas.

Conclusion:

As the whole world is adapting new technologies in every sector, and the continuous support from the government and RBI also has keen eye on banks. Digitalisation in banking has initiated a shifting paradigm from cash based or paper based banking to attain the goal of cashless or paperless banking in the Indian economy. By introduction of Digitalization in banking sector offered a number of benefits to the customers like reduced human errors, convenience of anytime and anywhere banking with possible access, cyber security measures in safeguarding customers data and conducive positive environment created by Indian government finding possible solutions in enhancing the best available opportunities with best use of innovative technology. Still there is a long way in encountering the challenges and finding possible solutions in bringing down intermediation costs, at the same time protecting their bottom lines. Over all the impact of digitalization has transformed more and customers are provided with different services and efficiency has been increased.

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