

Exploring The Potential Of Online Banking: An Insight Into Innovations And Barriers In The Indian Context

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ABSTRACT

With the advent of today's digital innovations, customers of banks and other financial institutions can perform a range of financial activities on the bank's website through Internet banking, also known as e-banking or virtual banking. This is because online banking often links to or is a component of the bank's primary banking system, as opposed to traditional branch banking, which is either linked to or apart from the main banking system. In India's banking industry, innovation and technology received more attention in the 1990s. Banks started utilizing technology to deliver higher-quality services more quickly. One of the technologies that people use the most frequently these days is Internet banking, which has a big impact on people's daily lives. Customers can now bank from anywhere thanks to the conveniences of mobile and Internet banking. stated. Additionally, banks have shifted their attention to serving local markets and offering a unique range of services. requirements and desires of local customers. In India, the Internet is becoming more and more popular. The landscape of online banking is evolving. It affects business partnerships the most and is especially common in the banking industry.. In terms of financial goods, services, and online banking. These days, a lot of banks offer ATMs with websites all around the globe. Internet banking, customer service, and so forth. The banking industry has been greatly impacted by information technology advancements.

Keywords: Online banking, financial institutions, UPI, net banking, etc.

Introduction

The introduction of globalization and liberalization processes in 1991 marked the beginning of innovation in the banking industry in India, and as a result, e-banking advanced. The banking industry is completely redesigned by this information technology. E-banking quickly and dramatically changed the way that customers banked; banks began offering a variety of services linked to electronic cash withdrawals and deposits. As a result of the IT revolution, more and more transactions are being completed electronically, and the world has transformed into a cyberspace where everyone is connected to the internet. The ability to move money and invest internationally was made possible by e-banking (Malc et al., 2023), and as a result, the world became a global market whose growth has nearly eliminated the impact of national borders.

It would not be incorrect to argue that e-banking, an IT breakthrough in the finance industry, has brought about a new economic paradigm in nations like India. Over the last thirty years, Indian banks have had a multiplication in their operating efficiency. Additionally, they have experienced a reduction in the time required to complete various transactions. Consequently, bank competition has intensified (D & N. Ramesh, 2020). All banks strive to leverage the most recent technological advancements to better serve their clientele. One of the important components in this context is innovative banking, also known as e-banking, which many Indian banks presently offer. Internet-based secure networks enable individual clients to conduct a range of banking operations from many locations, such as their home or office. This method is known as Internet banking or e-banking. Customers of traditional banks can use online or internet banking to do all common transactions, such as bill payments, account transfers, balance inquiries, stop-payment requests, and some even let online credit card and loan applications (Ayo et al., 2016). Online banking is a web-based service that allows bank customers who are permitted to examine account details. To access the bank's

website, clients can use their personal identification number (PIN) and the identity that the bank has provided.

Among the frequently utilized services provided by e-banking include ATMs, telebanking, internet banking, mobile banking, anywhere and anytime banking, and other services. The banking industry has evolved from being labor-intensive and cost-variable to being more capital-intensive and cost-fixed since the introduction of technology into banks. E-banking is still a relatively new concept, with fresh advancements being made regularly. The financial systems in India present a multitude of challenges and opportunities related to e-banking.

Online Banking: The Idea

"Electronic banking is the provision of bank services to a client at his place of business or residence via the use of electronic technology. Finland was the first country in the world to use e-banking. Online, or E-based, banking, sometimes known as cyber, home, or virtual banking, is a broad category of activities that can be performed from any location (Mishra, 2009). RTGS, NEFT, ECS, ATMs, credit and debit cards, telebanking, online and mobile banking, retail, virtual, credit union, and building society banks are all included in the category of e-banking. Additionally, it allows users to transact financially on a secure website managed by the organization. The method by which banks offer their clients services and information through a variety of delivery platforms that may be used with a range of terminal devices, including a desktop computer, a smartphone with a browser, a digital television, or a mobile device is known as electronic banking (Watts, 2017).

Review of Literature:

The following is an attempt to provide a concise overview of the literature based on a few of the relevant research that has been conducted globally in the field of e-banking.

The banking sector in India has seen significant changes and challenges in recent years, particularly with the rise of technology-enabled services. Dwivedi (Dwivedi, 2022) highlighted the importance of leveraging technology-enabled financial services for financial inclusion, especially in rural and semi-urban areas of India. This is particularly relevant in the current COVID-19 situation, where access to traditional banking services may be limited. (Radhika et al., 2021) discussed the aftereffects of the COVID-19 pandemic on the financial factors and the need for digital solutions to cater to mobile banking users. The study emphasizes the importance of digitalization in providing banking services efficiently and effectively, especially in times of crisis. Fathima (Fathima, 2020) delves into the difficulties the Indian banking sector faces particularly in the realm of virtual banking services. Although digital banking has a lot of potential in India, there are a lot of obstacles to overcome. The concerns of security, expertise, and transaction difficulties are all highlighted (Manivasagan, 2020) and (Basu, 2016) along with the conventional thinking of Indian consumers. (Bhat & Mangalura, 2016) discovered, however, that the majority of Indian clients are aware of and content with online banking services, especially those provided by public sector banks. (Sheikh & Rajmohan, 2015) highlights that in the rapidly changing world of digital banking, new approaches are required to draw in and keep consumers.

Virtual banking has emerged as a response to the growing demand for convenient and secure banking services. However, there are challenges in terms of customer awareness, perception, and satisfaction. The study emphasizes the need for robust systems and regulatory oversight to ensure India's progress in virtual banking. The literature also discusses the opportunities and limitations of online banking in the country. (Mishra, 2009) highlights the various virtual banking services offered in India, emphasizing the need to understand customer awareness, perception, and satisfaction. Various studies (A.M, 2019), highlighted the progress made in e-banking in India and the potential for increased awareness and adoption of electronic banking services. The implementation of Internet banking has modernized the banking sector in India (Khan & Mahapatra, 2009), presenting new opportunities for growth and innovation. Overall, the literature review suggests that while there are significant opportunities for Internet banking in India, there are also challenges that need to be addressed. The digitalization of banking services presents a promising avenue for financial inclusion and innovation, but it also requires careful management of risks and regulatory oversight to ensure the stability and security of the banking sector (Ingle & Pardeshi, 2012). Both banks and customers have profited from the adoption of Internet banking (Nidhi, n.d.).

There are benefits as well as obstacles associated with the growth of online banking in India. Significant obstacles include security worries, technological difficulties, and traditional banking practices (Revathi, 2019). Nonetheless, the business has prospects for growth and advancement due to the modernization of banks and the growing usage of the Internet (Chauhan, 2015). The banking sector in India is currently undergoing an IT revolution, with electronic banking playing a crucial role in its development (Monisha et al., 2014). Despite

the benefits of e-banking, it also faces challenges such as security and the need for skilled manpower (Gupte, 2016).

Aims of the study:

1. To examine the significance and advantages of electronic banking for the Indian economy.
2. To investigate the financial innovations in e-banking in India.
3. Analyse existing issues in the Indian E-banking ecosystem.

Research Methodology

The nature of this study is descriptive. The secondary data used in the study of Indian banking came from the Reserve Bank of India's bulletin, annual reports, and Report on Trends and Progress, in addition to several reputable magazines, newspapers, white papers, and RBI webpages.

Current State of Internet Banking / E-banking in India

E-banking has become a vital aspect of India's financial system these days in the modern world. Before the 1990s, traditional branch-based banking was the norm. However, non-branch banking services have since emerged. ICICI Bank was the first to implement Online banking in India. Internet banking services were then introduced by Citibank and HDFC Bank in 1999. The IT Act, of 2000 was passed by the Indian government on October 17, 2000, making online purchases lawful. The Reserve Bank continuously monitors and reviews e-banking regulations to ensure that it develops safely and does not threaten financial stability. The Reserve Bank continuously monitors and reviews e-banking standards to ensure that it develops responsibly and does not threaten financial stability.

Indian commercial banks have implemented many initiatives, including e-banking, in response to increased competition. Public sector banks face strong competition from newly founded private sector and international banks that have used e-banking technology. Indian banks offer to their users the following e-banking goods and services viz. ATMs, online, mobile, phone, telebanking, smart cards, electronic financial transfers, door-step banking, and electronic clearing services are some examples of banking choices.

Table IX.1: Payment System Indicators-Annual Turnover (April-March)

Item	Volume (lak h)			Value (lak 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
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.PrepaidPaymentInstruments	49,366	65,783	74,667	1.97	2.79	2.87
6.Paper-basedInstruments	6,704	6,999	7,088	56.27	66.50	71.63
Total-RetailPayments(2+3+4+5+6)	4,42,180	7,24,689	11,44,138	414.86	523.94	659.04
TotalPayments(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 Payments digitally:(1+2+3+4+5)	4,37,068	7,19,768	11,39,476	1,414.58	1,744.01	2,086.87

1. Note:. Only customer and interbank transactions are managed by the RTGS system.
2. Clearing Corporation of India Ltd. (CCIL) handles the settlement of foreign exchange transactions and government securities. Outright trades, both legs of a repo transaction, and triparty repo transactions are examples of government securities.
3. Online and point-of-sale transactions are included in card payment numbers.
4. Figures in columns may not add up to the total due to rounding.

Source: RBI.

(Reserve Bank of India - Annual Report, n.d.)

Here are some of the key aspects:

The number of transactions processed by payment and settlement systems increased by 57.8% in 2022–2023, exceeding the 63.8% growth in the year prior. Value-wise, the increase was 19.2% in 2022–2023 as opposed to 23.1% the year before, mostly because of expansion in the large-value payment system known as Real Time Gross Settlement (RTGS). 99.6% of all non-cash retail payments in 2022–2023 came from digital transactions, up from 99.3% the year before.

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In March 2023, 243 member banks offered RTGS services through 1,65,390 IFSCs, while 230 member banks provided NEFT services through 1,66,544 IFSCs. In 2022–23, credit card payments climbed by 30.1% in volume and 47.3% in value.

The volume and value of debit card transactions fell by 1.4% and 13.2%, respectively. The value and volume of prepaid payment instruments (PPIs) increased by 2.9% and 13.5%, respectively. Launched in January 2021, the Payments Infrastructure Development Fund (PIDF) initiative has resulted in notable advancements in acceptance infrastructure, which have fueled the growth of digital payments. The number of UPI QR surged by 48.4% to 25.64 crore by the end of March 2023, while the number of Points of Sale (PoS) terminals increased by 28.3% to 77.9 lakh. Moreover, there are now more automated teller machines (ATMs) than ever before. from 2.52 lakh in March 2022 to 2.59 lakh by the end of March 2023.

Present Financial Advancements in the Indian Banking Sector

Online banking Innovative technology systems, fresh product designs, and online financial transaction methods are all products of banking industry innovation. All of this led to the most well-known term in the current financial system: innovative banking. Innovative banking places a strong emphasis on ease of use and customer pleasure. The principal driving force for the integration of innovation into the extant banking system was the utilization of technology to provide enhanced customer services. The Internet served as the primary means of innovation banking during this technological race. After the advent of the Internet, the banking sector saw significant improvements that included decreased costs, better control over operations, enhanced efficiency and profitability, and the automation of labor-intensive, paper-based activities. Due to the numerous issues that the conventional banking system was facing, the financial sector needed innovations. These issues were resolved when innovative banking products and services were introduced, completely altering the philosophy of banking.

The list of numerous innovations in e-banking is provided below.

Automated Teller Machines (ATMs): A machine that operates on a preprogrammed schedule is referred to as an ATM. To put it simply, it's an electronic computerized telecommunications device that enables users

to make cash withdrawals and deposits using their ATM cards. It also enables users to receive account balance reports without the assistance of a teller or bank branch representative. To put it simply, the self-service solution is easy to use.

Digitization: India's banking and financial services needed to keep up with the rapid advancements in digital technology and offer new digital goods to cater to the market's tech-savvy customers. Apart from the finance sector, the insurance, healthcare, retail, trade, and commerce sectors are all seeing a significant digital transformation. To stay competitive, the banking industry needs to embrace digitalization. Modern digital banking systems, with features like RTGS (Real Time Gross Settlement), NEFT (National Electronic Funds Transfer), Online Banking, and Tele-banking, among many more, offer numerous benefits that simplify, paperless, sign-free, and branchless banking. "Anywhere and anytime banking" is now convenient because of digitization. It has reduced expenses, raised revenue, and reduced the possibility of human error.

Telebanking: The second kind of e-banking innovation is telephone banking, which allows customers of the bank to do a variety of financial activities over the phone without having to go to an automated teller machine or bank branch.

Furthermore, telephone banking has far longer hours than branch banking, and some financial institutions even provide their clients with round-the-clock assistance. Customers can do the following different kinds of financial transactions using telephone banking:

- Getting account balances
- Obtaining a list of recent transactions
- Online bill payment
- Transferring money within a customer's account or even in another.

Debit Card: Another name for a debit card is a check card or bank card, Debit cards are plastic payment cards that work similarly to cash or a personal check and can be used in place of cash when making transactions. They look like ATM (automated teller machine) cards or credit cards. With credit cards, you can "pay later," but with debit cards, you can "pay now." This is how debit cards and credit cards differ from one another. Every customer's account is promptly emptied of funds when they utilize a debit card. Put simply, when a transaction is made using a debit card, the money originates from the user's bank account.

Direct Deposit: The movement of money from a payer to a payee's bank account is referred to as "direct deposit" or "direct credit". The main purposes of direct deposit include salary and earnings as well as direct bill payment into other people's accounts. The most common way to make direct deposits is by electronic financial transfers using online, mobile, and phone banking systems; but, physical deposits into the payee's bank account are still an alternative.

UPI: With the Unified Payments Interface (UPI) payment system, customers may link several bank accounts to a single smartphone app and transfer money without needing to enter an account number or IFSC code. With this real-time payment system, money is credited immediately and continuously. Each person wishing to use UPI for money transfers needs to have a UPI ID, which is an identity. The unique identity provided by a bank account's UPI ID is useful for transferring funds across banks.

Difficulties with E-Banking: In India

E-banking is still in its infancy. The majority are fundamental services. Only the e-banking industry's liberalization combined with the introduction of new banking technology is allowing new rivals to swiftly and effectively enter the financial services marketplaces. It must be acknowledged, nevertheless, that perceptions may not always align with better e-banking service performance.

The Trust Factor: The biggest obstacle to online banking for most customers is trust. Customers' mistrust of online security makes them prefer traditional banking. They think conducting business online poses risks and can result in deception. Trust is one of the main factors that influences customers' desire to transact with online merchants.

Lack of Digital knowledge: The digital transition poses difficulties for older and less educated individuals. In India, just a small percentage of the population is digitally literate, and the literacy rate is only moderate. They are reluctant to participate in digital transactions because they lack the necessary knowledge and are concerned that they will make mistakes that could cause them to suffer large financial losses. Without enough knowledge, there cannot be a digital shift from a cash-based to a cashless economy.

Risk of privacy invasion: Customers who may be hesitant to use digital banking services are discouraged by the risk of divulging personal information and identity theft issues. The majority of users of Internet banking services think that utilizing them makes them more susceptible to identity theft (Singh & Srivastava,

2018). According to the survey, customers are concerned about their privacy and believe banks may breach it by utilizing their data for marketing and other unrelated purposes without their permission.

Management of technology: Achieving and upholding high standards for service and efficiency, as well as cost-effectiveness and a sustainable return to shareholders, necessitates the development or acquisition of the appropriate technology, its proper implementation, and optimal utilization. One of the biggest problems the Indian banking industry faces is managing technology, as early adopters of new technologies gain significant competitive advantages.

Cash-based economy: In India, over half of the population is impoverished, unbanked, and disorderly. Most Indians rely on cash-based transactions because they feel more at ease and secure with cash transactions. Rural Indians lack a solid knowledge of digital financial transactions because they are illiterate and lack access to contemporary technology.

Opportunities in E-banking:

Despite of various obstacles that banks face in India, the following advantages are encouraging marketers to adopt e-banking:

Potential of Rural Markets: Making up 70% of India's population, these markets are mainly unexplored for the banking industry (Sikdar & Makkad, 2013). Banking services are available in all urban locations, however banks are only present in a small number of large villages. Because most Indians still reside in rural areas, the banks must reach all remaining villages.

Multiple Channels: To boost their banking operations, banks can provide a wide range of channels for customers to access their banking as well as other services including ATMs, local branches, phone and mobile banking, video banking, etc.

Competitive edge: Because of the benefits of e-banking, banks have an edge over other businesses in the market (Ranjith, 2019). The use of e-banking benefits banks in several ways, such as decreased costs, improved customer support, increased geographic reach, and more. The benefits of Internet banking have made it possible for banks to enhance the way they manage their banking operations.

Digital knowledge & Internet Users: To use online banking, one needs to have a rudimentary understanding of Internet technology. This will help one become used to the services more quickly. India has a fast-expanding internet user base, which is a big potential that the banking industry should make use of to get more people to use online banking services (Sardana & Singhania, 2018).

Deserving Customer Service: The ideal way for a bank to expand its business is through providing deserving customer service as a brand ambassador. Every interaction with a customer presents a chance to increase the consumer's trust in the bank (Lavuri, 2018). Amidst growing competition, banks' client services are now the primary factor considered when evaluating their success.

Customer Opportunities: With customers using e-banking more frequently, there are more opportunities for e-banking in the Indian setting. The development of Internet banking services has had a substantial impact on a broad spectrum of banking customers. Clients can use online banking to make their payments and manage their accounts from the comfort of their homes or offices. The use of credit and debit cards has also increased. Through the use of e-banking services, a customer can access her bank at all times.

Conclusion

It is evident from the discussion that came before it that the advent of electronic banking transactions has presented opportunities as well as difficulties for consumers, financial institutions, and banks in India and around the world. Document research reveals that major banks at all development stages have quickly adopted cutting-edge E-banking technology. This suggests that global banks see electronic banking as a growth strategy and that electronic banking is becoming more popular in developed nations. Opportunities in banking channels in developing countries may be leveraged. E-banking use in India can be increased by cooperation between banks and government agencies to improve security, safety, privacy, and consumer confidentiality safeguards. In the banking sector, electronic banking is a concept that is expanding quickly.

Technological innovation has brought about major and positive changes in the banking industry. Anyone can now transact financial business anywhere, at any time.

This guarantees transaction accuracy while saving users' time and resources. Users can now send and receive money from anywhere with only a few clicks. The only means of facilitating international business in the era of globalization is through electronic banking. Daily transactions and money transfers can be made using e-wallets, IMPS, RTGS, UPI, Mobile Banking, Debit/Credit Cards, and other ways. The use of UPI, IMPS,

mobile banking, and cards has grown annually, according to RBI. ATM cash withdrawals have not increased significantly, suggesting that consumers these days prefer cashless purchases. The younger age group is starting to recognize the ease and advantages of using electronic banking. In the upcoming years, E-banking will not just be the most preferred form of banking but will be the favored choice in India. Private sector banks have a larger share of the POS terminal market compared to public sector banks. authoritative figure demonstrated a strong command over the attendees during the meeting. Mostly, mobile wallets are used for prepaid payment instruments in the country. The Government of India, along with various government organizations, is working to enhance e-banking services. Protected, trustworthy, and dependable while also being convenient through online platforms. The majority of customers are coming to visit. They visit branches infrequently and rely on online and mobile technology for their banking needs frequently. Internet-based Online and mobile banking are experiencing fast growth. Currently, the majority of individuals in India are utilizing electronic banking services. conduct transactions and align them with the current situation of the country.

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