

Technological Advancement: A Study on Banking Sector in India

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ABSTRACT

Over the last few years it has been observed that banking sector of India has undergone with many upgradation and advancement, that especially help in global financial system. Indian banking system has introduced many innovative steps that aim to provide banking services to people, not availing such services. These steps include NEFT, RTGS, mobile banking, internet banking ATM, Retail banking, debit and credit card, 24/7 banking service that include chatbot which provide one to one advice as per the requirement of the customers. This paper highlighted the advancement in banking sector of India that not only benefited the sector but customers too. This study elaborate the efforts made by the banking sector towards the advancement that leads to growth and development.

Keywords: Banking, Banking system, Advancement, Digital Banking and Development

INTRODUCTION

Banking sector has undergone with many advancements throughout the era of advancement, especially after liberalization banking sector taking the advantages through the lowering entry barriers, competition has significantly increased new private sector banks entered the market between 1994 to 2000. Additionally, 20 foreign banks started their working since 1994. As far as technology concerned, it had started in early 1970s with introduction of automated system like SWIFT network for electronic payment, computerized banking and online banking feature enabled in late 1980s, mobile banking enabled in early 2000s, and in present day AI, machine learning, block chain and security has enabled.

Evolution in Technology in Banking

- **Pre-Digitalization Era:** It was a time when life was shaped by analog systems, physical interactions, and manual processes exists.
- **Core Banking Solution:** It is a network of bank branches that allow their customers to manage their bank account from anywhere, at any time.
- **Automated Teller Machines:** It is a computerized device and a boon for customers that enables them to withdraw money at anytime and anywhere with some certain free transactions. It is also convenient to carry, use and safe to assess.

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- **Internet and Mobile Banking:** Mobile banking and internet banking are both digital banking methods that allow you to access your accounts and perform transactions online. Mobile banking is done on a smartphone, while internet banking is done on a computer or laptop
- **FinTech and AI Integration:** Integrating AI in the FinTech sector has proven cost saving by decreasing operational costs spent on customers to provide them banking services, fraud prevention, clerical tasks and more. It can also improve customer experience by performing in-depth analysis on investment and insurance.

IMPACT OF TECHNOLOGICAL ADVANCEMENTS

- **Financial Inclusion:** Financial inclusion is one of the initiative that enables savings, credits and insurance services to vulnerable and low income groups by government and RBI. It leverages services UPI, Aadhaar to foster economic growth. This advancement not only benefited individual but economy as a whole.
- **Operational Efficiency:** It has improved the efficiency of banking services provided to its customers that leads to customer satisfaction. This leads to competitiveness and profitability.
- **Customer Experience:** Customers can avail banking services by 24*7, personalized banking services, chatbots has enhanced their satisfaction.
- **Security Enhancements:** It has enhanced security in transactions, identifying frauds, preventive measures, early recognition of defaults.

CHALLENGES IN ADOPTING BANKING TECHNOLOGY

- **Cybersecurity Risks:** As we become digitalized, many frauds took place, like fraud with ATM, UPI, Internet banking, mobile banking, Aadhaar and bank account.
- **Digital Divide:** It might create a gap between generation that use technology. Many of old age do not want to use these technology because of these frauds.
- **Regulatory Compliance:** Regulatory compliance is the process of adhering to laws, regulations, standards, and other rules set forth by governments and other regulatory bodies. Sometimes it become a challenge for bank to maintain and complete the task. It is an important aspect of doing financial buisness to follow certain laws and regulations to maintain their operations.
- **Infrastructure Limitations:** Infrastructure limitations can include scalability issues, environmental impact, technological challenges, and cost overruns.

FUTURE TRENDS IN BANKING TECHNOLOGY

- **Artificial Intelligence & Machine Learning:** Artificial intelligence (AI) is a broad concept, and machine learning (ML) is a subset of AI. AI is the ability of a machine to learn, reason, and act like a human, while ML is a way to teach machines to perform tasks by analyzing data.
- **Blockchain & Cryptocurrency:** Blockchain is a digital ledger that records transactions, while cryptocurrency is a digital currency that uses blockchain technology.
- **Neobanking & Open Banking:** Neobanking and open banking are both transforming the banking industry, with neobanks offering digital-first services and open banking enabling data sharing.
- **5G & IoT in Banking:** can work together to improve banking services by enabling faster transactions, enhanced security, and better customer experiences.

Objective of the study:

1. To understand the evolution of technology advancement and its impact.
2. To analyze the challenges to implement the advancement in banking sector.
3. To know the customer perception towards using the innovative technology in banking.

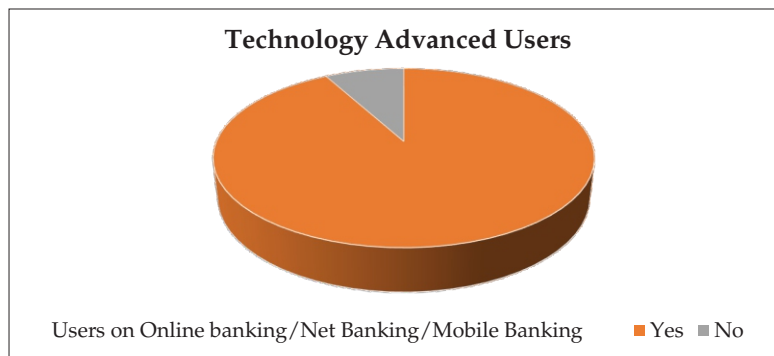
RESEARCH METHODOLOGY:

This research is descriptive and analytical, collected primary and secondary data on technology and innovations adopted by banks of India. Finding and conclusions of the study is based on adopting technologies by time and also by collecting data from the users by structured questionnaire. The primary data was collected by structured questionnaire and collected by 50 respondents. The researcher had gone through the academic literature available and also from various sources of secondary data were used for the study.

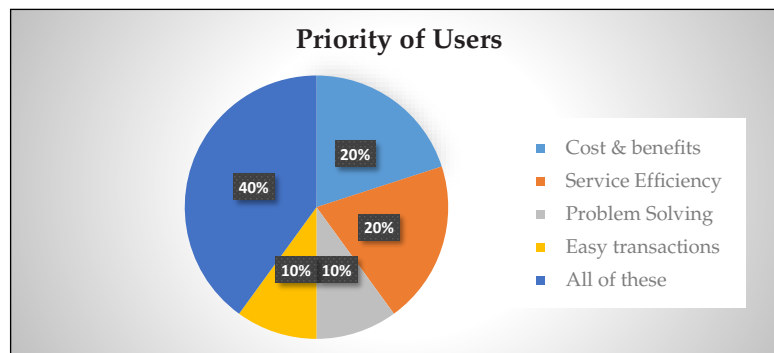
Literature Review: Private and foreign sector banks has invested in technology but public sector banks need to invest (Megha D. Shetty 1 & Nikhitha M. K 2022). Financial innovations lower cost of capital, reduce financial risks, improve financial intermediation, and hence welfare enhancing (Gowripeddi hari kumar 2022). Financial innovation is helpful in ensuring smooth functioning and improves the overall efficiency of the system by minimizing cost and reducing risk of fraud. More generally, financial innovation has been a central force driving the financial system toward greater economic efficiency (Merton and Bodie 2005). Advancement in technology are set to change the face of banking business. Advancement in banks has transformed the retail banking that increased the chance of profit. The Indian banking sector has developed, but customers of banking services have not yet fully followed the new path of banking. Over time, awareness about banking services among customers improves and leading to a better acceptance of the advanced banking (Avasthi & Sharma 2000-01).

Analysis:

1. Technology Advanced Users: There are 92% of account holders are availing the online, Net banking and Mobile Banking users and only 8% are not availing this facility, this might be possible that users are afraid of fraud, cyber-crime or scams in bank.



2. As per the study, found that the technology helps and prioritized the users by cost efficient, user friendly, problem solving any time and service efficient.



FINDINGS

As per the study, researcher found that there are many advantages of advancements and innovations in banking sector, it also makes functioning of banks more convenient to use. It is also found by the primary study that maximum account holders use online banking, mobile banking and net banking, found it more efficient method of work, cost effective etc.

CONCLUSION

Technological advancements have revolutionized the Indian banking sector by improving accessibility, security, and efficiency. However, challenges such as cybersecurity threats and digital literacy need to be addressed to ensure sustainable growth. With continued innovation and regulatory support, the Indian banking sector is poised for a tech-driven future.

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