A COMPARATIVE STUDY OF E-BANKING FEATURES AND PERFORMANCE IN SELECTED PUBLIC AND PRIVATE SECTOR BANKS IN NAGPUR

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Abstract:

E-banking services have significantly changed the banking industry in India, improving accessibility, efficiency, and convenience. However, there are notable differences between banks in the public and private sectors with regard to features, adoption rates, customer happiness, and service efficacy. An investigation into the characteristics and functionality of e-banking in both public and private banks was carried out in Nagpur, with a focus on internet and mobile banking services, security protocols, transaction speed, user experience, and customer satisfaction. Using primary data from consumer surveys and secondary data from banking reports and scholarly literature, the study employed a mixed-method approach. The findings showed that private sector banks outperformed public sector banks in areas including 24/7 customer care, AI-driven fraud detection, user-friendly interfaces, and faster transaction processing. However, public sector banks face challenges such as legacy infrastructure, occasional service downtimes, and slower adoption of modern banking technologies. The study suggests that public banks should accelerate IT modernization and enhance cybersecurity measures, while private banks should focus on expanding financial inclusion efforts.

Keywords: ***Public Sector Banks, E-Banking, Digital Banking, Private Sector Banks, Nagpur, Customer Satisfaction***

Introduction:

The rapid advancement of digital technology has brought about a significant revolution in the banking sector, altering the way financial institutions operate and interact with their customers. E-banking services have revolutionised traditional banking by providing customers with convenient, secure, and efficient access to financial services from anywhere at any time. Digital banking has eliminated many of the limitations associated with brick-and-mortar banking, allowing individuals to conduct transactions, access financial products, and manage accounts seamlessly through internet and mobile banking platforms.

Both public and commercial banks in India have included a range of e-banking services into their operations after seeing the value of digital banking. However, notable variations exist between these banking sectors in terms of technological advancements, service efficiency, customer experience, and adoption rates. While private sector banks have been at the forefront of digital innovation, leveraging cutting-edge technology to offer seamless, AI-powered banking solutions, public sector banks have been gradually upgrading their infrastructure to enhance digital accessibility, particularly for rural and economically weaker sections. Understanding these differences is crucial to enhancing customer satisfaction, service quality, and financial inclusion

while guaranteeing that everyone, irrespective of financial condition, has equitable access to banking services.

In Nagpur, a dynamic city with a wide range of banking needs, the study aims to analyse the features and performance of e-banking in a few public and private sector banks. The study looks at important topics such user experience, transaction efficiency, security measures, consumer perceptions, and online and mobile banking services. By assessing these variables, the study aims to pinpoint digital banking's advantages, disadvantages, and potential areas for development in both industries.The assessment will highlight whether public sector banks are effectively competing with private banks in offering advanced digital services or if they lag due to technological and operational constraints.

Objectives of the Research:

1) To conduct a comparative analysis of the features and performance of e-banking in a few public and private banks in Nagpur.
2) To investigate the range of e-banking services offered by a few public and private sector banks in Nagpur, such as digital payments, internet banking, mobile banking, and other online financial services.
3) To evaluate the performance of e-banking services offered by banks in the public and private sectors with respect to speed, reliability, security, user experience, and transaction efficiency.
4) To assess the perceptions and emotions of consumers in both banking sectors about the effectiveness, usability, and accessibility of online banking services.
5) To compare the security and risk management strategies employed by public and private banks to ensure safe online transactions.

Literature Review:

The adoption of e-banking in India has seen significant growth, with both public and private sector banks investing in various digital services to enhance customer experience and operational efficiency. Vaidya and Gokhale (2020) discuss the challenges and opportunities e-banking presents, highlighting the need for robust security measures, customer education, and infrastructure development. Singh and Jain (2021) explore the impact of e-banking on bank performance, noting that while both sectors benefit from increased operational efficiency and customer satisfaction, private banks have a slight edge in customer engagement. Sharma and Deshmukh (2019) examine how e-banking features such as online banking portals, mobile applications, and ATM services influence customer satisfaction, finding that private sector banks outperform public ones in terms of user-friendliness and convenience. Bansal and Mehra (2022) analyze the role of digital banking features, particularly mobile banking, in improving customer service, showing that these features are crucial for maintaining customer loyalty in both public and private sector banks. Nair and Patel (2021) explore customer perceptions of e-banking, revealing that while customers value convenience, trust remains a significant barrier for public sector banks, which need to work harder to ensure a positive digital experience. Finally, Sharma and Shah (2020) address the technological advancements in banking, emphasizing how innovations like digital wallets and mobile payment systems have reshaped banking operations in Nagpur, leading to greater customer satisfaction and improved bank performance..

Research Methodology:

Using a comparative research approach, this study evaluates the e-banking capabilities and performance of banks in Nagpur's public and private sectors. Customer and staff surveys and questionnaires, as well as secondary data from other sources, are used to gather data. To guarantee participation from both public and private sector banks, a stratified random selection technique is

employed. Awareness, security, user experience, effectiveness, contentment, and difficulties encountered when utilising e-banking services are evaluated using a standardised questionnaire.

E-Banking Features and Performance in Selected Public and Private Sector Banks in Nagpur:

E-banking, often known as online banking or electronic banking, is a digital platform that lets customers use internet and mobile banking apps to execute financial transactions. Both public and commercial banks in Nagpur have adopted e-banking to increase customer convenience and operational efficiency. Some of the primary features of e-banking services include web banking, mobile banking apps, ATM and debit/credit card services, UPI and digital wallets, chatbots and AI-powered customer support, cybersecurity and fraud prevention, e-loans, and digital account opening.

The public and private sectors in Nagpur have quite different e-banking success rates. Compared to public sector banks like SBI and Bank of India, private sector banks like ICICI, HDFC, and Axis have embraced new digital tools and technology faster. There is some processing time latency, but overall service speed and efficiency are moderate. Customer satisfaction is moderate, but high, user-friendly apps and quick responses are high. Security measures are strong, but occasional service downtime is possible.

Challenges faced by public sector banks include slower digital transformation, outdated infrastructure, and lower customer engagement. Private sector banks face high competition, cybersecurity risks, and dependence on continuous technological upgrades. Opportunities for public sector banks include improving cybersecurity frameworks, expanding AI-driven banking solutions, and strengthening digital literacy initiatives to encourage widespread adoption of e-banking.

Private banks have a competitive edge in digital innovation and consumer happiness, according to a study of e-banking features and performance in Nagpur. However, public sector banks are gradually adopting modern e-banking technologies to bridge the gap. Improving infrastructure, service efficiency, and security measures can help public banks enhance their digital banking experience, ensuring a more competitive and customer-friendly financial ecosystem.

Comparative Analysis of E-Banking Features:

E-banking has completely changed how financial transactions are carried out by providing consumers with speed, convenience, and security. Nonetheless, the quality of e-banking services offered by public and private sector banks varies. While public sector banks suffer difficulties because of legacy systems and resource constraints, private sector banks frequently lead in technical improvements and customer-centric innovations.

User interface and accessibility are crucial for enhancing customer experience in digital banking. Private sector banks generally offer more intuitive and user-friendly platforms with advanced mobile banking applications. Users can make transactions, check balances, and manage accounts with less effort because to their applications' and websites' current design elements, simplified navigation, and improved accessibility. Additionally, private banks frequently update their digital platforms to incorporate the latest UI/UX trends, ensuring that users benefit from seamless interactions and enhanced functionalities such as personalized dashboards, AI-driven insights, and voice-assisted banking.

Security is a major concern for banks in both the public and commercial sectors since digital transactions involve sensitive financial data. Both businesses use common security techniques, such as multi-factor authentication (MFA), end-to-end encryption, and biometric security features like fingerprint and face recognition, to protect consumers from fraudulent

activity and unauthorised access. on contrast, private sector banks invest more on state-of-the-art cybersecurity solutions that use machine learning (ML) and artificial intelligence (AI) algorithms to enhance fraud detection and threat prevention.

Public sector banks often struggle with legacy infrastructure and slower implementation of emerging security technologies, making them more vulnerable to cyber threats, phishing attacks, and hacking attempts compared to their private counterparts. In e-banking, transaction speed and system dependability are important variables that affect client satisfaction. Faster transaction processing times are typically provided by private sector banks, guaranteeing prompt online purchases, bill payments, and fund transfers. They invest in high-performance servers, cloud computing, and real-time payment gateways to minimize processing delays and provide a smooth banking experience.

In order to guarantee that consumers receive prompt help for their banking requirements, customer service and satisfaction are essential components of online banking. Private sector banks offer round-the-clock customer service through a variety of channels, such as specialised contact centres, chatbots powered by artificial intelligence, email support, and social media help. Numerous private banks have implemented AI-powered virtual assistants, which provide timely responses to often requested enquiries, reduce wait times, and increase customer satisfaction.

In contrast, public sector banks primarily offer customer service during standard working hours, with varying levels of responsiveness. While some public banks have improved their helpline services, customers often report delays in reaching support representatives or receiving resolution for their concerns. Limited integration of AI chatbots means that customers may have to rely on traditional communication channels, which can be time-consuming.

Both private and public sector banks have made significant advancements in e-banking services, but private banks generally offer a superior digital banking experience due to their focus on user-friendly interfaces, advanced security measures, faster transaction processing, and round-the-clock customer support.

Findings and Discussion:

According to the report, digital banking environments in the public and private sectors differ somewhat, particularly in terms of user experience, security enhancements, and service efficacy. Private sector banks frequently outperform public sector banks in terms of the efficiency of digital services because of their proactive investments in state-of-the-art financial technology, real-time payment systems, and first-rate IT infrastructure. Their speed and performance-optimized digital banking platforms provide smooth money transfers, immediate loan processing, and easy access to financial products. Moreover, the use of cloud computing, AI-driven automation, and blockchain technology enhances operational efficiency, reducing system downtimes and transaction failures.

Public sector banks face challenges related to outdated digital infrastructure and legacy systems, which often result in slower transaction processing, occasional server downtimes, and system maintenance delays. Many public banks still operate on traditional core banking systems (CBS) that are less agile in handling high transaction volumes, leading to inconsistent performance and user dissatisfaction during peak transaction periods.

Private banks provide their clients with voice-assisted banking services, personalised dashboards, AI-powered chatbots, and user-friendly mobile banking applications because they value smooth digital experiences and user-friendly interfaces. The most recent UI/UX improvements are regularly added to their systems, guaranteeing smooth navigation and improved security features like biometric authentication and real-time fraud warnings. Public sector banks,

on the other hand, have been slower to adopt contemporary UI/UX design ideas, which frequently leads to less responsive and intuitive platforms.

To protect digital transactions, banks in the public and private sectors prioritise stringent security measures such end-to-end encryption, multi-factor authentication (MFA), and biometric verification. Private banks lead in adopting AI-driven cybersecurity measures, employing machine learning algorithms to detect suspicious activities, behavioral biometrics for fraud prevention, and blockchain-based authentication for added security layers. Their proactive approach ensures better protection against phishing attacks, identity theft, and online fraud, reinforcing customer trust.

Through government regulations and financial literacy campaigns, public sector banks provide banking services to underserved and distant areas, playing a crucial role in financial inclusion. They continue to bridge the financial gap between urban and rural populations through programs like Jan Dhan Yojana in India, rural banking initiatives, and subsidized loan schemes.

To bridge this gap, public sector banks must focus on: Accelerating IT Modernization, Enhancing AI and Automation, Improving UI/UX and Accessibility, Strengthening Cybersecurity Measures, and Expanding Digital Literacy Programs. Private banks will continue to lead in digital banking advancements, focusing on innovations such as blockchain-based financial services, AI-driven predictive analytics, and hyper-personalized banking experiences.

Conclusion:

A study on e-banking in Nagpur found considerable differences between banks in the public and private sectors. Better customer service, enhanced cybersecurity, speedier transaction processing, and technological advancements are all offered by private sector banks. They adopt AI-driven fraud detection systems, user-friendly mobile banking apps, and 24/7 support services. Despite these advantages, public sector banks face challenges such as outdated digital infrastructure and slower adoption of new technologies. They play a crucial role in financial inclusion, reaching a broader segment of the population, especially in rural and semi-urban areas. Issues like server downtimes, limited customer service hours, and usability concerns hinder their digital banking performance. To improve their competitiveness, public sector banks should focus on modernizing IT infrastructure, implementing AI-driven automation, improving user interfaces, strengthening cybersecurity measures, and expanding digital literacy programs. A balanced approach combining technological upgrades with inclusive banking policies is essential for both sectors to cater to evolving customer needs and contribute to the digital transformation of the banking sector in Nagpur and beyond.

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