



Artificial Intelligence in Banking: An Analytical Study of Customer and Employee Experience

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Abstract

Artificial Intelligence (AI) has become a critical driver of transformation in the global banking industry, redefining service delivery models, operational processes, and stakeholder interactions. Banks increasingly deploy AI-enabled technologies such as chatbots, virtual assistants, robo-advisory systems, predictive analytics, and automated fraud detection to enhance efficiency and competitiveness. This research paper analytically examines the impact of Artificial Intelligence on customer experience and bank employees' experience using secondary data sources. Drawing upon peer-reviewed journal articles, industry reports, policy documents, and institutional publications, the study evaluates how AI influences service quality, personalization, trust, job roles, productivity, and skill requirements in the banking sector.

The paper adopts a descriptive and analytical research design grounded in secondary data analysis. The literature reveals that AI significantly enhances customer satisfaction by improving service speed, accuracy, accessibility, and personalization. At the same time, AI reshapes employee experience by automating routine tasks, redefining job roles, and increasing the demand for digital and analytical skills. However, the findings also indicate challenges such as employee resistance, job insecurity concerns, ethical risks, and data privacy issues. The study emphasizes the importance of balanced human–AI collaboration, continuous employee upskilling, and ethical governance frameworks to ensure sustainable AI adoption. The paper contributes to existing literature by providing an integrated perspective on both customer and employee experience in AI-driven banking, offering insights valuable to academics, policymakers, and banking practitioners.

Keywords: Artificial Intelligence, Banking Sector, Customer Experience, Employee Experience

1. Introduction

The banking sector has undergone unprecedented transformation over the past two decades due to rapid technological advancements. Among these technologies, Artificial Intelligence (AI) has emerged as a disruptive force that is reshaping traditional banking models. AI refers to the capability of machines and computer systems to simulate human intelligence, including learning, reasoning, problem-solving, and decision-making. In banking, AI applications range from customer-facing tools such as chatbots and virtual assistants to back-end systems for fraud detection, credit scoring, risk management, and predictive analytics. The increasing adoption of AI in banking is driven by intense competition, rising customer expectations, regulatory pressures, and the need for operational efficiency. Customers today demand fast, personalized, secure, and seamless banking experiences across digital platforms. AI enables banks to analyze vast volumes of customer data in real time, allowing them to offer customized products, proactive financial advice, and round-the-clock support. Consequently, AI has become a key determinant of customer experience and satisfaction. At the same time, AI significantly affects bank employees' experience. Automation of routine and repetitive tasks alters job roles, workflows, and skill requirements. While AI enhances employee productivity and decision-making capabilities, it also raises concerns regarding job displacement, skill obsolescence, stress, and resistance to change. The dual impact of AI on customers and employees necessitates a holistic analysis that considers both stakeholder perspectives. Despite the growing body of research on AI in banking, much of the existing literature focuses either on customer outcomes or operational efficiency, with limited integrated analysis of customer and employee experience. Moreover, there is a need for comprehensive secondary-data-based analytical studies that synthesize existing knowledge and identify emerging patterns and gaps. This paper

seeks to address this gap by examining the impact of Artificial Intelligence on customer and employee experience in banking through an analytical review of secondary data.

2. Review of Literature

The literature on Artificial Intelligence in banking highlights its transformative impact on service delivery, efficiency, and stakeholder experience. Studies consistently report that AI enhances customer experience by improving service speed, accuracy, personalization, and accessibility (**Davenport & Ronanki, 2018; McKinsey & Company, 2021**). AI-powered chatbots and virtual assistants provide 24/7 customer support, reduce waiting time, and improve service consistency, thereby increasing customer satisfaction and engagement (**Accenture, 2022**). Research also indicates that AI-driven personalization enables banks to tailor products and services based on customer behavior, preferences, and financial needs, strengthening customer trust and loyalty. From an employee perspective, scholars note that AI automates routine tasks, allowing employees to focus on higher-value activities such as relationship management and strategic decision-making (**Brynjolfsson & McAfee, 2017**). However, the literature also identifies challenges including job insecurity, resistance to technological change, ethical concerns, and skill gaps among employees. Employees often perceive AI as a threat when adequate training and organizational support are lacking. Furthermore, ethical issues related to data privacy, algorithmic bias, and transparency remain critical concerns in AI-driven banking systems. Although prior studies provide valuable insights, there is a noticeable lack of integrated analyses that simultaneously examine customer and employee experience using secondary data, underscoring the relevance of the present study.

3. Research Methodology

Objectives of the study:

1. To examine the role of Artificial Intelligence in enhancing customer experience in the banking sector.
2. To analyze the impact of AI tools such as chatbots and virtual assistants on customer satisfaction.
3. To study the effect of AI-based personalized banking services on customer loyalty.
4. To assess the impact of Artificial Intelligence on the efficiency and productivity of bank employees.
5. To identify the key challenges and opportunities in implementing Artificial Intelligence in banking operations.

The present study adopts a descriptive and analytical research design based exclusively on secondary data. Secondary data research is appropriate for examining broad trends, patterns, and theoretical insights across multiple contexts without the constraints of time and cost associated with primary data collection. The methodology is structured to ensure systematic data collection, analysis, and interpretation. Sources of secondary data include peer-reviewed academic journals, books, conference proceedings, banking industry reports, government and regulatory publications, white papers published by consulting firms, and reports from international financial institutions. Databases such as Google Scholar, Scopus-indexed journals, and institutional repositories were extensively consulted to identify relevant literature. The selection of literature was guided by relevance, credibility, and recency. Studies focusing on Artificial Intelligence applications in banking, customer experience, employee experience, and human–AI interaction were prioritized. Content analysis and thematic analysis were employed as analytical tools. Content analysis facilitated the systematic categorization of information related to AI applications, benefits, and challenges, while thematic analysis enabled the identification of recurring themes and patterns across studies. The methodological approach ensures reliability by relying on established and peer-reviewed sources, while validity is maintained through triangulation of data from multiple sources. However, the study acknowledges inherent limitations of secondary data, including potential publication bias and the inability to capture real-time perceptions.

4. Data Analysis and Discussion

The analysis of secondary data reveals significant insights into the impact of Artificial Intelligence on customer and employee experience in banking. From the customer perspective, AI-driven technologies enhance service efficiency by reducing transaction time, minimizing errors, and offering personalized interactions. Customers increasingly rely on chatbots and digital assistants for routine inquiries, account management, and transactional services. AI-based fraud detection systems improve security and trust by identifying suspicious activities in real time. From the employee perspective, AI reshapes work processes

by automating repetitive tasks such as data entry, transaction processing, and basic customer queries. This transformation enables employees to focus on advisory roles, relationship management, and complex problem-solving. However, the analysis also highlights challenges such as skill mismatches, stress associated with technological change, and concerns about job security. Employees in organizations with structured training and change management programs demonstrate higher acceptance and adaptability to AI tools. The discussion underscores the importance of human–AI collaboration, where AI complements human expertise rather than replacing it. Banks that adopt a balanced approach achieve superior outcomes in both customer satisfaction and employee engagement.

5. Findings and Suggestions

The study identifies several key findings. First, Artificial Intelligence significantly improves customer experience by enhancing service speed, personalization, accessibility, and security. Second, customers prefer AI-enabled services for routine transactions while seeking human assistance for complex financial decisions. Third, AI positively influences employee productivity and efficiency but simultaneously raises concerns related to job security and skill obsolescence. Fourth, effective training and ethical governance frameworks are critical for successful AI adoption. Based on these findings, the study suggests that banks should adopt a hybrid service model integrating AI efficiency with human empathy. Continuous employee training and reskilling programs should be prioritized to reduce resistance and enhance adaptability. Transparent communication regarding AI implementation can alleviate employee anxiety and build trust. Additionally, banks must establish robust ethical guidelines and data governance mechanism to address privacy and the bias concerns.

6. Future Scope and Conclusion

The future scope of research includes empirical studies using primary data to validate secondary-data-based findings. Longitudinal studies can examine the long-term impact of AI on employee career development and customer loyalty. Comparative studies across countries and banking systems may provide deeper insights into contextual differences in AI adoption. In conclusion, Artificial Intelligence has emerged as a transformative force in the banking sector, significantly influencing customer and employee experience. While AI enhances efficiency, personalization, and productivity, its success depends on responsible implementation that balances technological advancement with human values. Banks that strategically integrate AI with a human-centric approach are more likely to achieve sustainable growth and competitive advantage.

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