


## Chapter 12

# Conceptualizing the Use of Artificial Intelligence in Customer Relationship Management and Quality of Services: A Digital Disruption in the Indian Banking System

**Parag Shukla**

 <https://orcid.org/0000-0002-7014-163X>

*The Maharaja Sayajirao University of Baroda, Vadodara, India*

**Sofia Devi Shamurailatpam**

*Faculty of Commerce, The Maharaja Sayajirao University of Baroda, India*

### **ABSTRACT**

*In this chapter, the authors have conceptualized a hypothetical comprehensive model of AI, CRM, and quality of services by banks given the underlying pull and push factors that determine the extent of AI adoption by the banks. This chapter shall also serve as a primer to demonstrate the effects of use of artificial intelligence in the Indian banks and is also aimed to encapsulate the restraining and facilitating forces that drive adoption of AI. This chapter examines the blooming development of artificial intelligence and its significance in the operational efficiency in terms of management of issues related to customers while accessing different products and services offered by banks. In other words, the use of artificial intelligence technologies*

DOI: 10.4018/978-1-7998-7959-6.ch012

*can dramatically improve banks' ability to achieve four key outcomes: higher profits, at-scale personalization, rapid innovation cycles, strategic customer relationship management (CRM), and distinctive omni-channel experiences. The role of artificial intelligence (AI) is significant in the banking industry for operational efficiency.*

## **INTRODUCTION**

India has witnessed waves of technological disruptions eased by the advancement of Information and Technology (IT) sector, covering vast ecosystem under the digital platform of over 700 million internet users, making as world's second largest country in digitalization. One such outcome of technological innovation and digitization is the emergence of Artificial Intelligence (AI) and adoption of the same in different sectors of the economy. As we know that there the use of artificial intelligence (AI) by organizations including the government institutions is on the rise for dealing with governance mechanisms in the deployment of qualitative and efficient services. Indeed, most of the industries are aware about the concept of artificial intelligence and potentials of such technology, recognizing that if firms do not deploy such highly skilled technologies within the short span of one to two years; such firms will face difficulty to compete with their counterparts in the years to come who will offer the value added services. Banking industry has been gradually adopting the new technology in the form of digital mode of banking, financial innovations under digitalization reforms and working jointly with the FinTech firms in the delivery of services and products. However, banking industry has a very specific feature given its complex and heterogeneous products & services which covers multiple groups of heterogeneous customer data, which requires high degree of compliance for a smooth regulatory framework. It is thus imperative to understand the regulatory expectations around the use of AI for its implementation and monitoring as a first step if firms are to fully exploit the potential of AI and machine learning (ML) technology, in a sustainable and operationally resilient manner (PWC, 2019).

Over the period, the Reserve Bank of India have geared towards developing efficient and secure payment and settlement systems with focus on their greater penetration through availability of user-friendly platforms at affordable cost (RBI, 2020). The Indian banking industry has been in the forefront of adoption of newer technologies to redefine more sophisticated and qualitative services to the customers. Banks have been significantly improving the use of technology in the form of user interfaces, multiple delivery channels, payment gateways, dashboards, core banking solutions and internal control mechanisms for protection so as to increase the overall operational efficiency. Above these, use of AI-powered platforms reduces costs or production in terms of data storage and processing, which makes easier for banks to connect and access across time and space. The outcome of the use of these services has brought

23 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: [www.igi-global.com/chapter/conceptualizing-the-use-of-artificial-intelligence-in-customer-relationship-management-and-quality-of-services/289455](http://www.igi-global.com/chapter/conceptualizing-the-use-of-artificial-intelligence-in-customer-relationship-management-and-quality-of-services/289455)

## Related Content

---

### An Intelligent and Dynamic Decision Support System for Nonlinear Environments

S. Umaand J. Suganthi (2012). *International Journal of Intelligent Information Technologies* (pp. 43-61).

[www.irma-international.org/article/intelligent-dynamic-decision-support-system/74829](http://www.irma-international.org/article/intelligent-dynamic-decision-support-system/74829)

### Evolution of e-Sales as A Form of e-Entrepreneurship in Poland: An Analysis of Opportunities and Threats

Agata Mesjasz-Lech (2018). *International Journal of Ambient Computing and Intelligence* (pp. 43-54).

[www.irma-international.org/article/evolution-of-e-sales-as-a-form-of-e-entrepreneurship-in-poland/205575](http://www.irma-international.org/article/evolution-of-e-sales-as-a-form-of-e-entrepreneurship-in-poland/205575)

### Thread and Threat of AI: Analyzing Social Implications of Fake News and Hate Speech on Social Media Platforms in India

Aiswaria G. Shajan (2025). *Ethical AI Solutions for Addressing Social Media Influence and Hate Speech* (pp. 433-450).

[www.irma-international.org/chapter/thread-and-threat-of-ai/371747](http://www.irma-international.org/chapter/thread-and-threat-of-ai/371747)

### Is AI a Legal Person?: Redefining the Limits of Legal Personhood

Irfan Rasool Najarand Sneha Sneha (2025). *Exploring AI Implications on Law, Governance, and Industry* (pp. 25-58).

[www.irma-international.org/chapter/is-ai-a-legal-person/373407](http://www.irma-international.org/chapter/is-ai-a-legal-person/373407)

### Deep Neural Network Regularization (DNNR) on Denoised Image

Richa Singh, Ashwani Kumar Dubeyand Rajiv Kapoor (2022). *International Journal of Intelligent Information Technologies* (pp. 1-16).

[www.irma-international.org/article/deep-neural-network-regularization-dnnr-on-denoised-image/309584](http://www.irma-international.org/article/deep-neural-network-regularization-dnnr-on-denoised-image/309584)