


Chapter 1

Systematic Analysis of the Role of Artificial Intelligence in Customer Experience in the Service Sector: Towards the Development of a Conceptual Model

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ABSTRACT

The integrated use of artificial intelligence (AI) is rapidly transforming the service industry and fundamentally reshaping the customer experience (CX) through automation, personalization, and predictive analytics. With global AI adoption projected to exceed \$500 billion by 2025, service organizations are increasingly adopting AI-based solutions to enhance customer engagement and operational efficiency. Yet, the dynamic interplay between AI and CX remains under-researched, particularly with regard to ethical implications, trust drivers, and consumer preferences. To address this knowledge gap, this study employs a systematic literature review to develop an integrative heuristic model for understanding the impact of AI on CX. The results reveal that while AI improves service efficiency and personalization, its effectiveness depends on consumer trust, ethics, and industry-specific characteristics. The study provides a conceptual framework for assessing the role of AI in CX, highlighting both the opportunities and challenges associated with AI deployment in the service sector.

INTRODUCTION

The development of artificial intelligence has launched an extensive transformation of consumer behavior and transformed the relationships between businesses and their client base. According to Lemon & Verhoef (2016) service companies must achieve exceptional CX because it acts as a decisive factor for standing apart from competitors in a quickly evolving consumer expectations market. The service sector depends heavily on personal interaction for delivering good service yet artificial intelligence brings along both positive opportunities and difficult technical obstacles. AI delivers automation of mundane duties simultaneously with individualized suggestion features and service availability expansion through virtual assistant implementations (Wirtz et al., 2018). The development of advanced technologies leads to concerns about both ethical matters and individual data security as well as customer acceptance of these systems (Parasuraman et al., 2005).

The relevance of this subject gains additional importance because of the acknowledgment and the acceptance of companies that customer experience is their biggest differentiating factor in competitive markets. A study conducted by McKinsey and Company (2022), revealed that 80% of consumers are more likely to choose businesses that deliver customized service experiences while AI functions as the key driver of this shift. What's more, Gartner (2023) forecasts that by 2025, over 50% of customer interactions in service-oriented businesses will be tackled by AI-driven systems, thus pointing to the speed-up of this trend.

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