

CHALLENGES AND BENEFITS OF ADOPTING ARTIFICIAL INTELLIGENCE IN SRI LANKA'S FOOD AND BEVERAGE INDUSTRY: INSIGHTS FROM INDUSTRY PROFESSIONALS

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ABSTRACT

Although Artificial Intelligence (AI) is increasingly reshaping global industries, including the food and beverage sector, the adoption of AI in developing countries, such as Sri Lanka, remains underexplored, particularly in terms of its practical benefits and challenges. This study aims to bridge this gap by examining the perspectives of industry professionals regarding AI adoption in Sri Lanka's F&B industry. The objectives were to identify the benefits and challenges of AI adoption and provide recommendations to facilitate its integration into the industry. Using a qualitative approach, data were gathered through in-depth interviews with 15 industry professionals, including 12 hotel executives and 3 academics, selected using purposive and snowball sampling techniques. The data were analyzed using thematic analysis, which was conducted from January to March 2024. The findings reveal that AI technology enhances operational efficiency through improved inventory management, supply chain optimization, and quality control. It also elevates the customer experience by enabling personalized recommendations, automated customer services, and feedback analysis. In addition, AI contributes to waste reduction through predictive analysis and resource optimization. The benefits of AI include cost reduction in labor and operations, enhanced decision-making through data-driven strategies, real-time monitoring, and gaining a competitive advantage through innovation and market expansion. Challenges include financial constraints, such as high initial costs; uncertainty about return on investment; and technological limitations, including infrastructure deficiencies and skill gaps. Cultural and organizational resistance, driven by a preference for traditional methods and concerns about employment, also pose significant barriers. Additionally, regulatory and ethical concerns, particularly regarding data privacy and the ethical use of AI, complicate adoption. Strategic recommendations derived from these findings include investing in infrastructure development, particularly technological investments, and support for small and medium enterprises. Capacity building through targeted training programs and talent acquisition are crucial. Furthermore, this study suggests the initiation of policy and regulatory frameworks, emphasizing government policy reforms and industry standardization. Finally, managing organizational change through cultural shifts and pilot projects is essential to successful AI integration. In conclusion, although AI offers substantial benefits to the Sri Lankan F&B industry, its adoption is fraught with challenges that require careful management.

Keywords: AI adoption, challenges, food and beverage industry, operational efficiency, strategic recommendations