

Applications of Artificial Intelligence on International Microfinance Institutions

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Abstract

This paper focuses on how AI can transform operational efficiency, risk assessment, and customer outreach. The research primarily investigates AI's role in microfinance, considering the sector's unique challenges and the diverse socio-economic contexts these institutions operate in. Methodologically, the study employs mixed-method approaches, including a comprehensive literature review, case studies from Norway, Thailand, and Burundi, and both qualitative and quantitative analyses. This approach facilitates a nuanced understanding of AI's integration in varied economic realities and its impact on microfinance practices. The findings reveal that AI significantly enhances credit risk assessment by utilizing predictive analytics and alternative data sources, leading to more informed lending decisions and reduced default risks. AI's automation capabilities are shown to drive operational efficiencies, particularly in resource-constrained settings, by streamlining processes such as loan origination and customer service. The paper highlights the transformative potential of AI in optimizing product offerings and customer engagement strategies, while understanding that the use of AI will vary based on the financial development of specific areas that microfinance institutions aid. These findings suggest that AI can be a powerful tool for financial inclusion, enabling microfinance institutions to extend their services to underserved populations more effectively. However, the successful integration of AI in microfinance is contingent upon addressing challenges such as data privacy, the digital divide, and the need for supportive regulatory frameworks. The paper concludes by underscoring the necessity of a balanced approach to AI adoption in microfinance, ensuring responsible utilization that safeguards customer privacy and rights while enhancing financial services delivery.

Keywords: Artificial Intelligence, Microfinance, Financial Inclusion, Operational Efficiency, Credit Risk Management, Predictive Analytics, Institutional Finance, Digital Transformation