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Unveiling the transformative role of artificial intelligence in improving business process performance

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Purpose

The present study intends to examine the role of AI in enhancing the process performance of manufacturing entities in India. It aims to explore factors that measure the business process performance, which are influenced by the adoption of AI within various business processes.

Design/methodology/approach

The research conducted an empirical survey on Indian Manufacturing organizations using a questionnaire-based survey method on those businesses that have adopted AI within their business processes. For this, the study targeted C-level technology managers in the select manufacturing businesses in India. The structural equation modelling (SEM) technique was applied for data analysis.

Findings

The findings of the study indicate that the adoption of AI has a significant positive role in improving the business process performance of manufacturing firms. It can bring manifold advantages to business firms, including accuracy, speed, operational cost reduction, improved quality, enhanced productivity and efficiency. These benefits can help organizations in India to gain a competitive advantage in the changing business world.

Originality/value

The present article explores the transformative role of AI in the manufacturing sector of a rapidly developing economy like India. It provides empirical evidence on certain crucial benefits of AI, including quality enhancement, cost efficiency and productivity enhancement. This research offers valuable insights for both business leaders and policymakers on leveraging AI to drive industrial growth and competitiveness. It contributes to the limited literature on the practical implications of AI in emerging markets, particularly within the Indian context.



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AI capabilities; Infrastructure flexibility; Management capabilities; Personnel expertise; Business process performance; Manufacturing entities

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