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Impact of Artificial Intelligence Implementation on Sustainability in Colombo's Business Process Outsourcing Sector in Sri Lanka

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Abstract

The processes of Artificial Intelligence integration are evolving at a fast pace and are rapidly changing business models across industries and organizational functions. This study investigates the impact of Artificial Intelligence (AI) implementation on sustainability in Colombo's Business Process Outsourcing (BPO) sector. The research investigates the following four dimensions: energy efficiency, adaptability of workforce and compliance with the sustainability standards, operational efficiency. The study uses a mixed methods approach including survey, a statistical analysis and shows that AI implementation has a huge impact on energy efficiency and operational efficiency that will positively influence one's overall sustainability. Although adaptation of the workforce has a negative relationship with sustainability, this demonstrates the need for comprehensive reskilling and changing management. There is no significant difference in overall sustainability outcome due to compliance with sustainability standards. There are several key contributions that the study makes to the field. First, it offers empirical proof of how multifaceted the impacts AI has on sustainability in an emerging market BPO environment, which contributes to that literature. It is also an illustration of opportunities and challenges associated with the use of AI for sustainable development and is a view of the use of AI. It finally presents practical insights for the implementation of AI in BPO firms, policymakers, and other stakeholders design to counteract the negative aspects of AI use. What these findings imply is that by using AI, both the economic, social and environmental sustainability of the BPO sector could be boosted, if there is a balanced approach towards technological impact and those of human factors in achieving such results.

Keywords: Artificial Intelligence, Business Process Outsourcing, Sustainability, Energy Efficiency, Workforce Adaptability, Operational Efficiency

JEL Codes: O33, L86, Q01, Q41, J24, D24

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