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Enhancing Managerial Competence and Corporate Social Responsibility (CSR) In the Era of Industry 4.0: A Strategic Imperative for Sustainable Business Transformation

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Abstract

The rapid evolution of Industry 4.0 technologies—characterized by digitalization, automation, artificial intelligence, and cyber-physical systems—has compelled organizations to rethink managerial capabilities and redefine their approach to Corporate Social Responsibility (CSR). This study examines how enhanced managerial competence serves as a catalyst for embedding CSR into organizational strategy, thereby enabling sustainable business transformation in the digital era. Adopting a qualitative case-study methodology, the research investigates organizations across diverse industries that have successfully integrated Industry 4.0 technologies while strengthening their CSR commitments. Through in-depth analysis of managerial practices, strategic initiatives, and digital transformation pathways, the study identifies the competencies most critical for navigating technological disruption and fostering responsible innovation. Findings highlight that digital literacy, ethical leadership, stakeholder-centric decision-making, and adaptive strategic thinking are essential competencies for managers to align technological advancements with sustainability goals. Moreover, the case studies reveal that firms leveraging Industry 4.0 tools to enhance transparency, resource efficiency, and social impact gain a significant competitive advantage. This research underscores the strategic imperative of developing managerial competence as a foundation for effective CSR execution, offering a practical framework to guide organizations pursuing sustainable transformation in the age of Industry 4.0.

Keywords: Managerial Competence, Corporate Social Responsibility (CSR), Industry 4.0, Sustainable Business Transformation, Digital Transformation, Ethical Leadership, Responsible Innovation, Strategic Management, Case Study Research, Stakeholder Engagement