

Building Inclusive and Sustainable Work Systems in the Manufacturing Industry: A Soft System Approach

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Abstract

The rapid development of Industry 4.0 initiatives in the manufacturing industry has increased the industry's performance and competitive advantage. Yet, it also has a detrimental impact: the existence of socio-technical inequality in the workplace. The manufacturing industry is automating tasks and replacing workers with the latest technology to enhance efficiency, productivity, accuracy, and consistency. This study examines the accelerated adoption of Industry 4.0 in Indonesia's manufacturing sector and explores how it can evolve toward a more human-centric vision of Industry 5.0. Using the Soft Systems Method (SSM) approach, this study develops a conceptual model that promotes inclusivity and sustainability, enabling manufacturing to balance technology and worker well-being while maintaining productivity and profitability. Data were collected through in-depth interviews with two manufacturing companies that have successfully transitioned into a more balanced and harmonious work community. This study offers managerial and policy implications for the manufacturing industry, which will be helpful not only as a guide in Indonesia but also in other emerging economies.

Keywords

Industry 4.0, Industry 5.0, Sustainability, Manufacturing Industry and Soft Systems Method.

Biography

Erlinda Nusron Yunus is an Associate Professor of Operations Management at Sekolah Tinggi Manajemen PPM in Jakarta, Indonesia. She received her Ph.D. in Supply Chain Management at Southern Illinois University Carbondale, Illinois, USA. Prior to her academic career, Erlinda worked for over a decade as a trainer and consultant in the Management field. Her research has been published in several reputable journals, and her teaching and research interests encompass supply chain management, operations management, productivity, sustainability, and innovation.