Chapter 7
A Comparative Analysis of Sustainable Rural Manufacturing:
The Integration of Economic, Social, and Environmental Models With Special Reference to Haryana

Hemlata Parmar
https://orcid.org/0009-0009-1438-5427
Manipal University Jaipur, India

Utsav Krishan Murari
https://orcid.org/0009-0007-1606-6775
Sharda University, India

ABSTRACT

Rural manufacturing is essential for economic diversification, poverty alleviation, and sustainable development, particularly in predominantly agriculturally areas such as Haryana, India. This study examines many economic models—subsistence, cluster-based development, cooperatives, public-private partnerships (PPP), and social enterprises—that amalgamate economic, social, and environmental objectives to foster sustainable rural development. It assesses the efficacy of governmental programs such as MUDRA Yojana, PMKVY, and HSIIDC by utilizing instances like the Panipat textile cluster and dairy cooperatives. A hybrid strategy that incorporates many frameworks is advised to attain sustainable, inclusive, and resilient rural manufacturing.

DOI: 10.4018/979-8-3693-7515-0.ch007

Copyright © 2025, IGI Global Scientific Publishing. Copying or distributing in print or electronic forms without written permission of IGI Global Scientific Publishing is prohibited.

1. INTRODUCTION

1.1. Rural Manufacturing and Economic Development

Manufacturing is a central development pillar that aids in the fight against poverty and unemployment in countries whose rural sector depends on agriculture (Agarwal & Malik, 2020). The present census indicates that sixty-five per cent of the population of India is still rural-based; however, these regions of economic dependency are agricultural, which is, in actuality, a weak foundation since being an environmentally sensitive commercial crop, it experiences limited stability of income and price idiosyncrasies with low yield due to excessive concentrations of unproductive farming practices (Chandra & Saxena, 2019). To avoid these risks and enhance the welfare of the country's people, rural manufacturing is a possibility for developing the non-agricultural sector to generate stable rural employment and the diversification out of agriculture (Gupta & Patel, 2022).

Haryana is one of the potential players on India's agriculture map and among the major producers of wheat, rice, sugarcane, and many others. However, the manufacturing industry in the villages has become helpful as a supporting sector (Jain & Yadav, 2023). The emergence of Haryana's new face of industrialisation, particularly in the metropolitan zones spearheaded by automobile, information technology, and pharmaceutical industries, is faster than the slow growth of rural manufacturing firms (Sharma & Patel, 2023). Rural manufacturing has a twofold advantage in areas where agriculture prevails: it can slow rural-urban drift by providing jobs for people in their respective regions and encouraging industrialisation for its products to be made for domestic and export markets (Singh & Sharma, 2020).

Manufacturing in rural areas means that SMEs/MSMEs are involved; these are important for every economy worldwide, especially in India (Sinha & Mehta, 2020). There is no way the world will develop the employment sector and generate high revenues without the assistance of micro, small, and medium enterprises (MSMEs). They comprise over one-third of the country's GDP and employ over 110 million people (Roy & Banerjee, 2022). The MSMEs' focus areas in rural areas would include agro-processing, textiles, handicrafts, and metallurgical industries (Kaur & Singh, 2019). This makes it possible for these industries to harness locally available resources and indigent innovative skills and engage in manufacturing competitive products (Verma & Choudhary, 2020).

Manufacturing for rural areas is essential for providing inclusive growth, such as socioeconomic development and the reduction of the polity gap internationally (Murari & Parmar, 2025). The Public-Private Partnership (PPP) model also discovered that other nations like China, Vietnam, and Bangladesh had transformed a resilient rural manufacturing model that had propelled remarkable transformation (Gupta &

28 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/chapter/a-comparative-analysis-of-sustainable-rural-manufacturing/373563

Related Content

Total Quality Assurance Networking Model for New Defect Prevention Techniques

(2022). *Examining a New Automobile Global Manufacturing System (pp. 169-183).* www.irma-international.org/chapter/total-quality-assurance-networking-model-for-new-defect-prevention-techniques/303350

Process Optimizations of Direct Metal Laser Melting Using Digital Twin

Sachin Salunkhe, Vishal Gangadhar Naranje, Jayavelu S.and Atiq Rehman (2022). *Applications of Artificial Intelligence in Additive Manufacturing (pp. 177-193).* www.irma-international.org/chapter/process-optimizations-of-direct-metal-laser-melting-using-digital-twin/294053

Parts Design and Process Optimization

Hany Hassanin, Prveen Bidare, Yahya Zweiriand Khamis Essa (2022). *Applications of Artificial Intelligence in Additive Manufacturing (pp. 25-49).* www.irma-international.org/chapter/parts-design-and-process-optimization/294047

Computational Intelligence-Driven Design and Optimization of Polyurethane Belt-Type Oil Skimmer for Sustainable Manufacturing Using Solidworks 3D CAD

Amandeep Singh Wadhwa, Shalom Akhai, Mahapara Abbass, Arti Chouksey, Shailendra Tiwariand Tanu Taneja (2025). *Using Computational Intelligence for Sustainable Manufacturing of Advanced Materials (pp. 445-464).* www.irma-international.org/chapter/computational-intelligence-driven-design-and-optimization-of-polyurethane-belt-type-oil-skimmer-for-sustainable-manufacturing-using-solidworks-3d-cad/376705

Applications of TPS for Realizing QCD Studies Developing JIT Strategy

(2024). *Revolutionary Automobile Production Systems for Optimal Quality, Efficiency, and Cost (pp. 47-67).* www.irma-international.org/chapter/applications-tps-realizing-qcd-studies/347004