

Strategic Human Resource Practices and SDG 8: Advancing Decent Work in the Steel Industries

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Abstract

The purpose of the paper is to identify the strategic human resources practices (SHRPs) prevalent in steel industries which are leading to decent work and economic growth in global context. An extensive literature review was conducted to identify the SHRPs. The SHRPs are then thematically categorized with the help of field experts and academicians of India having expertise in 17 SDGs. The findings are then modelled in consultation with academicians. The finding would be helpful in identifying and addressing the SHRPs of steel industry considering SDG 8. The steel industry would be benefitted in implementing decent work for economic development.

Keywords: Strategic Human Resource Practices, SDG 8, Decent Work & Economic Growth, Steel Industries

1. Introduction

Sustainable development has become a trend for organizations that are catering to productivity, inclusion, safe, and socially sensitive (Singh and Gupta, 2018; Andreotti *et al.*, 2023). Among the 17 SDGs prescribed by United Nations, SDG-8 focusses on Decent Work and Economic Growth. It links economic growth with employment quality, labour rights, workplace safety, social inclusion as well as productivity. The objective lies in sustained and inclusive economic growth, valuable employment, and decent work for all (Krein *et al.*, 2022).

Organizations are focussing on fair employment practices, their development, occupational safety, equality, and meaningful participation along with economic performance (Berhan, 2020). Human resource management therefore considered a critical organizational system which can address SDG 8 in workplaces.

The steel industry cannot be seen in isolation. This strategically important industry supports construction, infrastructure, transportation, energy, manufacturing and other industrial activities (Karlsson et al., 2020). Steel production involves complex production systems, capital intensive infrastructure & technology (Gajdzik & Wolniak, 2021), demanding occupations, shift-based work, exposure to occupational hazards, and diverse workforces (Rajak & Chattopadhyay, 2026), such as different strata of employees, contractors, apprentices, engineers, and managerial personnel (Evans & Stroud, 2016). Their presence creates significant human resource challenges. Consequently, to maintain a sustainable economic development of steel industry, quality of employment and working conditions are to be considered independently.

With this perspective, strategic human resource management lays an important conceptual foundation for alignment of human resource policies and practices keeping in view of the long-term organizational and social objectives. Strategic human resource practices can influence both organizational performance and the quality of work expected from the employees.

The relationship between strategic human resource practices in steel industry and SDG 8 is significant since decent work encompasses multiple dimensions of employment (Arda *et al.*, 2025). Despite the growing emphasis on sustainable HRM and the SDGs, an important research gap remains, since existing studies often focus on individual HR practices in relation to organizational performances, employee outcome, or sustainability, and less attention on portfolio of strategic HR practices collectively contribute to SDG 8 in steel industries.

The present study addresses this gap by analysing strategic human resource practices in the steel industry through the lens of SDG 8. It conceptualises strategic HR practices as not only as simple managerial mechanisms but potential organizational pathways for advancing decent work along with sustainable economic participation.

2. Methodology

2.1 Identification of Strategic HR Practices: Extensive literatures were analysed from reputed peer reviewed journals published globally. Strategic practices addressing SDG 8 were further identified and analysed.

2.2 Thematic Arrangement: All the strategic HR Practices so obtained were thematically arranged in consultation with field experts and academic experts having significant knowledge in SDGs. Three dimensions were arrived at such as, Human Capital Development with four strategic HR practices, Strategic Leadership & Participation with three strategic HR practices and Sustainable Performance & Workplace Excellence with two strategic HR practices.

2.3 Development of Conceptual Model: The model was developed in consultation with field experts and academician having knowledge of SDGs.

3. Findings

3.1 Human Capital Development

3.1.1 Apprenticeship Programmes: Apprenticeship Programs are attractive to job-seeking youths because the steel industries provide practical on the job-trainings which can be an early entry to employment, economic independence, and social recognition. These programs provide a mechanism for developing industry-ready skills and bridging school-to-work transitions (Altreiter, 2021). The need for initial vocational education and training to respond to Industry 4.0 as digitisation is transforming production processes and demanding new skill requirements (Antonazzo et al., 2023). Industrial transitions require coordinated skill policies, retraining, and workforce adjustment measures (Botta, 2019).

3.1.2 Competency Mapping: Shaheen et al. (2019) developed a framework for contractual workers in India's steel sector classifying competencies into knowledge, skills, and attitudes supported by behavioral indicators. Organizations can map and evaluate workforce competencies for recruitment, training, development, and performance management. Complementing this, Marlapudi and Lenka (2025) identified seven competency groups and 21-sub-groups prioritizing digital-technical and industry specific competencies recognizing generic competencies as foundational, followed by cognitive and business competencies.

3.1.3 Skill Development: Singh and Gupta (2018) highlighted worker training, skill development, occupational health, and social wellbeing as important social dimensions of sustainability in Indian steel industry. Akyazi et al. (2023) emphasized the importance of technical knowledge, interdisciplinary skills, and ability to manage emerging sustainable production technologies. Stroud et al. (2026) further showed that AI adoption in metallurgy requires transversal skills such as problem solving, collaboration, communication, adaptability, and critical thinking, in addition to technical skills.

3.1.4 Talent Management: Systematic talent identification, development, retention and alignment of employee capabilities to address organizational objectives, Salamatian *et al.* (2024) developed a talent management model that highlighted the importance of talent management in technology-intensive steel industry. Developing a talent management support system in sustaining organizational human capabilities, Morioka et al. (2025) demonstrated the value of systematic approaches in identifying employee capabilities, supporting employee development, and maintaining skill and knowledge.

3.2 Strategic Leadership & Participation

3.2.1 Leadership Development: Effective leadership behaviour shapes employee attitudes, satisfaction, and performance in Indian steel industry (Kesari and Verma, 2018). Leadership commitment led to innovation, speed, strategic capability and organizational transformation in

JSW steel, India (Singh, 2024). Leadership and managerial capabilities support supply chain resilience in Mobarakeh Steel Company, Iran (Amin et al., 2025).

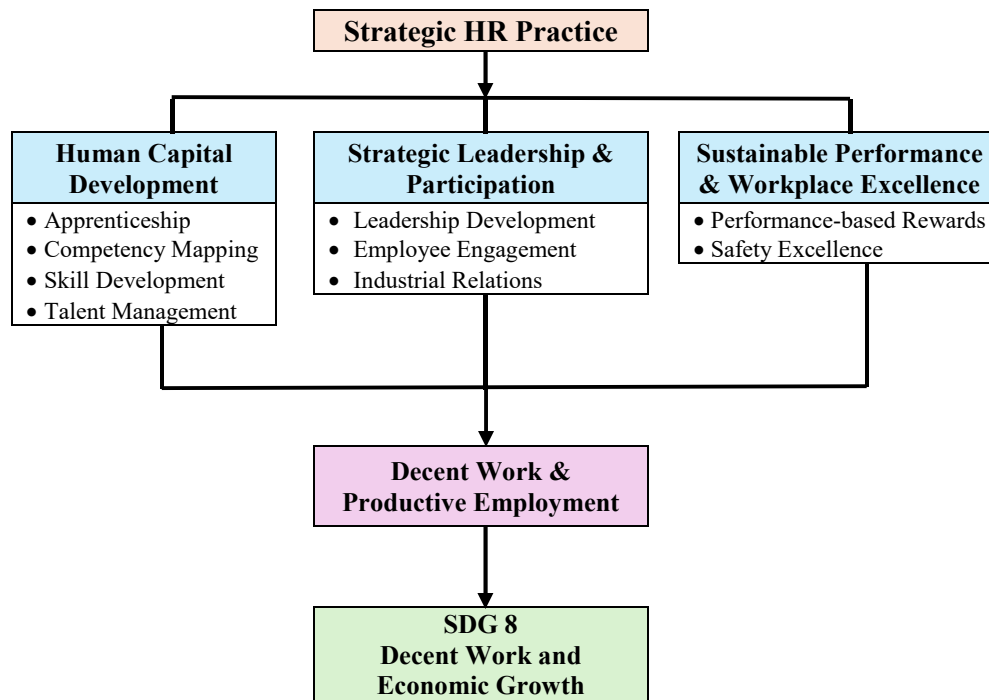
3.2.2 Employee Engagement: Work-life balance, leadership style and employee engagement contribute employee performance highlighting workforce effectiveness (Katili et al., 2021). Supportive management practice can enhance employee attachment strengthening employee loyalty in Egyptian iron and steel industry (Abd-El-Salam, 2023). Lean management contributes to sustainable performance with employee performance play an important moderating role (Thawornsujaritkul and Boonnual, 2024). Employee involvement fosters green HRM supporting sustainability in steel industry (Kumar et al., 2026).

3.2.3 Industrial Relations: Sustainable industrial relations depend on joint learning, collective bargaining, cooperation and institutional adaptation to respond constructively in technology implementation and organizational changes (Müller-Jentsch, 2018). Digital gamification supported energy-efficiency initiatives in European steel industries creating new forms of employee participation and interaction, stressing workforce involvement (Stroud et al., 2020). Decarbonization involves argued power relations and governance, making stakeholder negotiation and worker participation important (Grouiez and Klenaner, 2026).

3.3 Sustainable Performance & Workplace Excellence

3.3.1 Performance-based Rewards: Implementation of sustainability initiatives can be strengthened linking employee responsibilities and organizational targets with employee involvement, operational responsibilities and effective management of waste-water management of steel plants (Deng et al., 2023). Green total factor productivity needs organizational mechanisms to pursue green innovation and efficiency improvement with encouraged employees and managers to meet technological changes and environmental performance (Zheng et al., 2025).

3.3.2 Safety Excellence: Systematic hazard identification, implementation of preventive measures, and strengthened occupational safety practices found essential for preventing occupational accidents and injuries among iron and steel workers in West Bengal, India (Rajak et al., 2022). Tappura et al. (2023) emphasised the importance of safety monitoring indicators in facilitating continuous improvement through a systematic framework for measuring and managing safety performance. Costa et al. (2024) observed through two field studies that pushing interventions into working environment safer employee behaviour can be practised, highlighting the potentiality of behavioural approaches to complement conventional safety systems.



4. Discussion and Conclusion

The strategic HR practices consists of three dimensions such as human capital development, strategic leadership & participation, and sustainable performance & workplace excellence. apprenticeship, competency mapping, skill development, and talent management come under the dimension of human capital development. Leadership development, employee engagement, and industrial relations come under strategic leadership & participation. Lastly, performance-based rewards, and safety excellence come under sustainable performance & workplace excellence. This categorization gives a clear distinction among the strategic HR practices leading to decent work & economic development, which addresses SDG 8. Attending the strategic HR practices in steel industries by their concerned managers would be easier and simplified with this approach. Further research can be conducted in establishing impact of each dimension of SDG 8. An ISM approach can be established by unearthing the relationships among these SHRPs.

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