HUMAN RESOURCE MANAGEMENT STRATEGIES FOR SUPPORTING THE ACHIEVEMENT OF SDGS IN THE ERA OF TECHNOLOGY 5.0

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Abstract

The era of Technology 5.0 has brought significant transformation to various aspects of organizations, including Human Resource Management (HRM). This research discusses HRM strategies that can support the achievement of Sustainable Development Goals (SDGs) by leveraging smart technologies such as artificial intelligence, big data, and the Internet of Things. The primary focus of this study is on workforce skill development, strengthening a sustainable organizational culture, and applying technology to enhance efficiency and inclusivity. The research also emphasizes the importance of collaboration between the public sector, private sector, and educational institutions to address global challenges, such as skill gaps and digital inclusion. The findings indicate that the adoption of adaptive, technology-based HRM practices can be key to an organization's success in supporting the SDG agenda while enhancing competitiveness in the digital era.

Keyword: *Human Resource Management, SDGs, Technology 5.0, Sustainability, Digital Transformation*

A. INTRODUCTION

The era of Technology 5.0 represents a new revolution that emphasizes the integration of humans, technology, and sustainability in various aspects of life. Technology 5.0 focuses not only on automation and digitalization but also on placing humans at the center of decisionmaking processes. In this context, human resource management (HRM) plays a critical role in ensuring that technological advancements align with the sustainability principles outlined in the Sustainable Development Goals (SDGs). The SDGs, comprising 17 global objectives, require organizations to prioritize inclusive development, poverty alleviation, and environmental preservation. Therefore, HRM must adopt relevant strategies to effectively support the achievement of these goals (Smith, 2024).

Technology 5.0 presents new challenges for HRM, especially in managing a workforce that is increasingly digitalized. The implementation of technologies such as artificial intelligence (AI), the Internet of Things (IoT), and blockchain demands a workforce equipped with specialized skills and high adaptability. HRM needs to design skill development programs that are not only technologically relevant but also aligned with sustainability values. For instance, enhancing expertise in green technology can support the SDGs' carbon emission reduction targets. In this regard, collaboration among the education sector, government, and businesses is key to success (Wang & Zhang, 2023).

Furthermore, HRM's role in fostering an organizational culture oriented toward sustainability is increasingly important. A work culture that promotes inclusivity, equity, and employee well-being can accelerate the adoption of environmentally friendly and sustainable technologies. HRM must ensure that all work processes, from recruitment to performance evaluation, reflect a commitment to the SDGs. This includes empowering women, reducing social inequalities, and developing more sustainable communities through responsible business practices (Jones & Roberts, 2023).

However, the implementation of HRM strategies in the era of Technology 5.0 also faces obstacles, particularly in developing countries. Limited access to technology, low levels of digital literacy, and cultural barriers often pose significant challenges. Therefore, an inclusive approach is required, such as providing technology-based training for vulnerable groups and creating sustainable job opportunities. HRM must design adaptive policies to ensure that the benefits of technological transformation are accessible to all segments of society (Patel, 2022).

This research focuses on HRM strategies that can be implemented to support the achievement of SDGs in the era of Technology 5.0. By integrating innovative and sustainable approaches, HRM is expected to become a driving force in balancing economic growth, social inclusion, and environmental preservation for the future.

B. METHOD

This study employs a descriptive qualitative approach and a literature review method to examine human resource management (HRM) strategies in supporting the achievement of the Sustainable Development Goals (SDGs) in the era of Technology 5.0. The descriptive qualitative approach was chosen to provide an in-depth overview of the implementation of policies, practices, and innovations in human resource management relevant to sustainable development goals.

The research data were collected from various sources, including journal articles, books, reports from international organizations, and other digital resources relevant to the topic. The literature was selected based on its credibility, relevance, and contribution to the discussion of HRM issues in the context of Technology 5.0 and SDGs. Data analysis involved the identification, categorization, and interpretation of information obtained from the literature to identify patterns, challenges, and opportunities related to HRM in supporting SDGs (Bowen, 2009).

The first stage of this research was the collection of literature data. The researchers accessed various scientific databases, such as Scopus, Springer, and Google Scholar, to gather recent literature addressing the themes of SDGs, Technology 5.0, and human resource management. The selection of literature was conducted by identifying keywords such as SDGs 5.0, human resource management, technological innovation, and sustainability. The literature that met the selection criteria was then categorized based on subtopics such as HRM strategies, Technology 5.0, and its impact on the SDGs (Snyder, 2019).

The second stage involved in-depth data analysis. At this stage, the researchers utilized content analysis techniques to understand how HRM can be optimized to support SDGs through the utilization of Technology 5.0. The analysis focused on policies for workforce competency development, the digitalization of work processes, and the application of sustainability values within organizations. The findings of this analysis served as the basis for designing adaptive and innovative HRM strategies to address the demands of the rapidly evolving technological landscape (Creswell, 2014).

Subsequently, the collected data were analyzed to identify the relationships between HRM strategies and the achievement of SDGs. This study highlights the importance of integrating technology into human resource management, particularly in the development of digital competencies, fostering an organizational culture oriented toward sustainability, and enhancing social inclusion within organizations. This analysis aimed to identify key factors that can drive organizations to support SDGs through effective HRM (Silverman, 2020).

By employing a descriptive qualitative approach and literature review, this study seeks to contribute both theoretically and practically to understanding the strategic role of HRM in supporting the achievement of SDGs in the era of Technology 5.0. This method also enables researchers to formulate recommendations

that can be applied by various stakeholders, including governments, businesses, and educational institutions, in managing human resources sustainably (Bryman, 2016).

C. RESULTS AND DISCUSSION

Picture 1

Source : https://globalabc.org/advocacy/political-processes.com Human Resource

Management (HRM) plays a crucial role in addressing the dynamics of the 5.0 Technology era, particularly in supporting the achievement of Sustainable Development Goals (SDGs). Technology 5.0 offers a collaborative approach between humans and technology, based on artificial intelligence (AI), the Internet of Things (IoT), and big data. However, effective implementation can only be achieved if human resources have the necessary skills to optimally utilize these technologies (Smith, 2023 "The Role of Human Resource Management in Leveraging Technology 5.0 for Achieving Sustainable Development Goals", This journal reviews the important role of HRM in adapting and leveraging Technology 5.0 to support the achievement of SDGs. The focus is on developing digital skills and the role of HRM in innovating using sustainable new technologies.). Companies must align their HR strategies with sustainable development goals, including education and training that support digital competence.

Improving HR capacity becomes a key element in supporting the transition to a sustainable circular economy. This includes developing technological innovation skills and fostering an organizational culture that is proactive toward environmental and social issues. For example, companies that successfully implement SDG principles in HR management demonstrate operational efficiency while contributing to carbon emissions reduction (Wang & Zhang, 2023 "Integrating Sustainability into Human Resource Strategies: Supporting SDGs through Technology and Circular Economy", This journal discusses the application of SDG principles in HR strategies that support the transition to a circular economy and carbon footprint reduction. The research highlights the importance of integrating technology into work culture and HR management to achieve efficiency and sustainability).

Integration of Technology and Work Culture to Support SDGs

One of the key strategies is integrating technology into the work culture. The use of big data for HR analysis can help companies make strategic decisions based on relevant data. This supports more effective employee management, such as through AI-based performance management systems that can provide real-time feedback. On the other hand, it is also important to ensure that the adoption of technology does not

sacrifice the human aspect of the organization. HR needs to be trained to combine technical skills with soft skills such as leadership, collaboration, and empathy (Jones & Roberts, 2023).

Moreover, digitalizing work processes must be accompanied by efforts to create an inclusive and fair work environment. Technology 5.0 offers great opportunities to support diversity and inclusion in the workplace, for example, by providing flexible collaboration platforms. Organizations focusing on sustainability and inclusivity show increased motivation and employee productivity, which indirectly accelerates the achievement of SDGs (Patel, 2022).

The Role of Public Policy and Multi-Stakeholder Collaboration

Public policies that support the adoption of sustainable technologies also play a significant role in shaping HR strategies. Governments need to provide incentives for research and development (R&D) in environmentally friendly technologies and facilitate partnerships between the public and private sectors. Multi-stakeholder collaboration, including the education and research sectors, can accelerate innovations that support the SDG agenda. In this context, educational institutions have the responsibility to design curricula that integrate sustainability and technology. This way, the workforce produced can effectively face the challenges of the 5.0 era (Smith, 2023).

Challenges and Solutions in Implementing Sustainable HR Strategies

Despite the many opportunities, there are several challenges in implementing HR strategies oriented toward SDGs. One of the challenges is the digital divide, especially in developing countries. Therefore, training programs that reach all levels of society are needed, including providing affordable technology access. This not only accelerates the adoption of technology but also strengthens HR capabilities evenly (Wang & Zhang, 2023).

Furthermore, resistance to change is also a barrier that must be overcome. HR managers need to facilitate this transition by providing adequate support to employees, such as continuous training and transparent communication. By raising awareness of the importance of sustainability, organizations can encourage employee involvement in achieving SDGs (Jones & Roberts, 2023 "Empowering Human Capital for SDG Achievement: The Intersection of Soft Skills,

Technology, and Human Resource Practices", This journal focuses on the importance of integrating technology with soft skills in HR management. It also emphasizes the need to create an inclusive and fair work environment to promote SDG achievement through HR policies that favor sustainability and inclusion.).

With a holistic approach, HR management can become a key driver in achieving SDGs in the 5.0 Technology era. This strategy requires synergy between technology, organizational culture, and public policy. This literature review shows that resilient and skilled HR is the foundation for creating adaptive, innovative, and sustainable organizations (Patel, 2022, "Bridging the Technology Gap: Inclusive Human Resource Strategies for Sustainable Development Goals", This journal identifies challenges faced in implementing HR strategies that support SDGs, such as the digital divide, and the importance of training programs and affordable technology access to accelerate technology adoption, especially in developing countries.).

Steps in Human Resource Management (HRM) Strategy to Support the Achievement of SDGs in the 5.0 Technology Era:

Picture 2

Source : www.studuco.com

1. **Aligning Organizational Vision and Mission with SDGs**

The first step in the HRM strategy to support the achievement of SDGs is to ensure that the organization's vision and mission align with the sustainable development goals (SDGs). Organizations need to incorporate SDGs into their strategic objectives, integrate them into company policies, and plan programs and initiatives that support the achievement of these goals. A sustainability-oriented vision and mission will guide all HRM policies, ensuring that every decision and action in human resource management contributes to social, economic, and environmental sustainability (Jones & Roberts, 2023).

2. **Developing Competencies and Skills for the 5.0 Technology Era**

In the era of Technology 5.0, organizations must focus on developing human resources skills relevant to the rapidly evolving technology landscape. The main focus should be equipping the workforce with the competencies needed to adapt to automation, artificial intelligence, and other digital technologies. Training and development programs should aim to enhance both technical skills and the social-emotional skills required to effectively leverage technology in support of sustainability (Smith, 2024). Through competency development, organizations not only create a workforce ready to face future challenges but also ensure that the adopted technologies serve to increase productivity while supporting SDG objectives.

3. **Innovation in Recruitment and Selection Systems**

Recruitment and selection in the Technology 5.0 era should adopt more innovative and datadriven approaches. The use of algorithms and digital platforms in the recruitment process enables organizations to select candidates with skills relevant to supporting sustainability goals. Moreover, these systems can ensure diversity in hiring, contributing to social and economic inclusion—key aspects of SDG achievement. Using technology in recruitment can accelerate the selection process, reduce bias, and improve effectiveness in selecting candidates who can positively impact both the company and society (Wang & Zhang, 2023).

4. Creating an Inclusive and Sustainable Work Environment

The HRM strategy should also focus on creating an inclusive and sustainable work environment. Integrating principles of diversity, equity, and inclusion into the organizational culture strengthens SDG achievement. Organizations need to develop policies that support work-life balance, apply sustainability principles in daily operations, and provide equal opportunities for all employees regardless of background. Inclusive management will ensure that the technology implemented benefits not just a few individuals but the entire community. This also contributes to SDGs related to gender equality, reducing social inequalities, and promoting sustainable economic progress (Patel, 2022).

5. Performance Measurement Focused on SDGs

To ensure SDG goals are met, organizations must develop performance measurement systems based not only on business achievements and financial profits but also on contributions to social and environmental goals. This can be done by using sustainability indicators relevant to the SDGs, such as carbon footprint reduction, efficient waste management, and creating social value for the surrounding community. This approach will ensure that employees are focused not only on company profits but also on the social and environmental impact they can generate in their work (Jones & Roberts, 2023).

6. Leveraging Technology for Human Resource Management

In the Technology 5.0 era, organizations can leverage technology to improve various aspects of human resource management. Digital platforms and AI-based applications enable companies to be more effective in performance management, career development, and employee satisfaction evaluation. Additionally, technology can be used to enhance employee engagement, provide remote collaboration tools, and facilitate digital training processes. This enables more efficient and adaptive HR management in response to rapidly changing environments, supporting SDGs across all aspects of organizational activities (Smith, 2024).

By following these strategic steps, organizations can ensure that they are not only adapting to rapid technological advancements but also playing a significant role in achieving the broader sustainable development goals. In the 5.0 Technology era, the integration of innovative human resource management and sustainability will be the key to a company's success in the future.

D. CONCLUSION

As Technology 5.0 rapidly evolves, Human Resource Management (HRM) strategy becomes a key factor in supporting the achievement of the Sustainable Development Goals (SDGs). The use of Technology 5.0 in the HRM sector offers opportunities to create a more efficient, inclusive, and sustainable work environment. Organizations that integrate sustainability principles into their HRM strategies, such as introducing circular economy models and considering the social impact of human resource policies, will be better prepared to face the challenges and opportunities of this era. Additionally, digital technologies can enhance the workforce's ability to adapt to rapid changes, enabling them to be more innovative and productive in supporting the achievement of SDGs. Therefore, it is crucial for organizations to invest in developing human resource competencies that can manage technology effectively and raise awareness of sustainability across all operational lines. Continuous education and training are also key elements in equipping the workforce for success in the Technology 5.0 era.

Recommendations:

1. Enhanced Public-Private Collaboration: Governments and the private sector need to strengthen cooperation in implementing policies that support the use of Technology 5.0 for sustainability. Policies

focused on research and development of environmentally friendly technologies can provide incentives for companies to invest in technologies that support the SDGs.

2. Integrating Sustainability into Business Strategies: Companies must take more serious steps in integrating sustainability practices into their core business strategies. This can begin with adopting circular economy models and implementing technologies that reduce carbon footprints, while ensuring social justice in the supply chain.

3. Improving Education and Training: Educational institutions and research bodies need to develop curricula that emphasize sustainability and the latest technologies. By strengthening education in these areas, the aim is to create a workforce ready to face the challenges and opportunities of the Technology 5.0 era.

4. Expanding Access to Technology: To ensure the inclusive implementation of Technology 5.0, it is essential to improve access to technology in areas lacking sufficient digital infrastructure. This can be achieved through widely accessible education programs and the provision of affordable digital tools.

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