Factors influencing effective incorporation of green management techniques in business organization: an comprehensive insight

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Abstract. Owing to the industrialization, the use of energy and natural resource are increasing exponentially. All products and commodities used day-to-day human life are by-products of natural resources, which are depleted without awareness. Green human resource management (GHRM) is viewed in the context of green management as another aspect of human resource management (HRM), which aims to successfully implement green initiatives in any businesses organization. To upsurge understanding of how GHRM initiatives within businesses can foster environmentally conscious behaviour among workers, with a focus on the mediating function of green innovation (GI) is of utmost concern. On a profound observation, there are numerous implications and unawareness that causes lack or practices of green management in majority of the organizations. This article presents comprehensive review on the predominant external and internal factors to be considered for any small scale, medium scale and large-scale organization for effective adoption of green management technique. Additionally, an exhaustive analysis on value added to firms in terms of social sustainability, economic sustainability and environmental sustainability is elaborated. Nevertheless, there is little research on the relationship between GHRM initiatives and the following business outcomes: financial success, flexibility, and productivity. Indeed, a review article with focus on influencing parameter to be consider for ease of implementation of green management policies will be a critical insight to business firms, government policy makes, social culture in any organization. This review also allies with the sustainable development goals (SDG 08: Decent Work and Economic Growth) and (SDG 12: Responsible Consumption and Production) as framed by the united nation.

1 Introduction

For both industrialized and emerging nations, environmental change has grown to be a major policy concern. As they affect every human being, economic sector, and country, the causes and impacts of climate change now provide a severe environmental concern to humanity. Industries have a direct or indirect impact on the degradation of the environment. As direct impact is the excessive consumption of natural raw materials for production, whereas indirect

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impact is the disposal of excessive waste, pollution in terms of noise, air and water. As governments and scientists increasingly agree that action must be taken to prevent catastrophic effects of climate change, many businesses have begun to gear up for a world with limited carbon emissions. But this behaviour varies greatly and is not consistent across all organizations. The most common impediments that are projected differ depending on the industry and country and include institutional, technological, economic, and organizational barriers [1]. Likewise, while an individual begins with materialism (body), they require a harmonious progression of physical, emotional, and spiritual aspects in life. Similarly, industrial ecology endeavors to achieve sustainability, realizing that eventually, economic benefits will become less appealing, and that a spiritual perspective will become essential for worldwide sustainability.

One of the many issues facing by modern organizations is environmental sustainability, which is increasingly seen as an explicit performance dimension in addition to more conventional ones like cost, time, and quality [2]. Since businesses must abide by laws and regulations regarding their operations and the effects they have on the environment, sustainability has become more and more crucial [3]. Sets of business procedures working together to bring about value for the company might be considered organizations. The business procedures of the company have a significant impact on how much carbon an organisation emits. Consequently, business process management (BPM) can be a key enabler for the development of more ecologically friendly organizations since it concentrates on the comprehension and enhancement of an enterprise's business processes [4]. Moreover, the field of Green BPM is responsible for incorporating sustainability-related concepts into business process management. It appears that a sizable percentage of businesses use green HRM techniques these days when considering the world at large. The scientific and practical areas of HRM will benefit greatly from an exploration and synthesis of these green HRM approaches that businesses and other organizations are implementing or plan to implement. Green HRM is a new area of study in organizational theory that emerged in the 1990s [5]. Figure 1 presents the key elements of green management technique that are vital.

Fig. 1. Key elements of green management technique.

The main purpose of this article is to examine the benefits of the incorporation of green management techniques into any various business organization based on the existing literature. Subsequently, provides a comprehensive review on the predominant external and internal factors to be considered for any small scale, medium scale and large-scale organization for effective adoption of green management technique. As well, numerous implications and unawareness that cause a lack or practice of green management in the majority of the organizations are discussed elaboratively. This paper commences with a brief introduction, outlining the methodology employed during the review process. It then reviews the literature on the factors that influence the successful integration of green management techniques in business organisations. The following section offers a succinct discussion, while the final section concludes.

2 Methods

A number of databases, including Web of Science, EBSCO-host, ProQuest, Emerald, and Science Direct, were searched electronically to find papers. The phrases "business

organisation," "resource," "manufacturing," and "psychology" were combined with the terms "environmental strategy," "environmental management," "green management," "environmental performance," and "sustainability" in the title, abstract, and/or keywords of the literature review. To provide the influencing parameters, each article underwent a thorough analysis. The recognised papers were published between 2010 and 2023. The majority of those examined were managers, frequently in conjunction with staff members. The organisation was the primary unit of analysis, as evidenced by the assessment of the analysis's levels. There was less focus on the individual level. The majority of the time, the individual level was connected to psychological and cognitive elements that influenced each employee's choice.

3 Key Insights of the Review Conducted

There is always some environmental impact associated with the way a business operation is carried out. Thus, an organization's carbon footprint is significantly influenced by its business processes. The sustainability of a business process is determined by the types and environmental quality of the outputs produced as well as the ratio of renewable to non-renewable inputs used in the process [6]. Following this line of reasoning, the amount of non-renewable inputs and the amount of emissions (outputs) that surpass the environment's assimilative capacity should be minimised, while the amount of renewable inputs and the amount of emissions (outputs) that can be maintained within the environment's assimilative capacity should be maximised. Thus, in the context of an organisation, a green business process is an environmentally conscious business process that adds value to the organisation while having a negligible negative impact on the environment. It is also required, effective, efficient, adaptable, and measurable. Additionally, from a technological standpoint, a business process that is energy-aware is one that is service-based and takes into account both functional and non-functional requirements, along with particular annotations that inform the energy evaluation.

3.1 Green and Sustainable Practices adopted in Business Organization

In an effort to increase the workforce's concern for the environment, some businesses now carefully assess and determine the environmental training requirements of their staff. These are, in fact, excellent practices that are also required to carry out corporate environmental management programmes. These organisations execute serious and systematic education, training, and development programmes for their employees with the goal of equipping them with the information, skills, and attitudes necessary for good environmental management. These programmes are based on workforce analyses of environmental training needs.

The goal of the study by Alshehail and Khan [7] is to critically examine the structural connections in the public service sector of the United Arab Emirates (UAE) between total quality management (TQM), service innovation, and sustainability performance. Four hundred workers from eight carefully chosen UAE public service sector firms in Abu Dhabi participated in an online survey that was used by the study to gather data. To investigate experimentally whether TQM methods enhance service innovation and, consequently, sustainability performance in the UAE's public service sector, the gathered data were examined using structural equation modelling (SEM). As evidenced by the findings, TQM significantly affects sustainability performance and service innovation in the public service sector in the United Arab Emirates. Furthermore, service innovation acts as a partial mediator in the TQM-sustainable performance relationship.

The hotel industry's embrace of green and sustainable practices was discussed by Prakash et al. [8] In order to achieve a strong adoption framework for green and sustainable practices,

the study analyses critical performance indicators (CPIs) and uses the Hotel Carbon Management Initiative (HCMI) framework to prioritise CPIs. The hotel industry is influenced by shifting ecological degradation, which makes achieving practical development goals essential. The decision-making model in this research paper is developed utilising the Analytic Hierarchy Process (AHP), and the CPIs are obtained from the HCMI. The five main CPIs of HCMI—air pollution, energy efficiency, water conservation, noise pollution, and waste management—are taken into consideration in this study. According to the report, the Indian hotel business has to implement green practices, improve control, and experience sustainable growth with low carbon emissions.

In the tourist sector, Ali and Hassan [9] sought to investigate how ethical leadership mediated the relationship between green behaviour intention and trust based on commitment and compliance-based practices. The effects of leadership styles on green management practices are not well-researched in the field of sustainability. In order to ascertain this effect, this study employs a quantitative approach via survey. Data is gathered using a questionnaire that was developed based on previous research. SmartPLS is used to analyse the gathered data through measurement and structural model evaluation in order to confirm the hypotheses. The study's conclusions show that, when trust is built on commitment-based behaviours rather than compliance-based practices, ethical leadership does indeed increase the relationship between trust and the intention to engage in green activity.

By utilising structural equation modelling (SEM) research, Lillian Fok et al. [10] sought to investigate the direct and indirect effects of organisational culture (OC) and total quality management practices (TQMPs) on the link between green practices (GPs) and sustainability performance (SP). This study developed six hypotheses as well as a conceptual research model of the linkages. In order to evaluate these ideas, a structured questionnaire based on earlier research was utilised in this study to gather relationship data from 441 full-time managers across a range of US organisations. Using IBM SPSS Statistics and SEM-AMOS, the valid and comprehensive survey responses were then compared to the hypotheses. The linkages suggested in the research model were validated by the findings. They suggested that positive SP and GPs might be enhanced by robust supporting OCs and TQMPs. Furthermore, managers are more likely to have a favourable opinion of the organization's SP the more familiar they are with the GPs of their own organisations.

The study conducted by Priyanka Aggarwal [11] aimed to examine the connection between environmental performance (EP) and green human resource management (GHRM) practices. The concept is that implementing green HR practices makes it easier for an organisation to create a green organisational culture (GOC), which gives it a competitive advantage over rivals in the market. The three aspects of culture—degree, diffusion, and depth—served as mediators in the model that this study built, with GHRM practices serving as the independent variable and EP acting as the dependent. This study used an exploratory research design that was quantitative in nature. 278 personnel from Indian public and private sector companies made up the sample. The environmental performance of the organisation was found to have a substantial relationship with green human resource strategies. Findings from parallel mediation demonstrated that green human resource practices and the organization's EP were significantly mediated by the "degree" dimension of GOC.

The goal of Rana and Arya's [12] study was to ascertain how green human resource management (GHRM) contributes to workers' environmental performance (ENVP). By using green innovation (GI) as a mediator, this study seeks to enhance information about how GHRM initiatives within businesses contribute to the development of environmentally conscious behaviours within their workforce. 579 respondents' data was gathered for this study from workers in India's industrial sector. A total of 579 workers from India's industrial industry took part in the research. With SMART PLS 3.3, the suggested model was evaluated. According to the study's findings, GI showed partial mediation, and GHRM was revealed to

be a major predictor of ENVP in the Indian manufacturing sector. This study underscores how GHRM initiatives implemented by companies stimulate employee creativity in creating environmentally friendly products and discovering innovative ways to operate more sustainably in order to raise the ENVP of the company.

According to Mehrajunnisa et al. [13] in order to support sustainable environmental performance, policymakers in the manufacturing and service sectors located in the United Arab Emirates (UAE) have defined and prioritised Green Human Resource Management (GHRM) activities. Using a multi-criteria decision-making approach called the Analytic Hierarchy Process (AHP), this study ranks the most significant enablers of GHRM practices by drawing on the ability–motivation–opportunity (AMO) and corporate environmentalism theories. A total of twenty-four C-suite executives from manufacturing and service units in the United Arab Emirates provided data. Green HRM practices are highly supported in UAE manufacturing and service companies by top management orientation, green organisational culture, and green corporate strategy planning. Previous studies have mainly ignored the strategic factors and concentrated primarily on organisational level antecedents using HR bundles of practices.

3.2 Significant Parameters

Few predominant parameters influencing the effective incorporation of green management techniques in business organization are listed as below

- **Resource Efficiency**: Green management emphasizes the efficient use of resources, such as energy, water, raw materials, and land. This can lead to cost savings and reduced environmental impact.
- **Waste Reduction:** Minimizing waste generation and promoting recycling and reuse are central components of green management. This helps reduce the disposal of materials in landfills and incineration, which can harm the environment.
- **Renewable Energy:** Many green management initiatives encourage the use of renewable energy sources like solar, wind, and hydro power to reduce reliance on fossil fuels and decrease greenhouse gas emissions.
- **Sustainable Sourcing:** Organizations often adopt green management practices in their supply chain by selecting environmentally responsible suppliers and ensuring products are sourced from sustainable and ethical sources.
- **Corporate Social Responsibility** (CSR): Green management often overlaps with CSR initiatives, where businesses engage in socially and environmentally responsible actions, such as community involvement and ethical labour practices.
- **Compliance with Regulations:** Companies must comply with environmental regulations, which are often stricter for certain industries. Green management ensures adherence to these laws and regulations.
- **Eco-friendly Innovation:** Encouraging the development of green technologies and practices is another aspect of green management. Businesses strive to innovate and implement new, environmentally friendly solutions.
- **Employée Engagement:** Engaging employées in green initiatives and fostering a culture of sustainability within the organization is essential for the success of green management

4 Conclusion

Based on the literature review conducted, the following reasons emerged as the prior cause for the lack or practices of green management in majority of the business organizations.

Those factors are a) Lack of awareness and education; b) Short-term focus of the organizations; c) Economic concerns; d) Lack of interest to change; e) Lack of regulations and guidelines for implementation; f) Improper infrastructure and spacing; g) Uninformed consumers; h) Focus on growth; i) Competitive pressures; j) Complex supply chains; k) Lack of incentives for any activities related to green management; l) Poor reporting and transparency; m) Misconceptions and n) Poor leadership. Special consideration over the above factors will be of utmost importance to overcome the issue restricting the implementation of green management.

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