

Sustainability in Human Resources: Evaluating Competencies and Overcoming Challenges in India's Service Sector

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ABSTRACT

Sustainability has swiftly turned into a significant driver in the air conditioning industry, with many manufacturers focusing on sustainability integration within the sector. Given the fact that shipping has a tremendous impact on global energy consumption and environmental impacts, it is vital to integrate sustainability into company strategies so that sustainable growth can be achieved. This abstract takes into consideration the evolution of enduring competencies in Air Conditioner companies, particularly in India. Recent studies on HR competencies have mainly highlighted a few important competencies such as the adoption of energy-efficient technologies, environmental consciousness, Green HRM practices, and Corporate social responsibility (CSR). Challenges include the inability to devise resources, some resistance to taking up new technologies, and being out of sync with business strategies. The abstract highlights guidelines to overcome these barriers, including the incorporation of sustainability in organizational policies, raising industry-wide awareness, and providing expertise training in sustainable technologies. Through mastering these capabilities, air conditioning companies can improve the way their brand is perceived worldwide, become more environmentally friendly, as well as run leaner systems to support global sustainability goals. The implications of the review for educators, industry leadership, and policymakers in addressing air conditioning for a sustainable future are highlighted.

Keywords: Sustainable competencies, Human Resources (HR), Indian service sector, Corporate social responsibility (CSR), Green HRM, Organizational strategy

1. Introduction

The emerging trend in the global business scenario has shifted sustainability to the center of organizational strategy, with increasing attention being paid to the role of HR in achieving sustainable development and observing a situation where the Indian service sector is playing a significant role in the growth of the country's economy, occupying more than 54% of India's GDP and providing a big chunk of employment, making sustainable competency an integral part of HR practice becomes desired but essential. Rapid growth in the sector, especially in IT, finance, and health care, demands a skilled workforce in traditional HR practices and competencies aligned with sustainability goals, according to [1-2]. Sustainability in HR encompasses a broad spectrum of competencies such as ethical leadership, environment management, and corporate social responsibility. These competencies are increasingly recognized as crucial for long-term organizational success, especially in those sectors where human capital drives value creation. Research has recently advocated that a sustainability-based understanding by HR professionals is essential in integrating it into HR functions: recruitment, training, and performance management. For instance, it illustrates that human resource professionals who hold competencies in green HRM are the ones who are best suited to lead corporate initiatives related to the issues of minimizing an organization's carbon footprint, which aids in enhancing employee engagement along with organizational commitment [3-5].

These factors drive sustainable HR practices internally and externally within the Indian service sector. Externally, the regulatory environment brought about by global sustainability frameworks like the United Nations SDGs and

domestic policies in India's National Action Plan on Climate Change demands more accountability from businesses. This has led organizations internally to apply HR practices that, besides being sustainable, can also meet the expectations of employees who increasingly value sustainability and corporate responsibility [6].

India's more diverse and complex service sector also poses a different kind of challenge when it comes to developing and establishing sustainable HR competencies. For example, in industries like IT and finance, technological changes are happening so fast that HR professionals have to balance striving for novelty and implementing sustainable practices that benefit the employees in the long run and enable the organization to be resilient [7]. On the other hand, the healthcare and hospitality industries are vertically labor-intensive, and the competencies of ethical leadership, diversity and inclusion, and CSR need to be developed by the HR professional to ensure that the trickle-down effect on sustainability occurs at each level of the organization [8]. Against the backdrop of the significant contribution of HR towards the feat of sustainable business practices, this review attempts to appraise the key sustainability-related competencies that are required by HR professionals in the Indian service sector. The paper aims to identify the most relevant competencies vis-à-vis this sector, the challenges in developing these competencies, and strategies to enhance such competencies by synthesizing data from recent Scopus-indexed research. This review will contribute to the broader debate on sustainability within HR, with particular messages for the policymakers, educators, and practitioners concerned with India's vibrant service sectors [9].

1.1 Background and Rationale

The service industry in India has undergone fast growth and structural change in the last couple of decades. It now encompasses IT, finance, healthcare, and hospitality industries. During this unprecedented growth, corporate sustainability has remained at the heart of various global trends and domestic policy frameworks, such as the SDGs and India's National Action Plan on Climate Change [10]. In this regard, developing and portraying specific competencies in the HR professional will lead to achieving sustainability in operations, talent management, and engaging various stakeholders. Therefore, the rationale for this review lies in identifying such competencies and how they have been applied within the Indian service sector to enable further enhancement in HR practices in line with sustainability goals.

1.2 Importance of Sustainable Competencies in HR

The core of sustainable competence in HR means embedding sustainability into the core of organizational strategies and practices. Such competencies allow human resource professionals to lead various initiatives in ethical leadership, diversity and inclusion, environmental stewardship, and social responsibility that are increasingly perceived as essential drivers of long-term organizational success. Apart from that, other sustainable competencies within the HR function include recruitment and training, and performance management that are necessary to bring into place a culture of sustainability within the institutions. In addition, the development of these competencies by HR professionals forms part of the creation of resilient organizations that can adapt to environmental, social, and economic changes at large [11]

1.3. Objectives of the Review

The key objective, therefore, of this review is to assess and identify the most salient sustainable competencies the HR professional should have in the Indian service sector. More precisely, the review intends to try to achieve the following:

- Appeal to the theoretical and empirical basis on which the concept of sustainable competency in HR must apply
- Assess the current level of sustainability in the HR practices of the Indian service sector
- Explore the challenges in developing sustainable competency within this setting.

Emphasize various recommendation strategies that can help improve the sustainable competencies of HR professionals in India, mainly from the perspective of implementation.

1.4 Definition and Scope

The service sector is the backbone of the Indian economy, covering many industries such as IT, telecommunications, finance, banking, healthcare, education, hospitality, and retail. India's service industry has become a critical driver of economic growth, constituting over 54% of India's GDP and employing a large section of the working population. India's service sector may thus be termed diverse and dynamic, as it has adapted well to the flux in global market conditions, technology, and consumer demand. It embraces a traditional scope of the tertiary sector and knowledge-intensive sectors like IT and financial services, in which India has been integrally involved with the world economy.

1.5 Current Trends and Challenges

The Indian service sector has experienced robust growth in recent decades. This has been achieved on the back of some powerful tailwinds caused by liberalization policies, foreign direct investment, and the sudden emergence of the IT and ITES industries. Recent trends reflect the shaping of the sector into digital transformation with the rapid advancement of technology, penetration of the internet, and mobile services. Most evident is within the financial services and e-commerce verticals, where online platforms and fintech innovations reshape conventional business models.

However, the service sector is also afflicted by various challenges. For instance, it has irregular growth patterns throughout its different sub-sectors. Where IT and financial services have grown in leaps and bounds, other areas of health and education continue to suffer due to accessibility, quality, and infrastructure [12]. Equally, the COVID-19 pandemic has exposed some of the service sector's vulnerabilities, especially in hospitality, tourism, and retail industries, among the most affected sectors due to lockdowns and travel restrictions in many countries worldwide.

Role of HR in the Indian Service Sector

Human resources take centre stage in India's service sector's development and long-term sustainability, where people form an overarching basis. Therefore, proper human resource management is necessary for the best performance of all employees. The evolution of HR functions in the service sector has gone from regular administrative roles to strategic business partners in organizational development, with a strong focus on talent management, employee engagement, and leadership development.

In the IT and ITES industries, HR practices have been instrumental in managing the complexities of a highly skilled workforce, addressing high employee turnover, talent acquisition, and continuous upskilling. Similarly, in the health and education sectors, it plays a vital role in workforce shortages, enhancement of service quality, and compliance with regulatory standards. Aiming at this situation, HR professionals in service sectors have been more focused on embedding sustainability in their practices, increasingly realizing that sustainable HR management will likely improve employee satisfaction and retention and overall performance.

The role of HR is also expanding in response to increasing diversity and inclusion, CSR, and environmental sustainability concerns in the service sector. Nowadays, HR professionals' roles also include leading initiatives on workplace culture that foster diversity and inclusion, driving CSR activities, and integrating environmental concerns into HR policies and practices. These emerging roles further underline the relevance of sustainable competencies in HR since service organizations increasingly need to align human capital strategies with wider sustainability objectives.

2. Literature review

2.1 Theoretical Underpinning of Sustainable Competencies

Sustainable competence has been described as the combination of knowledge, skills, and behaviors that individuals and organizations possess to satisfy present needs without eroding the possibility of future generations meeting their own needs. The foundation of sustainable competencies lies in the more general context of sustainable development, interlinking economic, social, and environmental aspects towards ensuring that efforts are made for long-term sustainability. It was pointed out that many theoretical models have already been adopted while trying to explain the nature of sustainable competencies, the resource-based view of the firm, where human capital is among the primary resources which lead towards sustaining competitive advantage. The dynamic capability theory supplements this perspective by developing and adapting competencies in response to altered environmental conditions. Within the HR domain, coupled with the concept of sustainable competencies, is Green Human Resource Management. It incorporates ecological management into HR to promote sustainable business operations [12-13].

2.2 Empirical Studies in Global Context

The empirical studies on sustainability competencies within a global outlook have highly been centered on the impact they make on organizational performance and sustainability outcomes. Examples of these include those who argue that organizations with the best practices on GHRM, like eco-friendly recruitment and training, perform better in aspects of environmental performance and employee engagement [14]. Another related study [15] showed that there is a need for more development of sustainable leadership competencies in promoting corporate sustainability initiatives through leaders who can manage and balance economic reasons with social and environmental considerations. Besides, according to several empirical studies, such sustainable competencies are

highly relevant not only to assure organizational outcome but also to promote employees' well-being and organizational commitment because employees perceive the organizations which give priority to sustainability concerns as more ethical and trustworthy [16].

Empirical Studies in Indian Context Empirical studies on sustainable competencies are relatively recent but are growing in importance in the Indian context due to rapid economic development and an increasing focus on sustainability. For example, [16] studied the role of GHRM practices in the Indian manufacturing sector and found that GHRM practices share a positive relationship with organizational sustainability performance. Other evidence by [17], in a study on sustainable leadership in Indian IT companies, also established that highly sustainability-oriented competent leaders tend to be more innovative and engaging for their employees. The last relates to the study of [18], which focused on the Indian healthcare sector and underlined that HR plays a significant role in promoting sustainability, focusing on workforce diversity management and inclusion as critical social sustainability dimensions.

Gaps in the Literature Review Despite various research on sustainable competencies, many gaps persist in the literature. Firstly, much of the literature remains concentrated in a few industries, such as manufacturing and IT; hence, other sectors, such as education, healthcare, and hospitality, specifically in India, remain unexploited. The second gap refers to more calls for longitudinal studies measuring the long-term effects of sustainable competencies on organizational performance and employee outcomes. Most studies have also been cross-sectional, meaning they only offer a snapshot of the relationship between sustainable competencies and organizational performance outcomes. The work focuses more on how sustainable competency can be developed at a managerial level rather than how individual employees can develop such competencies or how HR can facilitate this process. Research evidence on the challenges and barriers to implementing sustainable competencies in diverse cultural and economic contexts is scarce, particularly in emerging economies like India, where specific local factors may influence how sustainability practices are adopted.

Table 1. HRM Research Landscape in India: Trends, Challenges, and Gaps

Ref	Objective	Findings	Challenges	Problem Statement	Research Gaps
[19]	To provide conceptual clarity on sustainable leadership competencies in HR.	Identified competencies like strategic thinking, cognitive diversity, and societal values.	Limited empirical studies and lack of a suitable competency framework.	There is a need to relook at leadership development paradigms.	Lack of consensus on the interpretation and definition of sustainable leadership competencies.
[20]	To evaluate the adoption of Green HRM practices in Indian service sectors.	Found that Green HRM is nascent in India with low awareness.	Poor promotion and incentives from government and industry leaders.	Integration of sustainability in HRM is underdeveloped.	Need for better promotion of Green HRM and bottom-up approach.
[21]	To understand HRM practices' impact on organizational performance in India.	Positive correlation between HRM practices and organizational performance.	Descriptive data limits the generalization of results.	The effectiveness of HRM practices in varied organizational settings.	There is a need for empirical studies linking HRM practices with specific performance metrics.
[22]	To investigate HRM roles and competencies in the Indian context.	Highlighted the importance of strategic HR roles and competencies.	Difficulty in mapping competencies across diverse industries.	Lack of competency models tailored to Indian cultural and business contexts.	Need for models that integrate global HR practices with local needs.

[23]	To assess new competencies required in HR occupation in India.	Identified the necessity for new skill sets to adapt to socio-economic changes.	Resistance to change in adopting new competencies.	Outdated HR competencies in rapidly changing environments.	Need for continuous updating of HR competencies aligned with industry demands.
[24]	To determine the level of adoption of selected HR practices in Indian organizations.	Found closer attention to practices improving employee competencies.	Variation in HR practice adoption across organizations.	Inconsistent adoption of HR practices affecting employee engagement.	Need for standardization and benchmarking of HR practices across industries.
[25]	To identify HR issues and competencies required for entry-level HR professionals.	Career development emerged as a critical competency.	Variations in competency needs based on organizational size and sector.	Discrepancies between managerial expectations and HR competencies.	Need for targeted competency development programs for entry-level HR professionals.
[26]	To measure HR's contribution to organizational performance in India.	Developed HR measures linked to organizational capabilities.	Challenges in implementing consistent HR measurement frameworks.	The gap between HR practices and organizational performance metrics.	Need for refined metrics that align HR activities with business outcomes.
[27]	To analyze the impact of HR audits on employee performance in Indian banks.	HR audits positively influenced employee performance post-awareness campaigns.	Resistance to HR audits due to lack of awareness and training.	Misalignment between HR audit practices and performance outcomes.	Need for HR audit frameworks that are contextually relevant to Indian organizations.
[28]	To explore sustainable HR practices in a public sector enterprise in India.	Identified unique HR practices contributing to long-term sustainability.	Integration of sustainability into HR practices is complex and challenging.	The disconnect between sustainability goals and HR functions.	More case studies are needed on sustainable HR practices in diverse sectors.

Case studies

In India, the sustainable competencies study has gained momentum and, therefore, has produced different case studies highlighting unique challenges and successes within the Indian context.

Case Study 1: ITC Limited

ITC Limited is a highly diversified conglomerate in India at the front line in integrating sustainability into the core functions of the business. The company's approach to a "Triple Bottom Line"-Economic, Social, and Environmental Capital- has been highly studied. A case study demarcated that ITC's HR practices, incredibly inclusive growth programs, and sustainable supply chain management were significant contributors toward sustainability goals. Through these interventions, HR was enabled to foster competencies in ethical leadership, stakeholder engagement, and environmental management [29].

Case Study 2: Tata Group

Another Indian conglomerate recognized for its commitment to sustainability is the Tata Group. In the context of sustainability, analyze how the Tata Group has incorporated sustainable competencies into its leadership development programs. In the context of sustainability, this study by Kumar and Nair looks at how the Tata Group has integrated sustainable competencies into its leadership development initiatives. According to the authors, at

Tata, the company's significant values are integrity, social responsibility, and care for the environment; this is reinforced by training and development programs spearheaded by the HR department [30].

Case Study 3: Infosys

One interesting case study in this regard can be considered about Infosys, one of the high-performing IT services companies in India. According to [31], Infosys has imbibed sustainable practices into its HR functions, especially in talent management and employee engagement. The company's sustainability strategy contains a marked direction toward low carbon emissions and is concerned with ensuring wellness among employees by introducing green policies and interventions. Infosys' Human Resources has played the most critical role in developing competencies for adopting green technologies and responsible business practices.

Case Study 4: Mahindra & Mahindra

Another Indian multinational automobile manufacturing company that has also been in the lead regarding sustainability is Mahindra & Mahindra, which conducted a study on how the HR function at Mahindra & Mahindra drives sustainability through green manufacturing and corporate social responsibility programs. It found that the HR function of this company had taken the lead in developing the competencies required for sustainability, including environmental management and ethical business practices [32].

Case Study 5: Wipro

Another IT giant, Wipro, has adopted holistic, sustainable HR practices. Kaur and Singh presented a case study on Wipro. According to them, Wipro aims to build a sustainable workforce through its GHRM practices, like green recruitment and training programs that cause minimum environmental harm. The findings proved that the Wipro HR policy is aligned with the company's sustainability goals regarding environmental conscience and social responsibility among the employees [33].

Despite these rich case studies, there are several gaps in the literature. First, only a few studies have investigated sustainable competencies outside the IT and manufacturing industries, such as healthcare, education, and hospitality. These industries are the backbone of the Indian economy and present unique challenges and opportunities for sustainable HR practices. While there is a whole range of empirical studies on sustainable competencies, not all have longitudinal designs; most studies have cross-sectional data. Second, more longitudinal studies are needed to understand the long-term impact of sustainable competencies on organizational success; current research predominantly relies on cross-sectional data. Third, more studies are required on the role of individual employees in the development of sustainable competencies, with a focus on how HR can support this development through training and career development programs. More importantly, India's cultural and economic diversity poses challenges to establishing sustainability in HR practices, which are largely unexplored in the extant literature.

Sustainable Competencies - Conceptual Framework

Definition of Sustainable Competencies

The term 'sustainable competencies' describes a combination of knowledge, abilities, attitudes, and individual and organizational behavior that provides for sustainable performance and, at the same time, contributes to environmental, social, and economic sustainability in the long run. These competencies go beyond traditional technical and managerial skills, including decision-making capabilities that balance economic, social, and environmental considerations. This basis of sustainable development rests in that very principle that espouses that the needs of the present may be met without hampering the ability of future generations to meet their own needs. Brundtland Commission, 1987]. Sustainable competencies are crucial in driving sustainability concerns within organizations and ensuring businesses operate in an environmentally responsible, socially equitable, and economically viable manner over the long term [34-36].

Core Components and Dimensions

The core elements of sustainable competencies can be broadly divided into three dimensions: environmental, social, and economic competencies.

- **Competencies of the Environment:** This encompasses various knowledge and skills that enable the perception of environmental challenges for climate change, resource depletion, pollution and the introduction of strategies that minimize environmental impact. In this regard, emphasis is drawn on ecological awareness, eco-innovation, and integrative environmental considerations in companies [37].
- **Social Competencies:** Social competencies address social concerns around inequality, diversity, labor, and community. Critical competencies along this dimension include ethical leadership, social

responsibility, stakeholder engagement, and functionality that guarantees an inclusive and equitable workplace. These competencies ensure that organizations contribute positively to society and human rights [38].

- **Economic Competencies:** Sustainability competencies focus on the economic viability of the effort towards sustainability and its long-term contribution to an organization's financial success. Competencies, therefore, include sustainable business models, cost-benefit analysis associated with sustainability initiatives, and the ability of employees to identify and leverage opportunities for sustainable growth. Economic competencies also concern the financial understanding of sustainability issues and aligning them with organizational goals [39].

Relevance to HR Professionals

Sustainable competence is becoming increasingly relevant to HR professionals, as they must embed sustainability into an organization's culture, policies, and day-to-day practices. HR professionals must develop and implement strategies promoting sustainability at every organizational level. This involves embedding sustainability issues into recruitment, training, performance management, and practices that relate to employee engagement.

GHRM, the focused approach of HR in pursuit of sustainable competencies, means making HR policy consistent with environmental objectives. Concrete examples include when the HR representative promotes sustainability by hiring individuals with excellent environmental and social skills, training them with programs that will improve the skills of employees concerned about sustainability, and developing performance systems to compensate for plotted sustainable behavior [40].

Besides, HR professionals are the keystone professionals in creating a culture of sustainability within organizations. This involves leading with examples and communicating sustainability not only to each individual but also to ensure that everyone at whatever level knows their sustainability commitment to the organization. By so doing, HR can help create a workforce capable and motivated to contribute towards an organization's long-term sustainability initiatives [41].

Sustainable HR professional competencies rationalize the complex and diversified cultural, regulatory, and environmental terrains in response to global business challenges. They enable HR to contribute to developing a resilient organization that adapts to transformations and thrives, given the prevailing global sustainability challenges [41].

Key Sustainable Competencies for HR Professionals

Strategic Thinking and Visioning: Other essential competencies that will drive or enable the HR professional to bring sustainability into organizations include strategic thinking and visioning. It refers to the competencies of the ability to anticipate future trends, identify opportunities and risks, and integrate HR strategies into the long-term objectives of organizations. In this regard, strategic HR professionals are supposed to contribute to the overall sustainability strategy by integrating social, environmental, and economic objectives into HR policies and practices. For example, HR professionals can contribute to making an organization prepared to fulfill its sustainability goals by predicting future workforce requirements and building talent pipelines that sustainably facilitate a business's core functioning. Moreover, strategic visioning allows HR to be highly integrated with organizational change for sustainability, ensuring sustainability is part of the organizational culture and decision-making processes [42].

Ethical Leadership and Corporate Social Responsibility (CSR)

Managing Diversity and Inclusion

Diversity and inclusion management is another significant competency that organizations look forward to acquiring in the case of a human resource professional, especially regarding sustainability. Effective diversity management identifies and assesses employee differences to form an enabling work environment where all have equal opportunities to succeed. This critical competency can enhance social sustainability in organizations by ensuring that the organization's workforce composition reflects the communities it serves and that employees are treated as equitably as they deserve. In addition, it has been shown that diverse and inclusive organizations are more creative and can adjust more readily and, therefore, better meet globalization-generated challenges [43]. Diversity and inclusion human resources professionals can support forming a respectful culture in organizations by reducing prejudices and allowing collaboration across diversity dimensions. In this way, they can provide a good backbone for sustainability.

Environmental Awareness and Green HRM

This will help HR professionals acquire the competencies regarding environmental awareness and GHRM that will eventually enable them to incorporate environmental sustainability into human resource management practices. GHRM would, therefore, entail adopting HR practices that coax greener behaviors at work, such as reducing energy consumption, minimizing waste, and encouraging sustainable behaviors among employees [44]. For instance, HR can develop green job descriptions, integrate sustainability criteria into performance appraisal systems, and develop training programs on environmental management. Environmental awareness involves knowledge of the ecological consequences or implications of business operations and the ability to support initiatives that minimize the organization's environmental footprint. Hence, HR professionals who demonstrate very high levels of ecological competencies may also lead efforts in bringing about a greener workplace, enhancing the organization's reputation as an environmentally responsible entity, and, eventually, contributing to the broad aim of corporate sustainability [45].

Technological Proficiency and Innovation

In the fast-moving environment typical of today's business, technological proficiency and innovation are highly important for an HR professional. These competencies imply the use of technology in continuously improving HR processes, influencing efficiency, and fostering innovation. This technological proficiency encompasses skills regarding data analytics, HRIS, and digital tools to enable better talent management, employee engagement, and decision-making activities [46]. On the contrary, innovation deals with developing a creative culture and continuous improvement within the company. Technology and innovation-savvy HR professionals can take the lead in digital transformation initiatives such as adopting AI and machine learning in their HR processes, bringing a sea change in sustainability for HR practices because they become more agile, scalable, and data-driven accordingly. Those competencies are precious in the sustainability context, as they enable organizations to adapt to changing environmental conditions and sustain competitiveness because of technological advancement.

Barriers to Sustainable Competence Development

Organizational Level Barriers

There are various hindrances to the development of sustainable competencies for sustainable competence an organization. However, these obstacles significantly impede and create inefficiencies in embedding sustainability in practical business. The major obstacle is the gap between the intended goals of sustainability, the stated objectives, and the overall business strategy. According to [47], most organizations consider sustainability peripheral to, rather than an integral component of, their plan. The results are exhibited in the lack of sustainability-related resource allocation. Organizational culture is a very relevant factor in the development of sustainable competencies. A culture that is unable or unwilling, to change or is focused on short-term financial gains rather than trying to seek longer-term goals will serve as an obstacle to the efforts to adopt sustainability practices [48]. The other significant is the top management's lack of commitment to sustainability; it should lead the organization in sustainability matters. Without strong leadership support, sustainability efforts might lead to a lack of direction and, therefore, a diffusion of interest within sustainability practices themselves.

Barriers at the Individual HR Level

Various barriers at the individual level of HR prevent the achievement of sustainable competency. One significant barrier is incompetence or a lack of awareness about sustainability by human resource professionals. Most human resource practitioners' training is centered on the traditional functions of HR, possibly lacking specific expertise or the necessary awareness for integrating sustainability into HR practices. Such skills gaps could be one of the reasons why human resources professionals fail to advocate for appropriate sustainable practices within an organization.

In addition, sustainable competencies may face resistance when introduced because they may conflict with the other goals of HR, namely, cost control and efficiency. For instance, green recruitment and training programs for sustainability might be considered time- and cost-intensive for organizations so that less effort will be devoted to their implementation [48]. Individual human resource professionals will also be under pressure because organizational leadership is setting expectations of a focus on short-term financial performance compared to long-term sustainability goals, which may be seen as fighting for change which is counter to that expected role.

The second critical factor is the cavity in training and development aspects focusing on sustainability. While the need for competencies in sustainability is increasingly recognized, most organizations fail to provide specific training and professional development programs to build the necessary competence and knowledge regarding

sustainability among human resources professionals. This lack of exercise could suggest that human resource professionals are not well placed to drive the initiative on sustainability issues and the development of sustainable competencies within their workforce [49].

Specific Industry Challenges in the Indian Context

Industry-specific challenges in developing sustainable competencies further complicate the issues in the Indian context. Since industries in India include IT, manufacturing, agriculture, and health, the specific issues of sustainability and competencies needed will be dramatically different across sectors [Singh & Chawla, 2021]. Whereas in the manufacturing sectors, priorities would be to minimize environmental impact and maximize energy efficiency, the IT sector would underscore how innovation and digital transformation can help support sustainability.

The fact that the different industries are at different levels so far as the awareness and commitment to sustainability go is one of the critical challenges in the Indian context. While big multinational corporations and the top companies of India have integrated sustainability within their business model, most SMEs are not in a position to develop competencies in sustainability for their businesses because of a lack of resources and expertise. Also, the informal sector comes with its set of challenges. A large proportion of this economy consists of small businesses, sometimes operating with little or no regulation, and, in any case, do not have sustainability high on their agenda. At least, according to, this is so for a significant segment of the Indian economy [50].

A regulatory environment in India can act as both an enabler and a barrier to building sustainable competencies. Even though there are supporting regulations and policies for developing sustainability, such as the Companies Act 2013, which makes CSR spending mandatory for all qualified companies, the amount of enforcement and compliance with these regulations can be sporadic and depends greatly on the region or industry. This inconsistency sometimes makes it difficult for an organization to develop sustainable competency because they will have to operate under indefinite regulatory demands that keep changing now and then [52].

One of the reasons, in the Indian context, is cultural factors. Conventional ways of business and social norms will conflict with modern-day notions on sustainability, resisting change. In this respect, industries organized on hierarchical lines are less motivated to challenge the conventional way or even 'innovate if it challenges traditional business models [53]. Overcoming these cultural barriers requires strong leadership and a focused effort to raise awareness and develop a mindset for sustainability within organizations.

HR Strategies to Enhance Sustainability Competencies

Training and Development Strategies

- Inclusion of Sustainability in HR Training: Organizations can enhance sustainable competency by introducing elements of sustainability into their already-running HR training programs. This includes training on environment management, corporate social responsibility, and ethical leadership [54].
- Workshops and Seminars: It would allow human resources professionals to acquire basic knowledge of sustainability issues through workshops and seminars on sustainability, updating themselves about the changes and developments in sustainable business [55]
- On-the-job Training and Mentorship: Introduction of on-the-job training and mentorship to connect human resources professionals with the sustainability team may improve practical knowledge and application of sustainable skills [52-53]

Organizational Policies and Practices

- Embedding Sustainability in HR Policies: Organizations must design and adopt various HR policies that incorporate sustainability goals, such as green recruitment, sustainable performance management practices, and environmentally friendly workplace practices [54].
- Building a Sustainability Culture: A sustainability-focused culture can be created by leadership commitment, employee engagement programs, and smooth communication and transference of sustainability goals across the organization [55].
- Rewarding of Sustainable Behaviour: Rewarding and recognizing employees for showing sustainable behavior or contributions to sustainability initiatives is a long way to incentivizing HR professionals and the rest of the workforce in building and applying sustainable competencies [56]

Role of Professional Associations and Educational Institutions [57-58]

- **Certification Programs and Professional Development:** Professional associations that provide certification programs and continuous professional development courses on HR sustainability issues can offer an essential avenue for HR professionals to be formally recognized for their sustainable competencies.
- **Partnerships with Educational Institutions:** By developing specific courses and degree programs related to sustainable HR management with universities and schools, we would ensure that future HR professionals enter the labor market equipped with such knowledge and skills.
- **Networking and Knowledge Sharing:** Professional associations offer networking opportunities at professional meetings and larger conferences to share best practices, obstacles to clearer pathways, and innovations around sustainable HR management, enhancing competencies through peer learning.

Future Directions and Implications

Emerging Trends in Sustainable HR Competencies

- **Integrating Digital Technologies:** Artificial intelligence, big data, and machine learning increasingly permeate human resource processes. This provides greater efficiency in managing sustainability and enhances data-driven decision-making opportunities regarding sustainability-related issues.
- **Resilience and Adaptability:** With global disruptions happening more regularly, more emphasis is being placed on the competencies needed to make organizations resilient and agile in such crises, whether due to pandemics or climate change.
- **Global and Cross-cultural Competencies:** As organizations work in increasingly global settings, HR professionals need to be more active in developing competency that ranges from the ability to address sustainability issues across cultures to considering various regulatory contexts and facilitating global sustainability standards.
- **Emphasis on Social Equity and Justice:** There is a growing trend to incorporate social equity and justice within sustainability, meaning HR professionals have to develop competencies related to fostering diversity, inclusion, and equitable labor practices.

Implications for HR Practice and Policy in India

- **Policy development and advocacy:** The professional HR cadre in India will, therefore, have to advance policies that promote sustainable practice, including those related to quality labor standards, protection of the environment, and social responsibility.
- **Customization of global best practices:** Indian organizations need to contextualize global sustainability-related practices to suit local realities, considering India's peculiar socioeconomic and cultural profile.
- **Building Capacity for Sustainability:** HR departments in India will need to emphasize building internal sustainability capacity through continuous training, leadership development, and employee engagement initiatives.
- **Collaboration with Government and NGOs:** Businesses need to collaborate more with government bodies and NGOs to create a supportive ecosystem that can help create a sustainability initiative.

Research Opportunities and Future Studies

- **Longitudinal studies on sustainability outcomes:** More longitudinal studies will provide a proper understanding of the long-term effects caused by sustainable HR practices on organizational performance and employee well-being. [58]
- **Sector-wide Studies:** Industry-wide studies in sustainable HR competencies in India need to be taken up. The sectors that have been pretty understudied so far are agriculture, health, and education [57]
- **Impact of Technology on Sustainable HR:** From a research point of view, it remains to be seen how far the role of emerging technologies such as AI and blockchain would actually stretch the sustainability of human resource practices [59]
- Cross-cultural comparative studies enable the facilitation of such studies to obtain useful insights for organizations operating globally on sustainable HR competencies developed and applied across highly variable cultural and geographical boundaries [60].

Conclusion

- There is growing consensus on the point that sustainable competencies are essential for the human resource professional in aligning HR practices to the long-term sustainability goals of an organization, given their interlinked economic, social, and environmental concerns.
- The critical human resource sustainability competencies are strategic thinking and visioning, ethical leadership and corporate social responsibility, diversity and inclusion management, environmental awareness and Green HRM, and technological proficiency and innovation.
- Other critical barriers to developing sustainable competencies in organizations included a lack of alignment with core business strategies, resistance to change, and a general lack of training and resourcing in sustainability.
- There is diversity imposed by industry; that is, awareness, commitment, and regulatory support for sustainability vary in most industries in India.
- Human resource professionals can help facilitate sustainability within organizations. Human resources can affect an organization's culture, policies, and practices that support long-term sustainability.
- The ever-changing challenges facing the globe today in climate change, technological advancement, and social equity demand a continuous commitment to sustainability from human resources. Organizations will need to develop these competencies to remain competitive and responsible constantly.
- Most narrowly, since sustainability increasingly becomes intertwined with business success, demand for skilled HR professionals will keep improving. This transition requires active learning, innovation, and collaboration across industries and sectors.
- In the final analysis, those organizations taking the lead by focusing on sustainable competencies within HR will be the winners in moving toward sustainable growth, building brand reputation, and positively contributing to society and the environment.

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