EFFECTIVE ENGINEERING MANAGEMENT

FOSTERING SUSTAINABILITY AND RESPONSIBLE LEADERSHIP

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Effective Engineering Management: Fostering Sustainability and Responsible Leadership

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PREFACE

In today's rapidly evolving world, where the intersection of technology, sustainability, and innovation is becoming increasingly vital, effective engineering management emerges as a cornerstone of progress. It is within this context that Effective Engineering Management: Fostering Sustainability and Responsible Leadership takes its place—a comprehensive exploration of the convergence of engineering, management, and sustainability.

This book brings together a diverse array of perspectives and insights from experts across various fields, offering a unified and holistic approach to navigating the challenges and opportunities inherent in contemporary engineering management. Through meticulously curated chapters, it delves into fostering sustainable practices, responsible leadership, and organizational effectiveness across industries and sectors.

The journey begins with an exploration of the foundational aspects of sustainability and engineering management, addressing cultural adversities encountered by managers and the importance of embedding sustainability into organizational frameworks. It further highlights new paradigms in ESG reporting and the critical role of corporate social responsibility (CSR) in fostering responsible leadership.

Moving forward, the book delves into sustainable practices across industries, examining the construction, design, and IT sectors. The chapters provide critical analyses of mergers and acquisitions through a sustainability lens and explore the factors that drive organizational effectiveness in key industrial sectors such as iron and steel.

Innovation and forward-thinking approaches are pivotal themes in this volume. Readers will uncover insights into the profound impact of effective engineering management on societal development and process improvement. The evolving landscape of human resource management is thoroughly examined, showcasing HR trends and the future trajectory of the profession. Additionally, the transformative roles of cutting-edge technologies such as artificial intelligence (AI) and gamification in shaping the modern workplace are explored, highlighting their implications for innovation and adaptability.

As editors, we are profoundly grateful to the esteemed contributors whose expertise and passion have enriched this volume, offering diverse perspectives and profound insights. This book aims to serve as a guiding resource for practitioners, scholars, and students, inspiring them to pursue a future where engineering management is synonymous with sustainability, responsibility, and innovation.

We hope that the ideas contained herein ignite meaningful actions and foster a world where responsible leadership and sustainable practices are at the forefront, leading us toward a brighter, more equitable future.

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CHAPTER 1

Embedding Sustainability by Reconnoitering the Cultural Adversities Encountered by Managers

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Abstract: Organizations that prioritize sustainability practices are very considerate of culture and leadership. Both organizational culture and managerial effectiveness revitalize novelty in sustainability practices by implementing innovative ways to reduce their impact on the environment, enhance social responsibility, and improve their economic performance. Therefore, the aim of the existing study is to empirically scrutinize the organizational culture and managerial effectiveness in the Indian banking industry. The study took place in 15 banks in highly colonized cities (Delhi and the NCR region) of India. For data collection, a total of 467 managers functioning in public, private, and foreign banks were approached. The results reveal that embedding sustainability dimensions of organizational culture, *i.e.*, standard, conflict, identity, leadership, delegation, grievance handling, and decision-making, plays a noteworthy role in enhancing managerial effectiveness. Creating an organizational culture that fosters sustainable practices and service quality is a prerequisite when trying to enhance managerial effectiveness. This paper is distinctive as it dissimilitudes the organizational culture and managerial effectiveness of banks in an Indian milieu. Besides this, the walk-on part of organizational culture in managerial effectiveness is not sufficiently delved into. The existing study is also an effort in this conduct to analyze the association between culture and managerial effectuality to embed sustainability in the Indian context.

Keywords: Indian baking industry, India, Managerial effectiveness, Organizational culture, Sustainability.

INTRODUCTION

In the realm of banking at a global level, engaging with diverse cultures presents both challenges and opportunities. Mastering cultural awareness, fostering effec-

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tive communication, building relationships, and navigating cross-cultural interactions are essential skills for thriving in this sector. By adopting these practices, professionals in international banking can cultivate trust, cooperation, and sustainable connections across borders. Additionally, being aware of cultural shifts and regulatory transformations, while continually improving cultural intelligence and adaptability, will provide a competitive advantage in the global financial landscape. Ultimately, when approached with sensitivity and expertise, cultural diversity can serve as a powerful asset and a source of innovation, enabling international banking professionals to succeed in an interconnected world. The entire country's economy is impacted by bank fraud and deception [1]. Businesses are able to maintain exceptional financial results because of IBM, Hewlett-Packard, Procter & Gamble, and McDonald's strong accessibility to their culture [2]. The manager is in charge of providing customers with excellent financial services because the bank is a service-based enterprise. These organizations are true examples of sustainability as they mark themselves at a global level in terms of culture and leadership.

The banking industry's working strategy has undergone a change since the introduction of information technology. When it comes to organizational transition toward sustainability, corporate culture often plays an inventive role by overcoming challenges and legal obligations. According to a study [3], a few conflicting cultural values come together to build their corporate sustainability approach, specifically people-oriented exchanges (*e.g.*, empowerment, guidance, origination, teamwork, leadership). These days, companies must reexamine the principles and procedures that make up their culture in order to retain and attract talent [4] and start improvements that affect workers' performance. It is well acknowledged that banks with successful human resources [5, 6] are more likely to have highly effective managers and sustainable organizations [7, 8].

Global financial growth is supported by a robust banking sector [9]. Indian banks have faced difficulties such as the market's erratic expansion, banks' erratic treasury gains, and falling interest rates, which have made foreign banks more competitive. According to Burns *et al.* [10], sustainability aids in changing the paradigm of leadership and cultivates leaders who are capable of working together to tackle pressing issues. A culture within a company promotes sustainability. In light of these strategic realignments, managerial effectiveness is also seen as a leading composite set of performances in time management, result orientation, and making effective decisions [11], in addition to being a necessary set of expertise to get the right things [12].

For instance, Xerox, founded in 1906 in the United States, specializes in document management, corporate processes, and outsourcing services. The

business experienced scandals, a huge debt load, and an emergency in 2001. As a strong leader, Anne Mulcahy was able to boost trust by providing employees with motivation to be optimistic and dedicated to the business. The share price rose fivefold in just two years.

The factors that are linked to management effectiveness have been the subject of several studies. Organizational culture is one of the elements that appear to affect management success [13, 14]. Many researchers have shown that managerial behavior is strongly related to workplace culture and climate because of the critical role effectiveness plays in a variety of cultural contexts [15 - 17].

On the other hand, organizational culture has been intensively examined, explored, characterized, and reviewed to intensify theoretical accessibility [*e.g.*, 18, 19]. Even if organizational culture showed a strong link with job satisfaction, leadership behavior [20], and management performance, conjoint evaluation is still scarce in the research.

The majority of research was conducted in the fields of manufacturing, education, and pharmaceuticals, despite the crucial role that organizational culture plays in promoting management effectiveness. Related to this, in 1971, Southwest Airlines was founded in the United States. Airlines experienced significant losses as a result of the 9/11 terrorist attack in 2011. In contrast, James F. Parker, a great transformer, avoided layoffs completely and upheld his commitment to employee care. During the recession, Southwest was the only airline to continue turning a profit. Additionally, some facets of managerial efficacy and organizational culture towards sustainability have yet to be thoroughly investigated [15]. Additionally [13], some authors proposed that alternative approaches should be taken when analyzing construct restrictions. According to a study [10], a variety of strategies help leaders grow in terms of their ability to think, absorb, and explore inside an organization.

Similarly, when ICICI employees welcomed Bank of Madura members into their organization, they displayed a great sense of culture. When ICICI and the Bank of Madura merged in 2003, it was a marriage of unequals. With 2400 workers and 2.6 million customers, the Bank of Madura seemed larger. There were barely 1600 people working for ICICI. After the merger, the average age of ICICI's workforce increased from 28 to 43. The fact that ICICI has effectively handled cultural fusion is to its credit. The ICICI HR team deserves praise for managing the merger as well. Therefore, the ability of managers and decision-makers to balance the conflicting objectives of social, environmental, and financial sustainability makes a sustainable corporate culture crucial for managerial performance. In order to foster a culture where employees can share values and

CHAPTER 2

Fostering Sustainability through New Paradigms in ESG Reporting

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Abstract: Climate change is now being recognised as an issue of national importance. The urgent need to address this issue requires efforts from all sectors of the society. The Paris Agreement, the UN Climate Change Conference in Glasgow, and the adoption of Sustainable Development Goals are some of the concrete steps towards this direction. The government and other regulatory bodies are also making strong guidelines to strengthen sustainability reporting practices followed by the corporate world. CSR Policy, NGBRCs principles, BRR, BRSR, and SRMM are some of the key policies and guidelines issued in this direction. The 2030 Agenda for Sustainable Development, along with its 17 Sustainable Development Goals (SDGs), was universally adopted by the United Nations General Assembly as a comprehensive and transformative strategy for development. The objective of the paper is to study the new paradigms in sustainability reporting that are helping in the achievement of overall sustainable development goals. With comprehensive ESG frameworks in place, companies are now focussing on adopting more sustainable practices than ever before.

Keywords: BRR, BRSR, ESG, SDG, Sustainability, SRMM.

INTRODUCTION

Presently, climate change conversations are at the forefront of global attention, involving governments, environmental activists, regulatory agencies, and scientists. Climate change is recognised as a worldwide crisis that transcends national boundaries. The urgency to take action on this issue has never been more pronounced, and there is a growing consensus that mitigating climate change necessitates a collaborative approach involving all segments of society. The Paris Agreement marked a significant milestone in the global effort to address climate change. This agreement played a pivotal role in tackling climate change through

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the establishment of ambitious objectives, encouraging broad participation, advocating for transparency, mobilising financial support, and fostering collaboration. It was endorsed by 196 countries at the UN Climate Change Conference (COP21) in Paris, France, on December 12, 2015. India, for instance, ratified the agreement on October 2, 2016, and its commitments are referred to as the National Determined Contributions (NDCs).

Case Study: Tata Power's Commitment to Renewable Energy Tata Power has aligned with India's climate goals by investing in solar energy projects and targeting 80% renewable capacity by 2030. This transition illustrates how a major Indian corporation is working within national goals and global frameworks like the Paris Agreement to reduce carbon emissions.

Subsequently, there was another significant UN Climate Change Conference in Glasgow (COP26) that convened 20 world leaders to determine ways to intensify global efforts and address the climate crisis. This event held great importance for India, as Prime Minister Shri Narendra Modi committed to achieving net-zero emissions for India by the year 2070 during the COP26 Summit in Glasgow [1]. It was the first time that all nations came together in a binding agreement to combat climate change and adapt to its impacts [2].

The 2030 Agenda for Sustainable Development, along with its 17 Sustainable Development Goals (SDGs), was universally adopted by the United Nations General Assembly as a comprehensive and transformative strategy for development. The 2030 Agenda for Sustainable Development, adopted by the United Nations General Assembly, commits the global community to pursue sustainable development across three key dimensions, economic, social, and environmental, in a harmonious and interconnected manner. The economic dimension stresses sustainable economic growth that benefits all, while the social dimension emphasises improving the well-being and quality of life for all, addressing issues like poverty and gender equality. The environmental dimension highlights the importance of preserving the planet's ecosystems and resources. Crucially, these dimensions are interdependent, and the agenda underscores the need for a balanced and integrated approach to address complex global challenges like poverty, inequality, climate change, and biodiversity loss [3].

Creating a resilient and environmentally friendly economy necessitates a transformation in corporate business strategies, a realignment, and activation of the financial sector within a regulatory framework that encourages transparency and motivates proactive measures. Acknowledging the current imperative, several advancements have occurred in India's regulatory landscape, with substantial policy adjustments aligning with worldwide sustainability trends.

The Prime Minister of India unveiled a set of five pivotal initiatives known as the "Panchamrit," signifying India's significant commitment to combatting climate change. First, India aspires to attain a non-fossil energy capacity of 500 GW by 2030. Second, the nation is firmly dedicated to fulfilling 50 percent of its energy requirements through renewable sources by the same year. Third, India has ambitious plans to cut its projected carbon emissions by an impressive one billion tonnes between now and 2030. Fourth, by 2030, India aims to substantially reduce the carbon intensity of its economy, aiming for a reduction of less than 45 percent. By 2070, India has set the goal of achieving Net Zero emissions. These initiatives collectively underscore India's significant role in global climate action [4].

Case Study: India's transition to renewable energy is a powerful example of a country embracing the Sustainable Development Goals. By setting ambitious targets like reaching 500 GW of non-fossil energy capacity by 2030, India demonstrates how national policies can align with global climate frameworks. Key steps have included public-private partnerships, large-scale investments in solar and wind power, and initiatives to increase energy efficiency. Companies such as Tata Power and ReNew Power have led the way by significantly expanding their renewable energy portfolios, supporting both the environment and economic growth.

LITERATURE REVIEW

Sustainability reporting is the new language of business communication with its stakeholders under frameworks like the Global Reporting Initiative, Task Force on Climate-related Financial Disclosures, and Carbon Disclosure Protocol. Non-financial performances of the firms are increasingly becoming the critical assessment criteria of overall corporate performance [5]. As investor's interest in non-financial data from companies continues to grow, various sustainability accounting frameworks have emerged to enhance the standardised reporting of environmental, social, and governance (ESG) metrics. These frameworks aim to provide investors with more consistent, accessible, and comprehensible information to evaluate the sustainability implications of their investment decisions. Nevertheless, while easily obtainable and discloseable data serves its purpose, its value pales in comparison to information acquired through intricate procedures, thorough due diligence, partnerships with domain experts, and fortuitous discoveries [6].

The most prevalent expression of a Triple Bottom Line framework for corporate reporting is the Global Reporting Initiative (GRI), which was founded in 1997 by the Coalition for Environmentally Responsible Economies, the UN Environment Program, and the Tellus Institute [7]. Another breakthrough in sustainability

CHAPTER 3

CSR and Effective Engineering Management

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Abstract: Integrating Corporate Social Responsibility (CSR) into engineering practices is essential to align projects with ethical, social and environmental gaols. CSR embodies responsible corporate citizenship, balancing social/ environmental challenges with financial success. Effective Engineering Management (EEM) represents the intersection of engineering expertise and management principles, focusing on the efficient coordination of technical teams, resources, and processes to deliver high-quality, innovative solutions to complex problems. This chapter will focus on the relationship between CSR and EEM. Moreover, some case studies of engineering organisations with CSR initiatives will also be discussed in the present chapter. Furthermore, it will also highlight the major challenges faced by engineering organisations in integrating CSR into engineering practices, such as cost considerations, limited awareness, resistance to change, regulatory complexity, resource allocation, supply chain integration, and balancing stakeholder interests. Addressing these research areas can guide engineering firms in effectively integrating CSR while maximising their societal and environmental impact.

Keyword: Corporate social responsibility, Effective engineering management, Engineering firms, Supply chain integration, Stakeholders.

INTRODUCTION OF CORPORATE SOCIAL RESPONSIBILITY

Corporate Social Responsibility (CSR) has become a vital and ever-evolving concept in today's business world. It covers a wide range of ethical and community-focused activities that companies undertake to make a positive impact on society and the environment [1 - 3]. Unlike the traditional view that businesses exist only to maximise profits, CSR reflects the understanding that companies have responsibilities to many stakeholders beyond just their shareholders [4, 5].

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At its core, CSR is about being a good corporate citizen. This means actively addressing social and environmental issues while still pursuing financial success [6, 7]. Businesses recognise that they don't operate in isolation—they are part of a larger community and can have both positive and negative impacts on it [8, 9].

CSR initiatives can take many forms, from environmental efforts like reducing waste and conserving resources to community projects, fair labour practices, and charity [10, 11]. Companies that embrace CSR often aim to strike a balance between financial profitability and societal well-being, recognising that these objectives are not mutually exclusive but, rather, can reinforce each other [12, 13].

In an increasingly connected global market, the importance of CSR has grown significantly due to increased concern about social and environmental issues such as climate change and social inequality [14, 15]. For organisations, CSR is a powerful way to align business objectives with the values and expectations of society, helping them contribute to a better world while also achieving long-term success [16, 17].

Corporate Social Responsibility (CSR) Obligations

Section 135(1) of the Companies Act 2013 mandates that companies meeting the following criteria - a) net worth of ₹ 500 crore or more, b) turnover of ₹ 1000 crore or more, c) or net profit of ₹ 5.00 crore or more during any financial year - must establish a Corporate Social Responsibility Committee of the Board. This committee should consist of three or more directors, with at least one director being an independent director. If a company subject to CSR provisions falls below the mentioned criteria for three consecutive years, it is exempted from CSR obligations. Section 135(5) specifies that 2 percent of the average net profit during the three immediately preceding financial years must be allocated for CSR activities [18].

Scope of CSR Activities

The Ministry of Corporate Affairs has introduced a revised Schedule VII, broadening the range of CSR activities under the Companies Act and incorporating various new initiatives. According to Schedule VII, permitted CSR activities include [18]:

- Eliminating hunger, poverty, and malnutrition; promoting preventive healthcare and sanitation, including contributions to the Swachh Bharat Kosh established by the central government for sanitation promotion and ensuring safe drinking water availability.
- promoting education, including special education and enhancing vocational

skills for children, women, the elderly, and differently-abled individuals, along with livelihood enhancement projects.
- Promoting gender equality, empowering women, establishing homes and hostels for women and orphans, creating old age homes, daycare centres, and facilities for senior citizens, and implementing measures to reduce inequalities faced by socially and economically backward groups.
- Ensuring environmental sustainability, ecological balance, protection of flora and fauna, animal welfare, agroforestry, conservation of natural resources, and maintaining soil, air, and water quality, including contributions to the Clean Ganga Fund set up by the central government for sanitation promotion.
- Protection of national heritage, art, and culture, including restoration of buildings and sites of historical importance and works of art; establishing public libraries, and promoting traditional arts and handicrafts.
- Initiatives for the benefit of armed forces veterans, war widows, and their dependents.
- Training to promote rural sports, nationally recognized sports, paralympic sports, and olympic sports.
- Contribution to the prime minister's national relief fund or any other fund established by the central government for socio-economic development, relief, and welfare of scheduled castes, scheduled tribes, other backward classes, minorities, and women.
- Contributions or funds provided to technology incubators within academic institutions approved by the central government.
- Rural development projects.
- Slum area development.

INTRODUCTION TO EFFECTIVE ENGINEERING MANAGEMENT

Effective Engineering Management is a vital discipline in today's fast-paced, technology-driven world. It plays a key role in driving the success of engineering projects and making the best use of available resources [19]. Sitting at the intersection of engineering expertise and management skills, this field is all about efficiently coordinating technical teams, resources, and processes to create high-quality, innovative solutions to complex challenges [20].

While technical knowledge is fundamental, successful engineering management goes beyond technical know-how. It requires strategic planning, strong leadership, and effective organisational abilities [21]. A skilled engineering manager must balance technical demands with budget limitations, address the diverse expectations of stakeholders, and ensure projects are delivered on schedule and within budget [22].

CHAPTER 4

Sustainable Business Practices in the Build and Design Sector

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Abstract: The construction and design industry holds significant influence in shaping the built environment, hence affecting ecological sustainability and social welfare. This research paper aims to analyse the adoption and implementation of sustainable business practices within the construction and design sector. The study primarily emphasises on identifying significant trends, difficulties, and possibilities associated with this process. Through an examination of the incorporation of sustainability principles into the operations of the sector, the ultimate objective is to elucidate the trajectory towards a more ecologically accountable and socially aware industry. This research emphasises the design and build industry, which is adopting greener practices to reduce building environmental effects, *viz*. Energy-efficient building design, water conservation, sustainable materials, and green infrastructure. Green Building Certifications such as LEED, BREEAM, and WELL are popular industry standards to evaluate and verify building sustainability and environmental performance.

Keywords: Construction and design, Environmental effects, Environmental performance, Green Building, Sustainable business practices.

INTRODUCTION

The design and construction industry, comprising the fields of architecture, engineering, and construction, plays a pivotal role in designing the physical environment. Nevertheless, the actions within this sector have substantial environmental ramifications. The construction sector is responsible for a substantial proportion of worldwide resource consumption, energy utilisation, waste production, and emissions of greenhouse gases. Given the pressing imperative to confront climate change and environmental degradation, there is an increasingly acknowledged significance in including environmental endeavours

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within the realm of design and construction. The design and construction industry holds a crucial position in influencing the physical infrastructure and exerts a substantial influence on ecological sustainability. Due to the significant contribution of buildings to worldwide energy consumption and the release of greenhouse gases, there is increasing acknowledgement of the necessity to implement environmental measures within this industry [1]. The use of sustainable design practices and the attainment of green building certifications have become crucial approaches in mitigating the ecological impact of buildings and advancing the cause of sustainability [2].

There has been a growing recognition among organisations in the design and build sector regarding the significance of including sustainable practices. Recognition among individuals that incorporating environmental initiatives into their projects can yield a multitude of advantages. These advantages include but are not limited to a decrease in energy usage, an enhancement in the quality of the interior environment, an improvement in occupant comfort, and the potential for long-term financial savings [3]. The importance of examining environmental activities within the design and construction industry is underscored by several crucial factors:

Environmental initiatives in the sector can substantially mitigate its impact. Organisations within the sector can achieve resource consumption reduction, waste generation minimisation, and greenhouse gas emissions decrease by embracing sustainable design practices, integrating renewable energy technology, implementing waste management techniques, and using sustainable materials.

The promotion of sustainable development is significantly influenced by the design and build sector. Environmental initiatives have the potential to facilitate the development of energy-efficient, ecologically conscious, and climate change-resilient buildings and infrastructure. These projects have the potential to facilitate the attainment of worldwide sustainability objectives, such as the Sustainable Development Goals (SDGs) outlined by the United Nations and the targets established by the Paris Agreement. The market is experiencing an increasing demand for buildings and infrastructure that prioritises environmental sustainability. There is a growing need from clients, investors, and tenants for projects that exhibit a strong dedication to environmental responsibility. Through the adoption of environmental initiatives, organisations operating within the design and build sector have the potential to augment their competitive advantage, allure environmentally sensitive clientele, and establish a distinct market position.

Governments worldwide are implementing legislation and policies aimed at fostering environmental sustainability within the constructed environment. Green

building certifications, energy efficiency standards and waste management regulations are becoming increasingly prevalent. The comprehension and execution of environmental efforts within the design and construction industry can assist organisations in adhering to regulatory standards and maintaining a competitive edge amongst the dynamic landscape of environmental requirements.

The act of researching and examining environmental efforts in the design and construction sector facilitates the exchange of knowledge and promotes collaboration among industry stakeholders. Through the analysis of case studies, identification of best practices, and exploration of lessons learned, this research aims to facilitate the cultivation of creativity, stimulate the interchange of ideas, and facilitate the adoption of successful environmental measures among the community of industry professionals. Environmental activities within the design and construction sector have the potential to yield significant long-term cost benefits for organisations. Energy-efficient buildings have the potential to decrease operational expenses since the utilisation of renewable energy sources can offer a stable long-term energy cost structure. Additionally, the implementation of waste management systems can effectively mitigate waste disposal costs. Furthermore, the implementation of sustainable practices frequently leads to enhanced levels of occupant comfort and productivity, thus augmenting the overall worth of sustainable design and construction.

The objective of this study is to make a scholarly contribution to the comprehension of efficacious tactics, obstacles, and prospects in the pursuit of environmental sustainability. The results of this study have the potential to provide valuable insights for decision-making processes, offer guidance for policy development, and motivate industry stakeholders to adopt and execute environmentally conscious practices in their projects. Consequently, these efforts can contribute to the creation of a built environment that is both sustainable and resilient.

Research Objectives

The research objectives of this study on environmental initiatives in the design and build sector are as follows:

- To analyse and evaluate the various environmental initiatives undertaken by organisations in the design and build sector.
- To examine sustainable design practices employed in the design and build sector.
- To investigate the role and effectiveness of green building certifications and standards in the design and build sector.

CHAPTER 5

Sustainable Business Practices of Mergers and Acquisitions: Analyzing Critical Factors in IT Sector Companies across Asia

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Abstract: The last decade has witnessed the highest number of Mergers & Acquisitions in the history of the business world across sectors and industries. The abstruse business environment, the ever-fluctuating political circumstances, the interconnected world, and hence cutthroat competition have been pushing the business to join hands remain competitive in the market. Therefore, it has become crucial for businesses to create and apply sustainable business practices. This study will find out the key fostering factors and critical success and failure factors of Mergers & Acquisitions and their correlations and finally validate the identified factors with the neo-classical theory of Mergers & Acquisitions.

This study gyrates around the IT Companies of Asia where 64 respondents classified on the kind of experience from Information Technology space viz. Academicians, consultants, Employees and entrepreneurs further spread across the Asian continent are considered for analysis of critical factors related to Mergers & Acquisitions.

The primary data will bring out that brand strengthening pushes a company towards Mergers & Acquisitions along with synergistic benefits. Cost competitiveness and economy of scale push companies towards Mergers & Acquisitions with the highest representing factors, and additionally, the critical factors, which are predictors, have a reliance on the variability of determined components. Corporate restructuring, value, and wealth creation are also major fostering factors.

A review of the literature will conclude that clarity in intent, adequate training & development, due diligence, advocacy of fits, proper chain of communication, and practical valuations are key success and failure factors of Mergers & Acquisitions.

In conclusion, this study highlights sustainable business practices relevant to the critical success and failure factors of mergers and acquisitions for IT sector companies

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in Asia. Also, the study will provide the framework of the neo-classical theory of Mergers & Acquisitions across the identified critical factors in the review of the literature.

Keywords: Best business practices, Critical fostering factors, Information technology sector, Key success factor, Mergers and acquisitions, Neo-classical theory, Process improvement, Project management, Sustainability models.

INTRODUCTION

Today, the business world has become ever more competitive, which has shown a sharp rise in the theoretical concepts of strategic alliances. This current study will focus on Mergers & Acquisitions as part of the strategic alliances and finding out the key fostering factors and critical success and failure factors. The last decade has witnessed the highest number of Mergers & Acquisitions in the history of the business world across sectors and industries. Globally and domestically, *i.e*., 'Glocally', the trend is to take the growth path by buying or combining. This means that companies around the globe are opting for mergers & acquisitions as a tool of growth.

The uncertain business environment, the ever-changing political situations, and the interconnected world accounting for the cutthroat competition have been pushing businesses to join hands to stay visible in the market. This will result either in successful deals or fatal deals. For example, the acquisition of YouTube by Google has been successful, but the acquisition of Motorola by Google has not been successful. Hence, there are a few factors that are critical to the success and failure of mergers and acquisitions.

Hence, the current study will find out the sustainable business practices, *i.e*., critical success and failure factors of mergers & acquisitions. The philosophy of Mergers and Acquisitions is certainly derived from the mathematical algebraic formula, which states that $(A+B)^2 = A^2 + B^2 + 2AB$. This means that the concept and idea behind Mergers & Acquisitions is to increase the result by multiple folds or, in simple words, to build upon and leverage on capabilities. There can be different approaches to Mergers &Acquisitions, like creating, *i.e*., organic, purchasing, *i.e*., inorganic, and amalgamating, *i.e*., mixed/hybrid approach. For example, Tata Consultancy Services (TCS) has created multiple growth technologies like SAAS. Similarly, Google and Microsoft have been famous for acquiring approaches. Lastly, many IT companies like HP-Maphasis, IGATE Patni, and LTI-Mindtree have combined to be ahead of the competition.

This study will be based on companies from the IT sector, and the respondents will be divided into academics, IT employees, entrepreneurs from the IT sector,

and experts/consultants from management consultancies and legal firms who deal with mergers & acquisitions.

Review of Literature

The oligopolistic reaction is to be considered and taken into consideration, which is used for different types of alliances. Furthermore, leading from the front and claiming ownership is also important, along with setting up KRAs for the involved shareholders within and outside the organisations [1]. The proper valuation of the entity's proper market research in terms of evaluating the viability of cultural fit, technological fit, and structural fit is mandatory to ensure the success of the deal [2]. The inability to leverage synergies like technology, culture, and geography will give negative results. Further, the inability to leverage human capital will never give positive results. The study reasoned that human capital involved in the pre & post-deal scenarios should be strategically steered by gaining their faith and inculcating the various objectives of the deals to make them feel associated and involved and hence make them perform efficiently [3].

The major factors that foster Mergers and Acquisitions (Merger Wave) are advancements in Technology and PESTEL synergies. For example, in the European Union (EU), this group of 30-odd countries serves as a very good playing field for Mergers and Acquisitions because of various factors like the same currency and similar regulations. Companies always want to grow their profits, which is not always possible in the domestic or primary market only, and therefore, to explore all the various possible methods that can enhance their profit statements along with the risk factors involved in it [4].

The author brought about some very important issues like human resource management in the resultant or merged entity. It is strongly recommended that the parent firms should not directly impose their policies on the merged firms. There should be a proper analysis of the need for policies and a suitable process for its implementation should be devised [5].

After understanding the fostering factors for Mergers & Acquisitions, it becomes mandatory to introduce the respective training and development tools and techniques to gain the desired results and call it a successful deal. The process of training becomes important because every partnership and alliance/acquisition is different. In case of mergers and acquisitions in the field of Information and Technology space, the skills, tools, and technologies are very different, and hence, the employees across the pyramid must be trained and developed to a level where everyone can contribute to the fullest. Along with the technical training, they have also highlighted the need for motivational and tangible training [6].

CHAPTER 6

Understanding the Factors Affecting Organizational Effectiveness in Iron and Steel Industry: A Case Study of Mandi Gobindgarh (Punjab, India)

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Abstract: Purpose: The iron and steel industry is the backbone of a progressive engineering system, so increasing organisational effectiveness in the iron and steel industry requires strong, proactive measures. Thriving economies need associations that provide recitals that are beyond anticipation. Our main goal in conducting this research was to identify and clarify the many variables that have a measurable impact on organisational effectiveness. This purpose was motivated by a deep passion to fully comprehend the complex processes that support an organisation's capacity to meet its objectives, make the most of its resources, and prosper in a constantly changing business environment.

Design/Methodology/Approach: This research analysed the factors influencing organisational effectiveness. For this, data was collected from employees working in the iron and steel Industry in Mandi Gobindgarh. The findings were obtained using the factor analysis technique.

Findings: A task was accomplished with the use of factor analysis in the field of data analysis, where a sizable data set consisting of an impressive 31 different assertions was carefully investigated. Ten unique components were successfully identified from this large collection of statements through a rigorous analytical approach. Each element indicated a different aspect or quality, which helped to fully comprehend the underlying factors. These were named management system and effectiveness, performance improvement, teamwork, legitimization, work environment, reward and recognition, involvement, consensus, competency, and commitment. The outcomes of the research will be helpful to the iron and steel sector, which wants to increase the effectiveness of their organisations. These organisations can use these factors as a

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measure to increase effectiveness and productivity in the organisations instead of sticking to conventional methods.

Keywords: Competency, Employees, Engineering system, Industry, Iron, Mandi Gobindgarh, Organizational effectiveness, Performance improvement, Reward, Steel, Teamwork, Work environment.

INTRODUCTION

An organisation's ability to accomplish the goals it sets out to achieve is referred to as its organisational effectiveness. This refers to a business that achieves the desired result or is naturally productive and eliminates waste to the greatest degree possible. Organisational effectiveness evolved from a simple concept to an essential organisational goal, gaining importance in the 1980s [1]. Some issues were related terms such as the competence of an association to admittance, reallocate resources, and, therefore, accomplish its objectives [2]. An institution's effectiveness is determined by how well it uses and has access to essential tools [3]. However, through core strategies, organisations can fulfil their objectives, and these core strategies act as criteria for organisational effectiveness [4]. One should focus on helping employees to achieve expertise and self-worth so that they are in command of the new surroundings and find haven and backing, and organisations should emphasise human resource development and management [5]. Research and development-related universities, organisations, and laboratories experience the most hardships since they must be extremely operative, demonstrate greater accountability, and complete tasks with the least amount of resources possible to increase their efficacy. The leaders in these businesses regard themselves first and foremost as researchers, then managers, even though they are willing to increase their efficacy. However, they must deal with a wide range of issues, such as organisational and system efficacy. They must be creative in their scientific research, performance, sponsorship, creativity, and design, as well as in the administration and technology of their businesses.

The institute can yield the anticipated outcome with the least disbursement of time, vitality, money, and material resources. Some authors have a different point of view, and they attempt to achieve organisational effectiveness, compare net profitability with the target profitability, or collect data from customer surveys and the growth of the company. The other factors that affect organisational effectiveness are organisational structure, employee satisfaction, organisational culture, working environment, and, most importantly, organisational performance. In simple language, we can say that effective organisations produce results and enhance organisational performance.

Researchers have always shown curiosity about what makes a corporation more effective since Henry Ford designed an assembly line for large-scale production. Since then, researchers and executives have continued to seek models that improve resource efficiency, productivity, and overall organisational effectiveness. The idea of organisational success, though, has undergone extensive scrutiny in recent years [6].

To determine efficiency in the workplace, enhancing the perspective of organisation's implementations and altering the dimensions are intended, as described by previous researchers. A technique named "Excellence Theory" was created by Grunig to explain the communication structure in an organisation. He further explained that the ideas of organisations must be communicated through a communication channel in such a way that it yields desirable outcomes [7]. This idea of Grunig is also backed by his forerunner known as Daniel Denison, who pointed out that big corporate houses need to move from mystical thought of corporate culture and start working on primary theories based on conditions, relationships, behaviour, structure, ethics, and performance and integrate them into their organisational climate [8]. Both researchers claim that an effective communication channel within an organisation will yield theoretical as well as measurable benefits. While "measurable" is linked with quantitative studies, these scholars recommend that once applied over time and with a succession of patterns, a certain structure turns out to be measurable.

Different organisations show different criteria for organisational effectiveness. As theory indicated, not all variables lead to organisational effectiveness and cannot be applied in all organisations as they differ from each other. Concerning various theories, organisational effectiveness must take into deliberation some aspects, *i.e.*, the goals of the administration's working culture and communication channel in the association. In short, the research on organizational effectiveness must compete and address the matter of organisational resources and output. The most common criteria for organisations are (a) high productivity (whether qualitative or quantitative) in the sense of attaining the outcomes for which the organisation is designed, (b) ability to understand relevant internal and external changes, or the capability of the organisation to keep up with the times without putting at risk its veracity, and (c) the conservation of organisational human resources and their efficient management . Finally, we can say that organisations must keep these aspects in mind to enhance organisational effectiveness; the rest varies from organisation to organisation [9].

The study's goal is to comprehend the factors that influence organisational effectiveness. These factors will be helpful for the iron and steel sectors and will assist management in enhancing their companies' effectiveness. This data can then

CHAPTER 7

Impact of Effective Engineering Management on Sustainable Growth and Population Development: Touching the New Sky

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Abstract: Modern engineering, science, and technology focus on the achievement of sustainable growth instead of economic growth. It considers environmental, social, and ethical aspects apart from the economic aspects of society. Different nations emphasise the development of sustainable engineering to achieve sustainable development goals and foster effective population growth. Modern engineers innovate different eco-friendly designs that promote economic growth by protecting environmental resources. New technologies, like nanotechnology, biotechnology, microbial engineering, the study of organic polymers, *etc*., are being extensively utilised to manufacture less hazardous and envirnment friendly products. Sustainable synthesis processes are also being developed to facilitate effective resource utilisation and minimise waste generation to optimise the demand for natural resources. They also focus on the development of effective recycling technologies that prevent environmental degradation and convert waste products into potential resources. Efficient use of resources, social responsibility, prevention of environmental degradation, a life cycle perspective, and collaboration are five important principles of effective engineering management. Effective bilateral and multilateral relationships are necessary to develop the infrastructure of sustainable engineering, especially in developing nations like India.

Keywords: Environmental protection, International relationships, Responsible leadership, Sustainable development, Sustainable engineering.

INTRODUCTION

There has been a significant change away from engineering's traditional focus on expansion alone in favour of more resourceful methods of progressing society and

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the economy. By integrating sustainability principles into engineering management, today's technological advancements are geared towards ensuring the long-term health of our planet and the communities within it. The modern engineer takes into account environmental and social consequences in all phases of the design and operation process. Efficient resource management, including the reduction of waste and energy use, is fundamental to engineering practices that are both sustainable and effective. It encourages people to think things out before acting, to deal with ethical quandaries, and to put long-term good ahead of immediate gain. It encourages communities that will be impacted by a project to share their concerns and gain trust in the process through open communication. To maintain a leading position in the market, it promotes experimentation with cutting-edge sustainable technology and practices. To improve sustainability initiatives, it uses feedback loops and continuous improvement procedures. The concerns posed by issues of long-term sustainability and morality are also identified and addressed. It fosters transparency in reporting sustainability data and progress to stakeholders. To prevent damage to the environment and ecology, modern technical advances have placed restrictions on the production and use of potentially dangerous goods. To create a circular economic model that turns trash into useful materials, recycling technologies are advancing. By drastically decreasing emissions, the use of renewable energy sources will cause a power sector revolution. The goal of good engineering is to make the most of available resources, both in terms of actual usage and the protection of the environment. Engineers' expertise must be boosted to maximise the use of existing resources. If we want to cut down on trash, we need to upgrade our reuse and recycling technology. Smart bins, AI, 3D printing, nanotechnology, pyrolysis, biodegradable plastics, hyphenated analytical instrumentation techniques, *etc*., all use cutting-edge science and technology to help turn trash into useful resources that can be put to good use elsewhere [1].

In addition to increasing employment and stimulating economic growth, it will also generate new opportunities. There is a significant opportunity for countries like India to take the lead in South and Southeast Asia when it comes to engineering management that is both effective and sustainable. Indian engineers will benefit from sharing their knowledge of sustainable technologies with their Western counterparts. India, as an influential nation in the global south, must take the lead in establishing environment friendly engineering infrastructure throughout South and Southeast Asia [2].

PRINCIPALS AND THE IMPORTANCE OF EFFECTIVE ENGINEERING

As shown in Fig. (**1**), sustainable engineering refers to the practice of applying engineering and technological principles to promote economic development without compromising ecological systems. The sustainability movement emphasises ecological preservation and the ethical use of natural resources. Effective engineering management can also help eliminate poverty, ensure a steady supply of food and water, close the gender gap, and achieve other socially beneficial goals. Engineering management relies on five pillars: resource efficiency, social responsibility, pollution prevention, a life cycle view, and teamwork. Different from growth-centric engineering and management, it encourages innovation by taking into account environmental and social considerations [3].

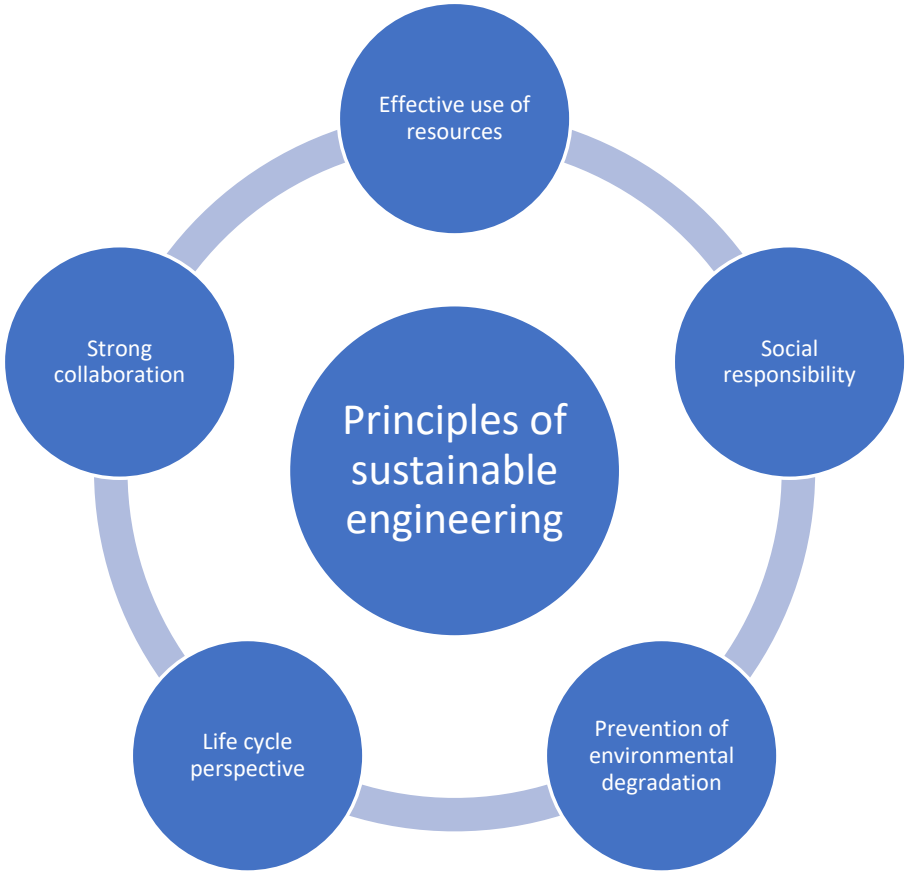

Fig. (1). Principles of sustainable engineering. **Source:** Authors' own illustration.

CHAPTER 8

Process Improvement in Engineering Management

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Abstract: The banking world is complex, laden with regulations and silos. Particularly in large multinational banks, there is a continuous need for simplification, process improvement, and evolution of program management activities that focus on increasing efficiency and reducing cost. The chapter 'Process Improvement in Engineering Management' focuses on the imperative for process improvement in engineering management in banks and financial services and the role of Machine Learning, AI, and IoT. It also speaks to the regulatory landscape, global perspectives, and organisational action needed to ensure process improvement in engineering management in large banks is continuous and self-improved.

Keywords: AI, Efficiency, Financial services, IoT, Machine learning.

INTRODUCTION

Process improvement is a fundamental concept in engineering management, aiming to enhance efficiency, reduce waste, and optimise operations within engineering organisations. In today's fast-paced and competitive business environment, staying ahead necessitates continuous refinement of processes. This introduction explores the latest findings, key authors, and a renowned case study in the realm of process improvement for engineering management.

In recent years, process improvement has evolved significantly in response to dynamic market demands and technological advancements. Researchers and practitioners alike have been actively engaged in identifying innovative approaches to enhance engineering processes. One of the latest findings is the book "Reengineering the Corporation: A Manifesto for Business Revolution". It introduced the concept of "business process reengineering" (BPR), advocating for the radical redesign of business processes to achieve dramatic performance improvements [1]. Although this work is not the most recent, its principles still resonate and are foundational in process improvement discussions.

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Recently, the Lean Six Sigma methodology has become a powerful tool for process improvement. This methodology can be applied beyond manufacturing to improve service and engineering processes [2]. This reflects the evolving nature of process improvement, extending its reach into diverse sectors.

Additionally, the advent of Industry 4.0 and the Internet of Things (IoT) has brought about new opportunities for process improvement. By considering the role of big data analytics in process optimisation by harnessing vast amounts of data generated by IoT devices and using advanced analytics techniques, engineering managers can gain valuable insights into their processes and make data-driven improvements [3].

One key finding from recent studies is the growing importance of human factors in process improvement. Employee engagement, skill development, and empowerment are crucial elements that can drive sustainable improvements in engineering processes [4]. This perspective underscores the holistic nature of process improvement, recognising that it is not solely about technology or methodologies but also about the people who execute and manage these processes.

Turning attention to a renowned case study that illustrates the impact of process improvement in engineering management. Toyota's Production System (TPS), often referred to as Lean Manufacturing, is a prime example. Toyota's relentless pursuit of efficiency and quality has set a benchmark for the industry. A seminal work highlighted how Toyota's principles of continuous improvement, waste reduction, and employee involvement revolutionised manufacturing [5].

Toyota's TPS embodies several key principles of process improvement, including the elimination of waste, just-in-time production, and a focus on quality. It demonstrates the profound impact that a well-executed process improvement initiative can have on an organisation's competitiveness and profitability. The success of TPS has led to its widespread adoption across industries, making it a case study that continues to inspire engineering managers worldwide.

Process improvement in engineering management is a dynamic field that constantly evolves in response to changing market dynamics and technological advancements. Recent findings emphasise the role of big data analytics and the importance of human factors in achieving sustainable improvements.

The case study of Toyota's Production System serves as an iconic example of how a well-executed process improvement initiative can transform an organisation and set new industry standards. As engineering managers continue to navigate the complexities of the modern business landscape, they must remain vigilant in their

pursuit of process excellence, drawing from the latest research and real-world examples to drive innovation and efficiency within their organisations.

Unlocking Efficiency: A Journey of Process Improvement in Engineering Management in Banks

In the fast-paced and ever-evolving landscape of the banking sector, the pursuit of efficiency is paramount. Engineering management plays a pivotal role in ensuring that processes are not only streamlined but also adaptive to the dynamic nature of the financial industry.

The banking sector, a cornerstone of the global economy, is undergoing a profound transformation driven by technological advancements and heightened customer expectations. At the heart of this transformation lies the imperative for efficiency. Engineering management, with its focus on optimising processes, emerges as a key driver in this quest for operational excellence. Banks operate in an environment where agility and precision are paramount. Inefficient processes not only incur unnecessary costs but also hinder the ability to respond swiftly to market changes. The stakes are high, and hence, the need for unlocking efficiency through meticulous process improvement in engineering management is more pressing than ever.

Examining successful case studies provides valuable insights into the practical application of process improvement in engineering management. For example, a multinational Bankthat faced challenges in its loan approval process implemented Six Sigma methodologies. By identifying and eliminating bottlenecks, the bank reduced processing time by 30%, resulting in improved customer satisfaction and increased operational efficiency.

Similarly, another large Asian bank leveraged Lean Management principles to enhance its back-office operations. Through a systematic approach to waste reduction and continuous improvement, the bank achieved a 20% reduction in operational costs. These cases underscore the tangible benefits that process improvement in engineering management can bring to the banking sector.

To unlock efficiency, banks are increasingly embracing the latest trends in engineering management. The integration of artificial intelligence (AI) and machine learning (ML) is revolutionising how banks optimise their processes. For instance, chatbots powered by AI are being employed to streamline customer interactions, reducing response times and improving overall service efficiency.

Blockchain technology is another trend reshaping engineering management in banks. It enhances the security and transparency of transactions, reducing the need

CHAPTER 9

HR Trends: Envisioning the Future of Human Resource Management

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Abstract: Objective: This article attempts to determine how HR trends will shape the future of human resource management. This theoretical study discusses the major HR trends shaping human resource management.

Methodology: For this study, the researcher reviewed the most recent research findings from the scientific literature and business practice. There has been a flow of information; however, the researcher has used updated HR practices and trends that have been implemented in the organisation or that they want to incorporate shortly.

Findings: HR trends will shape the future of human resource management. HR leaders must rethink, rebuild, redesign, and reshape their strategies and build skills and competencies among people working in organisations through training and development.

Value Addition: This article will become an essential voice for HR trends. The emerging and current HR trends will allow organisations to equip their employees with the competencies that are the most strategic fit according to the needs of organisations. It will further target the education system to develop more predictable, functional organisational competencies.

Recommendations: The current scenario has shown a rapid change in HR trends and has led HR leaders in most organisations to rethink and redesign their strategies. So, the researcher highly welcomes new tips, recommendations, and personnel solutions that HR leaders can implement. The other researchers are also invited to explore HR trends at multidimensional levels.

Keywords: HR trends, HRM, Hybrid work model, HR analytics, Healthy organizations.

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INTRODUCTION

Human resource management is a unified and cohesive approach to managing the organisation's most valuable assets that individually and collectively accomplish its objectives [1]. It is a pervasive and influential approach to managing personnel in different types of organisations operating in various markets. It has become a central theme in academic, policy, and practitioner literature [2]. HRM encompasses the policies, practices, and systems that directly impact employees' behaviour, attitudes, and performance [3]. Today, business is changing quickly, becoming more interdependent and complex. Organisations need a holistic approach to routinely reviewing and transforming structures, people, and processes to gain a competitive edge. With technological advancements, the skills required in the industry are changing. To effectively manage these challenges and respond to the emerging trends in the corporate environment, it is imperative to use more innovative approaches to human resource management. The Internet and digital technology are reshaping business organisations and providing new approaches to carrying out human resource management. The HR industry has transformed in recent years, reshaping the work culture in organisations. Since the 2000s, E-HRM and HRIS have been practised in organisations and have been the research agenda among academicians for two decades. With technological development and further changes in the business environment, big data and artificial intelligence have entered the business world, transforming business practices [4]. Hybrid and remote work cultures have emerged globally. HR analytics and artificial intelligence are playing a pivotal role in HR processes. The transformation of digital technology has changed industrial relationship dynamics and work processes across the globe. It profoundly affects the workforce and has been termed a socio-technical revolution [5]. The HR plays a pivotal role in navigating the trajectory of the organisation. To embrace the changes in the HR landscape, they are adopting a proactive approach and developing a culture that engages people. They are being asked to upgrade the skills of people working in organisations through collaborative and innovative work cultures in artificial intelligence, people analytics, the metaverse, and other digital technologies. HR leaders must act swiftly to keep up with the pace of transformation. This will provide them with a strategic advantage over their competitors globally. This study contributes to how HR trends will shape the future of organisations. However, these trends will not change the organisations overnight, but it will be imperative for them to go in parallel with these trends. The insights obtained from the study will offer a new research agenda among academics that will increase the scientific robustness. Further, it will create new scholarly research focusing on its impact on HR functions and the organisation.

HR TRENDS

This section deals with the HR trends shaping HRM's future. HR trends are employee-centric techniques and practices aligned to meet commercial demands, adding value to organisations. HR professionals constantly learn from HR trends to increase efficiency and add value to their organisations. It is imperative to study these HR trends as they continuously create employee professionalism, which is the critical driver for the success of organisations. The few most crucial HR trends have been enlisted in this section.

Hybrid Work Model

The term hybrid has been used diversely in different representations. Recently, it has been referred to as the infusion of technology into human work-life. The hybrid arrangement is known as the blended system, and it balances equity between two different types of demands to avoid a clash. Organisations employing a hybrid working model offer employees the advantage of remote work [6]. Hybrid work modifies the work style, management style, and organisation within the periphery of a home, workspace, and cyberspace [7]. A hybrid work model mixes in-office and remote work, and hybridity in a workspace combines physical and remote work systems [8]. A hybrid work model gives employees greater flexibility to work from anywhere to be more productive. The workplace is not restricted to office walls; it provides an ecosystem where employees work in the office from home and any other remote place [9]. Adopting a hybrid work model to move forward is a natural choice. However, it is not easy for organisations to adopt this transition because they coexist with different types of employees. A hybrid work model can take various forms depending on the organisation's needs. A hybrid work model in 2×**2** matrix form is shown below in Fig. (**1**).

Flexible Hybrid Work Model

Under this model, employees choose their place and time based on their priorities. There is greater flexibility given to employees. The upper right quadrant of the model shows this type of work culture [10]. Cisco is leveraging this kind of model.

Fixed Hybrid Working Model

Under this model, the organisation fixes the days and times for employees to work remotely or go into the office. American Express has adopted a fixed hybrid working model.

CHAPTER 10

The Role of Artificial Intelligence (AI) and Gamification at Workplace: An HR Perspective

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Abstract: In today's fast-changing world, technology is playing a vital role. It has evolved like never before. The application of AI and gamification has significantly increased in the workplace. The full potential of AI applications in the organisation is still to be explored. Further, various processes of HR, like recruitment and selection, as well as training and development programs, are using AI and gamifying the processes to satisfy the expectations of dynamic and cutthroat workplaces. These have been considered to be an emerging and powerful tool to enhance employee engagement in organisations. The chapter has discussed the conceptual foundations of AI and gamification in the workplace. Further, it has discussed the rationale, advantages, and challenges involved in their application. A few cases of the companies as examples are also discussed in the chapter. It finally tries to give certain solutions to the challenges involved.

Keywords: Artificial Intelligence (AI), Gamification, Employee engagement, Performance, challenges.

INTRODUCTION

Human Resource Management has been described as a strategic process that includes organising, planning, coordination, directing, and managing the organisational structure. Recruitment and selection refers to the activities undertaken to find the best applicant for any vacant position [1]. To streamline and accomplish the goals of hiring and selection of an organisation, a team must be created that facilitates the process. The best candidate must be selected through appropriate ways in the organisation. The simplest and most used definition of recruitment says that it is the art of discovering and acquiring potential candidates for vacant positions in organisations. The process of acquiring human resources in various departments, divisions, sections, and positions within organisations is called recruitment and selection. There are several techniques that are used to

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choose the right candidate across organisations. While considering the Indian environment, the recruitment strategy has a great impact on external elements, including recruiting policies, human resource planning, organisational size, recruitment expenses, corporate growth and expansion, and so on. In contrast to it, in the global context, the recruiters emphasise personality traits, job, as well as environmental analysis. In addition, they analyse issues about expatriates, such as family stress, culture, rigidity, emotional immaturity, physical breakdown, and excessive burden of responsibilities.

Phases of Recruitment: There are mainly six phases of Recruitment: i). Planning/Preparing ii). Procuring iii). Screening iv). Selection v). Hiring vi). Onboarding/Orientation

1. Planning/Preparing: The planning or preparing stage is all about gathering the required information, job analysis, and preparing for job posts, keywords, and job descriptions.
2. Sourcing: Sourcing means to find from where we get the things. When we start looking at CVs, it is called sourcing.
3. Screening: In screening, primary judgments are taken by analysing the data made available in the CVs.
4. Selection: In selection, by using various assessment tests, HR selects the most suitable candidate from the pool of applicants.
5. Hiring: In this process, required documents need to be submitted by the candidate. Reference and background verification is done.
6. Onboarding: Continuous contact is maintained with the candidate to understand his willingness to join. Because of continuous communication, HR can judge and make a backup plan at the appropriate moment so that they can go for an alternate candidate. In case the priority candidate backs out before joining, the second priority candidate is made an offer and the HR can skip the entire selection again. Once joining formalities are done, induction is arranged for newly joined employees, in which information about the company and a formal introduction to other employees is provided. The candidate is also made to go through the company's history and various policies.

Challenges in the Traditional Recruitment Process

With the changing times, individuals are increasingly attuned to technology and recent trends, making them easily drawn to innovations and startups. Similarly, new innovative companies and startups require fresh talent. However, attracting the right talent for the right position remains a significant concern. The evolving role of Human Resource Management (HRM) as a strategic business partner necessitates considerable effort to build the company's reputation and establish it

as a brand. This is crucial for attracting potential candidates who are best suited for the required positions.

In traditional recruitment processes, managing data posed the biggest challenge. It was time-consuming to review and assess candidates who had previously applied for the same position due to the unavailability of records or the absence of systematic and categorised record-keeping. Additionally, in traditional recruitment processes, it was observed that some candidates applied for positions that did not match their current work profile or where their qualifications and experience did not meet the basic minimum criteria of employers. Inflated or larger-than-life resumes were common, and scrutinising them took a significant amount of time for recruiters. This was due to the easy availability of pre-drafted CV templates on the internet, making original CVs rare and complicating the screening and assessment process for candidates.

As a result, traditional recruitment processes are time-consuming, and job seekers might secure another opportunity by the time the process is completed.

General Guidelines by the Organizations for Recruitment at Present

The majority organisations provide general recommendations on how they assess candidates with advanced professional degrees and provide suggestions for highlighting their accomplishments. The organisations assure the candidates that every application will be thoroughly reviewed and encourage them to provide accurate and comprehensive information about themselves. There are no strict criteria for rejection, and candidates do not need to excel in every aspect. Providing all requested information is emphasised over omitting perceived weaknesses.

The candidate's application, including the cover letter and CV/resume, serves as the company's initial and primary assessment of their written communication skills. Therefore, it is advised that these documents be crafted thoughtfully and persuasively. Moreover, they should feature distinctive elements that make the candidate stand out.

Numerous organisations are exploring innovative methods to align candidates with suitable positions. Some have begun experimenting during the interview phase by inviting candidates to collaborate in a shared closed room, tackling a provided mystery or puzzle together. An interviewer observes their interaction, notes down their approach to the challenge, and assesses their ability to provide solutions both individually and as a team. This process not only evaluates candidates' problem-solving abilities but also their intellectual curiosity.

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