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**EXPLORING SYNERGIES: HR, FINANCE, AND SUSTAINABLE SUPPLY
CHAINS**

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Abstract

This study aims to investigate how Human Resources (HR), Finance, and Sustainable Supply Chains collaborate for the promotion of sustainability within Pakistan. In this context, the study bases its research on live case studies of corporate attempts to incorporate sustainability into supply chains. It studies the HR role in sustainability promotion talent management, training, and culture creation encouraged towards sustainability. It looks into how finance helps in Functionalization of financial goals with environment-based objectives and financing green projects as well. The research throws light on the best practices, challenges, and prospects for better cooperation among HR, and Finance, and Supply chains in the efforts to enhance the sustainability initiatives. The findings offer practical recommendations for firms that want to improve their sustainability effectiveness. This study serves the Pakistani corporations to understand better the localized and international trends in fusion of strategies of HR, Finance, and Supply Chain for consonant sustainability and local challenges as well.

Keywords: Human Resource Management (HR), Financial Integration, Sustainable Supply Chain, Corporate Social Responsibility (CSR), Pakistan's Business Landscape

Introduction

Pakistan's economy consists of agriculture, manufacturing, and services, where the most important sectors in this era are agriculture and textiles in terms of GDP contribution. Services have also grown over recent years to become the economy's largest sector, contributing more than 58% of GDP. This blend of industries is creating opportunities and problems alike in building sustainable practices and achieving long-term growth for the

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nation. according to researchers, with the evolution of global trade, supply chain sustainability is gaining precedence in Pakistan. Firms understand that going green is not just about compliance but also about staying ahead of the competition. National regulations are now more inclined toward environmental stewardship, prompting enterprises to incorporate sustainability into their supply chain strategies (Shahid et al., 2024; Kulkov et al., 2023; Huang & Xie, 2024).

As stated by authors, this transition signifies enhancing the resilience of an enterprise against disruptions and compliance with international standards, thus penetrating into more markets. Therefore, by going for sustainability, the companies could become more legal and, at the same time, turn out to have a better standing in the global market. According to Rasheed, et al., (2024) and Shoaib, et al., (2024) finance and Human Resources (HR) are the pillars that help organizations grow and thrive. Sarmad, Iqbal, Ali, and ul Haq (2018) stated that HR is concerned with developing an engaged workforce that ensures sustainable practices. Employee involvement also helps organizations perform better in sustainability activities. Contrary to that, finance provides resourcing and strategies for implementing these activities (Azhar, 2024; Pu et al., 2021). It makes it possible for the sustainability initiatives to be economically feasible and consistent with the overall purpose of the firm. When HR and finance are integrated, the firm remains viable and sustainable (Anjorin et al., 2024; Amjad et al., 2021; Dharmayanti et al., 2023).

The study of the relationship between HR, finance, and sustainable supply chains continues to be crucial in Pakistan's business world. in this study, emphasis is put on how the two regions are interdependent for effective sustainable supply chain management. In Pakistan, there is no awareness of how Human

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Resources (HR), Finance, and sustainable supply chain operations can collaborate to enhance businesses and contribute to achieving sustainability objectives (Rasheed et al., 2023; Amjad et al., 2021). Existing research fails to explicitly state how these fields can work together to enhance company performance and preserve the environment. Pakistani enterprises encounter challenges in integrating HR and Finance with green supply chain practices due to constraints such as resource limitations, poor infrastructure, and few regulations in place to enhance sustainable supply chain management (Shahzad et al., 2022; Amir, et al., 2015). Researchers also argue that it is challenging to execute green practices within supply chains because enterprises do not have the right financing, operations, and logistics setup for sustainable practices (Mahmood et al., 2024; Kazancoglu et al., 2020).

Human Resource (HR) has an important role in facilitating sustainable supply chain activities. Green HR management ensures sustainability by engaging the employees in green activities. In Pakistan, HR policy can be aligned to facilitate green supply chain initiatives through training the employees on sustainable logistics. As per Kayvanfar et al. (2024), the application of the Internet of Things (IoT) in HR can enhance supply chain management and reduce its environmental impact. The finance department also has a significant role to play in backing green projects and making them cost-effective. Financial incentives and effective cost analysis are usually lacking, which prevents companies from investing in green practices. According to the Waqas, Khan and Saeed, (2024) financial organizations in Pakistan may assist by providing green loans for financing sustainable supply chain initiatives (Mahmood et al., 2024). Synergistic coordination among green supply chains, Finance, and HR allows company performance and sustainability goals to be boosted (Zainab, et al., 2023; Raja, et al., 2022; Khan,

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2021). Synergizing green supply chains, financial planning, and HR practices offers businesses a solid competitive edge, increasing employees' commitment while decreasing expenses and improving environmental results (Azhar, 2024; Nawaz, et al., 2024).

Ejibe et al. (2024) affirm that worker engagement enhances the beneficial impact of sustainable supply chain practices on performance, with HR taking a central role in sustainability. Naseer, Haq, and Farooq (2018) explore that Success in Pakistan hinges on developing mechanisms for supply chains, finance, and HR to work together. This entails establishing facilitative regulations, making green investments in logistics, providing financial incentives for sustainability, and utilizing technology to render supply chains efficient and sustainable (Zainab, et al., 2023; Raja, et al., 2022; Khan, 2021). This research examines how harmonization of Human Resources (HR), Finance, and sustainability practices can enhance supply chains in Pakistan.

In addition, financing projects that support sustainability objectives through either private or government institutions helps in training employees while conserving resources (Imran & Akhtar, 2023). The other dimension of this research deals with how both government companies and private companies can promote sustainability (Nawaz, et al., 2024). It proposes policies such as tax reduction for environmentally friendly practices or enhanced regulations (Dimitrov, 2021; CiTiL, 2024; Trivedi et al., 2024). Such cooperation among the government, industries, and NGOs is essential to up-scale green practices and counteract issues such as environmental degradation and unemployment to contribute towards a greener and more resilient economy for Pakistan.

Research Objectives

1. To explore the role of HR and Finance in promoting sustainable supply chain practices in Pakistani organizations.

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2. To investigate the integration of HR and Finance strategies with sustainability goals within supply chain management.
3. To identify the challenges and opportunities in fostering synergies between HR, Finance, and sustainable supply chains.
4. To assess the potential benefits of aligning HR and Finance with sustainability goals for long-term business performance in Pakistan.

Literature review

Human Resources and Sustainability

Human Resource Management (HRM) has an important function to encourage sustainability in organizations. Sustainable HRM (S-HRM) incorporates practices that benefit the environment, society, and economy, e.g., managing talents, engaging staff, and providing training. The practices not only make the organization sustainable but also enhance employees' welfare and motivation. According to researchers, socially responsible HRM aims at saving human resources and promoting corporate social responsibility (CSR) (Ercantan & Eyupoglu, 2022; Bozma & Karcıoğlu, 2023). In contrast, green HRM supports environmental sustainability through the promotion of green behaviors among employees. These activities complement each other to bring a positive effect to the company as well as its employees.

Finance and Sustainability

The finance function plays an important part in enabling sustainable business practices. It entails green technology investment, cost-benefit analysis, and risk management concerning sustainability. Financial sustainability is also related to long-term profit and stability since firms that emphasize sustainability tend to perform better financially in the long term (Nawaz, et al., 2024). Financial instruments such as green bonds and sustainability-linked loans are increasingly used to finance green projects (Aliano

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et al., 2024; Gleißner et al., 2022; Sobik, 2023). Such financial mechanisms enable companies to invest in future rewarding actions that benefit the environment.

Supply Chain Sustainability

In Pakistan, SSCM is significant because the country's industries under development cause environmental and social impacts (Saba, Fatima, Farooq, & Zafar, 2021; Saba, Tabish, & Khan, 2017). According to Akhtar et al., (2020) this involves activities such as maintaining a limit on carbon pollution and improving social responsibilities for the benefit of stakeholders concerned. In Pakistan, SSCM faces difficulties as there exists widespread ignorance about the concept and lack of sufficient resources (Alzubi & Akkerman, 2022; Baig et al., 2020). These challenges hinder organizations in fully adopting sustainable practices that are very important to the ultimate success of environment and society (Imran, et al., 2023; Ahmed, Ahmed & Buriro, 2023).

Global Perspective on Synergies Between HR, Finance, and Sustainable Supply Chains

The concept of combining Human Resource (HR)-Finance and sustainability in supply chain management is beginning to gain traction among numerous businesses worldwide. Taking from companies in developed economies as an example, both IKEA and Patagonia have put strategies in place to integrate the above-discussed measures in sustainable business models. They consider employees as the most important and treasured factor in their company-success strategy; they put emphasis on investing in green technologies; and they put into practice supply chain processes focusing on social and environmental responsibilities (Attah et al., 2023; Malik et al., 2021). It is noteworthy that the triple-bottom-line (TBL) approach has been the common method applied to consider sustainability regarding economic, environmental, and

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social practices. There are several companies that have purportedly attempted the TBL framework for minimizing their negative externality on stakeholders in supply chains (Narkhede et al., 2024; Alzoubi et al., 2019). To date, however, though much has been achieved, a lot still needs to be done to assess the successful implementation practice of this within the context of emerging markets like Pakistan, where probably more issues could exist.

The Role of HR and Finance in Pakistani Organizations

Human resource and finance departments, in most companies in Pakistan, are just concerned with day-to-day activities such as recruitment, training, employee management, and dealing with financial reports and budgets. On the contrary, the necessity of integrating these processes with initiatives on sustainability, mainly within supply chain management, is being increasingly recognized. Research shows that sustainability implementation poses a multitude of challenges for Pakistani companies (Feng et al., 2022; Iqbal et al., 2021). These challenges include cultural hindrances, organizational resistance to change, and others such as financial constraints including resource inadequacy and unawareness of the potential benefits of sustainability. Therefore, for most companies, an additional challenge remains to integrate human resource and finance departments with sustainable supply chain initiatives (Akhtar & Kayani, 2024; Anwar, et al., 2019).

Barriers and Challenges in Pakistan

Pakistan has a lot of difficulties with integrating Human Resource Management (HRM), finance, and sustainability into the supply chain. Culturally, people in HRM and finance who want to sustain these changes are mostly socialized into a culture of "business as usual." For organizations, traditional management hierarchies tend to resist any change that demands sustainability. From the point of view of economics, scarce resources and policy deficits greatly

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accentuate these problems. Financial constraints and the lack of skills are great impediments. The other hindrance is that poor policies and regulations, which fail to place importance on sustainability, impede development in the sense of Rahman et al. (2023), Nnaji et al. (2024), and Ahlström and Monciardini (2021). Remarkably, despite there being so-called laws dictating the protection of the environment, lack of enforcement leads to inconsistent application of the sustainable practices in industries.

These problems necessitate a special tailored strategy for the firms in Pakistan, which would include raising awareness of the benefits of sustainability, training of HR and Finance officers, and lobbying for policies that incentivize and reward sustainable practices (Aftab et al. 2023; Malik et al. 2021).

Methodology

Research Design

This study applied case study method to investigate in detail how Human Resources (HR), finance, and sustainable supply chains interface with and interact within organizations in Pakistan. A case study was preferred because it allows for a comprehensive, real-life analysis of the collaboration and mutual influence of these functions within actual businesses.

Participants and Sampling

The participants sampled in the research included finance officers, mid-managers, HR managers, supply chain managers, sustainability officers, and employees. The organizations were purposively selected. These were the organizations that were known to be at the forefront of sustainable supply chains or had put emphasis on integrating sustainability into the HR and Finance functions. This ensured that the organizations in question would possess expertise with sustainability, offering useful information on the pragmatic challenges and solutions arising from it. The sample included

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companies in different industries such as manufacturing, retailing, and agriculture, to capture diversified synergies and challenges.

Data Collection Methods

Data collection was conducted through various methods to understand the synergies among HR, Finance, and sustainable supply chains in depth:

Semi-Structured Interviews:

Stakeholders including HR managers, finance officers, supply chain managers, and sustainability officers were interviewed to gain in-depth knowledge on strategic decisions and operational matters involving integration of sustainability in HR and Finance functions.

Focus Groups

Employee and middle management focus group interviews were conducted to obtain grassroots views on how the consolidation of these functions affected organizational culture and day-to-day operations.

Document Analysis

Organizational reports, sustainability activities, HR and finance policies, and supply chain performance data were assessed to get insight into the organization's sustainability practices, policies, and commitments.

Field Observations

Observations were conducted in the organizations to analyze the integration of sustainability practices into supply chain functions and cooperation between HR and Finance functions.

Data Collection Procedure

The data collection process took a number of months, during which interviews, focus groups, and field observations were carried out. Participants were briefed on the aim of the study, and consent was sought before data collection. Confidentiality was guaranteed, and all data were anonymized.

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Data Analysis

Thematic analysis was employed to reveal the emergent themes relating to the opportunities, challenges, best practices, and synergies between HR, Finance, and sustainable supply chains. The data were coded and grouped into thematic meanings like collaboration, resource allocation, and sustainability goal alignment. Cross-case analysis was then conducted to synthesize the findings across various organizations to identify patterns and differences in achieving synergies and responding to challenges.

Theme :1 Challenges

Various departments such as HR, Finance, and Supply Chain find it difficult to cooperate in addressing sustainability initiatives. They tend to aim at each of their respective goals but without always ensuring cohesion. In fact, finance typically looks for ways of cutting expenses while excluding long-term sustainability investments, which may impair performance. The aim of HR, on the other hand, was to address issues related to worker welfare, while that of the Supply Chain was to target streamlined operations. It introduces a gap across departments, and it is difficult to put in place an integrated sustainability strategy. The issue is compounded by departments not communicating with each other and not sharing common targets or measures to measure achievement. Resources are also limited, including both funds and experienced personnel, which makes it slow to take up new technologies, such as Big Data or Blockchain, that would help enhance sustainability across the supply chain. According to researchers, most companies are also deterred by the prohibitive costs of environmentally friendly practices and the necessity of complying with stringent environmental regulations (Vandchali et al., 2021); Minhas et al., 2024; Alam et al., 2025; Härenstam et al., 2024; Kshetri, 2021; Omowole et al., 2024).

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Theme: 2 Opportunities

Coordination among HR, Finance, and supply chain functions is essential to synchronize sustainability objectives with financial performance. Emerging technologies such as Big Data, AI, and Blockchain also contribute significantly by enabling companies to analyze data, enhance the utilization of resources, and maintain transparency in the supply chain. HR also enhances sustainability by conducting employee training on sustainability practices within the performance objectives, fostering an environment where sustainability is achieved by working together as a team. The actions demonstrate teamwork, technology, and employee participation as key aspects of establishing a sustainable supply chain (Walińska & Dobroszek, 2021; Gohil & Thakker, 2021; Bilderback, 2023; Martínez-Peláez et al., 2023).

Theme: 3 Best Practices

Incorporation of the Environmental, Social, and Governance metrics into financial models can enhance supply chains by linking financial rewards, including lower financing expense, with sustainability goals. researchers point out, by correlating the payment terms with the Environmental, Social, and Governance ratings, Mauritius Commercial Bank's scheme prompts the suppliers to adopt responsible behaviors. Departments such as HR, Finance, and supply chain must collaborate to realize sustainable supply chain objectives. Sustainability competence training can be initiated by the HR department which can be funded through finance. Effective application of circular economy strategies to products while minimizing waste inclusion was enhance both the profitability and environmental health of companies. Interdepartmental integration generally makes supply chains more sustainable while fostering the global meet up with ESG criteria through it (Chen et al., 2023; Gujadhur & Ansaram, 2021; Tarigan

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et al., 2021; Kazakova & Lee, 2022; Wang, et al., 2024).

Discussion

Human Resources (HR) is tasked with coordinating workers towards sustainable supply chain goals. Training of employees is one of the channels through which HR supports this goal. Through developing training programs that inform employees on green practices, ethical sourcing, and sustainability, HR coordinates all members of the organization towards sustainability responsibility. It might also include staff training on the way their workplace behavior in procurement, transportation, and production activities affects the community and the environment (Malik et al., 2021); Barakat et al., 2023). Apart from training, development of leadership may be the major area of concentration for HR (Hafeez, Iqbal, & Imran, 2021). Through leadership development, HR could assist leaders to understand how they can integrate the consideration of ESG factors during decision-making decisions, particularly of the supply chain. Research has shown that if HR empowers and supports teamwork for the green supply chain, companies operate more financially successfully (Sklavos et al., 2024); Christian et al., 2024).

An HR function committed to embedding a culture that empowers employees to make sustainability decisions allows the company to meet its green objectives and enhance its financial performance. For example, HR will be able to get in touch with supply chain people, determine skill gaps, and thereafter initiate recruitment and training programs in this area, such as recruiting green logistics personnel (Amjad et al., 2021; Freihat et al., 2024). While HR nurtures a sustainable supply chain, another very important function of finance would be to invest in green technologies and otherwise enhance the sustainability of the company. The finance department may consider investing in green

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transport or renewable energy technologies or sourcing sustainable materials. Another very significant function of finance is to mitigate the financial risks relating to ESG factors (Mahmood et al., 2024; Yunus & Nanda, 2024).

Strategic supply chain and finance meet with human resource departments in the global or multinational organization to better strategize toward sustainability goals. For example, finance and human resource departments could work hand in hand in developing reward systems for employees as motivation for participation in sustainability programs. The awards could link to some of the overall sustainability objectives that a company has such as reduction of carbon footprints or increasing renewable materials usage. Additionally, finance can collaborate with supply chain units to evaluate changes on the right feasibility grounds for green initiatives and distribute the resources based on priority (Cinti et al., 2024; Ejibe et al., 2024; Agbelusi et al., 2024; Shishehgarkhaneh et al., 2024).

One of the difficulties in the integration of human resource issues, financial matters, and sustainability is really a win, for it allows the firm to continue thinking about harmonizing sustainability with better processing. Next, there is a lack of coordination across various departments (Hafeez, Khan, & Jabeen, 2024). This misalignment of HR, finance, and supply chain departments leads to inefficiency and chaos; the HR function does not consider the cost implications for acquiring green talent, whereas finance does not take into account the operational issues arising in adopting environmental solutions through the supply chain. It is really this lack of coordination that denies the organization an opportunity for an integrated embedding of sustainability into its supply chain strategy. In addition, this lack of support may compromise sustainability within a corporation due to

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its road map on sustainability. So, it becomes difficult for these companies to determine the priorities and follow up on progress. It will get murky on which projects get fast-tracked or measured against which criterion of sustainability (Lin et al., 2024; Bravo et al., 2021; Mutambo et al., 2022).

Organizations like Pakistan depict barriers in the regular application of sustainable practices resulting from lack of finances. Most companies in Pakistan do not have finances to invest in green technologies or the sustainability practices (Kumar et al., 2022). Similarly, skilled manpower is lacking in most circumstances when it comes to putting such practices in place. There are also cultural barriers because businesses are based on profit generation in the short term at the expense of sustainability in the long term. According to the Azhar, Iqbal and Imran (2025) this may disorient the organizations towards giving sustainability initiatives the due priority. To break down such barriers to collaborations, companies can use different approaches that optimize synergies between supply chain, finance, and HR departments. One of them is through encouraging inclusive leadership and cultural intelligence. By creating a culture of teamwork and collaboration in the workplace, HR can also facilitate cross-functional collaboration and dismantle departmental silos. Finance would also react to the needs since it would provide a separate budget for sustainability projects cutting across different departments (Alshukri et al., 2024; Ahmed et al., 2024; Attah et al., 2024; Pulkkinen et al., 2023). Thus, departments are well empowered to make considerable contributions.

Every two weeks, the finance, supply chain, and HR divisions may congregate for shared discussions to raise communication and harmonization of priorities among themselves. They view these meetings as a chance to share experiences and build consensus on the challenges ahead while keeping everyone aligned towards

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achieving the sustainable objectives. The case studies on this issue describe the various alternative ways to enhance collaboration in practice. Some companies established digital platforms for real-time intercommunication among departments. Hence, these might serve as collaborative tools for the HR-finance-supply chain axis quite successfully and efficiently. Other firms have provided training that integrates technical competencies with sustainability training so that employees can improve their knowledge regarding both their duties and the firm's sustainability objectives.

A number of recommendations can be considered to enhance the coordination of HR, finance, and supply chain departments in advancing sustainability. First, firms need to formulate integrated policies that synchronize the goals of HR, finance, and supply chain with corporate sustainability objectives (Paliwal et al., 2020; Sadiq et al., 2024). The above policies should come with a straightforward outline of the role that every department plays to ensure sustainability as well as measure their contributions in this area. Companies must make investments in digital solutions that ensure data sharing between departments. Digital tools enable finance, HR, and supply chain teams to cooperate more efficiently while monitoring progress in sustainability goals (Groschopf et al., 2021). leadership buy-in is key to developing a spirit of cooperation. Organizations ought to encourage leadership groups to undertake workshops that identify the business importance of cross-functional collaboration toward sustainability. The focus of these workshops was be to develop understanding among leaders as to why teamwork and often-touted silo-busting must be exercised to promote long-term sustainability goals.

It is within the remit of both the private sector and the public sector to provide means for creating sustainable supply chains. Corporations must formulate explicit policies that integrate ESG

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considerations into their human resources and finance schemes. This may include providing incentives to companies that meet sustainability targets or tax exemptions for green efforts (Deshmukh & Tare, 2023). In addition, business groups can provide training courses for organizations to enhance cross-functional coordination on sustainability concerns. Government agencies can also facilitate businesses by establishing policies that promote sustainability in the supply chain (Hafeez, Khan & Jabeen, 2024; Khan, Khan, & Shehzad, 2024). For instance, the government could grant economic incentives, namely grants or subsidies, for investments in green technologies by companies (Shao & Chen, 2022). Other areas where governments can influence companies to improve their responsibility and transparency in sustainability practice is through adding ESG reporting requirements as a government policy. Public-private partnerships can also serve as innovatory engines for the co-learning of best practice in sustainable supply chain management (Xie et al., 2021).

Conclusion

It makes much evident that contributions from Human Resource (HR) management, finance, and Sustainable Supply Chain Management (SSCM) lead towards achieving organization sustainability. Their efforts significantly involve themselves into making supply chain operations sustainable as HR role through empowering or enhancing collaboration and trust among the employees. These practices should increase the green supply chain integration as there would be an increase in cooperation between the customers and suppliers. Financial support includes based financial instruments like supply chain financing that create a tangible cash flow while promoting green conducts among suppliers as finance reinforces such approaches. Such synergistic action of HR, finance, and SSCM forms an extremely strong

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platform to address all challenges: economic, social, and environmental challenges. For example, sustainable development supply chain financing has proven successful in driving suppliers' environmental, social, and governance (ESG) compliance in emerging economies like Pakistan.

Similarly, HR programs for talent acquisition and retention diminish workforce deficits that can impair supply chain resilience. Integrating HR, finance, and supply chain management (SSCM) improves efficiency, cost savings, and competitiveness but faces numerous challenges that hinder such an integration in Pakistani organizations. Among them are trust problems and the lack of effective communication tools between the HR and SCM functions, limited budgets for sustainability, cultural resistance to change, and uncertainty regarding profitability of investment in sustainability. Additionally, the absence of definitive regulatory guidelines and common performance measures makes it difficult for firms to meet global sustainability standards and monitor their own performance. HR has a key role in embedding the culture of sustainability, while collaboration and employee empowerment are necessary for effective green practice implementation in the supply chain. HR can integrate sustainability into organizational strategy by interdepartmental collaboration.

Moreover, a focus on talent building equips employees with the competencies for handling sometimes complex sustainable supply chains. This contributes not just to the organization meeting its sustainability goals, but also to ensuring they have competence in the areas of actually managing sustainable practices. Finance departments was playing a parallel role in support of SSCM initiatives: they provide the working financial framework through which organizations can materialize sustainability initiatives. An instance of sustainable supply chain financing extends favorable

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credit terms to suppliers in order to keep cash flows throughout the supply chain. It reduces costs and nudges the suppliers toward sustainability practices alongside the goals of an organization. Such financial instruments can potentially go a long way in countries like Pakistan, where access to cheap finance is limited. Finance gaps within firms could be closed and therefore found suitable in building a sustainable supply chain. Breaking walls of obstruction is essential for better cooperation between HR, finance, and supply chain management in Pakistan. The first step is about spending on advanced information systems. These systems allow greater access to information and effective communication among HR, finance, and supply chain functions, coupled with transparency and trust. Such communications tools improve accessibility to the core stakeholders of sustainability, which would now feature as a fundamental component of the company strategy. A far greater improvement will have to be made with respect to regulatory systems. Legislators of Pakistan must set clear and open requirements for environmental, social, and governance (ESG) compliance and should also provide incentives to companies that engage in green behavior.

This type of sustainable supply chain finance will help the businesses offer the supplier good credit terms so that cash never dries out through the supply chain. Along with saving money, it will also influence suppliers towards sustainable practices along the organization itself (Ali, Khan, & Atta, 2024; Tariq, Khan, & Atta, 2024). In countries like that of Pakistan, where funding through cheap finance is limited, these very instruments of financing can create a huge impact as it helps companies fill the gap of finances and build a sustainable supply chain. Better HR-finance-supply chain management cooperation in Pakistani organizations demands tearing down existing barriers and walls of separation. The first

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part means investing toward advanced information systems. Such systems provide better access to information and efficient communication among HR, finance, and supply chain functions. They also propagate greater transparency and trust. With the better communication environment, all the critical stakeholders will be able to communicate much more effectively, hence sustainability in the firm strategy. Improvement in regulatory mechanism, too, needs to be enhanced. Pakistani policymakers must set open requirements for environmental, social, and governance (ESG) compliance and offer incentives to companies that practice green behavior. This will help encourage the implementation of sustainability policies by firms and foster an enabling environment for SSCM.

Organizations must also encourage cross-functionality between the HR and finance departments. As they work more closely together, HR and finance can coordinate their strategies with those of SSCM. Training initiatives in collaboration between the two functions can bridge knowledge gaps between departments and develop one approach to sustainability. HR can also educate finance departments of the benefits of sustainable practices, while finance can inform HR of the bottom-line consequences of putting in place SSCM programs. Both departments will be mutually cooperating to realize the common vision of a sustainable supply chain in the process. Another effective strategy is drawing from the world's best practices.

Recommendations

The recommendation of the study shows that governments can help build sustainable supply chains by providing tax incentives or subsidies to businesses that invest in environmentally friendly technology or sustainability training for employees. This ultimately helps businesses save money in their endeavors towards becoming

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greener. According to research, there ought to be clear guidelines for companies to follow on environmental, social, and governance principles. The guidelines should promote interdepartmental cooperation between HR and finance to make certain that sustainability is accounted for in all business functions. The obligation to report on sustainability will, in turn, enhance transparency, covering the economic and labor aspects.

In this recommendation It's also essential for governments to team up with companies to finance research and development of sustainable technologies. Providing grants for proposals that effectively merge HR and finance into sustainability initiatives could generate innovation. Meanwhile, country-level training programs should be established to educate HR and finance practitioners on how they can be involved in sustainability. Research suggest that Companies ought to leverage tools that integrate HR information e.g., employee competencies and turnover with financial information such as budgets and forecasts to make better decisions. Incentives like bonuses for meeting sustainability goals should be introduced to motivate employees and suppliers. businesses should leverage integrated platforms that allow HR, finance, and supply chain teams to share information and track sustainability performance in real-time.

Future Directions

Future studies would investigate the extent to which long-term cooperation between finance and HR can enhance supply chain resilience and environmental performance. More specifically, research could target the financial value of waste minimization or staff engagement to enhance retention. In major industries such as textiles and agriculture, crucial to Pakistan's economy, it would be beneficial to know how HR and finance can tackle certain issues such as international sustainability standards or labor shortages.

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For instance, in the textile industry, finance and HR may collaborate to achieve organic certification for improved sustainability.

Additionally, another important avenue for future research is the potentially indispensable contribution of the nascent technologies AI and Blockchain to improved collaboration among the three dominant functions HR, finance, and supply chain. Such technologies may offer real time employee performance data and help improve sustainable financial planning.

This research investigates into the ways in which the application of behavioral economics can assist in developing incentives for environmentally friendly behavior with no loss of profit. Targeting employees and suppliers, companies can formulate strategies that tie their success to environmental as well as social objectives. This way, companies can become a greener, more powerful future, particularly in developing nations such as Pakistan. Companies also develop realistic solutions specific to the specific needs of every industry.

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