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ESG-Driven HR Practices as a Driver for Creation of Sustainable Firm Value: A Systematic Survey of Literature

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Abstract:
The growing prominence of Environmental, Social, and Governance (ESG) considerations has fundamentally reshaped how organizations define performance, risk, and long-term value creation. While prior research has extensively examined the relationship between ESG performance and financial outcomes, comparatively less attention has been paid to the organizational mechanisms through which ESG commitments are operationalized. In particular, the role of human resource (HR) practices as a conduit between ESG strategies and financial value remains fragmented across multiple research streams. This systematic literature review addresses this gap by synthesizing existing evidence on ESG-oriented HR practices and their implications for long-term financial value creation. Adopting a PRISMA-compliant systematic literature review methodology, the study integrates insights from sustainable HRM, green HRM, and ESG–financial performance research. Drawing on a broad range of conceptual, empirical, and meta-analytic studies published in leading peer-reviewed journals, the review examines how HR practices aligned with environmental, social, and governance priorities influence firm-level financial outcomes such as profitability, firm value, stock market performance, and risk. The analysis reveals that ESG-oriented HR practices are rarely associated with immediate financial gains but tend to generate value through indirect and cumulative mechanisms operating over longer time horizons. The review identifies several key pathways linking ESG-HR practices to financial performance, including human capital enhancement, employee engagement and retention, innovation and operational efficiency, reputational gains, and risk reduction. Importantly, the evidence highlights that these effects are highly contingent on issue materiality, industry context, institutional environments, and the degree of integration of HR practices within broader organizational systems. Firms that adopt coherent bundles of ESG-aligned HR practices, rather than isolated or symbolic initiatives, are more likely to experience sustainable financial benefits. At the same time, the review documents significant measurement challenges and empirical heterogeneity arising from inconsistent ESG ratings, limited HR-specific indicators, and methodological issues related to causality and endogeneity. These limitations underscore the need for more granular, longitudinal, and context-sensitive research designs. This review advances understanding of how people management practices underpin ESG performance and sustainable value creation. By positioning HRM as a central operational bridge between ESG commitments and financial outcomes, the study offers a more nuanced perspective on the business case for ESG and identifies promising directions for future research and managerial practice.

Keywords: ESG-oriented HR practices, Sustainable human resource management, Green HRM, Firm value, Sustainable value creation

JEL Codes: M12, M14, G30, Q56, J24

INTRODUCTION

In recent years, Environmental, Social, and Governance (ESG) considerations have moved from the periphery of corporate responsibility to the core of strategic decision-making. What was once viewed largely as a reputational or compliance-driven agenda is now increasingly framed as a potential source of long-term financial value and competitive advantage. Investors, regulators, and other stakeholders are paying closer attention to how firms manage non-financial risks and opportunities, particularly those related to human capital. Against this backdrop, human resource (HR) practices have emerged as a critical yet underexplored link between ESG commitments and sustainable value creation.

The growing academic and practitioner interest in ESG reflects a broader rethinking of how firm performance is defined and measured. Traditional financial metrics, while still essential, are no longer considered sufficient to capture the long-term health and resilience of organizations. A substantial body of research has shown that firms with strong ESG performance tend to exhibit superior risk management, stronger stakeholder relationships, and, in many cases, better financial outcomes (Friede et al., 2015; Eccles et al., 2014). However, the mechanisms through which ESG orientations translate into economic value remain contested and unevenly understood. There is limited clarity on how ESG principles are operationalized within organizations and how day-to-day managerial practices shape ESG outcomes.

Human resource management occupies a central position in this discussion because ESG ambitions ultimately depend on employee behaviour, capabilities, and engagement. Practices related to recruitment, training, performance management, rewards, employee well-being, diversity, and workplace safety directly influence the “social” and “governance” pillars of ESG, while also enabling environmental initiatives through skills development and pro-environmental behaviour. Prior research on sustainable HRM and green HRM suggests that HR systems can be designed to support long-term employee well-being, organizational resilience, and environmental performance (Renwick et al., 2013; Jackson et al., 2014). At the same time, classic HRM research has long demonstrated that well-designed HR practices can improve productivity, reduce turnover, and enhance firm performance (Huselid, 1995), providing a conceptual bridge between HR investments and financial value.

Despite this convergence, the literature remains fragmented. Studies vary widely in how ESG-oriented HR practices are defined, measured, and linked to financial outcomes. Some research highlights positive associations between employee satisfaction, sustainability-oriented cultures, and long-run stock market performance (Edmans, 2011), while other studies point to context-specific or conditional effects, shaped by industry characteristics, issue materiality, and institutional environments (Khan et al., 2016). Moreover, much of the empirical ESG–financial performance literature operates at an aggregate firm-score level, offering limited insight into the specific HR mechanisms that drive observed outcomes.

This systematic literature review responds to these gaps by synthesizing existing research on ESG-oriented HR practices and their implications for long-term financial value creation. By bringing together insights from sustainable HRM, green HRM, and the broader ESG–performance literature, the review seeks to clarify key concepts, theoretical foundations, empirical findings, and underlying mechanisms. In doing so, it aims to move beyond the question of whether ESG pays and instead focus on how, when, and under what conditions HR practices aligned with ESG priorities can contribute to sustainable value creation for firms and their stakeholders

OBJECTIVES OF THE STUDY

The primary objective of this study is to systematically examine how human resource practices aligned with Environmental, Social, and Governance (ESG) priorities contribute to sustainable firm value creation. While ESG has gained prominence as a framework for evaluating long-term corporate performance, existing research has often treated ESG outcomes as abstract scores or disclosures, paying limited attention to the organizational processes that translate ESG commitments into tangible economic outcomes. This study seeks to address that gap by positioning HR practices as a central operational mechanism through which ESG strategies are enacted within firms.

A key objective is to synthesize fragmented evidence from diverse research streams—including sustainable human resource management, green HRM, and ESG–financial performance literature, to develop an integrated understanding of ESG-oriented HR practices. By consolidating findings across conceptual, empirical, and review-based studies, the paper aims to clarify how HR practices related to employee development, engagement, diversity, well-being, and governance influence long-term financial outcomes such as firm value, profitability, stock market performance, and risk.

Another important objective is to identify and explain the mechanisms through which ESG-aligned HR practices generate financial value. Rather than assuming a direct and immediate payoff, the study seeks to uncover indirect pathways such as human capital enhancement, innovation, employee retention, reputational gains, and risk reduction. This mechanism-based perspective allows for a more realistic and nuanced understanding of why ESG-oriented HR investments tend to yield benefits over extended time horizons.

The study also aims to critically assess methodological patterns and limitations in the existing literature. By examining how ESG and HR practices are measured, and how financial outcomes are operationalized, the review highlights persistent challenges related to measurement inconsistency, causality, and contextual heterogeneity. In doing so, it identifies directions for more rigorous and context-sensitive future research.

Finally, the study seeks to contribute to ongoing debates on the business case for ESG by demonstrating that people management is not a peripheral support function but a core driver of sustainable value creation. By emphasizing HRM as a bridge between ESG intent and financial outcomes, the study offers insights relevant to scholars, managers, investors, and policymakers concerned with long-term corporate sustainability.

METHODOLOGY OF THE STUDY

This study adopted a systematic literature review (SLR) design to examine how ESG-oriented human resource (HR) practices contribute to long-term financial value creation. To ensure transparency, rigor, and replicability, the review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. The PRISMA framework was considered particularly appropriate given the interdisciplinary nature of the topic, which spans human resource management, sustainability, and finance, and the need to synthesize fragmented empirical and conceptual evidence in a structured manner (Gond & Igalens, 2020; Pham & Nguyen, 2020).

Search strategy and data sources

A comprehensive literature search was conducted across major academic databases commonly used in management and finance research, including Scopus, Web of Science, and ScienceDirect. The search strategy combined keywords related to ESG and HR practices to capture both integrated and domain-specific studies. Core search strings included combinations of terms such as “ESG”, “sustainable HRM”, “green HRM”, “human capital”, “financial performance”, “firm value”, and “sustainable value creation”. Boolean operators and truncations were used to broaden coverage while maintaining relevance.

To ensure academic rigor and comparability, the search was restricted to peer-reviewed journal articles published in English. Given the rapid growth of ESG and sustainable HRM research over the past decade, particular attention was paid to studies published from the early 2000s onward, with an emphasis on more recent contributions reflecting contemporary ESG frameworks and data availability (Friede et al., 2015; Grewal et al., 2020).

Inclusion and exclusion criteria

Clear inclusion and exclusion criteria were applied at multiple stages of the review. Studies were included if they:

(a) explicitly examined HR practices linked to environmental, social, or governance dimensions; (b) analyzed outcomes related to financial performance, firm value, or long-term sustainability; and (c) employed conceptual, empirical, or review-based approaches relevant to ESG-oriented HR practices.
Studies were excluded if they focused solely on environmental management without an HR component, addressed corporate social responsibility without reference to HR systems, or lacked a clear linkage to organizational or financial outcomes. Conference papers, editorials, practitioner notes, and non-peer-reviewed sources were also excluded to maintain academic quality and consistency (Nwogugu & Alobo, 2023).

Screening and selection process

The PRISMA screening process was conducted in four stages: identification, screening, eligibility, and inclusion. In the identification stage, all records retrieved from database searches were compiled, and duplicates were removed. During the screening stage, titles and abstracts were reviewed to assess preliminary relevance. Full-text articles were then assessed for eligibility based on the predefined inclusion criteria. Disagreements during screening were resolved through iterative review and reference to the study objectives. The final sample consisted of high-quality studies that collectively represented theoretical diversity, methodological rigor, and geographical spread across developed and emerging economies.

Information extraction and synthesis

For each included study, relevant data were systematically extracted, including publication details, theoretical frameworks, research methods, types of ESG-oriented HR practices examined, and reported financial or organizational outcomes. A narrative synthesis approach was adopted, as the reviewed studies displayed substantial heterogeneity in research design, measurement of ESG and HR constructs, and financial performance indicators (Khan et al., 2016; Eccles et al., 2014). This approach allowed for the identification of recurring patterns, mechanisms, and contingencies, rather than relying on statistical aggregation alone.
This PRISMA-compliant methodology ensured a robust and transparent review process, enabling a nuanced understanding of how ESG-oriented HR practices are conceptualized, implemented, and linked to sustainable financial value creation in the existing literature.

FINDINGS OF THE STUDY

Introduction and Scope

Research examining the interface between Environmental, Social, and Governance (ESG) priorities and human resource management (HRM) has expanded rapidly over the past two decades, reflecting a broader shift in how organizations conceptualize value creation. Firms are no longer assessed solely on short-term financial outcomes; instead, increasing emphasis is placed on their ability to generate sustainable value while managing environmental risks, social responsibilities, and governance obligations. Within this evolving landscape, HRM has emerged as a critical organizational function through which ESG commitments are translated into everyday practices, employee behaviours, and long-term organizational capabilities (Jackson et al., 2014; Wright & Nyberg, 2017).
The literature reviewed in this study spans multiple, partially overlapping streams of research. At one end are conceptual and theoretical contributions that frame sustainable HRM as an approach integrating economic viability with social equity, employee well-being, and environmental stewardship. These studies often draw on stakeholder theory and paradox perspectives to highlight the tensions organizations face when balancing short-term efficiency with long-term sustainability objectives (Hahn et al., 2015; Griep & de Lange, 2024). Closely related is the growing body of work on green human resource management (GHRM), which focuses more narrowly on the environmental dimension of sustainability and examines how HR practices such as green recruitment, training, performance appraisal, and reward systems foster

pro-environmental behaviour and environmental performance (Renwick et al., 2013; Pham & Nguyen, 2020).

Alongside these streams, a more integrative perspective has emerged that explicitly links HR practices to ESG performance metrics and financial outcomes. Studies in this domain examine HR policies related to diversity and inclusion, labour standards, health and safety, skills development, and employee engagement as key drivers of ESG scores and as mechanisms through which firms signal responsible behaviour to external stakeholders (Gond & Igalens, 2020; La Hovary, 2021). This line of research is increasingly connected to the finance and accounting literature, which investigates whether ESG performance is associated with firm value, profitability, stock returns, and cost of capital (Friede et al., 2015; Aydoğmuş, 2022).

The scope of this review therefore encompasses both micro-level HR practices and macro-level financial outcomes. It includes conceptual models, empirical studies, systematic reviews, and meta-analyses that explore direct and indirect relationships between ESG-oriented HR practices and organizational performance. Attention is given to studies that identify mediating mechanisms i.e. employee engagement, innovation, and reputational benefits, and contextual contingencies, including industry materiality and institutional environments, that shape observed outcomes (Khan et al., 2016; Eccles et al., 2014).

By synthesizing these diverse strands, the review aims to provide a coherent understanding of how ESG-aligned HR practices contribute to sustainable value creation. Rather than treating ESG as an abstract reporting exercise, the scope of this review emphasizes HRM as an operational bridge between corporate sustainability commitments and long-term financial performance, while also highlighting unresolved debates and gaps that warrant further research

Definitions and Conceptual Distinctions

A recurring challenge in the literature on ESG-oriented human resource practices is the lack of conceptual clarity and the frequent overlap among related terms. Scholars have used concepts such as sustainable human resource management, green human resource management, and ESG-oriented HR practices, sometimes interchangeably and sometimes with distinct meanings, leading to ambiguity in both theory building and empirical testing. Clarifying these conceptual distinctions is essential for understanding how HR practices connect sustainability goals with long-term organizational and financial outcomes.

Sustainable Human Resource Management (SHRM) is the broadest of the three concepts. It refers to an approach to HRM that explicitly integrates economic, social, and environmental sustainability concerns into HR strategies and systems, with a strong emphasis on long-term outcomes rather than short-term efficiency alone. SHRM is rooted in the idea that employees are not merely inputs to production but critical stakeholders whose well-being, development, and employability must be sustained over time (Jackson et al., 2014; Wright & Nyberg, 2017). Core HR functions i.e. as workforce planning, training and development, performance management, and rewards, are viewed through a long-term lens that prioritizes organizational resilience, continuity of human capital, and social legitimacy.

Much of the SHRM literature adopts a paradox or stakeholder perspective, highlighting the tensions organizations face when balancing competing demands. For example, firms must reconcile cost pressures with investments in employee health, safety, and development, or short-term productivity targets with long-term employability and equity considerations (Hahn et al., 2015; Griep & de Lange, 2024). Rather than framing sustainability as a simple win–win, SHRM scholars acknowledge trade-offs and emphasize the role of HR systems in managing these tensions over time. As such, SHRM provides a normative and strategic foundation for understanding how HRM can support sustainable value creation beyond immediate financial returns.

Green Human Resource Management (GHRM) represents a more focused and operational subset of SHRM, with primary attention on environmental sustainability. GHRM encompasses HR policies and practices designed to promote environmentally responsible behaviour among employees and to support organizational environmental objectives. Typical practices include recruiting employees with environmental values or green skills, providing environmental training, incorporating environmental criteria into performance appraisal systems, and linking rewards and incentives to environmental performance (Renwick et al., 2013; Pham & Nguyen, 2020).

Conceptually, much of the GHRM literature is anchored in the Ability–Motivation–Opportunity (AMO) framework. From this perspective, HR practices enhance employees' abilities through training, motivate them through rewards and appraisal systems, and create opportunities for participation in environmental initiatives, thereby encouraging pro-environmental behaviour at work (Renwick et al., 2013; Singh et al., 2020). Empirical studies frequently examine how GHRM practices influence intermediate outcomes such as green behaviours, green innovation, or environmental performance, which may subsequently translate into economic benefits through efficiency gains, cost reductions, or reputational advantages (Nguyen & Tran, 2021; Zhou et al., 2023).

While GHRM has generated a rich and growing body of empirical evidence, its scope is inherently narrower than that of SHRM. It largely prioritizes the environmental pillar of sustainability and pays comparatively less attention to broader social and governance concerns such as labour rights, diversity and inclusion, or ethical governance structures. As a result, GHRM is best understood as one important component within a wider sustainability-oriented HR architecture, rather than a comprehensive framework.

The third concept, ESG-oriented HR practices, reflects a more integrative and outcome-oriented perspective that has gained prominence alongside the rise of ESG reporting and sustainable finance. ESG-HR practices refer to HR policies, systems, and processes that are explicitly designed to improve a firm's performance on environmental, social, and governance dimensions as measured by ESG frameworks and ratings. This concept extends beyond environmental initiatives to include practices related to workforce diversity, fair compensation, labour standards, health and safety, human capital development, ethical leadership, and compliance mechanisms (Gond & Igalens, 2020; La Hovary, 2021).

Unlike SHRM, which is often discussed at a normative or strategic level, ESG-oriented HR practices are typically examined in relation to measurable outcomes. In this sense, they function as an operational bridge between corporate ESG commitments and employee-level behaviours and capabilities. From a financial perspective, these practices are increasingly viewed as signals to external stakeholders, particularly investors, about a firm's long-term risk management, governance quality, and capacity for sustainable value creation (Friede et al., 2015; Serafeim, 2020). The finance and accounting literature has further emphasized that the value relevance of ESG-HR practices depends on issue materiality, meaning that HR investments aligned with ESG issues that are material to a firm's industry are more likely to be associated with superior financial performance (Khan et al., 2016).

While SHRM, GHRM, and ESG-oriented HR practices overlap conceptually, they differ in scope, emphasis, and analytical focus. SHRM provides a broad, long-term framework centred on sustainability and stakeholder balance; GHRM concentrates on environmental objectives and employee pro-environmental behaviour; and ESG-oriented HR practices emphasize measurable ESG outcomes and their links to firm value. Recognizing these distinctions is critical for advancing theory, improving empirical precision, and developing actionable insights into how HRM can meaningfully contribute to sustainable value creation.

Theoretical Lenses Used in the Literature

Research on ESG-oriented human resource (HR) practices draws on a diverse set of theoretical lenses to explain why and how HR systems aligned with sustainability objectives may influence organizational and financial outcomes. Rather than relying on a single dominant theory, the literature reflects a pluralistic approach, combining perspectives from strategic management, organizational behaviour, stakeholder theory, and finance. This theoretical diversity mirrors the complexity of ESG itself, which spans economic, social, and environmental domains and operates across multiple levels of analysis.

One of the most frequently used frameworks is the Resource-Based View (RBV) of the firm. From this perspective, human capital and HR systems are seen as strategic resources that can generate sustainable competitive advantage when they are valuable, rare, difficult to imitate, and well organized (Russo & Fouts, 1997; Huselid, 1995). ESG-oriented HR practices i.e. long-term skill development, employee well-being initiatives, and inclusive talent management, are conceptualized as investments that enhance the quality and durability of human capital. Scholars argue that when these practices are embedded in coherent HR systems, they can strengthen organizational capabilities related to innovation, adaptability, and risk management, thereby supporting superior long-term performance (Wright & Nyberg, 2017; La Hovary, 2021). The RBV is particularly influential in explaining why ESG-aligned HR practices may contribute to sustained financial value rather than merely increasing short-term costs.

Complementing the RBV, the Ability–Motivation–Opportunity (AMO) framework is widely applied, especially in the green HRM literature. The AMO framework suggests that employee performance and behaviour depend on their abilities, motivation, and opportunities to contribute (Delery & Doty, 1996). In the context of ESG and environmental sustainability, HR practices such as green training enhance employees' abilities, incentive systems tied to environmental or social goals strengthen motivation, and participative mechanisms provide opportunities for employees to engage in sustainability-related initiatives (Renwick et al., 2013; Singh et al., 2020). This framework is particularly useful for unpacking the micro-level mechanisms through which HR practices translate into pro-environmental behaviour, green innovation, or improved social outcomes. Empirical studies frequently rely on the AMO lens to model indirect pathways, showing that ESG-oriented HR practices influence financial performance through intermediate behavioural and operational outcomes rather than through direct effects alone (Nguyen & Tran, 2021; Zhou et al., 2023).

Another dominant theoretical strand is Stakeholder Theory, often combined with legitimacy theory. From this perspective, firms are viewed as accountable not only to shareholders but also to a wide range of stakeholders, including employees, customers, regulators, and society at large (Carroll, 1991; Jones & Levy, 2018). HR practices related to fair pay, safe working conditions, diversity and inclusion, and employee voice are interpreted as mechanisms through which firms address stakeholder expectations and maintain social legitimacy. ESG-oriented HR practices can therefore reduce conflict, enhance trust, and strengthen relationships with key stakeholders, which in turn may lower reputational risk and improve access to resources such as capital and talent (Gond & Igalens, 2020; Weber & Feltmate, 2016). This lens is particularly prominent in studies examining the social and governance dimensions of ESG and their links to firm value and risk reduction.

Closely related to stakeholder theory is the signalling and information economics perspective, which has gained prominence in the finance-oriented ESG literature. According to this view, ESG investments and disclosures serve as signals to external stakeholders about a firm's quality, long-term orientation, and governance standards (Spence, 1973; Serafeim, 2020). HR practices that support ESG performance i.e. transparent performance management systems, strong health and safety policies, or investments in employee development, are seen as credible signals because they involve real costs and organizational commitment. Importantly, research emphasizes that the financial market's response to such signals depends on materiality. Firms that invest in ESG issues, including HR-related ones, that are material to their industry tend to experience superior financial performance, whereas investments in immaterial issues may not yield comparable returns (Khan et al., 2016; Grewal et al., 2020). This perspective helps explain mixed empirical findings and highlights why context matters when evaluating the value implications of ESG-oriented HR practices.

The literature also draws on dynamic capabilities theory to explain how ESG-oriented HR systems enable firms to adapt to changing environmental, social, and regulatory conditions. Dynamic capabilities emphasize a firm's ability to sense opportunities and threats, seize them through resource reconfiguration, and transform organizational processes over time (Zollo & Winter, 2002). From this standpoint, HR practices that promote learning, cross-functional collaboration, and long-term skill development enhance an organization's capacity to respond to sustainability challenges and evolving stakeholder expectations (Eccles et al., 2014; Wagner, 2019). ESG-oriented HRM is thus viewed not as a static set of practices, but as part of an evolving system that supports continuous adaptation and long-term resilience.

Taken together, these theoretical lenses offer complementary explanations for the role of ESG-oriented HR practices in sustainable value creation. The RBV and dynamic capabilities perspectives emphasize internal resources and long-term competitiveness; the AMO framework explains micro-level behavioural mechanisms; stakeholder and legitimacy theories highlight relational and societal dimensions; and signalling theory connects HR practices to capital market outcomes. The coexistence of these frameworks reflects both the richness and the fragmentation of the literature. While no single theory fully captures the complexity of ESG–HR–performance relationships, their combined use provides a more nuanced and realistic understanding of when and how ESG-oriented HR practices may translate into long-term financial and organizational value.

Empirical Evidence: ESG/HR Practices → Financial Outcomes

The empirical literature examining the relationship between ESG-oriented HR practices and financial outcomes has grown substantially and now represents one of the most dynamic areas of sustainability research. Across disciplines, ranging from human resource management and strategy to finance and accounting, scholars have sought to determine whether, and under what conditions, investments in ESG-aligned people practices translate into superior firm performance. While findings are not uniform, the accumulated evidence points to a generally non-negative, and often positive, association between ESG-oriented HR practices and long-term financial outcomes, albeit with important contingencies.

At the broadest level, meta-analyses and large-scale reviews of the ESG–financial performance relationship provides a strong empirical foundation for the business case of sustainability. Friede et al. (2015), synthesizing evidence from more than 2,000 empirical studies, reported that nearly 90 percent of the reviewed studies found a non-negative relationship between ESG performance and corporate financial performance, with a substantial proportion identifying positive effects. More recent meta-analyses have reinforced this conclusion, suggesting that ESG engagement is, on average, associated with higher profitability, firm value, and risk-adjusted returns (Bai et al., 2024). Although these studies do not isolate HR practices explicitly, they establish an important macro-level context within which ESG-oriented HR investments can be expected to matter.

Moving closer to organizational processes, firm-level studies provide more direct insights into how ESG commitments are operationalized and linked to financial outcomes. Eccles et al. (2014) offered influential evidence showing that firms with long-standing sustainability orientations outperform their peers in terms of stock market and accounting-based performance over the long run. Crucially, these firms differed not merely in external disclosure but in their internal organizational systems, including HR practices, executive incentives, and governance structures. This finding suggests that ESG-driven financial benefits are rooted in systemic organizational changes rather than isolated policies, highlighting the central role of HR systems in translating sustainability strategies into economic value.

Evidence from the finance literature further strengthens the link between ESG performance and firm value, while also highlighting significant heterogeneity. Studies examining ESG disclosure and performance across countries generally report positive associations with firm valuation, profitability, and cost of capital, though effect sizes vary by institutional context (Aydoğmuş, 2022; Desai & Kumar, 2024; Zhang & Luo, 2022). Importantly, Khan et al. (2016) demonstrated that materiality is a key moderating factor: firms that perform well on ESG issues that are financially material to their industry outperform peers, whereas investments in immaterial ESG dimensions show little or no performance impact. This insight is particularly relevant for HR practices, as the materiality of HR-related ESG issues e.g. health and safety, labour standards, or human capital development, differs substantially across industries.

HR-specific empirical evidence provides a more granular understanding of the ESG–financial performance relationship. Long before the rise of ESG as a formal construct, strategic HRM research established a robust link between HR practices and financial outcomes. Huselid (1995) showed that high-performance work systems reduce employee turnover and enhance productivity, leading to improved corporate financial performance. These findings form a critical empirical bridge, suggesting that investments in people-oriented practices, many of which now fall under the social and governance pillars of ESG, are economically consequential. Extending this logic, Edmans (2011) demonstrated that employee satisfaction predicts long-run stock returns, implying that financial markets may systematically undervalue intangible, HR-related assets in the short term but reward them over longer horizons.

Within the green HRM literature, empirical studies increasingly document indirect pathways from HR practices to financial outcomes. Research consistently finds that GHRM practices improve environmental performance, employee green behaviour, and green innovation, which in turn contribute to cost savings, operational efficiency, and reputational gains (Singh et al., 2020; Nguyen & Tran, 2021; Zhou et al., 2023). For instance, firms that integrate environmental criteria into training and performance appraisal systems often report improvements in resource efficiency and waste reduction, outcomes that can translate into measurable economic benefits over time. Longitudinal evidence further suggests that these effects are not instantaneous but unfold through multi-step mechanisms, reinforcing the argument that ESG-oriented HR practices primarily influence financial outcomes indirectly (Makumbe et al., 2024).

Cross-country and sectoral studies add further nuance to the empirical picture. Research indicates that the strength of the ESG–financial performance relationship depends on regulatory environments, labour market institutions, and investor preferences (Narula, 2025; Serafeim, 2020). In contexts where labour protections are weak or ESG disclosure standards are underdeveloped, HR-related ESG investments may play a stronger signalling role, enhancing legitimacy and access to capital. Conversely, in highly regulated environments, such practices may be perceived as compliance-driven and yield more modest financial differentiation. These findings underscore the importance of contextualizing empirical results rather than assuming universal effects.

Despite broadly supportive evidence, the literature also highlights significant methodological challenges. Measurement inconsistency across ESG rating providers introduces noise into empirical analyses, making it difficult to isolate the effects of specific HR practices (Abate & D'Acunto, 2021). Endogeneity and reverse causality remain persistent concerns, as financially successful firms may simply have more resources to invest in ESG and HR initiatives. Studies employing panel data, matched samples, or quasi-experimental designs tend to report more conservative but still positive effects, suggesting that earlier cross-sectional studies may overstate simple correlations (Eccles et al., 2014; Wang & Li, 2022).

The empirical evidence supports a cautious but compelling conclusion: ESG-oriented HR practices can contribute to superior financial outcomes, particularly over the long term, when they are aligned with material ESG issues, embedded within coherent HR systems, and supported by complementary organizational processes. Rather than acting as direct drivers of short-term profits, these practices appear to enhance firm value through sustained improvements in human capital, innovation capacity, risk management, and stakeholder relationships. At the same time, the heterogeneity of findings highlights the need for more fine-grained, HR-focused empirical research that can disentangle mechanisms, contexts, and causal pathways with greater precision.

Mechanisms: How ESG-HR Practices Translate to Financial Value

While a growing body of empirical research documents a positive association between ESG-oriented HR practices and financial outcomes, an equally important question concerns *how* these practices create economic value. The literature suggests that ESG-HR practices rarely influence firm performance through simple, direct pathways. Instead, their financial relevance emerges through a set of interconnected mechanisms that operate over time and across multiple organizational levels. These mechanisms help explain why ESG-HR investments tend to be more strongly associated with long-term value creation than with short-term financial gains.

One of the most frequently cited mechanisms is human capital enhancement. ESG-aligned HR practices place sustained emphasis on employee development, health, safety, and well-being, thereby strengthening the quality and durability of human capital. Investments in training, reskilling, and lifelong learning, particularly in areas such as digital capabilities, sustainability competencies, and environmental management, enhance employees' productivity and adaptability (Jackson et al., 2014; Wright & Nyberg, 2017). From a financial perspective, stronger human capital supports innovation, operational efficiency, and resilience in the face of environmental and regulatory change. Empirical studies show that firms with robust HR systems experience lower turnover, higher labour productivity, and improved performance, outcomes that form a foundational pathway through which ESG-oriented HR practices contribute to firm value (Huselid, 1995; La Hovary, 2021).

A closely related mechanism is employee engagement and retention. Socially responsible HR practices e.g. fair compensation, inclusive work environments, strong occupational health and safety standards, and opportunities for employee voice, enhance employees' psychological attachment to the organization. Higher levels of engagement are associated with discretionary effort, reduced absenteeism, and lower voluntary turnover, all of which have clear cost and productivity implications (Edmans et al., 2012). Importantly, Edmans (2011) demonstrated that firms with high employee satisfaction generate superior long-run stock returns, suggesting that financial markets eventually reward firms that invest in employee well-being. ESG-HR practices therefore create value by stabilizing the workforce and preserving firm-specific knowledge that would otherwise be lost through high turnover.

Another key mechanism highlighted in the literature is innovation and operational efficiency, particularly in the context of green HRM. ESG-oriented HR practices shape employees' abilities, motivation, and opportunities to engage in innovative behaviour, especially related to environmental sustainability. Training programs focused on environmental management, incentive systems tied to sustainability targets, and participative mechanisms that encourage employee involvement in green initiatives foster green innovation and continuous improvement (Renwick et al., 2013; Singh et al., 2020). Empirical evidence suggests that these innovations often lead to cost savings through reduced energy consumption, lower waste, and improved resource efficiency, as well as revenue opportunities through green products and services (Nguyen & Tran, 2021; Zhou et al., 2023). Financial value thus emerges indirectly, as ESG-HR practices enable innovation-driven efficiency gains rather than immediate accounting profits.

Reputation building and risk reduction constitute another important pathway linking ESG-HR practices to financial outcomes. Strong social and governance-related HR policies, covering labour standards, diversity and inclusion, ethical conduct, and compliance, reduce the likelihood of workplace disputes, regulatory penalties, and reputational crises. From a stakeholder theory perspective, such practices enhance trust among employees, regulators, customers, and investors, strengthening the firm's social license to operate (Carroll, 1991; Gond & Igalens, 2020). Empirical research shows that firms with strong ESG performance often face lower downside risk and benefit from more stable cash flows, which can translate into lower cost of capital and higher firm valuation (Wang & Li, 2022; Zhang & Luo, 2022). HR systems play a central role in operationalizing governance standards and ethical norms, making them critical to this risk mitigation mechanism.

The signalling mechanism further explains how ESG-HR practices influence financial markets. Investments in employee development, safety, and inclusive governance are costly and difficult to reverse, making them credible signals of a firm's long-term orientation and management quality (Serafeim, 2020). However, signalling effects depend heavily on materiality. As shown by Khan et al. (2016), ESG investments generate financial value primarily when they address issues that are material to a firm's industry. HR-related ESG practices e.g. health and safety in manufacturing or human capital development in knowledge-intensive industries, are therefore more likely to be rewarded by investors when they align with sector-specific risks and opportunities. This insight helps explain why ESG-HR practices sometimes appear value-enhancing and sometimes do not.

Recent studies increasingly emphasize multi-step mediation pathways rather than single mechanisms. For example, ESG-oriented HR practices may first influence employee attitudes and behaviours, which then foster innovation or efficiency improvements, ultimately leading to enhanced financial performance (Makumbe et al., 2024). Such findings underscore the importance of viewing ESG-HR practices as part of integrated organizational systems rather than isolated interventions. Eccles et al. (2014) similarly argue that long-term financial benefits arise when sustainability-oriented HR practices are embedded within broader governance and incentive structures.

The literature converges on the view that ESG-HR practices create financial value through a combination of human capital development, engagement and retention, innovation, reputation building, risk reduction, and signalling effects. These mechanisms operate over time and interact with organizational context and industry materiality. Understanding these pathways is essential for moving beyond simplistic claims about the business case for ESG and toward a more nuanced explanation of how HR systems can emphasize sustainable value creation

Measurement Challenges and Empirical Heterogeneity

Despite the growing volume of research linking ESG-oriented HR practices to organizational and financial outcomes, the empirical literature is marked by substantial measurement challenges and heterogeneity. These issues help explain why findings across studies are often mixed, context-dependent, or difficult to compare. Understanding these limitations is critical for interpreting existing evidence and for guiding future research toward more robust and policy-relevant conclusions.

One of the most widely discussed challenges concerns the measurement of ESG performance itself. ESG scores are typically derived from third-party rating agencies such as MSCI, Sustainalytics, or Refinitiv, each of which employs different conceptual definitions, indicators, weighting schemes, and data sources. As a result, the same firm may receive markedly different ESG scores depending on the provider used (Abate & D'Acunto, 2021; Searcy, 2012). This lack of convergence introduces noise into empirical models and weakens the reliability of estimated relationships between ESG-related HR practices and financial outcomes. For HR-focused studies, the problem is compounded by the fact that many ESG ratings capture human capital variables only indirectly or at a highly aggregated level, obscuring the specific HR practices driving observed effects.

Closely related is the issue of construct validity in HR measurement. ESG-oriented HR practices encompass a wide range of activities, from training and development to diversity policies, health and safety systems, and governance mechanisms. However, studies vary considerably in how these practices are operationalized. Some rely on broad proxies, such as employee satisfaction or turnover rates, while others use survey-based measures of green HRM or sustainable HRM bundles (Renwick et al., 2013; Piwowar-Sulej, 2021). This diversity of measures makes cross-study comparison difficult and raises concerns about whether different studies are, in fact, examining the same underlying constructs. As a result, similar labels may mask substantial conceptual and empirical differences.

Another major source of heterogeneity lies in industry materiality. As emphasized by Khan et al. (2016), the financial relevance of ESG and extension of ESG-oriented HR practices, depends on whether the issues addressed are material to a firm's industry. For example, occupational health and safety practices are likely to be highly material in manufacturing or mining but less so in software or professional services, where human capital development and retention may dominate. Many empirical studies, however, apply uniform ESG or HR measures across industries without adequately accounting for these differences. This practice can dilute estimated effects and lead to inconsistent findings across samples and sectors (Grewal et al., 2020).

Geographical and institutional variation further contributes to empirical heterogeneity. ESG-HR practices operate within broader national contexts shaped by labour laws, regulatory frameworks, cultural norms, and capital market structures. Studies conducted in developed economies with strong labour protections and mature ESG reporting regimes often yield different results than those based in emerging markets, where ESG initiatives may play a stronger signalling or legitimacy role (Serafeim, 2020; Narula, 2025). Cross-country studies frequently report variation in both the strength and direction of ESG–financial performance relationships, underscoring the importance of institutional moderators that are not always explicitly modelled (Desai & Kumar, 2024).

Methodological challenges also loom large, particularly issues of causality and endogeneity. A persistent concern is reverse causality: financially successful firms may simply have more resources to invest in ESG initiatives and advanced HR systems, rather than ESG-HR practices causing superior financial performance. Omitted variable bias presents another risk, as unobserved factors such as managerial quality or organizational culture may drive both ESG engagement and financial outcomes. While some studies attempt to address these issues using panel data, matched samples, or instrumental variable approaches, many rely on cross-sectional designs that limit causal inference (Eccles et al., 2014; Wang & Li, 2022). Consequently, reported positive associations should be interpreted with caution, particularly in the absence of longitudinal evidence.

Empirical heterogeneity is further amplified by differences in performance metrics. Financial outcomes are measured using a wide array of indicators, including accounting-based measures (e.g., ROA, ROE), market-based measures (e.g., Tobin's Q, stock returns), and risk-related metrics (e.g., volatility, cost of capital). Each captures different dimensions of performance and may respond differently to ESG-HR investments over time. For instance, HR-related ESG practices may have limited short-term impact on accounting profits but stronger long-term effects on firm valuation or risk-adjusted returns (Edmans, 2011; Friede et al., 2015). Studies that do not align their performance measures with the expected timing and mechanism of ESG-HR effects risk underestimating their true value.

Finally, temporal dynamics represent an often-overlooked source of heterogeneity. ESG-oriented HR practices typically generate benefits gradually, as skills accumulate, cultures evolve, and reputational capital is built. Short observation windows may therefore fail to capture their full financial impact. Longitudinal studies suggest that sustainability-oriented firms outperform peers primarily over extended time horizons, reinforcing the need for temporal alignment between HR investments and outcome measurement (Eccles et al., 2014; Wagner, 2019). Yet many empirical studies rely on relatively short panels, limiting their ability to detect long-term effects.

The measurement challenges and empirical heterogeneity do not undermine the relevance of ESG-oriented HR research but rather highlight the complexity of the phenomenon under study. Variations in ESG and HR measurement, industry materiality, institutional context, research design, performance metrics, and time horizons all shape observed results. Addressing these challenges through more precise HR-specific ESG measures, industry-sensitive designs, and longitudinal methodologies is essential for advancing more consistent and credible evidence on how ESG-HR practices contribute to sustainable financial value creation

Gaps and Promising Avenues for Future Research

Although the literature on ESG-oriented HR practices has expanded rapidly, the review reveals several important gaps that limit theoretical integration, empirical precision, and practical relevance. At the same time, these gaps point to promising avenues for future research that can deepen understanding of how HR systems contribute to sustainable value creation. Addressing these issues is essential for moving the field beyond broad correlations toward more actionable and context-sensitive insights.

One of the most evident gaps concerns the limited availability of micro-level evidence linking specific HR practices to ESG outcomes and financial performance. Much of the existing research relies on firm-level ESG scores or aggregated HR indices, which obscure the underlying people management processes driving observed effects (Nwogugu & Alobo, 2023; Piwowar-Sulej, 2021). While these studies are valuable for identifying broad patterns, they offer limited guidance on which HR practices matter most and why. Future research would benefit from disaggregated analyses focusing on specific HR domains—such as training, performance management, rewards, or employee voice—and examining how these practices influence intermediate outcomes like engagement, skill development, or pro-environmental behaviour before affecting financial results (Jackson et al., 2014; Zhou et al., 2023).

A related gap lies in the lack of longitudinal and process-oriented studies. ESG-oriented HR practices are inherently long-term investments whose effects unfold gradually, yet many empirical studies rely on short panels or cross-sectional designs. This limits the ability to capture dynamic adjustment processes, learning effects, and delayed financial payoffs (Eccles et al., 2014; Wagner, 2019). Future research should prioritize longitudinal designs that trace how HR practices evolve over time and how changes in HR systems translate into ESG improvements, innovation outcomes, and financial performance. Such designs would also allow scholars to better address causality and reduce concerns about reverse causation.

Another important avenue concerns industry-specific and materiality-driven analyses. As emphasized by Khan et al. (2016), the financial relevance of ESG investments depends on whether the issues addressed are material to a firm's industry. However, relatively few HR-focused studies operationalize materiality in a systematic way. Future research could develop industry-specific frameworks that identify which HR-related ESG issues e.g. health and safety, diversity, or human capital development, are most salient in different sectors. Sectoral studies of this kind would not only improve empirical precision but also generate more practical guidance for managers seeking to align HR investments with value-relevant ESG priorities (Grewal et al., 2020).

The review also highlights a need for greater attention to measurement development and harmonization, particularly for HR-related ESG constructs. Current ESG ratings often treat human capital variables superficially, while HR studies use diverse and sometimes inconsistent measures. Developing validated, HR-specific ESG indices, grounded in theory and aligned with ESG reporting frameworks—represents a critical research opportunity (Searcy, 2012; Gond & Igalens, 2020). Such measures would enhance comparability across studies and help bridge the gap between HRM research and the sustainable finance literature.

Cross-country and institutional comparisons represent another underexplored area. Existing evidence suggests that labour market regulations, cultural norms, and governance regimes shape how ESG-oriented HR practices are implemented and valued by stakeholders (Serafeim, 2020; Narula, 2025). However, many studies remain confined to single-country contexts, often in developed economies. Future research could adopt comparative designs to examine how institutional environments moderate the relationship between ESG-HR practices and financial outcomes. This line of inquiry would be particularly valuable for understanding ESG dynamics in emerging markets, where HR practices may play a stronger legitimacy and signalling role.

There is also scope for deeper engagement with mediators and moderators in ESG-HR research. While recent studies increasingly acknowledge indirect pathways e.g. ESG-HR practices influencing financial outcomes through engagement, innovation, or reputation, which are often modelled in a limited or fragmented way (Makumbe et al., 2024). Future research could build more comprehensive models that integrate multiple mediators and test interaction effects involving leadership, organizational culture, or governance structures. Drawing on established mediation and moderation frameworks would enhance theoretical rigor and clarify boundary conditions (Baron & Kenny, 1986).

Finally, the review points to opportunities for interdisciplinary integration. ESG-oriented HR research currently sits at the intersection of HRM, sustainability, and finance, yet dialogue across these fields remains uneven. Greater integration with accounting and finance research could improve understanding of how HR-related ESG investments are priced by markets, while engagement with organizational psychology could enrich insights into employee-level mechanisms (Edmans, 2011; Wright & Nyberg, 2017). Such interdisciplinary approaches are well suited to capturing the complex, multi-level nature of ESG-HR phenomena.

Future research on ESG-oriented HR practices stands to benefit from more granular, longitudinal, industry-sensitive, and interdisciplinary approaches. By addressing these gaps, scholars can move toward a more nuanced and actionable understanding of how HR systems support ESG objectives and contribute to sustainable financial value creation, thereby strengthening both theoretical development and managerial relevance

Summarizing the Review

This review set out to synthesize and critically assess the growing body of literature examining ESG-oriented human resource practices and their role in long-term financial value creation. Taken together, the evidence reviewed paints a nuanced picture: ESG-aligned HR practices do not function as quick fixes or guaranteed drivers of short-term profitability, but when thoughtfully designed and embedded within organizational systems, they can make meaningful contributions to sustainable value creation over time.

Across conceptual and empirical studies, a consistent theme is the recognition of HRM as a central operational bridge between high-level ESG commitments and real organizational outcomes. While ESG strategies are often articulated at the board or executive level, it is HR systems—recruitment, training, performance management, rewards, and employee relations, which translate these commitments into employee behaviour and organizational capabilities (Jackson et al., 2014; Wright & Nyberg, 2017). The review highlights that firms with credible ESG orientations tend to adopt integrated bundles of HR practices rather than isolated initiatives, reinforcing the idea that system-level alignment matters more than symbolic actions (Eccles et al., 2014).

Empirically, the review confirms that the relationship between ESG-oriented HR practices and financial outcomes is generally positive or, at minimum, non-negative. Large-scale syntheses and meta-analyses provide strong support for the broader ESG–financial performance link, while HR-specific studies help explain why this relationship holds over the long term (Friede et al., 2015; Bai et al., 2024). Evidence from strategic HRM research demonstrates that investments in people, many of which align closely with the social and governance dimensions of ESG, improve productivity, retention, and organizational performance (Huselid, 1995). At the same time, finance-oriented studies show that markets tend to reward firms that invest in employee well-being and human capital, albeit with a lag, suggesting that HR-related ESG investments are often undervalued in the short run but recognized over longer horizons (Edmans, 2011).

A key insight emerging from the review is that context matters. The financial value of ESG-oriented HR practices depends critically on issue materiality, industry characteristics, and institutional environments. Studies grounded in materiality theory demonstrate that ESG investments, including HR-related ones, are most value-enhancing when they address issues that are financially salient for a firm's industry (Khan et al., 2016). This helps explain the heterogeneity observed across empirical findings and cautions against one-size-fits-all prescriptions. What constitutes value-creating HR investment in a manufacturing firm may differ substantially from that in a knowledge-intensive or service-based organization.

The review also underscores the importance of indirect and multi-step mechanisms. ESG-oriented HR practices typically influence financial outcomes through intermediate processes such as human capital enhancement, employee engagement, innovation, reputational gains, and risk reduction. Rather than producing immediate accounting returns, these practices build intangible assets and organizational resilience that support long-term performance (Renwick et al., 2013; Wagner, 2019). This insight challenges narrow interpretations of the business case for ESG and reinforces the need for long-term perspectives in both research and managerial decision-making.

At the same time, the review identifies persistent challenges that temper overly optimistic conclusions. Measurement inconsistencies in ESG ratings, limited HR-specific indicators, and methodological issues related to causality and endogeneity continue to constrain empirical clarity (Abate & D'Acunto, 2021; Wang & Li, 2022). These limitations do not negate the relevance of ESG-oriented HR practices but highlight the complexity of capturing their value using conventional metrics and short observation windows.

The converging evidence suggests that ESG-aligned HR practices can support sustainable financial value creation when they are materially relevant, strategically integrated, and implemented with genuine commitment rather than symbolic intent. HRM emerges not as a peripheral support function, but as a core driver of organizational sustainability and long-term performance. By synthesizing theory, empirical findings, mechanisms, and unresolved debates, this review provides a consolidated foundation for future research and offers a more grounded understanding of how people management can contribute to ESG outcomes and enduring firm value.

CONTRIBUTIONS OF THE REVIEW

This review makes several important contributions to the literature at the intersection of human resource management, sustainability, and finance. First, it offers conceptual clarity by systematically distinguishing between sustainable HRM, green HRM, and ESG-oriented HR practices. While these concepts are often used interchangeably in prior research, this review demonstrates that they differ meaningfully in scope, analytical focus, and outcome orientation. By clarifying these distinctions, the study provides a more precise vocabulary for future theorizing and empirical testing.

Second, the review advances theoretical integration by synthesizing insights from multiple frameworks, including the resource-based view, AMO theory, stakeholder theory, signalling theory, and dynamic capabilities. Rather than privileging a single dominant lens, the review shows how these theories offer complementary explanations for when and how ESG-aligned HR practices translate into financial value. This pluralistic approach responds directly to calls for more integrative theorizing in ESG and sustainable HRM research.

Third, the review contributes to the empirical ESG–finance literature by foregrounding HR practices as a central but often implicit driver of observed ESG–financial performance relationships. While much prior work relies on aggregate ESG scores, this review demonstrates that many value-enhancing effects attributed to ESG are, in practice, rooted in people management systems that shape skills, motivation, engagement, and organizational culture. In doing so, it bridges micro-level HR research with macro-level finance and accounting studies.

Fourth, the review provides a mechanism-based explanation of ESG value creation. By synthesizing evidence on mediating pathways—such as innovation, engagement, reputation, and risk reduction—the study moves beyond simplistic claims that ESG pays and instead explains how and under what conditions ESG-oriented HR practices support long-term performance.

Finally, the review offers a forward-looking research agenda, identifying critical gaps related to measurement, causality, industry materiality, and cross-country variation. These insights provide a roadmap for future research aimed at developing more robust, actionable, and policy-relevant knowledge on ESG-oriented HR practices.

CONCLUSION

This review set out to examine how ESG-oriented human resource practices contribute to long-term financial value creation, bringing together insights from HRM, sustainability, and finance literatures. The evidence synthesized in this study suggests that HRM plays a far more central role in ESG performance than is often acknowledged. ESG commitments may be articulated at the strategic level, but it is HR systems that translate these commitments into employee behaviour, organizational capabilities, and ultimately economic outcomes.

The review demonstrates that ESG-aligned HR practices are unlikely to deliver immediate financial returns. Instead, their value lies in building durable intangible assets e.g. human capital, trust, innovative capacity, and organizational resilience, which support performance over extended time horizons. These findings reinforce the importance of moving beyond short-term financial metrics when evaluating the returns on ESG and HR investments.

At the same time, the review highlights that ESG-HR practices are not universally value-enhancing. Their financial impact is highly contingent on issue materiality, industry context, and the degree of integration

with broader organizational systems. Symbolic or fragmented HR initiatives are unlikely to generate sustained value, whereas coherent and strategically aligned HR systems are more likely to do so.
By synthesizing conceptual foundations, empirical evidence, mechanisms, and unresolved challenges, this review positions HRM as a core driver of sustainable value creation rather than a peripheral support function. For scholars, it underscores the need for more granular and longitudinal research that captures the complex pathways linking people management to ESG and financial outcomes. For practitioners, it highlights the strategic importance of investing in ESG-oriented HR systems as part of a long-term value creation agenda.

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