

Sustainability Metrics for Human Resource Practices within the Nigerian University System: A Comprehensive Review of Literature

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Abstract

The Nigerian university system faces mounting pressures to contribute to sustainability not only in environmental terms, but also in social equity, governance, and institutional health. Human Resource Management (HRM) in universities has the potential to foster sustainability if sustainability metrics are properly embedded in HR practices. This literature review examines how sustainability metrics for HR practices are conceptualized, measured, and implemented globally and within Nigeria; it identifies prevailing frameworks and recent empirical findings; and it maps key gaps and opportunities in Nigerian universities. Findings indicate that while green HRM, employee well-being, diversity and inclusion, and governance ethics are emerging as important metric domains, measurement in Nigerian higher education remains fragmented, with few standard metrics, little use of predictive or analytics-based measurement, and weak alignment with strategic sustainability goals. The paper concludes by proposing a conceptual metric framework suited to the Nigerian university context and recommends agenda items for future research and policy.

Keywords: Sustainable HRM, HR Metrics, Nigerian Universities, ESG, Green HRM, Well-Being, Governance

1. Introduction

Sustainability has moved from a peripheral concern to a central pillar in institutional strategy globally. The triple bottom line—economic viability, social equity, and environmental protection—is now expected to guide organizational policies (5, 6). In higher education, universities are both knowledge producers and societal actors; they are uniquely positioned to model sustainable practice internally and externally. In Nigeria, increased public demand for accountability, quality, and alignment with Sustainable Development Goals (SDGs) creates pressure for universities to operationalize sustainability not only through curricula and research, but through internal management practices (9)

Within this context, Human Resource Management (HRM) becomes critical: HR practices influence institutional culture, employee behaviour, retention, and performance, all of which affect how sustainably a university operates. However, what is often missing is how HR practices are measured for sustainability, especially in Nigerian universities. Traditional HR metrics—employee turnover, time to recruit, and absenteeism; are inadequate to capture ESG dimensions or long-term institutional sustainability.

Recent studies globally show growth in sustainable HRM metrics, particularly in green HRM, governance ethics, and well-being (4, 10). But in Nigeria, empirical work is relatively scarce. Some studies have looked at green HRM in industry (1), while others examine strategic HRM's role in performance in public universities (7). There is limited evidence specifically about robust sustainability metrics for HR in Nigerian private or public universities—what indicators are used, how measured, whether they are linked to strategy, etc.

Thus, this review aims to:

- i. clarify conceptual foundations of sustainability metrics in HR practices, particularly in higher education,

- ii. examine recent empirical literature globally and in Nigeria on HR sustainability metrics,
- iii. identify key domains/dimensions of such metrics applicable to Nigerian universities, and
- iv. map existing gaps and propose a conceptual framework for sustainability metrics in HR practices suited to the Nigerian university system.
- v.

2.0 Literature Review

2.1 Conceptual Foundations of Sustainability Metrics in HR

The conceptual foundations of sustainability metrics in Human Resource Management (HRM) lie in the evolving recognition that HR practices are not merely administrative or efficiency-driven but are also instrumental in advancing ecological, social, and governance (ESG) goals. Sustainable Human Resource Management (SHRM) has been defined as the integration of ecological responsibility, social equity, and governance accountability into the design and implementation of HR policies and practices (5, 8). In this context, HR metrics function as both quantitative and qualitative indicators designed to capture the outcomes of HR practices. Unlike traditional measures that focus narrowly on recruitment costs, absenteeism, or turnover rates, sustainability metrics extend the evaluative scope to include employee well-being, diversity and inclusion, ethical governance, and environmental stewardship. These indicators provide organizations with a more comprehensive framework for understanding how HR practices contribute not only to organizational efficiency but also to broader ESG objectives.

The theoretical underpinnings of sustainability metrics in HR are rooted in several influential frameworks. The Triple Bottom Line (TBL) framework, introduced by (6), has been widely applied in sustainability discourse, emphasizing that organizational performance must be assessed across environmental, social, and economic dimensions. Within HRM, TBL informs the design of metrics that simultaneously evaluate ecological practices (such as green recruitment or energy-efficient workplace designs), social contributions (including employee well-being and inclusivity), and governance mechanisms (such as transparent promotion systems and compliance with labor standards).

Complementing the TBL is Stakeholder Theory, which asserts that organizations have accountability not only to shareholders but also to a broad range of stakeholders, including employees, students, governments, and local communities. From this perspective, HR metrics must reflect stakeholder expectations by incorporating indicators that measure fairness, inclusivity, ethical conduct, and contributions to community well-being (3). In the university context, this entails measuring HR practices in ways that capture the institution's impact on staff morale, student development, and community engagement.

The Resource-Based View (RBV) provides another important theoretical lens, emphasizing that employees represent valuable, rare, and inimitable resources that can provide sustained competitive advantage. HR practices, when aligned with sustainability goals, become mechanisms for preserving and developing human capital. Metrics such as retention rates, employee satisfaction, and well-being indices thus serve as indicators of how effectively institutions are protecting and enhancing their strategic human resources (4). This perspective underscores the importance of sustainability metrics as tools for ensuring the longevity and resilience of organizational human capital.

Finally, frameworks such as the Theory of Change and the Balanced Scorecard have been increasingly utilized to establish clear linkages between HR practices and sustainability outcomes. The Theory of Change provides a roadmap for how specific HR interventions—such as employee training in green practices or the implementation of flexible work arrangements—can lead to measurable sustainability outcomes, including improved well-being, reduced ecological footprints, and strengthened governance (10). Similarly, the Balanced Scorecard extends traditional performance measurement systems by incorporating

non-financial indicators, making it possible to evaluate HR's contribution to sustainability more comprehensively.

Together, these conceptual foundations provide a multi-dimensional basis for understanding and operationalizing sustainability metrics in HR. They demonstrate that sustainability in HR is not limited to environmental considerations but is instead a holistic framework that integrates ecological stewardship, social responsibility, and governance accountability into the heart of organizational practices.

2.2 Domains and Recent Metrics of HR Sustainability

Table 1 summarizes key domains and example indicators of HR sustainability metrics globally and in Nigeria.

Metric Domains	Example Metrics/Indicators	Recent Evidence	Context Applicability	Reference
Green / Environmental HR Metrics	Green recruitment, environmental training, eco-behaviors, green rewards	Ability-motivation-opportunity levers for environmental sustainability	Manufacturing, applicable to universities	Bindaeba et al., 2025; Adubor et al., 2022
Social / Employee Well-being Metrics	Job satisfaction, mental health, work-life balance, equity	Employee engagement and retention critical to performance	Universities and other sectors	Zulkarnaini et al., 2025
Governance / Ethical Metrics	Transparent promotion, ethical recruitment, compliance	Governance mediates ESG outcomes	Universities and organizations	Banga & Gobind, 2025
Analytics / Predictive Metrics	HR analytics, dashboards, turnover prediction	AI transforms HR practices for ESG integration	Universities adopting HRIS	Zulkarnaini et al., 2025
Contextual / Cultural Metrics	Alignment with culture, regulatory compliance, local adaptation	SHRM practices shaped by local context	Nigerian universities	Ucha et al., 2024

Source: Researchers Compilation (2025)

2.3 Empirical Evidence from Nigeria

Empirical research in Nigeria reveals that HR sustainability metrics have begun to gain traction, though often unevenly and across sectors. One of the more substantive contributions comes from (1), who examined Green Human Resource Management (GHRM) in manufacturing organizations across Lagos State. Their study demonstrated that green recruitment, environmental training, and sustainability-aligned compensation practices were significantly associated with corporate sustainability outcomes. Though their context is industrial rather than academic, the findings point to metric domains—such as green hiring, eco-training, and incentive alignment—that have clear relevance to service or knowledge institutions (1).

Building on this, studies in the Nigerian financial and insurance sectors further validate the value of green HRM in sustainability measurement. For instance, (2) conducted a survey of Nigerian insurance firms and found that green HRM positively and significantly influenced corporate sustainability, accounting for about one-third of variance in reported sustainability outcomes ($\beta = 0.656, p < 0.05$). Such findings strengthen the argument that HR metrics tied to environmental practices possess predictive power even in non-academic sectors of Nigeria.

Turning to higher education, evidence is more limited but promising. (7) studied public universities in Nigeria and discovered that strategic HRM practices relate strongly to institutional performance indicators such as research output, international collaboration, and academic awards. While not all of these indicators are framed explicitly as sustainability metrics, many overlap with metrics of institutional legitimacy and staff retention, bridging performance and ESG concerns (7).

Complementing this, (9) conducted a comparative analysis between Nigeria and the United States to assess SHRM adoption. They observed that although sustainability metrics are more advanced in Western organizations, HR measurement in Nigeria tends to remain descriptive rather than predictive or strategic. They attributed this to factors such as economic constraints, weak enforcement of sustainability norms, and lower levels of organizational awareness in Nigeria (9).

Additional insights emerge from related turnover and retention studies within Nigerian academia. For example, a qualitative inquiry into retention strategies among academic staff in Lagos State tertiary institutions found that managerial leadership, creation of enabling work climates, and differentiated retention incentives across faculty ranks significantly influence turnover. While the study did not explicitly test sustainability metrics, it underscores how institutional values and culture influence which HR practices survive or fail (11).

Moreover, research on broader employee turnover contexts in Nigeria reinforces the relevance of HR metrics beyond green practice alone. (1) explored determinants of turnover intention among employees in Nigerian SMEs and identified factors such as job dissatisfaction, pay inequity, and weak organizational commitment as significant predictors of turnover (1). These findings suggest that social and governance dimensions are integral to any robust sustainability metric framework.

In sum, the Nigerian empirical landscape presents a mixed but evolving picture. While green HRM and sustainability-linked HR practices show promising associations with organizational outcomes in manufacturing, insurance, and banking sectors, the higher education terrain remains under-researched in terms of sustainability metrics. The few studies in academic settings lean more toward performance and retention than formally defined ESG metrics. Collectively, the evidence signals both the relevance and the gaps of sustainability metrics for HR practices in Nigeria—pointing to the need for more university-based, context-sensitive, and predictive metric studies to validate and tailor global frameworks to the realities of Nigerian institutions.

2.4 Challenges and Gaps in Literatures

Despite the growing recognition of sustainability metrics in HR practices, several challenges continue to undermine their development and application. One of the most persistent obstacles is the lack of standardization across frameworks, which makes it difficult for organizations, particularly universities, to engage in meaningful cross-institutional benchmarking. Without commonly accepted indicators, sustainability reporting becomes fragmented, reducing the comparability and reliability of findings (8).

Another limitation lies in the over-reliance on quantitative indicators. While numerical measures such as turnover rates and cost-per-hire remain valuable, they fail to capture important qualitative aspects of sustainability, including trust, fairness, and organizational culture. This bias toward numbers risks oversimplifying complex realities and neglecting the social and cultural dimensions that shape HR practices.

The contextual limitations of existing frameworks further complicate the situation. Many sustainability metrics are developed in Western contexts and may not align seamlessly with African cultural and institutional realities. In Nigerian universities, for example, the influence of socio-cultural dynamics and governance structures creates challenges that are often overlooked by globalized frameworks (9). Moreover, limited financial and technological resources hinder the adoption of sophisticated HR analytics or sustainability audits in many

institutions. These constraints emphasize the importance of developing context-sensitive frameworks that reflect local realities while aligning with international ESG benchmarks.

Table 2: Proposed Framework for HR Sustainability Metrics in Nigerian Universities

The proposed framework encompasses five elements: metric domains, indicator design, strategic alignment, data systems and analytics, and context sensitivity. It integrates environmental, social, governance, predictive, and culturally aligned metrics into university HR practices.

Framework Element	Description	Illustrative Examples	Measurement Level	Strategic Alignment
Metric Domains	Key HR sustainability areas	Green HR, Well-Being, Governance, Analytics, Contextual	Input/Process/Outcome	Aligned with SDGs & NUC guidelines
Indicator Design	Multi-level indicators for presence, process, outcomes	Existence of green policy, staff trained, satisfaction scores	Input, Process, Outcome	Integration into strategic plan
Strategic Alignment	Align HR metrics with sustainability goals	Compliance with NUC, SDGs, strategic HR initiatives	Outcome-focused	Institutional strategy integration
Data Systems & Analytics	Tools for collection and analysis	HRIS, dashboards, predictive modelling	Input/Process/Outcome	Supports evidence-based decisions
Context Sensitivity	Adaptation to local realities	Limited funding, regulatory pressures, institutional culture	All levels	Reflects Nigerian university context

Source: Authors's Idea (2025)

3. Conclusion and future implications

This review underscores the paradigm shift in HR metrics from efficiency-focused indicators to sustainability-oriented frameworks that incorporate environmental, social, and governance considerations. Evidence from global scholarship demonstrates that the integration of sustainability metrics enhances institutional legitimacy, strengthens employee well-being, and contributes to long-term competitiveness. For universities, particularly in Nigeria, the strategic adoption of such metrics holds the potential to transform HRM from a largely administrative function into a critical driver of sustainable development.

However, the Nigerian university system still faces significant limitations. Existing research reveals a lack of standardized measurement tools, limited empirical validation, and resource-related constraints that prevent the full adoption of sustainability-oriented HR practices. While international frameworks offer valuable guidance, they often lack sensitivity to the socio-cultural and economic realities of Nigerian institutions.

Future scholarship must therefore prioritize the development of context-specific sustainability metrics that combine global best practices with local applicability. Such frameworks would enable Nigerian universities to measure their performance more holistically, demonstrate accountability to stakeholders, and align with global ESG agendas. For HR practitioners, the

integration of sustainability metrics is no longer a matter of compliance but a strategic necessity for institutional resilience and long-term success in an increasingly competitive higher education landscape.

4.0 Suggestions for Further Studies

Future research should empirically validate the proposed HR sustainability metrics framework within Nigerian universities through large-scale surveys and case studies. Comparative studies between public and private universities could provide deeper insights into contextual differences in adoption and effectiveness. Additionally, longitudinal research is needed to examine how the integration of sustainability metrics influences employee performance, institutional legitimacy, and alignment with the Sustainable Development Goals over time. Finally, exploring the role of advanced HR analytics and artificial intelligence in tracking sustainability outcomes would offer new directions for practice and policy.

Conflict of Interest

Authors disclose that there are no financial or non-financial conflicts of interest.

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