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Measurement and Management of University Social Responsibility: Methodological Advances and Challenges for Institutional Sustainability

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ABSTRACT

In recent decades, university social responsibility (USR) has become a strategic dimension of higher education, closely linked to institutional sustainability and to universities' commitment to addressing social, territorial, and environmental challenges framed by the 2030 Agenda. Despite its growing relevance, the measurement and management of USR remain characterized by significant conceptual and methodological heterogeneity, which constrains cross-institutional comparability and limits the effective use of evaluation results in decision-making processes. The aim of this article is to critically analyze recent methodological advances in the measurement of USR and to examine the challenges these approaches pose for sustainable university management. To this end, a documentary study with an analytical–critical and descriptive approach was conducted, based on a theoretical–methodological review of indexed scientific literature published between 2017 and 2025. The analysis identifies three dominant methodological trends: quantitative approaches focused on indicators and perceptual instruments; qualitative and participatory approaches oriented toward stakeholder engagement; and hybrid models that integrate measurement, explanation, and impact assessment through innovative tools such as evaluative matrices and explanatory modeling techniques. The findings show significant progress in capturing perceptions, processes, and social impacts associated with USR, while also revealing persistent limitations related to standardization, validity, and the weak linkage between evaluation and institutional management. It is concluded that strengthening USR requires comprehensive and participatory measurement systems oriented toward decision-making, capable of effectively connecting evaluation processes with university governance and long-term institutional sustainability.

Keywords: university social responsibility, institutional sustainability, social impact assessment, measurement models, university governance, 2030 Agenda, strategic university management.

INTRODUCTION

Over recent decades, universities have progressively expanded their social role beyond teaching and research, positioning themselves as institutions with a direct responsibility to address social, economic, and environmental challenges in their surrounding contexts (Martínez-Usarralde et al., 2017; Chen & Vanclay, 2021). Within this framework, University Social Responsibility (USR) has emerged as an integrative approach that combines ethical impact management, civic education, and engagement with social actors, reinforcing the role of higher education

institutions as strategic agents of sustainability and social transformation (Hernández et al., 2024; Ahmad et al., 2024).

USR is closely linked to institutional sustainability and the 2030 Agenda, as it encourages universities to align their policies, governance structures, and core functions with the Sustainable Development Goals (SDGs), incorporating social, environmental, and economic dimensions into decision-making processes (Guzmán et al., 2024; Atencio-González et al., 2025). Empirical evidence shows that when USR is embedded in teaching, research, and outreach activities, it contributes to the development of students' ethical commitment and social awareness, particularly when theoretical learning is combined with practice-oriented and community-based experiences (Atencio-González et al., 2025; Guzmán et al., 2024). Moreover, applied studies indicate that USR initiatives can generate observable territorial and community-level effects, such as strengthening local capacities, social networks, and economic sustainability through multidimensional interventions that integrate technical training, social support, and access to resources (Otiniano León et al., 2025).

Despite this growing recognition, a critical problem persists in the field: the fragmentation and methodological heterogeneity of approaches used to measure and evaluate USR. The literature reveals a proliferation of indicators, models, and instruments that complicate cross-institutional comparison, hinder standardization, and limit the production of robust evidence on the social impacts of USR initiatives (Hernández et al., 2024; Fuentes et al., 2025). In many cases, evaluation practices focus on isolated activities or descriptive metrics, failing to capture the formative, organizational, and territorial effects that USR seeks to produce. This limitation is particularly relevant in university–community relations, where impacts can be both positive and negative and require explicit practices of social impact management, transparency, and stakeholder participation to sustain institutional legitimacy and social license (Chen & Vanclay, 2021).

In response, recent studies emphasize the value of integrative evaluation approaches that incorporate stakeholder perceptions as a key analytical dimension. Perception-based models allow for a more nuanced understanding of how university strategies are valued by students and external actors, providing actionable insights for prioritizing areas of institutional intervention (Martínez-Usarralde et al., 2017; Fuentes et al., 2025). However, these approaches also face important limitations, including perceptual bias, reliance on ordinal scales, and sampling constraints, which require methodological triangulation and careful interpretation to enhance validity (Fuentes et al., 2025). Complementary research focused on student populations further suggests that perceptions of USR are associated with environmental sustainability practices and can be strengthened through USR-oriented curricular and extracurricular activities, underscoring the need to connect evaluation outcomes with pedagogical and institutional decision-making (Li et al., 2024).

Taken together, these findings reveal a clear knowledge gap: while multiple tools and frameworks exist to assess USR, there is limited integration between measurement practices and institutional governance, and insufficient consensus on methodological criteria capable of linking evaluation results to strategic management and long-term sustainability. When assessment systems are not translated into organizational learning and decision-making, USR risks remaining a peripheral or reputational component rather than a driver of verifiable institutional and territorial transformation (Hernández et al., 2024; Chen & Vanclay, 2021). By contrast, evidence from applied and explanatory studies demonstrates that USR programs achieve more sustainable outcomes when they are designed as multidimensional interventions and supported by evaluation models capable of capturing causal pathways, mediating variables, and indirect effects, such as economic empowerment and entrepreneurial culture (Otiniano León et al., 2025; Awad, 2025).

Against this background, the objective of this article is to analyze recent methodological advances in the measurement of USR and to critically examine their implications for sustainable university management. Drawing on recent academic production, the article contributes to the field by proposing a structured typology of methodological approaches and a set of analytical criteria to support the design of more coherent, participatory, and decision-oriented USR measurement systems, capable of linking evaluation processes to governance, learning outcomes, and territorial sustainable development.

THEORETICAL FOUNDATIONS

University Social Responsibility and Institutional Sustainability

University Social Responsibility (USR) has historically emerged as a critical reinterpretation of Corporate Social Responsibility (CSR) within the field of higher education. While CSR is rooted in corporate logics and often operates through voluntary or reputational mechanisms, USR is grounded in the public nature of the university as an institution dedicated to education, knowledge production, and social transformation. In this shift, USR transcends institutional goodwill and becomes a framework of integrated responsibilities embedded in teaching, research, management, and engagement with the surrounding environment. It is in this sense that USR is frequently

conceptualized as a "third mission," insofar as it repositions universities from the mere transmission of knowledge toward sustained and ethically grounded intervention in social and territorial challenges (Martínez-Usarralde et al., 2017; Chen & Vanclay, 2021).

This conceptual evolution has been accompanied by increasing efforts to clarify the meaning of USR and its relationship with sustainability. Kouatli (2019) emphasizes that USR remains a concept under construction and calls for contemporary definitions that explicitly integrate sustainability and value creation within quantifiable and manageable frameworks. This contribution is particularly relevant because it highlights the need to move beyond normative discourse toward operational mechanisms that allow responsibility to be translated into measurable institutional performance, thereby linking USR with institutional sustainability in comparable and decision-oriented terms (Kouatli, 2019). In parallel, recent scholarship increasingly understands USR not as a set of isolated activities but as a continuous improvement policy oriented toward holistic and sustainable community development (Hernández et al., 2024).

At this point, it is useful to introduce an integrative synthesis: USR, institutional sustainability, and governance are mutually reinforcing dimensions. USR provides the ethical and social orientation of the university, sustainability frames the long-term viability and legitimacy of institutional action, and governance operates as the mechanism through which responsibilities, priorities, and impacts are coordinated and made accountable. When USR is embedded in governance structures, it ceases to function as a peripheral axis and becomes a structural principle guiding decision-making processes. This implies that sustainability cannot be achieved through isolated outreach programs or philanthropic initiatives alone, but requires institutional coherence across policies, budget allocation, performance evaluation, academic training, contextualized research, and accountability mechanisms.

From a governance perspective, participatory diagnoses conducted with students illustrate this tension clearly. While ethical and civic values are often recognized within university training, there is a consistent demand for greater coordination and transversal implementation of value-oriented policies across institutional structures (Martínez-Usarralde et al., 2017). Consequently, consolidating institutional sustainability requires that USR operate as an organizing principle of university management, aligning discourse, practices, and outcomes within a coherent governance framework (Hernández et al., 2024).

Leadership emerges as a key enabling factor in this articulation. Sustainability is not achieved through the accumulation of initiatives but through strategic direction, ethical stewardship, and the capacity to integrate internal and external actors. Ahmad and Awang (2025) argue that universities have increasingly assumed a transformative social role in which USR functions as an extension of CSR adapted to higher education, with particular emphasis on community-engaged research, environmentally responsible campus practices, and academic programs aligned with the Sustainable Development Goals. In this context, leadership characterized by ethical custodianship fosters collaborative networks, optimizes institutional resources, and provides the organizational support necessary to sustain USR policies over time (Ahmad & Awang, 2025). Without such leadership and governance architecture, USR initiatives tend to fragment or depend on individual commitment rather than institutional strategy.

The relationship between USR and institutional sustainability ultimately rests on the university's capacity to responsibly manage its impacts and, in doing so, maintain social legitimacy, relevance, and long-term public acceptance. Chen and Vanclay (2021) provide a critical contribution by demonstrating that university sustainability cannot be reduced to environmental campus indicators or performance reports, as universities generate complex social impacts within host communities. Their analysis shows that local residents often grant universities a form of social license based on reputation, yet many institutions fail to adequately manage social impacts or systematically integrate environmental, social, and governance dimensions into decision-making. To address this gap, the authors propose practices such as comprehensive information disclosure, effective community participation, harm reduction procedures, benefit-sharing mechanisms, monitoring and adaptive management, and grievance-handling systems (Chen & Vanclay, 2021). This perspective shifts USR from a focus on contribution toward a responsibility for both positive and negative effects produced by university presence in specific territories.

Empirical studies further reinforce the importance of defining impacts in evaluable terms. Otiniano León et al. (2025) show that USR programs aimed at strengthening sustainable rural women's entrepreneurship generate meaningful outcomes when technical, social, and economic dimensions are integrated within clearly defined intervention pathways. Their findings highlight the mediating role of economic empowerment and the relevance of variables such as social networks, psychological self-efficacy, community participation, and information and communication technologies. Importantly, post-intervention changes reveal a shift from concerns over technological access toward greater emphasis on content quality and psychosocial development. These results demonstrate that USR can catalyze sustainable transformations when it is designed multidimensionally and evaluated through indicators capable of capturing both direct outcomes and mediating processes (Otiniano León et al., 2025).

Complementarily, Awad (2025) provides evidence that USR can influence local economic sustainability through organizational mechanisms such as the development of entrepreneurial culture. In this study,

entrepreneurial culture mediates the relationship between university social responsibility and business sustainability, suggesting that USR produces effects not only through direct action but also through indirect pathways that reshape practices, capabilities, and orientations within the university and its surrounding community. This reinforces a systemic understanding of institutional sustainability, in which USR contributes to long-term impact by creating enduring cultural and organizational conditions (Awad, 2025).

If USR is to function as a structural component of institutional sustainability, it must also be supported by evaluation systems that enable learning, correction, and strategic decision-making. However, the field continues to face a persistent challenge: the diversity of existing metrics complicates the selection of valid and comparable methodologies. Fuentes et al. (2025) address this issue by proposing a quantitative, perception-based model designed to support sustainability reporting accessible to stakeholders. Using surveys and nonparametric analyses, they identify critical areas for institutional intervention, such as engagement with the surrounding environment, research on contextualized problems, and the frequency of sustainability reporting. At the same time, they explicitly acknowledge methodological limitations, including perceptual bias, lack of a defined sampling frame, and reliance on ordinal scales. From an institutional sustainability perspective, this underscores the need for evaluation tools that are both managerially useful and methodologically robust, ensuring that measurement supports genuine improvement rather than symbolic compliance (Fuentes et al., 2025).

The centrality of stakeholders is further reinforced by studies focusing on student perceptions and learning processes. Severino-González et al. (2025) show that students value university strategies linked to USR and the SDGs, particularly those that promote socially oriented participation, while also identifying variations by sex and age that indicate heterogeneous perceptions within the student body. More specifically, Li et al. (2024) find associations between perceptions of USR and environmental sustainability practices, suggesting that sustainability promotion can be strengthened through USR-oriented courses and activities. This shifts USR from the margins of outreach toward the pedagogical core of the university, emphasizing that institutional sustainability also entails cultivating sustainable capacities, dispositions, and practices among those who pass through higher education (Severino-González et al., 2025; Li et al., 2024).

University Social Responsibility, the 2030 Agenda, and the Sustainable Development Goals

The adoption of the 2030 Agenda for Sustainable Development has repositioned University Social Responsibility (USR) as a strategic governance mechanism in higher education. Universities are no longer conceived solely as spaces for education and scientific production, but as institutions with public agency and responsibility in advancing the Sustainable Development Goals (SDGs). Recent literature reflects a growing convergence between USR and sustainability, emphasizing the need for universities to design and implement policies that coherently integrate teaching, research, and societal engagement in response to global demands for social, environmental, and economic transformation (Ahmad et al., 2024; Hernández et al., 2024). Within this framework, USR shifts from being an additional or complementary activity to functioning as an institutional grammar that guides priorities, legitimizes action, and sustains long-term commitments aligned with the SDGs.

At this point, an intermediate conceptual synthesis is necessary to clarify how USR, sustainability, and governance are articulated. USR provides the ethical and social orientation of university action, sustainability defines the long-term horizon of institutional viability and societal relevance, and governance constitutes the structures and decision-making processes through which responsibilities, resources, and impacts are coordinated and evaluated. When these three dimensions are aligned, the SDGs can be operationalized through institutional strategies embedded in planning, evaluation, and accountability systems. Conversely, when governance mechanisms are weak or fragmented, the alignment between USR and the 2030 Agenda risks remaining symbolic, disconnected from organizational learning and strategic decision-making.

The alignment between USR and the 2030 Agenda is often expressed through the mapping of university actions to SDG targets and the incorporation of the SDGs as a reference framework for academic programs, applied research projects, outreach initiatives, and sustainability reporting systems. However, contemporary debates caution against understanding alignment as a merely administrative translation of activities into indicators. Instead, alignment should be conceived as a process of contextual operationalization in which global normative frameworks are interpreted and adapted to local and regional realities. In this sense, the SDGs operate as a global horizon, but their meaning and feasibility are negotiated within institutional capacities, governance arrangements, and territorial demands (Hernández et al., 2024). USR thus acts as a bridging mechanism that connects global commitments with situated practices, helping to prevent the 2030 Agenda from being reduced to declarative or reputational discourse.

From a formative perspective, the USR–SDG relationship underscores the responsibility of universities to educate professionals capable of sustaining development not only at a cognitive level, but also in instrumental, ethical, and political terms. Evidence from the health sector illustrates this point. Atencio-González et al. (2025), using a qualitative interpretive approach, show that integrating USR into teaching, research, and community

engagement contributes to the development of students committed to sustainable development challenges, particularly when theory and practice are combined within a strong ethical and social framework. This finding converges with research in sustainability education, which suggests that USR can strengthen pro-environmental practices and attitudes among students. For instance, Li et al. (2024) identify associations between students' perceptions of USR and their environmental sustainability practices, indicating that courses or activities guided by USR principles can foster sustainable behaviors within the university community. Together, these studies highlight that the 2030 Agenda positions universities as institutions that form subjects of sustainability, rather than merely organizations that implement projects.

In the domains of research and social intervention, USR contributes to the SDGs when it promotes responses to complex problems through territorial, equity-oriented, and sustainability-focused approaches. The literature provides particularly relevant evidence for SDGs related to gender equality, decent work, reduced inequalities, and local development. Otiniano León et al. (2025) demonstrate that USR programs aimed at strengthening sustainable entrepreneurship among rural women can generate multidimensional transformations. Their structural equation model identifies economic empowerment as a mediating factor and highlights the role of economic resources, social networks, psychological self-efficacy, community participation, and ICT quality. These findings are significant for the USR–Agenda 2030 debate because they suggest that sustainable impact emerges not from isolated actions, but from integrated interventions that combine technical, social, and economic dimensions. Similarly, Awad (2025) shows that USR practices can influence local economic sustainability by fostering an entrepreneurial culture that mediates the relationship between social responsibility and business sustainability. Both studies converge on a key insight: the SDGs are not achieved through discrete programs alone, but through institutional mechanisms that build enduring capacities, cultures, and resources.

An additional and often underestimated dimension of the USR–Agenda 2030 nexus concerns communication and accountability. The incorporation of the SDGs has stimulated the proliferation of reports, metrics, and sustainability disclosure tools aimed at making university contributions visible. However, this trend introduces methodological challenges. The multiplication of indicators and models can fragment evaluation processes and obscure comparability across institutions. Fuentes et al. (2025) warn that the diversity of metrics complicates the selection of valid methodologies for assessing USR and propose a perception-based quantitative model to support accessible sustainability reporting for stakeholders. At the same time, they acknowledge limitations related to perceptual bias and sampling constraints. This debate is crucial because the 2030 Agenda often promotes measurement as a proxy for progress, whereas USR requires a clearer distinction between reporting activities and demonstrating social or environmental impact, as well as between compliance indicators and robust evidence of change.

From an institutional perspective, the articulation between USR and the SDGs also depends on how these strategies are perceived and valued by the university community. Severino-González et al. (2025) show that students at a religious university in Chile value USR strategies oriented toward the SDGs, particularly those that promote social participation, although perceptions vary by sex and age. This finding indicates that the implementation of the 2030 Agenda through USR does not produce homogeneous effects and requires differentiated strategies, context-sensitive pedagogies, and participatory spaces that translate the SDGs into meaningful formative experiences. It also reinforces earlier insights from participatory diagnostics suggesting that USR requires transversal coordination rather than merely discursive presence (Martínez-Usarralde et al., 2017).

Finally, the literature highlights underlying tensions between instrumental and transformative approaches to USR in the context of the 2030 Agenda. On the one hand, there is a proliferation of approaches that prioritize formal compliance, including activity mapping to SDG targets, ranking performance, and the production of predominantly quantitative reports. On the other hand, critical perspectives argue that a genuinely transformative alignment between USR and the 2030 Agenda requires confronting structural inequalities, power relations, and forms of exclusion that shape both society and the university itself. Hernández et al. (2024), in their review of Latin American scientific production, identify recurring links between USR, ethical commitments, student formation, and sustainable development, suggesting a strong normative orientation. However, they also highlight the ongoing challenge of translating this discursive consensus into verifiable transformations in governance, curricula, research agendas, and territorial engagement. In the same vein, Martínez-Usarralde et al. (2017) show that while students recognize advances in ethical education, they also perceive the need for more coordinated and transversal value-based policies. This observation underscores a critical risk: without substantive reconfiguration of institutional arrangements, the 2030 Agenda may remain at a declarative level rather than functioning as a driver of structural change.

University Stakeholders and Accountability

University Social Responsibility (USR) rests on a fundamental organizational premise: universities do not operate in isolation, but within a dense ecology of relationships in which multiple stakeholders, with differentiated

interests, expectations, and capacities for influence, shape institutional legitimacy, social acceptance, and long-term sustainability. Within this framework, it is possible to distinguish between internal stakeholders and external stakeholders, as well as between direct and indirect stakeholders. Internal stakeholders include students, academic staff, administrative personnel, and managerial bodies, whose daily practices and decisions directly affect institutional performance. External stakeholders comprise families, alumni, employers, public authorities, civil society organizations, local communities, host territories of campuses or projects, media, and international partners. Some of these actors are directly affected by university activities, such as communities involved in territorial interventions, while others exert indirect influence through regulation, public opinion, funding, or reputational dynamics. This classification moves USR beyond a narrow understanding of university volunteering and situates it as a form of relational governance, understood as the deliberate management of relationships, impacts, and responsibilities toward actors who evaluate universities not only by their declared values, but by their actions and their capacity to respond to harm or inconsistency (Martínez-Usarralde et al., 2017; Chen & Vanclay, 2021).

From this perspective, stakeholders are not merely target audiences in a communicational sense, but co-producers of university social value. Their perceptions shape trust, cooperation, and reputational capital, while also activating resistance, conflict, or demands for remediation when negative impacts or institutional incoherence are identified. Chen and Vanclay (2021) offer a particularly relevant contribution by analyzing the relationship between university campuses and host communities. They show that, due to the generally positive reputation of universities, local communities tend initially to grant a form of social licence to operate. However, this legitimacy is neither permanent nor unconditional. It depends on the institution's ability to anticipate and manage social impacts, ensure full disclosure of information, foster effective community participation, prevent harm, guarantee benefit sharing, monitor outcomes, adapt actions, and provide grievance and remediation mechanisms. This approach expands the meaning of accountability by emphasizing that transparency alone is insufficient. Universities require social due diligence procedures comparable to those expected in other impact-intensive sectors, especially when operating in territorial contexts (Chen & Vanclay, 2021).

In this context, the literature highlights social perception as a structural component of USR evaluation, given that many university impacts are symbolic, relational, and experiential, and therefore cannot be fully captured through conventional metrics such as the number of projects, beneficiaries, or publications. Perceptions function as indicators of legitimacy, revealing whether internal and external stakeholders consider the institution to act with fairness, reciprocity, relevance, and transparency. Martínez-Usarralde et al. (2017), through a participatory diagnostic focused on students, illustrate this logic clearly. Students acknowledge advances in ethical and civic education, yet simultaneously identify the need for value-based policies that are more coordinated and transversal. Student perceptions thus evaluate not only outcomes, but institutional coherence, namely the extent to which declared values are translated into consistent practices across teaching, management, and university life (Martínez-Usarralde et al., 2017).

Recent studies further emphasize that stakeholder-based diagnostics should not be reduced to satisfaction surveys, but rather designed as evaluative instruments capable of identifying gaps and critical areas for decision-making. Fuentes et al. (2025) address a recurring challenge in the field: the proliferation of RSU metrics and models complicates the selection of valid and comparable methodologies. Their contribution lies in a quantitative perception-based model aimed at supporting sustainability reporting that is accessible to stakeholders, enabling the classification of performance levels and the identification of critical areas such as engagement with the external environment, research on contextual problems, and the frequency of reporting. At the same time, they explicitly acknowledge methodological limitations, including perceptual bias, the absence of a sampling frame, and the use of ordinal scales. These limitations reinforce a key point for institutional management: perceptions are valuable evidence, but not self-sufficient. They must be triangulated with process indicators, outcome measures, and impact evaluations to inform robust governance decisions (Fuentes et al., 2025). In this sense, perception-based evaluation enhances the social intelligibility of USR while increasing its strategic usefulness.

Accountability thus emerges as a dual requirement that combines informational transparency with organizational responsibility toward stakeholders. This implies moving from reporting as institutional communication to reporting as a governance instrument. Accountability entails informing, justifying decisions, learning from evidence, correcting shortcomings, and guiding strategic choices through structured dialogue with stakeholders. However, the Latin American literature suggests that this transition remains incomplete. Hernández et al. (2024), in their review of regional scientific production on USR, identify strong links between USR, ethical commitments, student formation, and sustainable development within educational management. At the same time, they reveal a persistent challenge: transforming USR into institutionalized policies of continuous improvement rather than isolated projects. Achieving this requires evaluation and feedback systems that are effectively reintegrated into management processes. Accountability, in this sense, is not limited to publishing reports, but

involves building institutional learning cycles that connect diagnosis, action, evaluation, adjustment, reporting, and renewed action (Hernández et al., 2024).

An additional dimension of accountability, often overlooked when attention is focused exclusively on internal stakeholders, concerns its territorial and community-based character. USR becomes most visible and testable in contexts where impacts are tangible and reciprocity is expected, such as rural development projects, local entrepreneurship initiatives, health programs, or environmental sustainability interventions. Otiniano León et al. (2025), in their study of USR interventions aimed at strengthening sustainable entrepreneurship among rural women, demonstrate that robust outcomes emerge when programs adopt a multidimensional design combining technical training, social support, and economic resources. Their findings highlight the importance of community participation, ICT quality, and economic empowerment as mediating mechanisms for sustainable impact. This evidence suggests a demanding criterion for accountability: when universities claim to contribute to local development, they must report not only activities, but also mechanisms of change, such as empowerment, networks, self-efficacy, and resilience, along with evidence of sustained territorial effects (Otiniano León et al., 2025). From a stakeholder perspective, this shifts the guiding question from what was done to what capacities were generated and how shared responsibility and follow-up are ensured.

Similarly, Awad (2025) reinforces the idea that USR can act as a lever for economic and community sustainability by shaping institutional cultures, such as entrepreneurial culture. However, this requires accountability for intermediate processes. It is not sufficient to claim final impacts; institutions must demonstrate how university interventions activate mediating variables, partnerships, and capacities that explain observed outcomes. This connects directly to a central risk in university accountability: the tendency to transform USR into a reputational narrative. In contrast, the literature points toward more rigorous practices grounded in evaluation, evidence-based management, transparency regarding limitations, and continuous dialogue with stakeholders.

METHODOLOGY

This article is based on a documentary study aimed at the critical analysis of academic production on the measurement and management of University Social Responsibility (USR). This methodological approach is appropriate given that USR constitutes a heterogeneous and still consolidating field, characterized by a plurality of definitions, interpretive frameworks, and evaluation devices that hinder direct comparison across studies and limit the generalization of findings. Documentary research enables a systematic reconstruction of major conceptual and methodological developments, while also identifying convergences, tensions, and gaps that affect the capacity of USR to function as a driver of continuous improvement and institutional sustainability (Hernández et al., 2024; Fuentes et al., 2025).

Study Approach and Design

The study adopts an analytical critical and descriptive approach through a narrative theoretical methodological review complemented by comparative documentary analysis, aimed at reflecting on how University Social Responsibility is conceptualized, measured, and managed across diverse institutional contexts. This approach is justified by persistent tensions in the literature between models that emphasize formal compliance with indicators and those that frame USR as an ethical, social, and organizational transformation process, as well as by the performative nature of measurement systems, whereby indicators shape institutional action, making it necessary to critically examine the assumptions, scope, and biases of existing instruments (Chen & Vanclay, 2021; Fuentes et al., 2025). The narrative design enables interpretation of heterogeneous quantitative, qualitative, and mixed methodologies that address non-equivalent objects of measurement, such as institutional performance, ethical culture, student perceptions, territorial impacts, and contributions to the SDGs, rather than producing aggregated estimates (Hernández et al., 2024; Ouragini & Ben Hassine Louzir, 2024). In turn, the comparative documentary analysis contrasts experiences from Latin America, Europe, Asia, and transnational universities, highlighting how governance structures, degrees of sustainability institutionalization, regulatory frameworks, and university territory relationships condition the expression of USR, while underscoring the relevance of social impact management, host community relations, participation, transparency, and remediation mechanisms, particularly in contexts of campus expansion or territorial intervention (Martínez-Usarralde et al., 2017; Chen & Vanclay, 2021).

Literature Selection Criteria

The document selection was carried out through academic databases and specialized journals, prioritizing publications indexed in Scopus and other recognized scientific sources in higher education, sustainability, and University Social Responsibility. This strategy is supported by bibliometric evidence showing sustained growth in USR research, particularly in Latin America, with a notable concentration in countries such as Colombia and Peru and a marked increase since 2019, alongside expanding patterns of international collaboration that position USR

as a transnational field of scholarly debate (Hernández et al., 2024). The analysis covered publications from 2017 to 2025 in order to capture recent developments related to the articulation between USR and the SDGs, the expansion of perception-based and participatory methodologies, the advance of quantitative models oriented toward explanation rather than purely descriptive measurement, and the growing emphasis on accountability and institutional sustainability, integrating both early work on participatory diagnosis and more recent approaches based on causal modeling and mediation analysis (Martínez-Usarralde et al., 2017; Otiniano León et al., 2025).

Inclusion criteria encompassed studies explicitly focused on USR in higher education institutions, research that develops, applies, or critically examines instruments, indicators, or models for measuring or managing USR, and publications linking USR to institutional sustainability, stakeholders, accountability, the SDGs, or territorial impacts, with full-text availability as a requirement. Studies centered on specific programs or disciplinary areas were also included when they provided relevant methodological evidence on the evaluation of USR-related outcomes and mechanisms of change, such as qualitative interpretive analyses in health programs aligned with the SDGs or quantitative models examining causal pathways in community-based USR interventions (Atencio-González et al., 2025; Otiniano León et al., 2025). Conversely, documents that were exclusively normative or declarative without methodological development, as well as studies focused solely on corporate social responsibility without explicit adaptation to the university context, were excluded, given that the direct transposition of corporate frameworks may obscure university-specific dimensions such as formative missions, knowledge production, and territorial engagement, leading to incomplete assessments of USR (Kouatli, 2019; Chen & Vanclay, 2021).

Analytical Procedure

The analytical procedure was structured in four sequential stages. First, an exploratory reading was conducted to identify the scope, objectives, and methodological orientation of each document, allowing a preliminary classification by research design, level of analysis, and primary focus. Second, a thematic and categorical analysis was developed using an analytical matrix specifically designed for this study, which systematized information across five core dimensions: conceptual approaches to USR, evaluation methodologies, types of indicators, forms of stakeholder involvement, and the use of results in institutional management through feedback, decision making, and accountability mechanisms.

Third, the documents were grouped into three major methodological families. Quantitative models included descriptive perception-based scales and explanatory designs such as regression analysis, path analysis, and structural equation modeling, highlighting both the utility of perception data and its limitations related to bias and sampling (Fuentes et al., 2025; Li et al., 2024; Otiniano León et al., 2025). Qualitative interpretive approaches, including phenomenological and hermeneutic studies, examined USR as lived experience in teaching, research, and engagement, particularly in SDG-oriented programs (Guzmán et al., 2024; Atencio-González et al., 2025; Ouragini & Ben Hassine Louzir, 2024). Participatory and stakeholder-centered diagnostics emphasized student and community voices and incorporated disclosure, participation, monitoring, and grievance mechanisms in contexts of significant social impact (Martínez-Usarralde et al., 2017; Severino-González et al., 2025; Chen & Vanclay, 2021). Finally, a critical comparative assessment was conducted using criteria of contextual validity, capacity to capture intermediate processes, sensitivity to stakeholder participation, usefulness for accountability, and degree of integration into institutional management, in order to evaluate whether USR measurement systems effectively support institutional sustainability beyond formal compliance (Hernández et al., 2024; Chen & Vanclay, 2021).

Methodological Limitations

As a documentary study, this research is subject to several limitations. First, the analysis depends on the quality, scope, and methodological transparency of the reviewed literature, which may introduce biases related to publication trends and regional research capacities. Second, the narrative review design prioritizes interpretive depth over exhaustive coverage, and therefore does not aim to provide statistically generalizable conclusions. Third, differences in institutional contexts, governance systems, and cultural settings limit the direct comparability of methodologies and findings across studies. Despite these limitations, the documentary approach offers a robust framework for critically understanding how USR is measured and managed, and for identifying methodological pathways that strengthen its contribution to university governance and institutional sustainability.

METHODOLOGICAL ADVANCES IN MEASURING UNIVERSITY SOCIAL RESPONSIBILITY

Measurement of University Social Responsibility (USR) has developed in a progressive yet uneven manner, marked by the coexistence of quantitative, qualitative, and mixed approaches. This methodological diversity reflects both the conceptual complexity of USR and the institutional heterogeneity in which it is implemented. As a result, the field shows meaningful advances, but also persistent challenges regarding standardization, cross-institutional comparability, and practical usefulness for university management.

In this article, "methodological innovation" refers to advances that improve one or more of the following: (1) validity, by strengthening how USR is operationalized and how constructs are measured; (2) explanatory power, by moving from counting activities to identifying mechanisms and causal pathways; (3) integration, by linking measurement to governance, decision-making, and accountability cycles; and (4) usability, by translating complex evidence into tools that guide action for managers and stakeholders. Under this definition, innovation is not only the use of "new tools," but the capacity of a design to produce actionable and credible knowledge about impacts, processes, and institutional coherence.

Quantitative Approaches to Measurement

Quantitative strategies remain among the most widespread approaches for measuring USR, particularly in institutional assessment, inter-university comparison, and sustainability reporting. Their appeal lies in translating a conceptually broad domain, including ethics, social impacts, sustainability, governance, and territorial engagement, into observable and potentially auditable indicators. In many studies, USR is operationalized through conventional performance metrics such as the number of outreach programs, student participation rates in volunteering or service-learning, applied research outputs linked to public problems, budget allocation to USR, inter-institutional partnerships, and compliance with institutional sustainability plans or SDG-related targets (Hernández et al., 2024). These metrics frequently feed dashboards, periodic reports, or monitoring systems aligned with international frameworks, supporting accountability and reputational visibility.

A significant development, however, is the shift from input and output metrics toward outcomes and impact indicators. Instead of asking only "how much was done," newer work increasingly asks "what changed and why," incorporating explanatory models that estimate relationships among variables and identify mechanisms of change. For example, research has examined how perceptions of USR relate to students' environmental sustainability practices and beliefs about climate change, using association testing and regression-based approaches (Li et al., 2024). Other studies use stronger inferential designs, such as mediation and structural equation modeling, to assess not only whether USR interventions are associated with desired outcomes, but through which intermediate processes they operate. A clear example is SEM-based evaluation of USR programs aimed at strengthening sustainable entrepreneurship among rural women, where economic empowerment mediates the relationship between university interventions and business sustainability, while psychosocial dimensions (self-efficacy), community dimensions (participation and networks), and technological variables (ICT quality) contribute to entrepreneurial resilience and value-chain integration (Otiniano León et al., 2025). This line of work suggests that quantitative measurement, when carefully designed, can represent USR as a multi-component process rather than a checklist of activities.

A. Perception-Based Instruments and Actor-Centered Measurement

A major quantitative development is the use of perception scales and structured questionnaires administered to different university actors (students, faculty, administrative staff, and less frequently external communities). These instruments assume that USR cannot be assessed solely through "hard" outputs, but also through how stakeholders perceive coherence, relevance, and legitimacy in university conduct. Martínez-Usarralde et al. (2017), using the Vallaeys, De la Cruz and Sasia framework, illustrate how student perceptions can capture ethical formation and civic engagement while also revealing demands for stronger policy coordination and transversal implementation (Martínez-Usarralde et al., 2017). More recent perception-based quantitative approaches propose performance classification systems (for example, non-compliance, intermediate compliance, compliance) and group comparisons using non-parametric testing such as Kruskal-Wallis, explicitly aiming to generate stakeholder-accessible sustainability reporting inputs (Fuentes et al., 2025). This matters because it shifts evaluation from internal administrative monitoring toward outward-facing accountability, while keeping comparability as a goal.

Perception measurement has also expanded its focus on student heterogeneity. Studies in faith-based universities, for instance, employ factor analysis and internal consistency testing to map the structure of perceptions around USR and SDG strategies, detecting variations by sex and age and highlighting the value students assign to socially oriented participation initiatives (Severino-González et al., 2025). Methodologically, this reinforces that quantitative USR measurement is increasingly concerned not only with global averages, but with internal segmentation and subgroup differences that support targeted management decisions.

B. Quantification, Sustainability, and Leadership: What is Being Measured when USR is Measured

The literature also shows that quantitative metrics often encode, implicitly or explicitly, the institution's definition of USR. Some treat USR primarily as extension and philanthropy; others conceptualize it as integrated impact management and social value creation; still others frame it as a sustainability strategy anchored in governance and leadership. In that context, USR has been described as an adaptation of CSR to higher education, operationalized through community-engaged research, sustainable campus practices, and SDG-aligned education,

with effectiveness depending on ethical leadership and the capacity to build collaborative networks and optimize resources (Ahmad & Awang, 2025). This framing tends to encourage indicators that track integration across teaching, research, and engagement; program reach; partnerships; and sustainability target monitoring.

Research focused on sustainable outcomes in local environments also uses quantitative models to examine how USR practices relate to community-level results through mediators such as entrepreneurial culture. This is important because it suggests that some USR effects are indirect and operate through cultural and institutional transformations that can be operationalized with validated scales and modeled with pathway analyses (Awad, 2025). This expands measurement beyond immediate outputs toward intermediate constructs such as culture, empowerment, and self-efficacy.

C. Limits of Exclusively Quantitative Approaches and Validity Challenges

Despite their advantages, exclusively quantitative approaches face well-documented limitations. First, there is a risk of reducing USR to partial metrics that privilege what is easily countable rather than what is substantively meaningful, underrepresenting long-term formative, relational, and territorial processes (Gaete-Quezada, 2014, cited in Martínez-Usarralde et al., 2017; Hernández et al., 2024). Second, social impacts are typically multi-causal, context-dependent, and unfold over extended time horizons, meaning cross-sectional or annual designs capture only a portion of the phenomenon.

Third, perception-based models face specific methodological constraints: perceptual bias (including social desirability and asymmetric information), limited representativeness when sampling frames are weak, and frequent reliance on ordinal scales that lead to descriptive or non-parametric analyses with restricted inferential strength (Fuentes et al., 2025). Fourth, some metrics may function as proxies for social responsibility without demonstrating actual impact management. Reporting activities does not necessarily imply effective participation mechanisms, harm mitigation, or remediation when universities intervene territorially. In transnational campus or institutional expansion settings, universities may enjoy an initial social license, yet fail to manage social impacts if they lack disclosure practices, genuine community involvement, adaptive monitoring, or grievance mechanisms, dimensions that are typically invisible to standard metrics unless explicitly operationalized (Chen & Vanclay, 2021).

Qualitative and Participatory Approaches

In response to the limits of quantification, especially where USR becomes a checklist or a set of easily counted indicators, qualitative and participatory approaches have been used to understand USR as a situated, relational, and meaning-laden phenomenon. These approaches begin from a key methodological premise: USR exists not only as a declared institutional policy, but as a lived experience interpreted and negotiated by university and community actors in concrete contexts. Therefore, evaluation focuses less on "how much was done" and more on how legitimacy is built, how coherence between discourse and practice is perceived, and how intended and unintended impacts are experienced in communities and territories.

A. Participatory Diagnosis and Stakeholder Centrality

Participatory diagnosis is a core contribution in this tradition because it positions stakeholders as central actors in identifying strengths, weaknesses, and institutional challenges. In Martínez-Usarralde et al. (2017), participation is not reduced to consultation. Student voice becomes input for institutional deliberation by revealing both appreciation of ethical formation and demands for greater policy coordination and transversal implementation. Methodologically, this shifts evaluation from administrative control toward organizational learning, where findings are expected to challenge priorities and inform decision-making (Martínez-Usarralde et al., 2017).

In practice, participatory diagnosis can include deliberative workshops for prioritization, stakeholder mapping to identify power asymmetries and participation channels, reconstruction of theories of change from beneficiaries' perspectives, and identification of locally meaningful criteria of success such as trust, cultural relevance, continuity, or distributive justice.

B. Qualitative Methods to Capture Formative and Social Impacts

Qualitative methodologies such as semi-structured interviews, focus groups, participant observation, and discourse analysis are used to explore dimensions often excluded from indicators: ethical learning, identity transformations, perceived recognition or exclusion, and judgments about contextual relevance. In health and wellbeing contexts, interpretive approaches help reconstruct how integrated USR actions translate into educational experiences with a strong social component. For example, research using interviews with nursing students has been used to reconstruct perceived impacts of initiatives linked to a specific SDG, highlighting how participants interpret the relationship between professional learning and social commitment (Guzmán et al., 2024). Similarly, interpretive phenomenological and dialectical hermeneutic approaches have been proposed to reflect on USR

actions and SDG linkages, emphasizing that impact includes the formation of citizens able to advance sustainability through ethically grounded education (Atencio-González et al., 2025).

C. Territory, Participation, and the University's Social License

Qualitative and participatory approaches are particularly relevant when USR involves territorial intervention or long-term relations with host communities. Chen and Vanclay (2021) argue that host communities often grant an initial social license based on university reputation, but legitimacy can erode if institutions lack effective participation, monitoring, impact management, and grievance mechanisms. This strengthens the case for qualitative tools that capture positive and negative impacts not visible in standard metrics and evaluate the quality of community engagement as a substantive dimension of USR (Chen & Vanclay, 2021). In rural contexts, even when quantitative models are available, qualitative evidence can clarify decisive dynamics such as changes in network strength, perceived self-efficacy, evolving ICT needs, and shifts from access concerns toward content quality and psychosocial development (Otiniano León et al., 2025).

D. Trade-Offs: Interpretive Depth Versus Comparability

The main advantage of qualitative and participatory approaches is interpretive depth. They capture meanings, tensions, learning, conflicts, legitimacy dynamics, and unintended effects, supporting a view of USR as situated practice rather than mechanical indicator compliance. Their main limitation is that, if used alone, they may face challenges of comparability and scaling, particularly when rigor criteria (triangulation, saturation, analytic traceability) are not clearly specified or when results are not translated into governance mechanisms. For this reason, a visible trend is integration with quantitative measurement in mixed or hybrid evaluation strategies that preserve stakeholder voice while generating decision-relevant evidence.

Hybrid Models and Innovative Tools

In response to the limits of one-dimensional approaches, recent literature shows a move toward hybrid evaluation models that combine quantitative and qualitative strategies to capture measurable outcomes, institutional processes, and socially constructed meanings. Hybrid evaluation is not a simple addition of methods. It is an integrated design oriented toward explanation and decision support. Typical logics include using surveys to detect patterns and then interviews to interpret why particular groups evaluate a dimension negatively, or building participatory theories of change and testing them against performance indicators and monitoring data. In territorial contexts, hybrid evaluation becomes especially relevant because legitimacy and social license depend on both measurable performance and the quality of participation, monitoring, and remediation arrangements (Chen & Vanclay, 2021).

A. Synthetic Schemes for Hybrid Evaluation

To make hybrid evaluation more operational for governance, a useful way to summarize tools is through a text-based "synthetic table" that clarifies when each tool is advantageous and when it is risky:

- Indicator dashboards and reporting systems. Best for: monitoring implementation, resource allocation, and compliance; supporting periodic accountability. Limits: may privilege what is measurable; weak on mechanisms and long-term impacts.
- Perception scales and performance classification matrices. Best for: identifying legitimacy gaps, prioritizing critical areas, communicating performance to stakeholders. Limits: bias and representativeness risks; requires triangulation and contextual interpretation (Fuentes et al., 2025).
- Explanatory models (SEM, mediation, path analysis). Best for: identifying mechanisms and intermediate constructs such as empowerment, culture, or self-efficacy; improving program design and targeting (Otiniano León et al., 2025; Awad, 2025). Limits: requires strong measurement validity and theory of change; may overlook contextual meanings if not complemented qualitatively.
- Participatory diagnosis and qualitative case studies. Best for: understanding coherence, conflict, legitimacy, and unintended effects; evaluating engagement quality and social license dynamics (Martínez-Usarralde et al., 2017; Chen & Vanclay, 2021). Limits: comparability constraints; needs clear rigor criteria and translation into governance decisions.

B. "Traffic Light" Matrices and Stakeholder-Friendly Reporting

Innovative tools in the field include simplified performance classification schemes that translate complex evidence into governance-friendly categories. The corpus you reference describes an approach consistent with perception-based performance classification for producing stakeholder-accessible sustainability reporting, using descriptive statistics and group comparisons (Fuentes et al., 2025). The value of such tools is that they convert data into management language, facilitate accountability communication, and identify critical areas for intervention.

Their risks are also structural: if perception measures are not triangulated with documentary and process evidence, classification can become a reputational device rather than a management instrument. More robust hybrid designs therefore combine these matrices with documentary evidence, case studies, longitudinal follow-up, and explicit theory-of-change reconstruction.

C. Explanatory Modeling as Innovation: Measuring Mechanisms, Not Only Outcomes

A major innovation is the incorporation of explanatory modeling to evaluate mechanisms rather than merely documenting activities or outputs. SEM-based evaluations show how economic empowerment mediates the relationship between university interventions and sustainable entrepreneurship outcomes, while integrating psychosocial, community, and technological factors to explain resilience (Otiniano León et al., 2025). Similarly, path analysis showing entrepreneurial culture as a mediator highlights that USR may generate durable outcomes through cultural and organizational conditions rather than direct effects alone (Awad, 2025). These approaches strengthen the field because they support design decisions: if mediators are strong, universities should invest in strengthening intermediate capacities rather than only scaling visible activities.

D. Integrating USR and SDGs: Coherence Gains and Instrumentalization Risks

A further line of innovation links USR measurement to SDG frameworks to facilitate alignment across teaching, research, governance, and engagement. This can strengthen coherence and reporting, and supports evaluation of USR as a strategic governance device. At the same time, critical literature warns that SDG alignment can become a compliance exercise if institutions treat it as activity mapping rather than contextual operationalization and impact management. Participatory diagnostics that foreground stakeholder judgments of coherence and transversal implementation are therefore essential to prevent purely declarative or reputational uses of SDG language (Martínez-Usarralde et al., 2017).

E. From Reporting to Management: Closing the Accountability Loop

Finally, sustainability reporting frameworks and standards can support systematization and communication, but they do not guarantee responsible impact management. Chen and Vanclay (2021) emphasize that legitimacy depends on disclosure, participation, adaptive monitoring, and grievance mechanisms, which requires evaluation designs that link measurement to governance action. The most consistent hybrid models treat reporting as part of a management cycle: measure, interpret, deliberate with stakeholders, decide, monitor, adjust, and report again (Chen & Vanclay, 2021). Under this logic, innovation is not the report itself, but the institutional capacity to use evidence as feedback for governance and sustainability strategy.

Challenges for Managing University Social Responsibility

Despite notable conceptual and methodological progress, the specialized literature agrees that effective institutionalization of University Social Responsibility (USR) continues to face structural obstacles. These obstacles are not simply a matter of insufficient commitment. They stem from deeper tensions about what USR means, how its impacts can be credibly demonstrated, and how it can be governed within complex organizations (Hernández et al., 2024; Chen & Vanclay, 2021). In practice, USR often oscillates between the discursive and the operational. It may appear in strategic plans, reports, and institutional narratives, yet remain weakly embedded as a management system with defined priorities, resources, responsibilities, participation mechanisms, and organizational learning loops.

To clarify the problem and its implications for governance, this section organizes challenges into three tiers: structural, operational, and cultural. This hierarchy also anticipates the conclusions by showing why the next step is not adding more initiatives, but building integrated measurement and decision systems that convert evidence into governance and sustainable impact.

Structural Challenges

A foundational challenge is conceptual ambiguity. USR combines normative approaches (what universities should be), instrumental approaches (results-oriented management), critical approaches (questioning development models and power relations), and participatory approaches (governance with actors). This plurality makes the concept elastic and difficult to translate into shared management criteria across institutions (Hernández et al., 2024). The management consequences are immediate: treating USR as a portfolio of programs produces different decisions than treating it as a transversal transformation of teaching, research, engagement, and operations.

A persistent epistemological tension also shapes implementation styles: voluntariness versus obligation. One tradition frames USR as an aspirational ethical commitment, while another treats it as inherent to the university's public function and therefore tied to social expectations, regulatory frameworks, or public policy pressures (Gaete-Quezada, 2014, cited in Martínez-Usarralde et al., 2017). This divide matters because it generates divergent

governance architectures. A voluntary framing often prioritizes codes, campaigns, and reporting. An obligation framing tends to push structural changes in curriculum, incentives, performance evaluation, territorial investment, and stakeholder governance.

A second structural challenge is the tendency to equate USR with positive contribution while under-addressing responsibility for negative or contested impacts. Chen and Vanclay (2021) shift the focus toward social impact management and the social license communities grant to universities. Under this view, USR requires demanding practices such as transparency, effective community participation, harm reduction, monitoring, and grievance mechanisms, not only a portfolio of outreach activities (Chen & Vanclay, 2021). This reframing has governance implications: it requires risk management, due diligence, and accountability mechanisms similar to those demanded in other sectors with significant territorial effects.

The USR–SDG nexus introduces a further structural tension. Aligning with global agendas can improve coherence, but it can also incentivize a compliance logic where institutions map activities to SDG indicators without reconfiguring priorities or interrogating the ethical assumptions behind development models. Work on USR integrated into teaching and community engagement emphasizes that ethical coherence cannot be reduced to "meeting indicators," but must be expressed in how institutions reshape their priorities and form critically engaged citizens (Atencio-González et al., 2025).

Operational Challenges

Operationally, the most repeated obstacle is weak standardization. The proliferation of indicators, instruments, and models limits comparability across contexts and inhibits cumulative evidence about what works and under what conditions (Hernández et al., 2024). In university management, this often appears as fragmented evaluation: each unit measures its own activities, reports are not interoperable, and results do not feed a shared improvement system.

Decision impact example: when indicators are not harmonized across faculties, leadership cannot credibly decide whether to prioritize investments in community engagement, curriculum reform, or impact mitigation because the evidence is not comparable and does not describe trade-offs.

A second operational challenge is demonstrating real social impact. Many evaluations prioritize inputs, outputs, or short-term satisfaction, but do not capture sustained changes such as community capacity-building, civic participation, territorial transformation, or long-term sustainability outcomes. This is especially difficult in territorial settings where effects unfold over time and may involve conflict or unintended harm, which calls for monitoring and adaptive evaluation approaches (Chen & Vanclay, 2021).

Research that models causal pathways illustrates both the promise and the demands of stronger evaluation. SEM-based studies show how economic empowerment can mediate the relationship between USR interventions and sustainable entrepreneurship outcomes, alongside roles for networks, self-efficacy, community participation, and ICT quality (Otiniano León et al., 2025). Similarly, path models indicate that entrepreneurial culture can mediate the link between responsible university practices and community business sustainability (Awad, 2025). These designs move beyond describing outputs toward identifying mechanisms, but they also raise operational requirements: higher-quality data, validated measurement of latent constructs, and designs that distinguish intervention, mediators, context, and time horizons.

Decision impact example: if a university measures only "number of workshops delivered," it may cut funding because outputs look stable. If it measures mediators such as empowerment or network strength, it may discover that program quality has deteriorated and adjust the design instead of discontinuing it.

Perception-based instruments are useful for capturing legitimacy and lived experience, yet they introduce risks: social desirability bias, expectation effects, limited representativeness, and ordinal-scale constraints. Fuentes et al. (2025) propose a perception-based quantitative model to classify performance and support stakeholder-accessible sustainability reporting, while explicitly noting limitations related to perceptual bias, lack of sampling frames, and the analytic restrictions of ordinal data (Fuentes et al., 2025). This makes triangulation essential: perceptions should be combined with documentary evidence, process tracing, and impact indicators.

Decision impact example: if student perceptions improve after a communication campaign, leaders might assume governance improved. Without triangulation, they may overlook that community grievance mechanisms are still absent or that territorial impacts remain unmanaged.

Cultural and Governance Challenges

The most critical cultural-governance challenge is limited integration of USR into core decision systems. Even when USR appears in strategy documents, it often lacks budget authority, organizational structure, incentive alignment, performance evaluation links, and risk management tools (Martínez-Usarralde et al., 2017; Hernández et al., 2024). This produces peripheral USR: it exists, but it does not govern.

Leadership and governance capacity function as enabling conditions. Ahmad and Awang (2025) argue that universities' transition into transformation agents requires ethically oriented leadership, strategic direction, collaborative networks, and institutional structures that align resources with sustainability goals (Ahmad & Awang, 2025). Without this architecture, USR becomes dependent on individual champions and fluctuates with administrative cycles.

Another recurring governance challenge is the disconnect between evaluation and management. Sustainability reports and indicator systems can become ritualized accountability outputs that do not produce corrective decisions. Chen and Vanclay (2021) stress that, without participation standards, adaptive monitoring, and grievance mechanisms, accountability weakens and institutional learning remains limited (Chen & Vanclay, 2021). This disconnect helps explain why many universities report more than they transform.

Strategic communication of sustainability is a further governance issue. Even institutions well positioned in environmental rankings do not necessarily communicate sustainability policies effectively on their websites, suggesting gaps in visibility, format, and stakeholder engagement design (Carrillo-Durán et al., 2024). For USR, communication should function as governance evidence: transparency, coherence, participation, and accountability. If treated primarily as marketing, it can widen the gap between discourse and practice and erode legitimacy.

DISCUSSION

The results of the study engage consistently with a broad body of literature that argues that University Social Responsibility (USR) cannot be understood as an accessory or merely reputational component, but rather as an institutional framework for continuous improvement oriented toward the generation of verifiable and sustainable social impacts (Hernández et al., 2024). In this sense, recent evidence agrees that the main critical issue does not lie in the absence of initiatives, but in the persistent gap between institutional discourse and effective practices. Although universities often enjoy high social legitimacy derived from their academic prestige, they frequently fail to systematically manage the positive and negative impacts they generate in the territories where they operate, which weakens their social license and limits their real contribution to sustainability (Chen & Vanclay, 2021). From this perspective, the discussion shifts the emphasis from the number of actions implemented to the nature of the impacts produced, the management mechanisms employed, and the existence of effective systems of accountability and remediation when required.

At the same time, the findings align with studies that link USR to the 2030 Agenda and the Sustainable Development Goals (SDGs) not merely as a discursive framework, but as a substantive integration into teaching, research, and engagement with the surrounding environment. Research conducted in health programs shows that an integrated USR approach strengthens ethical formation, students' social commitment, and the articulation between theory and practice, all of which are key to generating sustained social impacts (Atencio-González et al., 2025; Guzmán et al., 2024). Likewise, studies focused on student perceptions reveal that young people particularly value USR and SDG strategies that promote socially oriented participation, while also demanding greater clarity regarding the values underpinning these strategies and their coherence with institutional decisions (Severino-González et al., 2025). This reinforces the idea that USR is not consolidated through isolated programs, but through ethical governance, organizational coherence, and an explicit formative purpose.

The discussion also incorporates empirical evidence demonstrating concrete socioeconomic impacts when USR is designed as a multidimensional intervention. In rural contexts, USR can act as a catalyst for sustainable transformations when it articulates technical training, economic resources, social networks, self-efficacy, and the quality of information and communication technologies, showing that impact occurs through mediations such as economic empowerment rather than through mere exposure to institutional activities (Otiniano León et al., 2025). Similarly, it has been documented that university social responsibility practices strengthen local business sustainability by promoting an entrepreneurial culture that mediates the overall effect of USR, highlighting the strategic role of the university as a key territorial actor (Awad, 2025). Taken together, these contributions confirm that robust USR is expressed when it generates capacities and enabling conditions in the environment, rather than simply making actions visible.

From a methodological standpoint, the article is situated within a field characterized by high heterogeneity, where the diversity of metrics and the difficulty of selecting valid and comparable methodologies remain structural problems (Fuentes et al., 2025). Quantitative approaches based on perceptions offer relevant advantages, such as identifying critical areas, comparing groups, and producing reports that are accessible to stakeholders; however, they also present significant limitations related to perceptual biases, sampling issues, and the use of ordinal scales that restrict robust inference if not complemented by other sources of evidence (Fuentes et al., 2025). This reinforces the need for USR evaluation to move beyond measuring levels of satisfaction or perceived compliance,

and to incorporate process, outcome, and impact indicators, especially when USR is framed as an institutional strategy.

In contrast, qualitative studies with interpretive approaches, including phenomenological and hermeneutic perspectives, make it possible to understand dimensions that are often rendered invisible in indicator-based systems, such as curricular appropriation of USR, the construction of professional identities, the ethical meaning of practices, and students' formative experiences (Atencio-González et al., 2025; Guzmán et al., 2024). These approaches are particularly relevant when analytical interest focuses not only on what was done, but on how it was understood and what tensions emerged during implementation. Moreover, case studies show that even when USR is applicable, its deployment tends to concentrate on academic or philanthropic dimensions, leaving ethical and legal responsibilities relatively underdeveloped, thus situating the debate squarely within the domain of university governance (Ouragini & Ben Hassine Louzir, 2024).

Explanatory models based on structural equation modeling and path analysis represent a significant advance, as they allow the estimation of direct and indirect relationships, the identification of mediating variables such as economic empowerment or entrepreneurial culture, and an approximation to plausible causal mechanisms (Otiniano León et al., 2025; Awad, 2025). Nevertheless, their application requires rigorous construct operationalization, high-quality data, and theoretical coherence. Overall, methodological comparison suggests that USR evaluation is strengthened through a layered approach that articulates: (1) perceptions and social legitimacy; (2) implementation processes; and (3) impacts and mediations, explicitly incorporating triangulation and temporality.

From a university management perspective, the results reinforce the idea that USR only acquires a strategic character when it is effectively integrated into decision making, resource allocation, incentive systems, and accountability mechanisms. The literature shows that university reputation can function as symbolic capital that grants social approval; however, without systematic impact management that includes transparency, effective community participation, adaptive monitoring, and grievance and remediation mechanisms, such legitimacy remains fragile and does not guarantee institutional or territorial sustainability (Chen & Vanclay, 2021). Consequently, a central implication is the need to institutionalize impact management procedures that include stakeholder mapping, participation protocols, monitoring, and continuous adjustment, thus preventing sustainability reports from becoming self-referential exercises.

The findings also suggest that USR should operate as a transversal architecture that connects teaching, research, and engagement with the surrounding environment, while simultaneously influencing the university's operational management, including campus operations, procurement, communication, and governance. This vision is consistent with evidence from health programs, where the integration of USR and SDGs into training promotes professionals with an ethical ethos oriented toward social well-being (Atencio-González et al., 2025; Guzmán et al., 2024). From a management standpoint, this implies revising curricula, preprofessional practices, and integrative projects to ensure coherence between competencies, values, and territorial demands.

From a socioeconomic perspective, the results show that universities maximize their impact when they conceive USR as a multidimensional intervention that articulates technical support, social networks, economic resources, and psychosocial strengthening. Evidence on sustainable entrepreneurship among rural women confirms that economic empowerment acts as a key mediator of business sustainability, while the quality of information and communication technologies and community participation function as critical drivers of impact (Otiniano León et al., 2025). This suggests that USR programs should make explicit their theories of change, expected mediators, and strategic alliances with local governments, associations, and the productive sector in order to sustain value chains and territorial integration.

Institutional communication emerges as a strategic component of USR management rather than merely a visibility resource. It has been shown that sustainability and USR are communicated unevenly on university websites, with opportunities for improvement in placement, formats, and articulation with social media, without a direct relationship to positions in international rankings (Carrillo-Durán et al., 2024). This reinforces the need to conceive USR communication as an exercise in transparency and accountability that makes both progress and gaps visible through verifiable evidence for stakeholders.

Regarding the article's contributions, these operate at three levels. First, it consolidates a reading of USR as a field articulated with sustainability and educational management, consistent with the growing trend in Latin American scientific production that emphasizes ethical commitment, student formation, and sustainable development (Hernández et al., 2024). Second, it contributes to the methodological debate by emphasizing that USR cannot be evaluated through fragmented measurements, and that perception-based instruments, while useful for diagnosis and reporting, must be interpreted in light of their biases and limits and complemented with process and impact evidence (Fuentes et al., 2025). Third, the article advances a mechanism-oriented approach to USR, aligned with studies that identify mediations such as economic empowerment or entrepreneurial culture as concrete pathways for transforming university initiatives into sustainable impacts (Otiniano León et al., 2025; Awad, 2025).

At a theoretical level, this approach reinforces the idea that USR does not constitute a simple transfer of corporate social responsibility into the university sphere, but rather a device with its own specificities linked to education, knowledge production, ethical leadership, and territorial embeddedness. This reading converges with perspectives that recognize universities as agents of social transformation and argue that the success of USR depends on visionary leadership, solid institutional ethics, and collaborative networks that optimize resources and sustain impacts over time (Ahmad & Awang, 2025). At the same time, it strengthens a critical view that places the university–community relationship at the center of sustainability, incorporating impact management and the need for institutionalized mechanisms of participation and social control (Chen & Vanclay, 2021).

The projection of USR as a strategic tool rather than a merely declarative one is supported by several operational criteria derived from the dialogue between results and the literature. First, it is necessary to move from discursive alignment with the SDGs to explicit theories of change that define what is transformed, through which mechanisms, with which actors, and over what time horizon, incorporating mediators such as economic empowerment or entrepreneurial culture where appropriate (Otiniano León et al., 2025; Awad, 2025). Second, it is essential to institutionalize a governance framework for USR oriented toward impact management, community participation, and grievance and remediation mechanisms, thereby strengthening social license and the sustainability of the campus and its environment (Chen & Vanclay, 2021). Third, USR must be articulated with ethical formation and professional practice through integrated curricula, situated research, and formative engagement, as evidenced by experiences in the health field (Atencio-González et al., 2025; Guzmán et al., 2024). Fourth, evaluation and reporting systems must be strengthened, avoiding exclusive reliance on perceptions and promoting triangulation with evidence of implementation and impact, in line with the limitations of ordinal scales and sampling issues highlighted in the literature (Fuentes et al., 2025). Finally, USR communication should be conceived as an exercise in transparency and accountability, using accessible and multidirectional formats, and avoiding its reduction to positioning strategies without institutional substance (Carrillo-Durán et al., 2024).

This discussion argues that a truly strategic USR is defined less by the number of initiatives implemented and more by its capacity to orient university management toward sustainable, ethically governed, and evaluable impacts, such that USR becomes the principle guiding decision making, resource allocation, professional training, knowledge production, and the university's responsible relationship with its territory.

CONCLUSION

This article has identified and systematized the main advances and limitations in the measurement and management of University Social Responsibility (USR), showing that, despite the sustained growth of academic production and the diversification of methodological approaches, USR still faces structural challenges that limit its consolidation as a strategic axis of university governance. The findings indicate a gradual shift from predominantly normative and declarative conceptions toward approaches oriented to sustainability, social impacts, and alignment with the 2030 Agenda. However, this transition has been uneven and only partially integrated into institutional decision making and governance systems.

A central conclusion of the analysis is that integral and participatory approaches are essential for a more rigorous and meaningful evaluation of USR. The reviewed evidence shows that methodologies based exclusively on quantitative indicators or institutional metrics tend to capture only partial dimensions of the phenomenon, while qualitative and participatory approaches make it possible to understand formative processes, symbolic appropriations, ethical tensions, and territorial dynamics that directly affect institutional sustainability. From a practical standpoint, this implies that university managers should not rely solely on dashboards or compliance indicators, but should deliberately incorporate stakeholder-based diagnostics, especially student, community, and territorial voices, as strategic inputs for prioritization, program redesign, and legitimacy building.

The article also highlights the need to advance toward USR measurement models that are explicitly linked to university management. Although the proliferation of instruments and metrics has expanded diagnostic capacity, it has not always translated into organizational learning or substantive improvements in practice. For university leaders and administrators, this finding underscores that USR measurement should be conceived as a strategic management process rather than a reporting exercise. Effective systems require explicit theories of change, indicators that capture processes and impacts, and feedback mechanisms that connect evaluation results to budgeting, resource allocation, incentive structures, curriculum decisions, and continuous improvement cycles.

Based on these findings, differentiated recommendations can be formulated. For future research, there is a clear need to develop longitudinal studies that assess medium and long term effects of USR, as well as mixed method designs that integrate perceptions, processes, and impacts within coherent analytical frameworks. Expanding empirical work in underrepresented contexts, identifying mediating mechanisms such as economic empowerment, entrepreneurial culture, or ethical formation, and examining more closely the relationship between

USR, governance, and quality assurance would help overcome fragmented approaches and support the construction of comparable analytical models across institutions and regions.

For university management, the results suggest prioritizing the institutionalization of USR through transversal governance arrangements. This includes embedding USR criteria into strategic planning, performance evaluation, risk and impact management, and internal quality systems, rather than confining responsibility to isolated units or short term projects. Managers are encouraged to use evaluation results as decision tools, not only as accountability outputs, and to strengthen participation, transparency, and learning loops that enable adaptive governance.

At the level of public policy and quality assurance, the findings point to the relevance of incorporating explicit USR criteria into accreditation and evaluation frameworks. Such criteria should move beyond the existence of programs or reports and focus instead on impact management, stakeholder participation, coherence between institutional discourse and practice, and the capacity of universities to demonstrate learning and improvement over time. This would reinforce the role of USR as a governance standard rather than a voluntary or reputational add on.

In closing, the added value of this article lies in its integrative contribution. By critically synthesizing methodological advances, identifying persistent challenges, and linking measurement to governance and sustainability, the study provides a structured analytical basis for aligning research, management, and policy agendas. In doing so, it positions USR not only as an ethical commitment, but as a structuring principle for university governance and for the effective contribution of higher education institutions to sustainable development and social transformation.

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