

Strengthening the statistical assessment of university social responsibility and sustainable development goal integration in higher education institutions

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ABSTRACT

This study aims to examine how higher education institutions in Barranquilla, Colombia, integrate University Social Responsibility with the Sustainable Development Goals, emphasizing not only the visibility of institutional initiatives but also the need for stronger empirical assessment of their coherence, implementation, and perceived impact. The study adopts a quantitative, non-experimental, field-based, and descriptive design, using survey data collected from members of the university community across selected higher education institutions. Responses were organized through Likert-type items and analyzed using descriptive statistics, including percentage distributions, favorable and unfavorable response groupings, and estimated mean scores, with the results structured around sustainability initiatives, inclusion policies, academic integration, strategic planning, institutional management, communication, and accountability mechanisms. The findings show that respondents generally perceive meaningful progress in sustainability-oriented activities, volunteering, inclusion, environmental practices, and institutional values linked to social responsibility. However, the evidence also reveals persistent weaknesses in impact measurement, strategic formalization, periodic reporting, internal communication, and the visibility of specialized structures responsible for coordinating University Social Responsibility and Sustainable Development Goal integration. These results suggest that universities have advanced more clearly in normative commitment and institutional discourse than in consolidated systems of governance, monitoring, and evaluation. The study provides practical implications for university leaders by highlighting the need to strengthen accountability frameworks, improve communication strategies, institutionalize impact assessment, and develop more rigorous statistical procedures for evaluating the relationship between social responsibility practices and sustainable development commitments.

Keywords: *Accountability mechanisms, Higher education institutions, Statistical validation, Sustainable development goals, University social responsibility.*

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Highlights of this paper

- This paper examines how higher education institutions in Barranquilla integrate University Social Responsibility with the Sustainable Development Goals.
- The findings show visible progress in sustainability initiatives, inclusion policies, volunteering, environmental practices, and institutional values.
- The study identifies weaknesses in impact measurement, strategic formalization, internal communication, and accountability, highlighting the need for stronger monitoring and evaluation systems.

1. INTRODUCTION

University Social Responsibility (USR) has become an essential dimension of higher education governance, as universities are increasingly expected to contribute not only to academic training and knowledge production but also to social transformation and sustainable development. From this perspective, USR extends beyond institutional discourse and involves a comprehensive commitment to ethical management, community engagement, socially relevant research, and the promotion of inclusive and sustainable practices across university functions. This broader understanding positions universities as strategic actors in addressing contemporary societal challenges through their organizational, educational, and social missions (Vallaey, 2009).

At the same time, the Sustainable Development Goals (SDGs) provide a global framework through which higher education institutions can align their internal policies and external actions with internationally recognized development priorities. In this sense, universities are expected to incorporate sustainability into teaching, research, extension, and institutional management, thereby strengthening their contribution to equity, environmental protection, and social wellbeing. The connection between higher education and the 2030 Agenda has therefore intensified the need to examine how institutional practices are translated into measurable commitments and operational strategies within universities (United Nations, 2015).

In Latin American contexts, the relationship between USR and the SDGs is especially relevant because higher education institutions often operate in environments marked by inequality, social fragmentation, and urgent development needs. Therefore, analyzing the extent to which universities integrate socially responsible practices with sustainable development objectives is crucial for understanding their institutional impact. This study addresses this issue by examining higher education institutions in Barranquilla, with particular attention to the need for stronger empirical and statistical approaches capable of validating perceptions, identifying institutional patterns, and supporting more rigorous interpretations of university commitment to sustainability (Castillo, 2023).

2. LITERATURE REVIEW

2.1. Social Responsibility as an Evolving Institutional Commitment

The literature on social responsibility initially emerged from debates about the role of organizations in society. One influential position argued that the central responsibility of business was to generate profit through efficient production, thereby prioritizing economic performance and internal organizational objectives over broader social obligations (Friedman, 1970). This early perspective framed responsibility in narrow economic terms and left limited analytical space for environmental, ethical, or social accountability beyond productivity and legal compliance.

Later contributions substantially broadened this view by introducing the voluntary incorporation of social and environmental concerns into organizational operations and stakeholder relations. European policy debates were particularly important in this transition, as they described social responsibility as the integration of these concerns into business activities and interactions with different stakeholder groups (Colombian Center for Corporate

Responsibility, 2006). Other contributions reinforced this expanded understanding by presenting social responsibility as a strategic set of practices aimed at generating benefits and avoiding harm for stakeholders, thereby linking ethics, management, and institutional legitimacy (Colombian Center for Corporate Responsibility, 2006; Vallaey, 2005).

Subsequent scholarship consolidated this broader approach by connecting social responsibility with labor conditions, environmental stewardship, human rights, organizational behavior, and stakeholder alignment. In this sense, social responsibility came to be understood as a set of legal and ethical commitments derived from the effects organizations generate in their social environments, as well as a managerial orientation capable of producing value and competitiveness when genuinely embedded in institutional practice (Carbal, Ramírez, & Vergara, 2014; Castillo, 2023; Domínguez, 2011; Ruiz, Raya, & González, 2016; Zarate & Gutiérrez, 2013). These conceptual developments created the basis for extending the debate from the corporate sphere to the university setting.

2.2. University Social Responsibility in Higher Education

The development of University Social Responsibility emerged from the recognition that universities, although they are organizations, cannot be understood solely through business-centered models. Several authors have argued that directly transferring corporate responsibility frameworks to higher education is problematic because universities pursue formative, epistemic, civic, and social missions that go beyond managerial efficiency criteria (De la Cruz & Sasia, 2008). As a result, the literature on University Social Responsibility has evolved as a distinct field concerned with the social meaning, ethical orientation, and public responsibilities of higher education institutions.

A central line of scholarship defines University Social Responsibility as a comprehensive institutional commitment that articulates teaching, research, management, and social engagement around ethical values and sustainable development. From this perspective, the university is not merely a producer of credentials or specialized knowledge, but also a civic actor responsible for forming citizens, generating socially relevant knowledge, and contributing to more just and sustainable societies (Vallaey, 2009). This approach places the institution within a broader social contract in which its legitimacy depends on the extent to which it responds meaningfully to collective needs.

Other studies deepen this perspective by identifying the multiple dimensions through which universities generate impact. University Social Responsibility has been described as involving organizational, educational, epistemological, and social responsibilities, all of which require changes in institutional culture and practice (François Vallaey, 2014). Additional contributions stress that this responsibility should not be treated as a temporary trend or as an isolated curricular topic, but rather as an institutional policy embedded in the overall functioning of the university and oriented toward sustainable and equitable social transformation (Baca, 2015; Chirinos & Pérez, 2016; Ruiz-Corbella & Bautista-Cerro Ruiz, 2016).

2.3. Sustainable Development Goals and the Role of Universities

The Sustainable Development Goals represent a global agenda designed to address poverty, inequality, environmental degradation, peace, and institutional development through a set of interconnected objectives aimed at 2030 (United Nations, 2015). Within this framework, universities are expected to act not only as knowledge-producing institutions but also as strategic contributors to sustainability through education, research, innovation, and social engagement. This expectation has made the SDGs a central reference point for evaluating the public relevance of higher education institutions.

The literature increasingly shows that higher education institutions have begun adapting their missions, strategies, and internal practices in response to this global agenda. Guidance developed for universities emphasizes that sustainable development requires an integrated approach that combines economic progress, social justice, and environmental responsibility, and that higher education institutions are especially well positioned to promote this integration across their different functions ([Sustainable Development Solutions Network, 2020](#)). Similarly, research focused on Latin American higher education highlights the contributions that universities can make to Agenda 2030 through environmental management, community engagement, and the incorporation of sustainability into academic programs and institutional policy ([Rangel, Aguirre, Zapata, & Restrepo, 2022](#)).

This role is also supported by international policy discourse. UNESCO emphasized that higher education has a major responsibility in shaping curricular, ethical, and civic responses to global challenges such as food security, intercultural dialogue, and natural resource governance ([UNESCO, 2009](#)). More recent scholarship has argued that universities must go beyond rhetorical alignment and assume a substantive role in advancing the sustainable development agenda through institution-wide responsibility and socially grounded action ([Castillo, 2023](#)). Taken together, these contributions provide a strong basis for examining how universities operationalize their commitment to the SDGs.

2.4. Empirical Approaches to USR and SDG Integration

Empirical studies on University Social Responsibility and sustainability have frequently relied on conceptual analyses, case studies, documentary reviews, and descriptive diagnoses of institutional practice. These approaches have been useful for identifying whether universities report environmental actions, social engagement initiatives, inclusive programs, or sustainability-oriented projects. However, they often remain limited in their ability to demonstrate the internal consistency of measurement instruments, the statistical structure of institutional dimensions, or the explanatory relationships among the variables under study.

Methodological literature on applied quantitative research suggests that studies based on surveys should move beyond descriptive frequency analysis and incorporate formal validation strategies for instruments, as well as inferential procedures capable of testing associations and patterns across variables ([Hernández, Fernández, & Baptista, 2006](#)). From this standpoint, the study of USR–SDG integration benefits from stronger procedures that distinguish dimensions, evaluate internal consistency, and assess whether perceived alignment between university responsibility and sustainable development is empirically robust. A practical orientation toward structured project evaluation also supports the need for clearer analytical models in institutional research settings ([Hernández et al., 2006](#)).

This methodological concern is particularly relevant in studies of higher education institutions in local and regional contexts such as Barranquilla, where organizational practices, institutional visibility, and stakeholder perceptions may vary substantially. The current manuscript already presents evidence related to inclusion, sustainability, research, alliances, and accountability, but the literature suggests that such domains should ideally be examined with greater statistical rigor. In this sense, the empirical background supports the need to strengthen the methodological sophistication of USR–SDG studies while maintaining the same conceptual and bibliographic foundation.

2.5. Theoretical Framework

2.5.1. Institutional Responsibility and Stakeholder Orientation

The theoretical foundation of this study begins with the evolution of social responsibility as a principle that redefines the relationship between institutions and society. Earlier approaches were primarily centered on the economic function of organizations and framed responsibility in terms of productivity and profit generation (Friedman, 1970). Over time, however, this understanding expanded to include the idea that organizations are embedded in broader social environments and therefore have responsibilities toward multiple stakeholders, including workers, communities, and the environment (Colombian Center for Corporate Responsibility, 2006; European Commission, 2001).

This broader perspective is important because it positions social responsibility as a multidimensional institutional obligation rather than as a voluntary or symbolic add-on. Theoretical contributions have emphasized that responsibility includes legal, ethical, social, and environmental commitments derived from the impacts institutions generate through their activities (Camacho, 2015; Domínguez, 2011). This approach also recognizes that responsibility is linked to organizational legitimacy and long-term sustainability, meaning that responsible behavior becomes part of how institutions justify their role within society.

Other authors extend this logic by interpreting responsibility as an ethical and strategic orientation that should permeate decision-making and organizational culture. From this perspective, social responsibility is not limited to external image or compliance but reflects a deeper alignment between institutional values, stakeholder expectations, and sustainable forms of development (Carbal et al., 2014; Esmailpour & Barjoei, 2016; Ruiz et al., 2016; Zarate & Gutiérrez, 2013). This framework provides the conceptual basis for analyzing universities as socially embedded institutions whose actions have consequences beyond the campus.

2.5.2. University Social Responsibility as an Integral University Model

The theoretical framework of University Social Responsibility rests on the premise that the university must be understood as a social actor with ethical, civic, and developmental obligations. Although universities share some organizational characteristics with firms, their distinctive mission requires a different interpretive lens. Scholars have argued that reducing the university to managerial efficiency overlooks its formative and public role, and risks subordinating its social function to utilitarian logic (De la Cruz & Sasía, 2008; Rodríguez, 2010).

Within this framework, University Social Responsibility is conceived as an integral model that links all core university functions to social transformation and sustainable development. This includes teaching that forms ethically committed citizens, research that addresses relevant societal problems, administrative management grounded in institutional coherence, and outreach activities that strengthen community engagement (Vallaes, 2009). Under this view, the university is accountable not only for what it teaches, but also for how it organizes itself and the kind of social impact it produces.

This model also assumes that university responsibility operates through several interrelated dimensions. Universities generate organizational effects through their internal management, educational effects through the training of students, epistemological effects through the production of knowledge, and social effects through their relationship with surrounding communities (François Vallaes, 2014). Additional theoretical contributions reinforce the argument that University Social Responsibility must be embedded across the institution as a policy orientation rather than treated as an isolated discourse or marginal initiative (Baca, 2015; Chirinos & Pérez, 2016; Ruiz-Corbella & Bautista-Cerro Ruiz, 2016).

2.5.3. Sustainable Development Goals as a Global Normative Framework

The Sustainable Development Goals function in this study as a global normative framework that allows institutional responsibility to be interpreted in relation to concrete and internationally recognized development priorities. The SDGs propose an integrated vision of development that addresses economic, social, environmental, and institutional challenges simultaneously, making them especially relevant for universities seeking to align their internal missions with broader societal needs (United Nations, 2015).

Theoretical and policy-oriented literature on sustainability in higher education suggests that universities are expected to translate these goals into action through curriculum design, research agendas, community engagement, environmental management, and institutional partnerships. In this sense, the SDGs do not merely provide an external reference; they also serve as a framework for institutional self-evaluation and transformation (Sustainable Development Solutions Network, 2020). Their relevance lies in offering a common language through which the contribution of universities to sustainable development can be identified, organized, and assessed.

This view is strengthened by research showing that universities increasingly operate under expectations of relevance, impact, and accountability in relation to Agenda 2030. Studies focused on higher education and sustainability argue that the SDGs allow universities to connect local institutional practices with global commitments, thereby reinforcing their social role and public legitimacy (Castillo, 2023; Rangel et al., 2022). UNESCO's reflections on higher education also support this perspective by underlining the responsibility of universities to respond to major world challenges through ethical and socially grounded academic action (UNESCO, 2009).

2.5.4. Conceptual Link Between USR and SDG Integration

The central theoretical proposition of this study is that University Social Responsibility and the Sustainable Development Goals are conceptually linked through the idea of institutional alignment between internal responsibility and external development commitments. University Social Responsibility provides the ethical and organizational foundation, while the SDGs offer the global development framework through which that responsibility can be operationalized and observed. In this sense, the integration between both constructs is not accidental but structurally connected.

This conceptual linkage becomes visible when universities adopt inclusive policies, strengthen sustainability practices, promote socially relevant research, establish external partnerships, and create mechanisms for evaluation and accountability. These actions reflect the university's internal commitment to responsibility while simultaneously contributing to SDG-related outcomes. The framework therefore assumes that institutional coherence, operational implementation, and monitoring capacity are key dimensions through which this integration can be analyzed empirically. This logic is consistent with broader debates on how organizations translate ethical commitments into strategic action and measurable impact (Vallaey, 2005, 2009).

Accordingly, the study is grounded in the assumption that a university's contribution to sustainable development depends not only on formal declarations, but also on the degree to which social responsibility is embedded in its structures, practices, and evaluative systems. This makes it possible to interpret perceptions of RSU–SDG integration as indicators of a deeper institutional process shaped by values, governance, visibility, participation, and impact. Under this framework, the analysis of higher education institutions in Barranquilla becomes a way of examining how global sustainability commitments are translated into local university practice through the lens of University Social Responsibility.

3. RESEARCH METHODS

3.1. Research Design

This study adopted a quantitative approach to examine the integration of University Social Responsibility and the Sustainable Development Goals in higher education institutions located in Barranquilla, Colombia. This design was appropriate because the research sought to identify patterns of institutional perception through structured data collection and to describe how members of the university community assess policies, practices, and initiatives related to social responsibility and sustainable development. In this sense, the study focused on the systematic analysis of measurable responses obtained through a survey instrument.

The research was framed as non-experimental and field-based. It was non-experimental because the variables were not manipulated by the researchers but were observed as they occurred in the natural institutional context of the participating higher education institutions. It was also field-based because the information was gathered directly from respondents linked to real university settings, allowing the analysis to remain grounded in the perceptions of students, faculty members, and administrative staff regarding institutional practices associated with USR and the SDGs.

In addition, the study had a descriptive scope. Its purpose was not to establish causal effects, but to characterize the degree to which the surveyed institutions demonstrate alignment between university social responsibility and sustainable development objectives. This descriptive orientation made it possible to identify strengths, limitations, and opportunities for institutional improvement in areas such as sustainability, inclusion, academic engagement, strategic alliances, monitoring, and accountability.

3.2. Population, Sample, and Data Collection

The study population consisted of sixteen higher education institutions in the city of Barranquilla, including three public institutions and thirteen private institutions. These institutions represented the broader universe within which the research problem was located, namely the extent to which local higher education institutions integrate USR principles with the Sustainable Development Goals. The decision to focus on Barranquilla was based on the city's relevance as a regional higher education hub and on the need to understand how these institutional commitments are expressed in a specific urban context.

The sample was selected through purposive convenience sampling. Seven higher education institutions were included based on information availability and access conditions. Although this type of sampling does not aim for statistical representativeness in a probabilistic sense, it is frequently used in applied institutional studies where access to organizations and respondents depends on administrative feasibility and cooperation. Within these institutions, the study included participants from different sectors of the university community, particularly students, faculty members, and administrative staff.

Data were collected through a structured survey as the main research instrument. The questionnaire was designed to capture perceptions regarding institutional initiatives, inclusion policies, sustainability strategies, academic and research practices, alliances, monitoring systems, and requirements for strengthening RSU–SDG integration. The use of survey data allowed the study to gather standardized responses across participants, facilitating the organization of findings into thematic dimensions and supporting the subsequent descriptive statistical analysis.

3.3. Data Processing and Analysis

Once collected, the data were organized and processed using SPSS. The use of statistical software made it possible to organize the responses, calculate percentages, and present the findings in a structured format through tables and graphs. This procedure supported a systematic interpretation of the survey results and enabled the identification of recurring response patterns across the items included in the instrument. The analysis therefore focused on the distribution of agreement and disagreement levels for each statement related to USR and the SDGs.

The analytical strategy relied primarily on descriptive statistics. Response categories were organized according to Likert-type agreement levels, and the results were interpreted through percentages associated with each option. This allowed the study to determine the degree of favorability or reservation with which the respondents perceived institutional actions in areas such as sustainability, equity, curricular integration, research, alliances, decision-making, environmental strategies, and evaluation mechanisms. In this way, the analysis generated a broad institutional diagnosis of current practices and perceived challenges.

To strengthen interpretation, the results were later grouped into broader analytical dimensions such as declarative coherence, operational integration, and monitoring and accountability. This dimensional reading allowed the study to move beyond isolated item interpretation and toward a more organized understanding of how the institutions relate RSU principles to the Sustainable Development Goals. Although the main analysis remained descriptive, this structure also provided a basis for future methodological strengthening through reliability testing, factorial validation, and inferential analysis in subsequent versions of the research.

4. RESULTS

4.1. Institutional Sustainability Initiatives and SDG Visibility

The first block of results shows a generally favorable perception of institutional efforts to connect university practices with the Sustainable Development Goals. Across the five items, favorable responses ranged from 64% to 68%, while estimated mean scores ranged from 3.66 to 3.85 on a five-point Likert scale. The strongest item was student participation in volunteering activities linked to the SDGs (P3), with 68% favorable responses and a net positive balance of 36 percentage points. This suggests that respondents recognize concrete participatory actions more clearly than broader forms of interinstitutional collaboration.

At the same time, the results indicate that institutional visibility remains uneven. Collaboration with companies and NGOs in sustainable development initiatives (P4) produced the lowest mean in this block (3.66), and all items retained between 32% and 36% of unfavorable responses when partial disagreement is included. This pattern suggests that, although institutions are perceived as active in sustainability and awareness-building, a substantial minority of respondents still does not identify these initiatives clearly or consistently.

Table 1 presents the distribution of responses related to institutional sustainability initiatives, student volunteering, collaboration with external actors, and SDG awareness activities in the participating higher education institutions.

Table 1. Institutional sustainability, volunteering, and SDG engagement.

Item	Statement (abridged)	Totally disagree (%)	Disagree (%)	Partially disagree (%)	Agree (%)	Totally agree (%)	Unfavorable (%)	Favorable (%)	Mean score
P1	SDGs are directly linked to institutional initiatives	7	4	22	31	36	33	67	3.85
P2	There are institutional projects focused on environmental and social sustainability	8	7	20	30	35	35	65	3.77
P3	Student participation in volunteering with SDG impact is promoted	8	6	18	38	30	32	68	3.76
P4	The university collaborates with firms and NGOs on sustainable development initiatives	8	8	20	38	26	36	64	3.66
P5	The institution organizes SDG awareness activities for the university community	6	10	19	36	29	35	65	3.72

Note: Unfavorable = totally disagree + disagree + partially disagree. Favorable = agree + totally agree. Mean score estimated from a 1–5 Likert scale using the percentage distribution reported in the manuscript.

Overall, this table suggests that higher education institutions have made visible advances in sustainability-oriented action, especially in volunteering, institutional initiatives, and awareness-building. However, the persistence of nontrivial levels of disagreement indicates that these efforts are not yet perceived as uniformly institutionalized across the university community.

4.2. Inclusion Policies, Academic Integration, and Impact Orientation

The second set of findings reveals that respondents perceive a positive, though more moderate, level of institutional integration between inclusion, USR, and the SDGs. Favorable responses range from 59% to 67%, and mean scores remain between 3.65 and 3.87. The strongest result corresponds to the existence of clear inclusion and social equity policies (P6), which achieved the highest favorable percentage in this block and the highest estimated mean score. However, the results also show that more demanding institutional functions, especially impact measurement, receive weaker evaluations. The item assessing whether the institution measures the impact of its

USR programs on SDG achievement (P10) obtained the lowest favorable percentage, at 59%, and the highest unfavorable level, at 41%. This suggests that respondents are more likely to recognize formal inclusion discourse and curricular content than robust systems for evidence-based assessment of institutional contributions. Table 2 presents the distribution of responses concerning inclusion policies, academic integration of University Social Responsibility and the Sustainable Development Goals, research promotion, incentives for social impact projects, and institutional impact measurement.

Table 2. Inclusion, USR, SDG integration, and impact perception.

Item	Statement (abridged)	Totally disagree (%)	Disagree (%)	Partially disagree (%)	Agree (%)	Totally agree (%)	Unfavorable (%)	Favorable (%)	Mean score
P6	The institution has clear policies on inclusion and social equity	6	6	21	29	38	33	67	3.87
P7	Academic programs include content related to USR and the SDGs	5	10	23	33	29	38	62	3.71
P8	The university promotes research on social and environmental problems aligned with the SDGs	7	6	26	31	30	39	61	3.71
P9	There are incentives for faculty and students participating in social impact projects	7	7	25	32	29	39	61	3.69
P10	The institution measures the impact of USR programs on SDG achievement	5	11	25	32	27	41	59	3.65

Note: Unfavorable = totally disagree + disagree + partially disagree. Favorable = agree + totally agree. Mean score estimated from a 1–5 Likert scale using the percentage distribution reported in the manuscript.

These results indicate that institutional commitment is more visible in policy and curricular discourse than in formalized systems of evaluation. In substantive terms, the block supports the interpretation that universities have

progressed in inclusion and academic alignment, but still face a notable gap in translating those efforts into measurable and widely recognized impact.

4.3. Strategic and Organizational Embedding of USR and the SDGs

The third block shows that the symbolic and value-based dimensions of institutional commitment are stronger than the formal managerial structures supporting them. The item with the highest support in the entire results section is the statement that institutional values reflect a commitment to sustainability and social responsibility (P11), which reached 74% favorable responses and an estimated mean of 4.06. Likewise, the inclusion of vulnerable groups in academic and extension programs (P15) obtained 69% favorable responses. In contrast, more formal organizational mechanisms, such as strategic plans, specific committees, and periodic reporting, produced only moderate favorability, ranging from 57% to 58%. This suggests an institutional pattern in which sustainability and USR are more visible as discourse and normative orientation than as consolidated structures of governance, coordination, and accountability. The relatively high levels of partial disagreement in P12, P13, and P14 reinforce this interpretation. Table 3 presents the distribution of responses regarding institutional values, strategic planning, specialized coordination structures, periodic SDG reporting, and inclusion of vulnerable groups within academic and extension programs.

Table 3. Institutional framework for sustainability, USR, and the SDGs.

Item	Statement (abridged)	Totally disagree (%)	Disagree (%)	Partially disagree (%)	Agree (%)	Totally agree (%)	Unfavorable (%)	Favorable (%)	Mean score
P11	Institutional values reflect commitment to sustainability and social responsibility	4	6	19	37	37	29	74	4.06
P12	The university has a strategic plan linking USR and the SDGs	5	10	30	36	22	45	58	3.69
P13	There is a specific committee or unit responsible for USR and the SDGs	7	6	30	34	23	43	57	3.60
P14	The university reports its SDG impact through periodic reports	7	7	28	34	24	42	58	3.61
P15	The institution promotes inclusion of vulnerable groups in academic and extension programs	5	11	20	37	32	36	69	3.95

Note: Unfavorable = totally disagree + disagree + partially disagree. Favorable = agree + totally agree. Mean score estimated from a 1–5 Likert scale using the percentage distribution reported in the manuscript.

Taken together, the findings suggest that respondents strongly recognize the ethical and value-based orientation of their institutions, yet they are less certain about the existence of visible strategic mechanisms and reporting structures. This difference is analytically important because it points to a gap between institutional culture and administrative formalization.

4.4. Management Systems, Communication, and Continuous Improvement

The fourth block presents a relatively balanced pattern of positive perception across institutional management processes. Favorable responses ranged from 60% to 64%, and mean scores ranged from 3.66 to 3.78. The strongest result corresponds to mechanisms of evaluation and continuous improvement for USR initiatives aligned with the SDGs (P20), followed closely by the incorporation of sustainability into investment decisions (P16) and ecological footprint reduction strategies (P18). Even so, communication remains the weakest element in this block. The item stating that the university community is informed about USR actions and their relationship with the SDGs (P17) obtained the lowest favorable percentage, at 60%, and the lowest mean score, at 3.66. This indicates that institutional actions may exist, but their visibility within the university community is less consolidated than environmental practices or improvement routines. It also suggests that internal dissemination is essential for stronger institutional appropriation. Table 4 presents the distribution of responses related to sustainability criteria in investment and procurement decisions, internal communication on USR and SDG actions, ecological footprint reduction, strategic alliances, and mechanisms for evaluation and continuous improvement.

Table 4. Management systems, sustainability criteria, and continuous improvement.

Item	Statement (abridged)	Totally disagree (%)	Disagree (%)	Partially disagree (%)	Agree (%)	Totally agree (%)	Unfavorable (%)	Favorable (%)	Mean score
P16	SDGs are considered in investment and procurement decisions	4	6	27	36	27	37	63	3.76
P17	The university community is informed about USR actions and their relation to the SDGs	7	7	26	33	27	40	60	3.66
P18	Strategies have been implemented to reduce the institution's ecological footprint	7	6	24	28	35	37	63	3.78
P19	Alliances with other universities and productive sectors reinforce commitment	7	8	23	31	31	38	62	3.71

	to USR and the SDGs								
P20	The institution has mechanisms for evaluation and continuous improvement of USR initiatives aligned with the SDGs	6	6	24	36	28	36	64	3.74

Note: Unfavorable = totally disagree + disagree + partially disagree. Favorable = agree + totally agree. Mean score estimated from a 1–5 Likert scale using the percentage distribution reported in the manuscript.

This table confirms that the institutions display moderate-to-strong perceived progress in integrating USR and SDG criteria into management and improvement systems. However, the weaker performance of internal communication indicates that one of the main institutional challenges is not only to implement actions but also to ensure that students, faculty, and administrative staff recognize them clearly and consistently.

5. DISCUSSION

5.1. Institutional Progress in Aligning USR with the SDGs

The findings indicate that higher education institutions in Barranquilla have made meaningful progress in connecting University Social Responsibility with the Sustainable Development Goals. The results show favorable perceptions of sustainability initiatives, volunteering, inclusion policies, academic engagement, and environmental strategies, suggesting that the participating institutions have moved beyond purely rhetorical commitment and have begun to incorporate sustainability-related principles into institutional practice. This supports the view that universities increasingly function as socially embedded organizations whose missions extend beyond teaching and research to include broader contributions to collective wellbeing.

This pattern is consistent with approaches that understand University Social Responsibility as a comprehensive institutional project rather than as an isolated extension activity. In particular, the results reinforce the argument that universities are expected to articulate their teaching, research, management, and social engagement functions around ethical responsibility and sustainable development goals. The relatively high levels of agreement found in the study therefore suggest that respondents perceive an emerging institutional culture in which responsibility and sustainability are becoming part of the university’s public role (Vallaey, 2009).

At the same time, the results confirm that such progress remains uneven and incomplete. While many respondents recognize institutional efforts, a substantial minority still reports partial or clear disagreement across several dimensions. This indicates that the integration process is advancing but is not yet fully consolidated or equally visible across the university community. In this sense, the findings align with the broader argument that universities must strengthen their substantive engagement with the sustainable development agenda if they are to translate formal commitment into more consistent institutional transformation (Castillo, 2023).

5.2. The Gap Between Institutional Discourse and Operational Consolidation

One of the most important findings of the study is the gap between symbolic institutional commitment and the formal consolidation of organizational mechanisms. Respondents clearly recognized institutional values related to sustainability and social responsibility, as well as the existence of inclusion-oriented policies and some forms of operational engagement. However, weaker results were observed in strategic planning, impact measurement, periodic reporting, and the visibility of specific structures responsible for leading USR–SDG integration. This suggests that ethical discourse is more firmly established than managerial formalization.

This gap is theoretically significant because it reflects one of the central tensions identified in the literature on University Social Responsibility. Universities may adopt the language of responsibility and sustainability, but unless these principles are embedded into structures of governance, monitoring, and accountability, their institutional effects remain partial. In other words, responsibility must be translated into systems, procedures, and decision-making arrangements if it is to become a stable organizational feature rather than a general declaration of intent. This interpretation is consistent with arguments that emphasize the importance of integrating responsibility across all dimensions of university functioning (François Vallaeys, 2014).

The findings also resonate with critical perspectives warning against the superficial transfer of responsibility discourse into higher education without sufficient structural adaptation. If universities are treated only as organizations that display values, but not as institutions that must build coherent internal arrangements around their public mission, then the social meaning of USR becomes diluted. The moderate results observed in planning, committees, reporting, and impact evaluation therefore support the claim that universities must go beyond symbolic alignment and develop institutionally visible mechanisms capable of sustaining and evidencing their contribution to society (De la Cruz & Sasia, 2008).

5.3. Implications for Institutional Strengthening and Future Research

The results have clear implications for institutional strengthening in higher education. First, they suggest that universities should consolidate internal communication strategies so that members of the academic community can more clearly identify the relationship between institutional actions and the SDGs. Second, the findings indicate the need for more systematic mechanisms for monitoring, evaluation, and public reporting. Without visible evidence of outcomes, even well-developed initiatives may remain weakly perceived or insufficiently legitimized within the institution. This is especially important in contexts where sustainable development commitments are expected to be measurable and accountable. The discussion also points to the need for stronger internal capacity-building. Respondents recognized the importance of training, student participation, strategic alliances, and better resourcing for USR-related initiatives. These priorities suggest that institutional strengthening should not be limited to formal policy documents, but should also include the development of organizational competencies, participatory structures, and long-term support systems capable of sustaining university engagement with social and environmental challenges. This interpretation is consistent with the view that universities play a central role in advancing Agenda 2030 through integrated and institution-wide practices (United Nations, 2015). From a research perspective, the study also reveals the importance of methodological strengthening in future work on USR and SDG integration. Since the present findings are based mainly on descriptive perceptions, subsequent studies should incorporate stronger validation procedures, dimensional modeling, and inferential testing in order to better capture the relationships among institutional commitment, operational implementation, and measurable impact. Such an agenda is consistent with methodological approaches that call for more rigorous quantitative designs in applied social

research, especially when institutional processes are being examined through structured survey instruments (Hernández et al., 2006).

6. CONCLUSIONS

The study concludes that higher education institutions in Barranquilla have made meaningful progress in integrating University Social Responsibility with the Sustainable Development Goals, particularly in sustainability initiatives, inclusion, academic engagement, environmental strategies, and community-oriented practices. However, the findings also show that this integration remains uneven, especially in relation to internal communication, impact measurement, strategic formalization, and accountability mechanisms. In this sense, the institutions appear to have advanced more clearly in normative commitment and visible institutional discourse than in fully consolidated systems of evaluation and governance. Therefore, stronger and more sustainable integration of USR and the SDGs requires not only continued institutional commitment but also improved monitoring structures, broader participation, clearer communication, and more rigorous empirical assessment of impact.

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