Assessing ESG Implementation in the Indian Construction Industry: A Comparative Analysis of Global Reporting Initiative and Business Responsibility and Sustainability Reporting Frameworks

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Abstract

The construction industry enhances GDP of an economy and employment, however, it impacts the environment. Players thus have to take measures to prevent environmental harm. Players have also to disclose these. It helps in channelling industry funding . This investigation evaluates the adoption and efficacy of the Global Reporting Initiative (GRI) and Business Responsibility and Sustainability Reporting (BRSR) frameworks within the Indian construction industry. The study uses mixed-methods approach through factor analysis and SEM. Differences were found in adoption of GRI and BRSR frameworks. GRI aligns with international standards while BRSR meets local regulations. Both frameworks face challenges in reporting practices. Findings suggest scope for standardized training and broader stakeholder engagement to improve quality and impact of sustainability reports. The study contributes to the theoretical understanding of sustainability reporting by balancing global best practices with local business realities, leading to more effective sustainability integration in the Indian construction sector

Keywords: Sustainability Reporting; GRI Framework; BRSR Framework; ESG Practices; Construction Industry

Introduction

The construction industry, while aiding in economic development, contributes to environmental degradation, through substantial emissions, waste production, and resource consumption (Smith, 2020).The growing awareness and regulatory pressures necessitate the adoption of robust Environmental, Social, and Governance (ESG) frameworks. This study examines the implementation and effectiveness of the Global Reporting Initiative (GRI) and Business Responsibility and Sustainability Reporting (BRSR) within the Indian construction industry, pivotal frameworks guiding sustainable development and corporate responsibility. The urgent need for sustainability in the construction sector is driven by its significant environmental footprint, which includes contributing to nearly 39% of global carbon emissions (Doe, 2019). The GRI and BRSR frameworks are designed to foster transparency and enhance accountability in sustainability practices. This research explores their adaptability and effectiveness, aiming to bridge the gap between global sustainability standards and local implementation challenges (Lee, 2021).

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Objective/s of the Study

This study evaluates how the GRI and BRSR frameworks are adopted and implemented in the context of the Indian construction industry, assessing their potential to meet the industry's specific needs and the overarching goals of sustainable development. It delves into the comparative analysis of GRI and BRSR frameworks, investigating their influence on the sustainability reporting practices of leading construction firms. Despite the critical role of sustainability frameworks in enhancing industry practices, research remains limited on the effectiveness of these frameworks within sector-specific contexts, particularly in emerging economies like India. This study addresses this gap by providing a detailed analysis of how these frameworks are utilized and perceived within the Indian construction industry. The significance of this study lies in its contribution to the empirical understanding of sustainability reporting within the Indian construction industry. By highlighting the practical and theoretical implications of GRI and BRSR frameworks, the research aims to inform policy-making and strategic decisions in sustainability practices (Michelon, 2015). Additionally, it seeks to contribute to the global discourse on sustainable development by contextualizing the effectiveness of international frameworks within local industry practices.

Literature Review

Sustainability reporting has evolved significantly from voluntary corporate initiatives to a structured global practice, driven by increasing environmental concerns and regulatory frameworks. This evolution encompasses various reporting paradigms such as the Triple Bottom Line, ESG Reporting, and Integrated Reporting, reflecting a broad commitment to economic, environmental, and social responsibilities (Nayak & Kayarkatte, 2021). Despite its critical environmental impact, the construction industry has lagged in adopting robust sustainability reporting practices. This gap is primarily due to the industry's complex nature and the significant environmental footprints associated with construction activities. Research highlights a pressing need for industry-specific sustainability frameworks that address unique challenges such as high emissions and resource consumption (Glass, 2012) (Goel, 2019). The growing importance of ESG indicators is transforming investment strategies and corporate performance evaluations. Key Performance Indicators play a vital role in quantifying environmental performance, pointing to a need for clear and relevant metrics that align with strategic priorities to foster long-term value creation (Kocmanová1, 2012). This section examines the practical applications and comparative effectiveness of the GRI and BRSR frameworks in the construction sector. Studies suggest that while GRI provides a global standard for sustainability reporting, BRSR offers a more localized approach, tailored to Indian regulatory conditions (Ioannou, 2019).Comparative studies stress the necessity for frameworks that support both compliance and strategic business objectives (Clarkson, 2008). Parashar (2024) found 52.30% similarities between GRI and BRSR. Author also reported about 18 areas where BRSR communicates more information compared to GRI and 7 areas where BRSR could be further refined. Kajal & Bansal (2025) reported that MCap of a company impacted sustainability reporting positively, which suggests that larger sized companies are giving higher priority to such reporting, which affirms legitimacy and stakeholder theory in the context of Indian companies. Perhaps this is also the reason why SEBI has stipulated that to begin with, large companies have to mandatorily report the sustainability initiatives. Devi et al (2025) observed information overlap with other disclosures, hence suggested that policy makers should look into establishing relevant disclosure guidelines to enhance future disclosures.

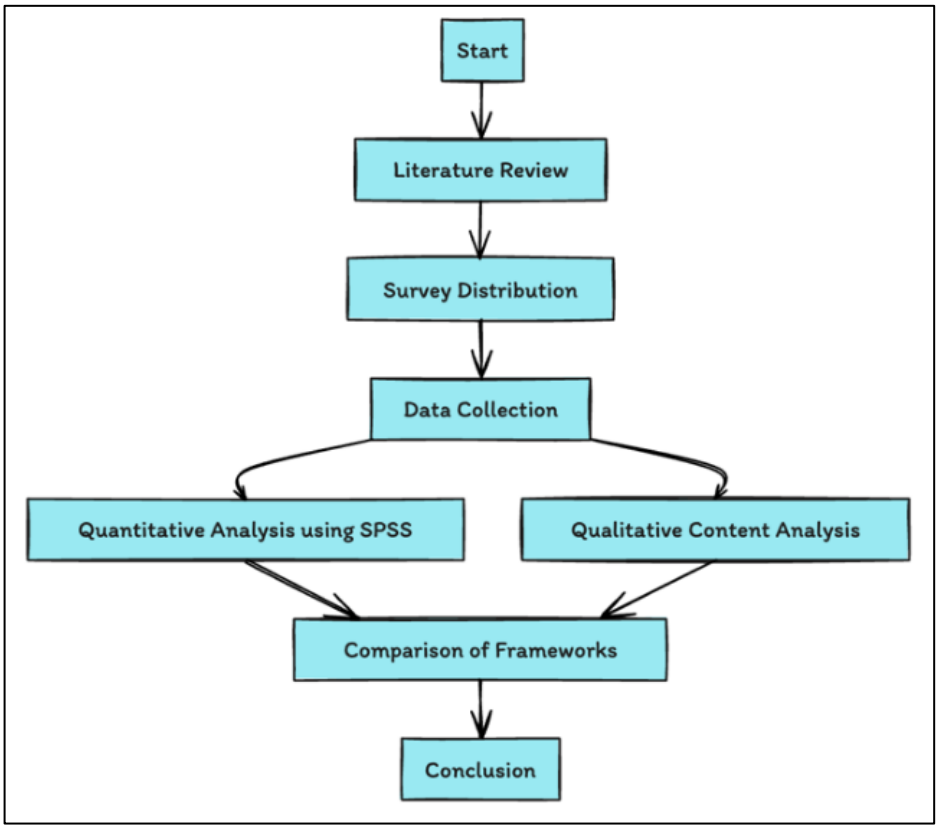
Comparative studies, such as those conducted by, provide insights into how these frameworks facilitate transparency and accountability in reporting practices, which is crucial for global and local compliance (Clarkson, 2008). The variability in stakeholders' familiarity with these frameworks underscores a critical gap in training and awareness, which is crucial for effective implementation. (Carol A. Adams, 2008) argue that stakeholder capacity building through continuous education is essential for the successful adoption of sustainability frameworks. Our study supports this, suggesting an urgent need for comprehensive educational programs tailored to different levels within organizations

Methods

The study employs a mixed-methods approach, integrating quantitative and qualitative analyses to provide a comprehensive understanding of sustainability reporting practices. This approach allows for a robust examination of the frameworks' implementation and their impact on sustainability reporting within the target industry. A schematic flowchart of the research methodology is presented in Figure 1.

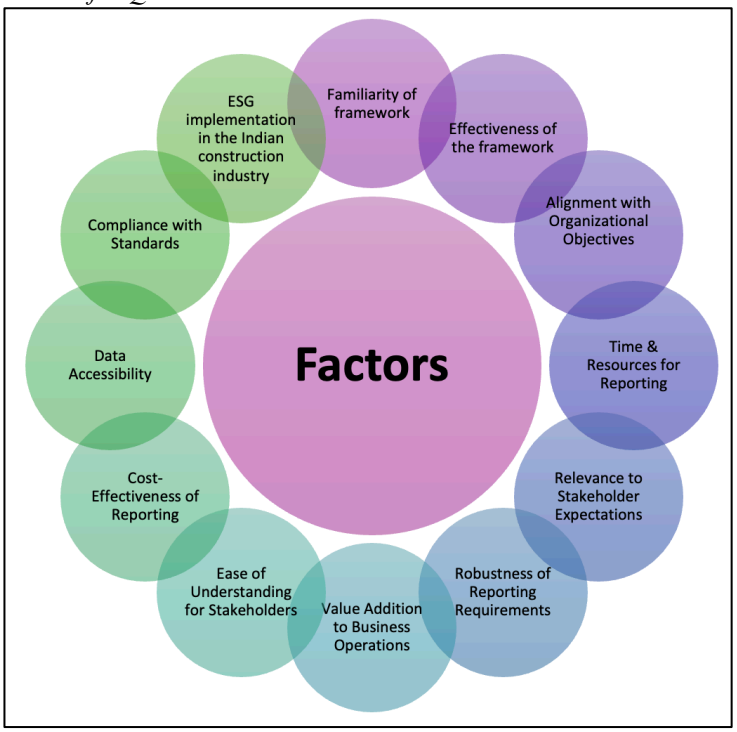
Figure 2

Flowchart of Research Methodology



Data were collected through two primary means. Qualitative data were gathered through the analysis of sustainability reports published by the surveyed companies, focusing on the integration and presentation of sustainability metrics and practices. Content analysis was conducted on the sustainability reports to identify themes and patterns in sustainability reporting practices. This analysis helped in understanding the depth and focus of the reports concerning the GRI and BRSR guidelines. A structured questionnaire was distributed to professionals involved in sustainability reporting within major construction companies in India. The survey aimed to capture quantitative data on the adoption and perceived effectiveness of the GRI and BRSR frameworks. Factors were extracted from the literature review in broad areas of familiarity with frameworks (Smith, 2020),usage of frameworks (Doe 2018), perceived effectiveness, challenges in implementation and preference of frameworks. Contributing factors related from the literature revolved around time, cost effectiveness resources for reporting, data accessibility, ease of understanding and compliance with standards. These factors provided inputs for survey design. Schematic diagram showing factors identified from the literature are presented at Figure 2.

Figure 3
Factors for Questionnaire



Descriptive statistics provided an overview of the data, while inferential statistics, such as chi-square tests and factor analysis, were used to assess relationships and differences between variables. The respondents were primarily mid to senior-level management professionals from top construction firms in India, identified based on their involvement in sustainability initiatives. A total of 100 responses were collected, ensuring a diverse representation of perspectives within the industry.

Results and Discussion

Cronbach's alpha at 0.856, and KMO of 0.853, and chi-square of 604.511 with 66 df and sig. 000, confirmed suitability of data for statistical analysis. 12 factors were extracted in 2 groups of 6 factors each. SEM was then conducted using AMOS and the diagram is presented in Figure 3. Model Fit parameters obtained from AMOS confirming model acceptance is presented in Table 1.

Figure 3
Amos Path Diagram

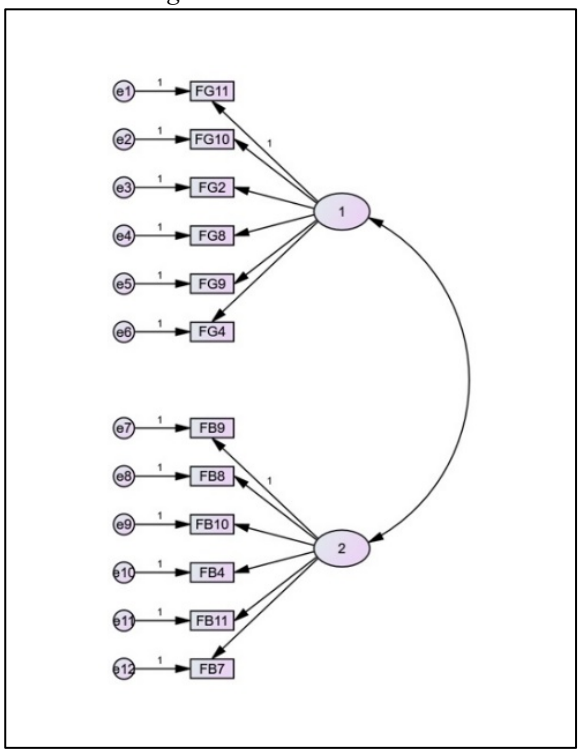


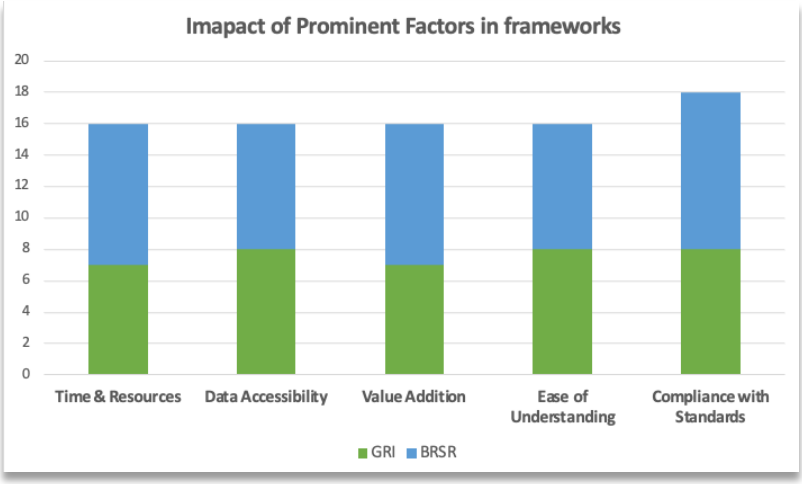
Table 1
Model Fit measures from AMOS

Measure	Estimate	Threshold	Interpretation
CMIN	84.653	--	--
DF	53	--	--
CMIN/DF	1.597	Between 1 and 3	Excellent
CFI	0.944	>0.95	Acceptable
SRMR	0.081	<0.08	Acceptable
RMSEA	0.078	<0.06	Acceptable
PClose	0.078	>0.05	Excellent

Congratulations, your model fit is acceptable.

Figure 4 shows key factors which have been found to have impact.

Figure 4
Prominent factors impact in framework.



Both GRI and BRSR require substantial time and financial resources, with firms often citing high costs and significant time investments as major barriers (Waddock & Graves, 1997; Adams, 2008). Effective sustainability reporting also depends on reliable data. Access to data facilitates transparency and enhances decision-making processes (Chauvey et al, 2015); (Michelon, 2015). Perceived cost-effectiveness of implementing frameworks influences organizational choice, comparing benefits against the expenses. Report presentation influences stakeholder engagement and trust. Easily understandable reports are more likely to be utilized by stakeholders, thus enhancing the frameworks' effectiveness (Moneva, 2006) (Hahn & Kuhnen, 2013). Regulatory compliance is crucial, especially for the BRSR framework. Adherence enhances the credibility and legitimacy of the firms' sustainability efforts (Gunningham et al, 2004) (Deepa & Christmann, 2011). GRI framework has robust approach to addressing comprehensive ESG issues effectively, making it preferable for firms looking to enhance their global sustainability performance (Ioannou, 2019). BRSR framework is perceived to add direct value to business operations, particularly in terms of compliance and engagement with local stakeholders, aligning well with firms' strategic priorities (Flammer, 2015; Eccles et al, 2014).

The implementation of ESG practices in industry is still in early stages due to limited awareness about these topics. Stakeholders have demonstrated a higher level of awareness and familiarity with BRSR, which is for regulatory compliance. Resource constraints, data accessibility, and consistent compliance are prominent. These challenges resonate with the work of (Deepa & Christmann, 2011), who discuss the obstacles in ESG implementation, particularly costs and complexity of data management. To address these issues, our research aligns with the recommendations of (Waddock & Graves, 1997) to prioritize resource allocation and improve transparency through better reporting tools and processes. Mandatory nature of BRSR for top listed companies under SEBI guidelines has significantly contributed to its widespread recognition and implementation. The adoption of the BRSR framework surpasses that of GRI, which stakeholders find more complex and less tailored to the specific needs of the Indian construction industry. BRSR's simpler compliance requirements and cost-effectiveness make it more accessible and preferable for local companies. This practicality supports a smoother integration of sustainability practices within corporate operations, making BRSR the preferred choice for many organizations. Despite BRSR’s popularity, many stakeholders recommend using both GRI and BRSR frameworks together. This dual approach is believed to enhance sustainability reporting by merging GRI’s international standards with BRSR’s local focus, providing a more rounded and effective sustainability strategy that aligns with both global and local expectations. GRI was adopted by 12% of

the companies, BRSR was adopted by 22%, while 56 companies adopted both and 10% adopted neither. This duality suggests a hybrid approach might be best suited for companies operating in global and local contexts simultaneously, a strategy supported by (Ioannis Ioannou, 2019) who emphasize the importance of aligning global standards with local practices. BRSR's higher adoption rate compared to GRI could be attributed to its alignment with local regulatory requirements and its recent promotion by Indian authorities (SEBI, 2020). This supports the notion that localized frameworks tend to have better implementation success in specific regulatory contexts (Menghnani et al, 2022). Robust adoption of BRSR is attributed to its specific alignment with regional regulatory and cultural needs. This observation is supported by (Lee M. &., 2019), who suggests that frameworks tailored to local contexts enhance compliance and integration into business operations, expediting their adoption across industries. Both frameworks show limitations in operational effectiveness, which could be improved by enhancing stakeholder engagement and training, as suggested by (Adams, 2008) (Waddock & Graves, 1997) (Ball, 2020). Pie chart indicating this distribution is presented in Figure 5. Table 2 presents a comparison of GRI and BRSR frameworks.

Figure 5

Adoption trends of frameworks.

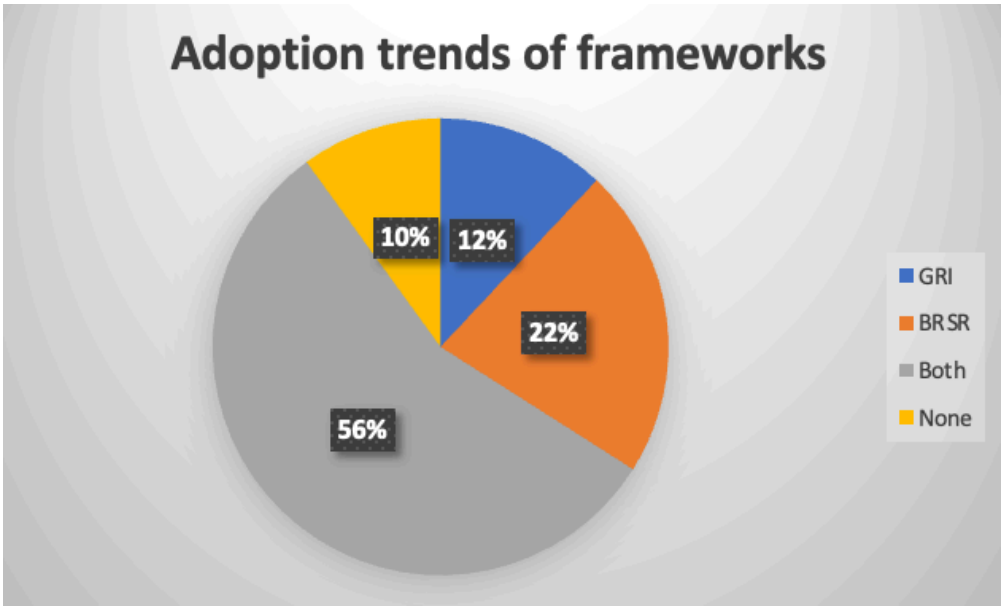


Table 2
Comparison of GRI &BRSR

Aspect	GRI Framework	BRSR Framework
Focus Areas	Emphasis on environmental sustainability, corporate governance, and broad stakeholder engagement	Focus on local regulatory compliance, social responsibility, and community engagement
Company Size Preference	Larger firms with global operations due to international standards	Medium to large firms focusing on local compliance and regulatory adherence
Coverage and Depth	Provides extensive guidelines on a wide range of sustainability topics, allowing for detailed environmental and social reporting	Focus on compliance with Indian regulations, emphasizing governance alongside environmental and social issues
Flexibility and Specificity	Highly flexible, enabling tailored reporting based on significant impacts, which may lead to variations in reporting depth	More prescriptive, standardizing reporting practices which facilitates comparability but may limit depth on certain issues
Stakeholder Engagement	Encourages extensive stakeholder engagement to identify material topics, ensuring reports address relevant issues	Encourages extensive stakeholder engagement to identify material topics, ensuring reports address relevant issues
Compliance and Integration	Adaptable to local norms but requires companies reporting independently with local regulations for full compliance	Designed in alignment with Indian regulatory requirements, ensuring direct compliance for Indian companies
Implementation Complexity	Can be complex due to broad and diverse criteria	Often challenging due to strict compliance requirements
Adaptability	Needs significant adaptation for local relevancy	Designed for local relevancy, less adaptation needed
Reporting Burden	Potentially high due to detailed and extensive reporting requirements	Can be high as it requires detailed documentation for compliance
Cost Implications	Implementation can be resource-intensive, requiring significant investment in data collection and reporting systems	Typically, more cost-effective for Indian companies due to alignment with local regulations and existing practices
Strategic Integration	Facilitates integration of sustainability into broader business strategy, supporting long-term value creation	Emphasizes compliance and risk management, potentially limiting strategic integration opportunities

Conclusion

Employee Awareness and Asset Valuation were important factors. Sustainability reporting is nascent in the industry. Global Alignment was necessary for improving stakeholder engagement and comprehensive reporting.

Improving ESG practices include advocating for policy support to integrate sustainability more deeply into business strategies, as supported by (Schaltegger & Burritt, 2010), encouraging the adoption of both frameworks, optimizing them to meet sustainability goals.

Industries can implement comprehensive ESG training across all level, develop integrated reporting systems that merge financial and non-financial data, enhancing transparency and stakeholder engagement.

Regulatory Bodies can standardize ESG metrics and offer incentives for compliance, eg tax benefits. They can track long-term changes and impacts of ESG practices over time; They can compare global ESG practices to identify adaptable best practices; explore relationship between ESG practices and financial outcomes; investigate how AI and blockchain could revolutionize ESG reporting, assess BRSR's effectiveness to determine real improvements in ESG disclosures and practices.

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