

Automating ESG Reporting: Driving Sustainable Finance and Global Competitiveness

Dr. Devika A¹ | Dr. Latha R^{2*}

¹Associate Professor, Vani Sakkare Government First Grade College.

²Associate Professor, LBS Government First Grade College.

*Corresponding Author: latharamappa@gmail.com

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Abstract

Environment, Social and Governance (ESG) reporting has gained significant importance as an instrument for communicating corporate sustainability performance to various stakeholders. At the same time, the fast development of sustainable finance increases the need for transparent, reliable and comparable ESG disclosures. To meet this need, organizations begin using digital technologies and automated systems for making their ESG reporting process more efficient and credible. This research paper is devoted to the role of ESG reporting automation in promoting sustainable finance and increasing competitiveness in the global market. This research is based on the secondary data collected from GSIA, SEBI, the NSE–SES ESG Analysis Model, CRISIL sustainability reports and other sources. It turns out that the amount of sustainable investment assets continues to grow worldwide, which shows the growing importance of ESG factors in investment decisions. Besides, it is revealed that the ESG reporting environment in India has been improved thanks to the introduction of the Business Responsibility and Sustainability Reporting (BRSR) framework and BRSR Core. Whereas governance is the most advanced pillar of ESG, the other two pillars need more attention. The research comes to the conclusion that ESG reporting automation would help ensure transparency, increase the quality of reporting, facilitate compliance with regulations and build investors' trust.

Keywords: ESG Reporting, Sustainable Finance, ESG Automation, BRSR, Sustainability Reporting, Global Competitiveness.

Introduction

The concepts of Environmental, Social and Governance (ESG) have gained relevance in terms of management and investment decision making in the recent years. Increasing pressure on businesses from different sides has made ESG transition from a voluntary approach towards an important element of the strategy, which is used for risk management and reputation building.

Sustainable finance also plays its role in increasing the significance of ESG reporting. Modern investors not only look at financial results of companies but also pay attention to the way the environmental, social and governance issues are managed. Thus, ESG reporting becomes an essential element that affects investment decision and stakeholder's confidence. The Global Sustainable Investment Alliance (GSIA) has reported that in 2024 assets, which report on responsible and sustainable investment approach, amounted to approximately USD 16.7 tril.

The rise in ESG reporting requirements has also given way to challenges with respect to reporting. The conventional reporting process involves manual gathering of data and use of fragmented

systems, which may pose efficiency and accuracy problems. Thus, the trend towards digitalization, artificial intelligence and automation in order to enhance the process of ESG reporting has been on the rise.

For instance, in India, the Securities and Exchange Board of India (SEBI) has enhanced the sustainability reporting practices with the development of the Business Responsibility and Sustainability Reporting (BRSR) initiative and BRSR Core. This is in an effort to promote better transparency, accountability, and quality of ESG reporting. However, there is more focus on governance than the other two elements.

In light of this, the current research study aims to analyze the contribution of ESG reporting automation towards sustainable finance and improving global competitiveness. The study analyzes global sustainable investment practices, the evolving ESG reporting system in India, and the increasing importance of technology-enabled sustainability reporting.

Literature Review

The significance of ESG has not gone unnoticed among scholars, investors, and policy makers. Previous literature shows that good ESG performance leads to the creation of reputation, stakeholder trust, efficient risk management, and financial gains. In particular, the research carried out by Aydoğmuş (2022) and Chen et al. (2023) revealed that firms having good ESG performance gain value, profit, and investor trust.

The popularity of sustainable finance has only enhanced the significance of ESG disclosure practices. According to NYU Stern Centre for Sustainable Business (2021), most researches linking ESG with financial performance have found either positive or no effect at all, meaning that sustainability efforts help create value in the long-run without jeopardizing financial performance.

Corporate governance is still an essential part of ESG performance in emerging economies. Handayati (2024) stressed the importance of governance in improving transparency, accountability and disclosure quality. However, environmental and social aspects have grown in their importance due to increasing demands towards responsible management of the climate issues, workers' health and stakeholder engagement. According to Yang (2024) and Zhang (2025), the balanced approach towards all ESG pillars is needed for sustainability.

Advances in artificial intelligence, data analysis and digital reporting platforms have also changed the way companies report their ESG activities. Digitalization of ESG reporting increases the accuracy of information and simplifies reporting process. Several regulatory initiatives in India such as BRR, BRSR and BRSR Core have been adopted to promote ESG reporting.

In general, literature indicates that there is an emerging relationship between ESG reporting, sustainable finance, and technology innovations. Nonetheless, few studies have explored the role of ESG reporting automation in promoting sustainable finance and competitiveness in the global market, especially in developing countries like India. This is what forms the research rationale.

Need for the Study

A review of literature highlights that substantial amount of research work has been done by researchers related to ESG performance, sustainability reporting and responsible investments. There is an extensive literature available regarding the linkages between the ESG metrics and the financial performance of firms, while some have dealt with investor behavior and sustainable financing. Likewise, there is extensive literature available regarding the governance mechanisms and its impact on corporate accountability and transparency.

But, there is relatively little literature available which deals with ESG reporting automation, sustainable financing and global competitiveness together. While existing literature focuses on sustainability reporting and technological innovation separately, there is no literature which examines how automation in the sustainability reporting system helps in improving the quality of disclosures and facilitates sustainable investing. Moreover, despite the fact that India has launched some regulatory reforms like BRSR and BRSR Core, there is very less empirical discussion about it.

The growing intricacy of ESG disclosure standards, alongside the accelerated growth of sustainable finance, gives rise to the necessity of understanding how an organization can manage its sustainability information. In light of the increasing need for disclosure, ESG reporting automation seems to be a viable approach. Thus, there arises a necessity for research on how ESG reporting facilitated by

technology can foster transparency, sustainable finance, and competitive advantage. The current research aims to bridge this gap by analyzing global trends in sustainable finance, ESG reporting standards in India and the role of ESG reporting automation in achieving competitive advantage.

Objectives of the Study

Objectives of the Research

In this research paper, we will be investigating the development of sustainable finance and ESG investments across the globe, the evolution of ESG reporting practices in India especially with respect to the framework for BRSR and ESG disclosures and the importance of ESG reporting automation in enhancing transparency, sustainable finance and global competitiveness.

Methodology

In this research paper, we use only secondary data that has been gathered from reliable sources including Global Sustainable Investment Alliance (GSIA), Securities and Exchange Board of India (SEBI), NSE–SES ESG Analysis Model, CRISIL and relevant academic literature. Descriptive and analytical method has been employed in investigating global trends in sustainable finance, ESG reporting in India and the importance of ESG reporting automation in enhancing transparency, sustainable finance and global competitiveness. All the information used in the analysis is purely factual information and no hypothetical figures or primary data has been used.

Analysis and Discussion

Global Development in Sustainable Finance: In recent years, sustainable finance has become one of the most important trends in the international world of finance. It has become more common for investors to integrate ESG aspects into their portfolios, which has been brought about by the increased understanding of sustainability risks and opportunities.

Table 1: Growth in Responsible and Sustainable Investment Assets

Particulars	2022	2024
Assets Reporting Responsible & Sustainable Investment Approaches (USD Trillion)	11.2	16.7
Absolute Increase (USD Trillion)	-	5.5
Percentage Growth	-	49%

Source: Global Sustainable Investment Alliance (2024), *Global Sustainable Investment Review 2024*.

The assets of sustainable investment have grown from USD 11.2 trillion in 2022 to USD 16.7 trillion in 2024, indicating an increase of 49 percent. The above statistics indicate the rising importance of ESG considerations in investments and also suggest that sustainability reporting has become strategic in nature in order to attract investors.

ESG Reporting in India: India has made considerable strides in improving ESG disclosures through regulatory action. Sustainability reporting has undergone changes over time from voluntary guidelines to structured frameworks through regulatory oversight.

Table 2: Evolution of ESG Reporting Frameworks in India

Development	Significance
National Voluntary Guidelines (NVG)	Initial sustainability framework
Business Responsibility Report (BRR)	ESG disclosures for listed entities
Expansion to Top 500 Companies	Increased reporting coverage
Expansion to Top 1000 Companies	Wider ESG disclosure adoption
BRSR Framework	Structured sustainability reporting
BRSR Core	Enhanced assurance and value-chain disclosures

Source: NSE–SES ESG Analysis Model and SEBI BRSR Core Framework.

The development of NVG and BRR to BRSR and BRSR core is indicative of India's attempts at improving the disclosure of ESG issues and integrating sustainability reporting in accordance with international norms. The additional reporting requirements have necessitated the need for more effective reporting systems as well. NSE-Ses ESG analysis model serves as a good example of insight into the hierarchy of different aspects of ESG in India.

Table 3: Weightage Assigned to ESG Pillars in the NSE–SES ESG Analysis Model

Environment (%)	Social (%)	Governance (%)
15–30	20–25	40–50

Source: National Stock Exchange of India & Stakeholders Empowerment Services (2020), *ESG Analysis Model*.

Governance is given the highest weighting (40-50%) in the ESG evaluation framework than the social (20-25%) and environmental (15-30%) aspects. It implies that there is more importance given to the governance-related disclosures in the Indian corporate world. But in the long run, sustainable development will be possible only when organizations pay attention to their environmental and social aspects along with good governance practices.

Automation of ESG Reporting and Sustainable Finance: The complex nature of ESG disclosure norms demands the use of technology-driven ESG reporting systems. Digitalization, artificial intelligence, and automation could help in making ESG reporting efficient and accurate.

Table 4: Illustrative ESG Performance Indicators: CRISIL (2023)

Indicator	Value
Renewable Energy Usage	58%
Reduction in Scope 1 & 2 Emissions	64%
Office Waste Recycled	91.8%
Workforce Trained on ESG	96%

Source: CRISIL ESG Report 2023.

From the table, it is evident that companies are integrating ESG aspects in their operations. According to CRISIL, 58 percent of its energy usage was sourced from renewables, while there was a 64 percent reduction in Scope 1 and Scope 2 carbon emissions from the baseline period. Moreover, 91.8 percent of the office waste was recycled, while 96 percent of its workforce was trained on ESG issues.

These examples show how the performance and reporting of ESG matters is becoming more crucial. They also indicate the kinds of sustainability metrics that organizations are required to report. Automated processes can be extremely useful in obtaining this data.

Implications for Global Competitiveness

It is important to acknowledge that apart from financial success, being competitive in the contemporary business environment implies that the organization demonstrates its sustainability, transparency, and responsible business conduct. In light of the growing role of ESG performance in investment decisions and other stakeholders' considerations, transparent ESG reporting becomes one of the crucial factors that contribute to gaining stakeholders' trust and drawing investments. Adoption of BRSR and BRSR Core by Indian organizations allows to benefit from alignment with international standards and further participation in international business. Moreover, ESG reporting automation can help to boost reporting efficiency, compliance and data quality of the organization. Hence, ESG reporting automation must be seen as a strategic resource that helps with sustainable finance.

Findings

It is clear that sustainable finance is still on the rise globally owing to increased integration of ESG factors in investment decision-making. In India, there have been considerable efforts, like BRR, BRSR, and BRSR Core, to enhance the reporting system and improve the disclosure practices of Indian listed companies. In addition, the research shows that governance is the most advanced ESG aspect in the reporting system in India, as compared to the other two aspects. Moreover, automation of ESG reporting brings about increased efficiency and transparency, thus contributing to increased reliability of the sustainability information reported.

Implications and Limitations

In light of the findings, ESG reporting has started to shift from being a mere compliance measure to a more strategic process. This is particularly due to the role played by reporting automation in increasing transparency, disclosure, and decision-making. With continued growth in the area of sustainable finance, companies will need to have a reliable and well-equipped technology-based reporting system while at the same time ensuring that they strike a balance when considering the three aspects of ESG. This study is constrained by the fact that it only uses secondary data from the reports, regulations, and academic literature. As ESG standards keep changing, future research can consider primary data and comparative studies.

Conclusion

ESG issues have been more crucial in determining the strategies that companies adopt. The rise of sustainable finance shows how increasingly relevant ESG disclosures have become for making investments. Various efforts, including the development of BRSR and BRSR Core, have enhanced ESG reporting standards in India.

The research indicates that governance is the most developed ESG pillar, whereas environmental and social aspects need improvement in order to create a balanced framework. This research also shows how increasingly important ESG reporting automation has become for improving reporting practices. With the use of technology, ESG reports can be used to make sustainable finance more efficient and increase competitiveness. Thus, further advancements in the area of ESG reporting and reporting automation can lead to sustainable economic growth and competitiveness.

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