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Corporate Sustainability, ESG, and the Triple Bottom Line: A Review of Key Challenges

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ABSTRACT

The Triple Bottom Line (TBL) concept, introduced over two decades ago by John Elkington, was once seen as a breakthrough in redefining business success by including social and environmental responsibilities alongside profit. However, in recent years, even its creator has raised concerns about its practical impact and widespread misapplication. This study presents a systematic review of existing literature on the relationship between corporate sustainability and the TBL framework, with a particular focus on Environmental, Social, and Governance (ESG) criteria. Using stakeholder and agency theory as the conceptual lens, the paper explores how ESG integration has influenced corporate sustainability performance across different contexts. Following the PRISMA guidelines, the review process involved careful selection and screening of relevant studies from major databases. Bibliometric tools, including VOSviewer, were employed to visualize research trends, co-occurrence patterns, and thematic clusters. A total of 65 scholarly articles were analyzed, highlighting both the growing interest in sustainability discourse and the persistent challenges in translating TBL principles into measurable strategies. Key obstacles include inconsistent ESG frameworks, stakeholder conflicts, and difficulties in evaluation. The study contributes to the ongoing conversation by mapping critical research developments and identifying gaps that must be addressed to advance sustainable business practices.

Keywords: Corporate Sustainability, Triple Bottom Line, ESG, PRISMA
JEL Classifications: Q56, M14, L21, Q01

1. INTRODUCTION

Sustainability has emerged as a defining topic of the decade, significantly impacting industries, economies, and various aspects of society. Consequently, the focus has shifted to defining what "sustainable" or "sustainability" truly means. Mainstream dictionaries define "sustainable" as "something that can be sustained" or "being an approach of harvesting or using an asset so that the commodity does not become exhausted or permanently damaged" when used alone (Merriam-Webster 2016). As a result, its adjectival usage with terms like "development," "manufacturing," or "agriculture" implies that these activities can also be continued in a way that prevents the permanent depletion of resources. The concept of sustainability gained momentum when Sustainable development was defined as an approach that meets present needs without endangering future generations' ability to meet their own (Brundtland Report, 1987).

Accordingly, to effectuate sustainable development in the business ecosystem, The Triple Bottom Line (TBL) concept was put forward by Elkington (1994) with a view to redefine success in a business organisation focusing on the 3Ps associated with sustainability:

1. People (Social Sustainability) – Ethical practices concerning labour, wellbeing of the society and an organisation's contribution towards social responsibility
2. Planet (Environmental Sustainability) – Judicious utilisation of natural resources focusing on resource conservation and green production resulting in reduction of carbon footprint

3. Profit (Economic Sustainability) – Long term financial growth aligned with business strategies concerned with sustainability.

TBL was initially introduced as a financial planning paradigm that incorporated social and environmental considerations into the conventional business performance model that was mostly focused on economics (Elkington, 1994). Their primary objective was to evaluate a company's success by balancing an organisation's profitability and its operational impact on environmental, human, social, and shareholder value (Slaper and Hall, 2011). Despite the fact that TBL literature seems to have been enthusiastically accepted by a larger number of industries, the practical implementation remains highly inconsistent across industries. Companies faced challenges in the due course of implementation such as lack of cooperation between suppliers and contractors, lack of clear guidelines, challenges while recruiting qualified personnel, and poor knowledge transfer among projects (World Economic Forum, 2016).

Moreover, although research indicates that TBL and sustainable construction have been embraced progressively, they have not been thoroughly examined from the standpoint of environmental, governance, and social sustainability as a whole. Existing literature is limited to the related works or several aspects of:

- Economic benefits of Sustainability (Illankoon et al., 2016),
- Societal responsibility/stakeholder engagement (Almahmoud and Doloi, 2015), or
- Sustainable construction materials (Khoshnava et al., 2018).

A company's capacity to generate profit for its shareholders while operating in a way that preserves social well-being, ecological integrity, and sound corporate sustainability performance is referred to as governance principles (Luque-Vílchez et al., 2023). It entails maintaining high standards of moral conduct, fostering healthy social relationships, and efficiently managing environmental resources (Bellandi, 2023). To assess a company's sustainability performance, both qualitative and quantitative indicators must be evaluated, taking into account a variety of elements such as environmental stewardship, corporate governance, and social responsibility (Sandberg et al., 2022).

ESG standards are used to assess the corporate sustainability and ethical performance of companies and investments (Arora and Sharma, 2022). They are used by businesses to monitor and control the effects of their operations on the internal and external environment (Viranda et al., 2020; Merli and Preziosi, 2018). These mostly consist of: (i) gathering data; (ii) creating solutions; (iii) handling ESG issues in accordance with standards; (iv) holding training sessions; and (v) communicating effectively. Prevention and preservation performance indicators are part of the ESG criteria (Gond et al., 2012). Additionally, it necessitates balancing the objectives of sustainable development with other company goals and coordinating efforts between the environmental department and other divisions inside businesses.

1.1. Research Objectives

The objectives of the study are;

1. To identify the challenges firms, face while implementing corporate sustainability and TBL strategies
2. Analyse the role of ESG factors in corporate sustainability performance and determine the most critical indicators
3. Conduct a bibliometric analysis to reveal trends, patterns and research gaps in sustainability literature
4. Examine the relationship between business sustainability, TBL, adoption and long-term organizational success
5. To map co-authorship and co-citation networks to understand research influence using VOS Viewer.

1.2. Research Questions

The following are the study's research questions:

1. What are the key challenges in implementing TBL for corporate sustainability?
2. How do ESG measurement frameworks impact the adoption of TBL practices?
3. What strategies should businesses adopt to balance environmental, social and governance dimensions?
4. How can standardization of ESG guidelines improve global adoption of TBL principles?
5. What role do corporate leadership and organizational culture play in overcoming resistance to sustainability initiatives?

1.3. Background of the Study

As there has been an alarming rate of catastrophic climatic conditions and depletion of natural resources, the call for adopting sustainability measures through businesses have been prioritized. Stakeholders' engagement with the accountability of corporations has taken a new outlook, demanding organizations to carry out socially responsible approaches.

Presented in the late 1990s, The Triple Bottom Line (TBL) worldview emphasizes the interconnected roles of social responsibility, environmental stewardship, and economic viability in driving sustainable business. More recently, Environmental, Social, and Governance (ESG) metrics have been used to operationalize these principles into corporate practices (Luque-Vílchez et al., 2023; Bellandi, 2023). Despite the fact that TBL's importance is widely recognized, its implementation is as yet lopsided and troublesome. The challenges faced in the incorporation of TBL framework were mainly due to the following factors:

- Resistance inside associations,
- Conflicting partner interests, and
- Lack of standardized framework in ESG reporting. (Montiel, 2008; Slaper and Hall, 2011).

Accomplishing a massive impact and advancing business sustainability requires the ability to comprehend and plan out a strategy to handle these issues. Hence, this study focuses on making an attempt in bridging the gap by undertaking an extensive review applying bibliometric analysis techniques to map out a unified approach that sheds light on how sustainability research has evolved and the challenges faced while implementation of ESG factors, determining the critical indicators.

2. REVIEW METHODS

In this study, we selected publications indexed in the Scopus database. Scopus is a comprehensive and curated abstract and

citation platform managed by Elsevier, covering a wide array of peer-reviewed journals, conference papers, and other scholarly literature across various disciplines. The research employs the PRISMA method and criteria to conduct a systematic review (Figure 1), concentrating specifically on research exploring Corporate Sustainability and the Triple Bottom Line and bibliometric analysis for overlay visualization, network visualization which defines co-citations and strongest relation between the journals, density visualization which explains the cluster of citations belonging or related to the high density of journals and topic related. The systematic search spans studies conducted between January 2010 and October 2024 that are pertinent to the specified search criteria. The search words are "CORPORATE SUSTAINABILITY" and TRIPLE BOTTOM LINE.

The inclusion criteria for the research study are given below;

- Qualitative and Quantitative research articles
- Scholarly research articles
- Corporate Sustainability, Triple Bottom Line

2.1. Requirement Description

A. Bibliometric Analysis and Systematic Reviews: -VOS viewer, Cite Space, or Bibliometrix (R package): These tools are useful for bibliometric analysis, enabling visualization of research trends, co-authorship networks, and keyword co-occurrences.
B. PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses): A guideline often implemented via tools like Covidence to structure and report systematic reviews accurately.

There were 2454 journal papers chosen in all. A lot of articles are disqualified according to the standards, like corporate applications. Additionally, research that does not use models or non-profit sectors is not included in the shortlist. Lastly, as indicated in Table 1 and Figure 2, 63 papers were used for this systematic review.

3. REVIEW BASED ON ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG)

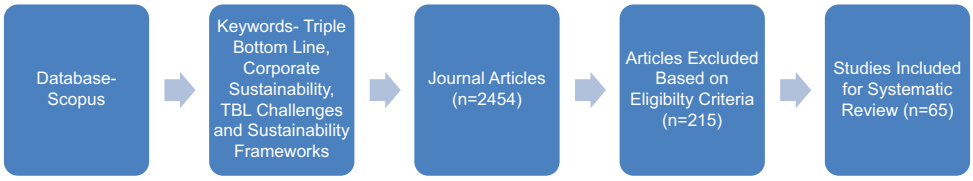
Business Environment has always been acknowledged as dynamic and evolving. The globally recognized Environmental, Social and Governance (ESG) factors plays a pivotal role in assessing the corporate sustainability strategies and ethical performance. The concept of ESG is based on three dominant theories that provide the underlying framework on Corporate Sustainability (Santamaria et al., 2021):

- Stakeholder theory – According to stakeholder theory, interacting with a variety of stakeholders is crucial for long-term success (Orlitzky et al., 2003). The ability of a company to successfully manage and balance the interests of many stakeholder groups, including workers, clients, suppliers, communities, and investors, determines its level of success (Freeman, 1984). Moreover, addressing the needs and preferences of all stakeholders allows a company to provide long-lasting value that benefits everyone. By supporting a broader perspective on value generation and ethical responsibility, this theory opposes the conventional shareholder-centric paradigm. It implies that companies have an obligation to make choices that benefit all parties involved, not just shareholders (Goswami and Bhaduri, 2023). Achieving long-term sustainability and success requires an inclusive strategy because sustaining operations and promoting growth depends heavily on the support and consent of stakeholders.
- Signaling Theory – The decision-making process around information disclosure and the disparity in knowledge across two parties are addressed by Spence (1978)'s signaling theory.
- Institutional theory – This theory offers a strong basis for studying the relationship between ESG and corporate success, especially in the ASEAN region. According to this idea, the institutional environment—which includes social expectations, cultural norms, and legal frameworks—has a big impact on how businesses behave, plan, and perform overall (Huang and Sternquist, 2007). Institutional Theory holds that organizations follow external laws and standards to obtain credibility, obtain funding, and guarantee their continued existence (David et al., 2019). In terms of ESG, this idea emphasizes that external as well as internal factors

Table 1: Distribution of Reviewed Papers by Publisher

Publisher	Number of papers
Elsevier	15
MDPI	7
Nature Publishing Group UK London	11
Springer	8
Wiley Online Library	4
Stat Pearls Publishing	2
SAGE Publications	3
Oxford University Press US	5
Bedfordshire University	1
IEEE	1
Frontiers Media SA	1
Durban University	1
AACN	1
Research Protocol	1
e-Century Publishing Corporation	1
Harvard Business Publishing	1
Emerald Publishing	1

Figure 1: Screening process for systematic review



push businesses to embrace sustainable and socially conscious practices.

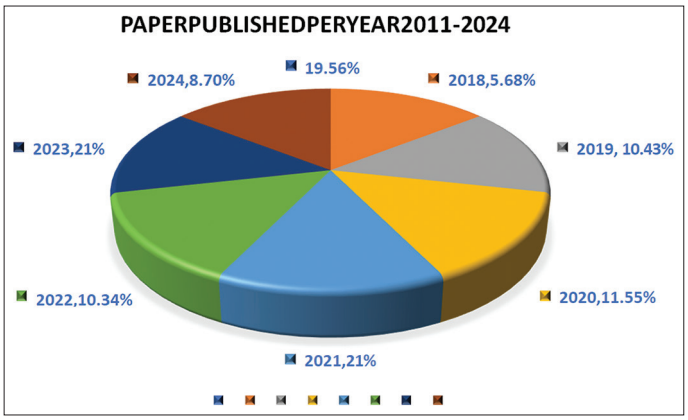
3.1. Environmental Sustainability

The environmental dimension of the Triple Bottom Line emphasizes the responsible management of natural ecosystems while sustaining economic growth. As emerging economies witness industrial expansion and rising consumption, there is growing concern about the ecological cost of unchecked growth. Resource depletion, pollution, and carbon emissions remain core environmental challenges, especially in regions experiencing rapid urbanization and energy demand.

One of the pressing issues is the overreliance on non-renewable resources, such as fossil fuels and minerals, which are being exhausted at an unsustainable rate. Simultaneously, the uneven distribution and misuse of freshwater resources contribute to rising concerns about water scarcity and sanitation infrastructure (Blowfield, 2013).

To address these concerns, companies are increasingly expected to integrate green production methods, focusing on low-emission technologies and efficient resource utilization. Renewable energy sources—such as solar, wind, and hydropower—offer long-term benefits, but adoption remains inconsistent due to cost barriers and infrastructural limitations.

Figure 2: Distribution of reviewed papers by year (2011–2024)



Furthermore, environmental responsibility is no longer a voluntary branding exercise; it is becoming central to competitive strategy and long-term survival. Firms demonstrating strong environmental commitments often benefit from improved stakeholder trust, lower regulatory risk, and access to new markets. These factors position environmental sustainability as not just an ethical obligation but a catalyst for innovation and resilience (Valentinov, 2023; Ye and Dela, 2023; Tan et al., 2022). Furthermore, compared to social and governance performance, environmental performance has a greater impact on a firm's speed of adjustment (SOA) to target leverage (Adeneye et al., 2023). To obtain favourable financial and environmental results, businesses should thus take a stakeholder-oriented strategy, coordinating their goals with stakeholder demands. When planning and carrying out environmental projects, it is imperative to take stakeholders' needs into account.

3.2. Social Sustainability

Social Sustainability deals with the importance of stakeholder well-being, maintaining ethical labour practices and constituting diversified corporate governance. Companies that successfully interact with their stakeholders and make investments in socially conscious projects can gain a competitive advantage, improved reputation, and superior financial performance (Pedrini and Ferri, 2019). This favourable association results from the social capital and goodwill created by moral and socially conscious actions, which cultivate stakeholder loyalty and trust while perhaps lowering risks and increasing operational effectiveness (Ting et al., 2019). Nonetheless, this relationship is intricate, and its influence may vary depending on variables including company size, sector, nation, and certain facets of the social performance being assessed (Elmghaamez et al., 2023). Supporting and nuanced data are found in the corpus of empirical investigation on the relationship between corporate performance and social factors. Studies such as those conducted by Kim and Li (2021), Maqbool and Bakr (2019), and Licandro et al. (2024) have shown that there is typically a positive association between socially conscious business and management performance and better financial outcomes. This could be because of improved stakeholder satisfaction and corporate reputation. The direction and degree of this association, however, may fluctuate greatly between industries and geographical areas.

Table 2: ESG dimensions – Critical evaluation and contributions

Dimension	Key gaps identified	Principal contributions	Limitations	Critical evaluation	References
Environmental	Lack of integration between environmental initiatives and business strategy.	Shows how ecological practices (e.g., green production) enhance innovation and long-term performance.	Inadequate longitudinal data; limited industry scope.	Strong environmental practices increase firm competitiveness and signal trust to stakeholders, encouraging access to resources.	Sul and Lee (2020); Shakil (2021)
Social	Varying impact of gender diversity and CSR on financial outcomes across regions.	Links gender diversity and social capital with better firm reputation and stakeholder trust.	Limited studies on CSR committee roles and inter-country regulatory variance.	Social practices like diversity and ethics enhance stakeholder engagement but may be deprioritized where financial pressures dominate.	Xu et al. (2021); Xu et al. (2022)
Governance	Inconsistent impact of board independence on ESG disclosures and anti-corruption efforts.	Emphasizes the need for active audit committees and transparent governance to improve ESG quality.	Data constraints on internal governance metrics; sector-specific governance strategies not covered.	Governance mechanisms (audit quality, independence) help balance managerial and stakeholder ESG goals, but strategic motives may influence disclosure decisions.	Sahoo and Kumar (2022); Bellandi (2023)

3.3. Governance and Corporate Sustainability

Governance represents the structural and ethical backbone of corporate sustainability. It encompasses the systems, practices, and relationships through which companies are directed and controlled, including board composition, shareholder rights, CEO accountability, and audit oversight.

Strong governance frameworks are widely associated with improved financial performance, lower capital costs, and enhanced trust among stakeholders. Better access to investment opportunities and lower capital expenses are frequent advantages for businesses with robust governance frameworks (Huo et al., 2021). For instance, firms with independent and active audit committees are better positioned to manage ESG disclosures with greater accuracy and transparency (De Villiers and Dimes, 2021). Moreover, governance elements like anti-corruption measures and ethical codes contribute to reputational resilience and competitive advantage (Sahoo and Kumar, 2022).

Conversely, weak governance may lead to mismanagement, financial irregularities, and loss of investor confidence. High-profile scandals linked to poor oversight have shown that governance failures can significantly erode firm value and stakeholder trust (Velte, 2023).

Emerging research highlights the benefits of adopting stakeholder-oriented governance models, which emphasize not only shareholder returns but also social responsibility, environmental accountability, and ethical leadership. These approaches promote inclusive decision-making, reduce agency costs, and strengthen organizational legitimacy (Dao and Phan, 2023). As ESG expectations evolve globally, aligning governance strategies with sustainability priorities becomes essential for long-term success.

To gain a clearer understanding of how Environmental, Social, and Governance (ESG) dimensions are approached in the literature, the Table 2 following table summarizes key thematic contributions, identified research gaps, limitations, and critical evaluations. These insights help highlight the evolving nature of ESG implementation within the TBL framework and the scope for future exploration across each domain.

4. TRIPLE BOTTOM LINE (TBL)

The Triple Bottom Line (TBL) framework, put forward by Elkington (1994) redefined corporate success by enhancing the traditional financial performance model by including three components that serve as the foundation for the newly expanded model. The TBL framework underscores the three "Ps" of People, Planet, and Profit associated with sustainability in terms of society, environment, and economy respectively (Slaper and Hall, 2011). Although, it was justifiable for businesses to prioritize profitability decades back, the organizations today in every nook and corner of the world have realized that long-term growth and survival in the current economy requires accountability on their part in balancing economic growth with preservation of the environment and well-being of the society. Thus, TBL approach has widely formed the basis of foundation for formulation of corporate sustainability strategies and policies regarding ESG criteria, adopted across industries. The following section deals with the challenges, implementation strategies and long-term sustainability implications of each of the three pillars of TBL.

4.1. Sustainability in the Environment

As emerging economies continue to expand, particularly in the sub-Saharan region of Africa and some regions of Asia, the consumption rate has been rapidly rising with their rise in population. Promoting a higher quality of living globally is socially desirable, but the effects are probably unsustainable, especially given that the first-world nations of today also continue to anticipate increased consumption and an increase in economic "wealth" and prosperity.

4.1.1. Key environmental challenges under TBL

There are many negative effects of this unrestrained growth on the environment, both in terms of inputs (such as the natural resources) and results (such as emissions).

- Resource depletion – Industrial growth across the world calls for an increase in the consumption of natural resources, particularly non-renewable sources of energy such as minerals, fossil fuels and rapid deforestation
- Carbon footprint and pollution – The higher amount of carbon emissions are mostly detected in industrially rich economies. Economical expansion and higher standard of living often leads to luxuries which turns out costly from an environment perspective, leading to deteriorating climatic conditions and environmental degradation
- Water Scarcity and sanitation – The imbalance between freshwater and sanitation supply and demand, however, can even create challenges in the availability of such resources (Blowfield, 2013).

4.1.2. Environmental sustainability perspectives:

- Renewable versus Non-Renewable resources – It is crucial to comprehend the long-term availability of non-renewable natural resources such as minerals and fossil fuels due to their limited availability on earth which calls for efficient consumption models and conservation strategies for sustainable utilization of such resources
  Renewable sources of energy such as solar energy, wind energy and hydro-power are naturally restored and can be judiciously utilized for sustainable economic growth. Despite their potential applications, their utilization needs to be viewed as a way to produce long-term, more sustainable results
- Corporate Responsibility and Green Production – It has become pressuring in a way for the companies to align their operations with sustainable production by undertaking eco-friendly techniques for long-term success in today's economy. Companies have also been focusing on Green production to achieve a competitive advantage over its rivals.

Thus, the TBL framework calls for sustainable innovation and environmentally efficient business models for the long-term success of an organization.

4.2. The Sustainability of Society

The Social Sustainability in the Triple Bottom Line (TBL) framework deals with the 'People' aspect, depicting its concern on human rights, ethical labour practices and well-being of the society. As businesses transcend geographical boundaries, supply chains have now grown longer leading to ethical concerns about their exploitation of direct or indirect (via suppliers) labour to produce their goods, frequently at extremely low rates.

It is beneficial, that MNCs create job opportunities for the huge stack of unemployed people in developing nations. However, concerns often arise about the boundary between providing employment and exploitation, marked by poor working conditions, inadequate pay, unsafe infrastructure, limited access to healthcare and sanitation, and violations of human rights, all of which raise serious ethical issues (Jayasuriya, 2008).

- Are MNCs being socially responsible by creating job opportunities for the underprivileged lot or are they violating human rights by exploiting cheap labour markets?
- If the conditions of employment are "legal" in the country where the workers are employed but subpar by global ethical standards, should the MNC be held responsible?

Across many supply chains, this is a contentious issue that has sparked numerous social media campaigns in which people have urged others to boycott particular businesses or their goods and services. One of the most tragic examples of social sustainability failure is the 2013 Rana Plaza factory collapse in Bangladesh, which killed more than 1,100 garment workers and injured thousands. The building had visible structural cracks, yet workers were reportedly ordered to return to work. The tragedy sparked global outrage, including social media boycotts targeting brands like Primark, which sourced from the factory (The Huffington Post, 2013)

4.2.1. Social sustainability issues

- Low-cost labour versus Exploitation – Many companies in the developed countries outsource their laborious work to third world economies for cheap labour markets however ethical concerns arise when the workers are deprived of proper healthcare, sound working conditions and absolute human rights
- Consumer Activism and Corporate Accountability – The increase in consumer engagement in social media campaigns and awareness movements have driven brands across the world to act responsibly and maintain proper working conditions
- Legal vs. Ethical compliance – It is to be well understood by firms operating globally that what might be considered legal in a country does not mean they are ethical. Hence, global companies must adopt Corporate Social Responsibility (CSR) measures over and beyond the mandated.

4.2.2. Social sustainability strategies

- Companies should ensure adequate compensation and ethical working conditions with proper access to healthcare and sanitation
- Companies should be transparent in implementing their third-party labour audits which might result in minimizing the risk of exploiting labourers
- Companies should actively engage with their consumer base, communicating their efforts in making a social impact, thus increasing brand goodwill and trust.

Companies are morally mandated to practice social responsibility strategies for fulfilling stakeholders demand in accountability of the businesses acting responsibly which, in the long run, contributes towards the growth of brand loyalty and business success.

4.3. Sustainability of the Economy

Economic sustainability, often represented by the "Profit" element of the Triple Bottom Line, focuses on a business's ability to remain financially viable while aligning with broader environmental and social responsibilities. It encompasses more than just profit margins—it includes sustainable value creation, resource efficiency, and long-term business resilience.

Common financial indicators such as Return on Assets (ROA), Return on Capital Employed (ROCE), and Cash Flow serve as benchmarks to assess a firm's operational health and efficiency. While profitability is essential for reinvestment, innovation, and stakeholder return, it must not come at the cost of environmental damage or social exploitation (Gimenez et al., 2012).

Critics have argued that the unrestrained pursuit of profit may promote practices that are harmful to society or the planet. However, others contend that profitability itself is not unethical; rather, it is the method and context of value generation that determine sustainability outcomes (Liebowitz, 2003). For instance, excessive cost-cutting can compromise product quality or labor standards, while tax avoidance or financial misreporting undermines trust.

Elkington (1997) emphasized the importance of avoiding trade-offs that undermine the social or environmental bottom lines. A truly sustainable economic model seeks to integrate responsible operations with growth strategies—maximizing long-term value while preserving stakeholder equity and ecosystem health. Thus, the accountant's role is not merely to report on financial targets, but to consider the interdependencies between economic success and ethical impact.

Recent literature provides varied insights into the practical limitations and evolution of the Triple Bottom Line (TBL) approach. Table 3 summarizes select academic contributions, highlighting the major challenges and proposed recommendations for better implementation across sectors.

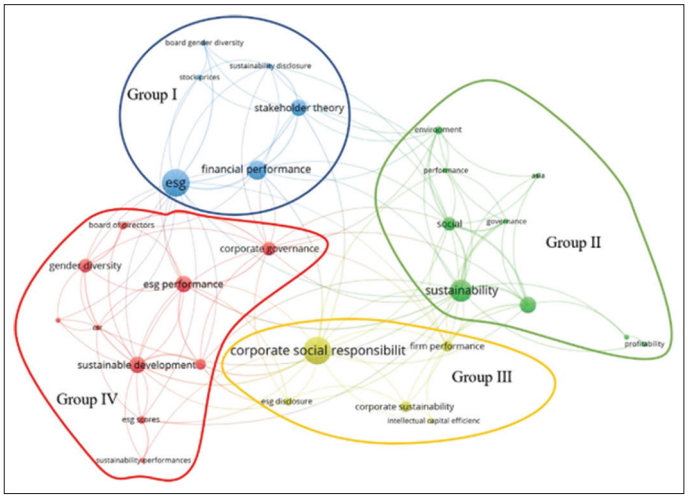
5. ANALYSING COLLECTED DATABASES BIBLIOMETRICALLY WITH VOS VIEWER

To identify the cognitive framework of research on corporate sustainability and the Triple Bottom Line (TBL), VOSviewer was used to conduct network analysis of keywords that were

Table 3: Summary of TBL implementation challenges and research recommendations

Reference	Key focus area	Noted challenges	Recommended action
Mihai and Aleca (2023)	GRI-based sustainability reporting	Limited practical guidance for firms	Develop industry-specific sustainability frameworks
Hoffman (2018)	Strategic sustainability planning	Tension between short-term business goals and long-term vision	Leadership-driven commitment to long-term impacts
Meemken et al. (2021)	Standards in agri-food supply chains	Inconsistent adoption of sustainability metrics across sectors	Global standardization of metrics and tools
Ketprapakorn (2019)	Evolution of sustainability models	Fragmentation across organizational sustainability efforts	Foster cross-industry collaboration and policy alignment
Srivastava et al. (2022)	Shared value and TBL synergy	Difficulty aligning profitability with social/environmental goals	Encourage innovation that balances financial and ethical returns
Erbetta et al. (2023)	Stakeholder views on TBL	Conflicting expectations from diverse interest groups	Institutionalize participatory decision-making
Darbari et al. (2019)	TBL performance metrics	Lack of universally accepted indicators	Promote global KPIs with local relevance

Figure 3: Analysis of keyword networks



extracted from Scopus, Web of Science (WoS), and SD databases. Nevertheless, Figure 3 illustrates the association using the VOSviewer software's network analysis connecting the keywords and the content in the chosen sample, with instances of recur no less than two times (indicating that terms that appeared just once were not presented). It should be mentioned that the meshes are more consistent (full-bodied) and the connections are more meaningful the stronger those connections (nodes) are.

Network analysis makes it easier to distinguish between the groups that are literally connected to its guiding principles and provides a more thorough explanation of the phrases' resonance.

5.1. Findings from Keyword Network Analysis (Figure 3)

- Four keyword sets were detected, indicating major research themes in ESG and Corporate Sustainability
- The term "ESG" and its variants appear in three of the four sets of the keyword network analysis, representing its dominancy in the area of sustainability research
- All four clusters indicate their presence when it comes to the terms "sustainability and performance." This indicates that the chosen search terms were aggressive since they clearly follow the suggested theme.

5.2. Interpretation of Clusters

To explore how the academic discourse around corporate sustainability and TBL has evolved, a keyword co-occurrence analysis was performed using VOSviewer. This analysis highlighted the structural relationships between frequently used terms across the selected 63 papers. Only keywords appearing at least twice were considered for network mapping to ensure meaningful connections.

The resulting visualization revealed four major thematic clusters:

- Cluster 1 (ESG and Performance): Terms such as "ESG," "firm value," and "financial performance" dominate this cluster, indicating significant interest in the link between sustainability metrics and corporate outcomes
- Cluster 2 (Innovation and Sustainability): This group includes "sustainable practices," "green innovation," and "strategic management," reflecting research on integrating sustainability into production and design processes
- Cluster 3 (CSR and Stakeholder Engagement): Highlighting terms like "corporate responsibility," "ethics," and "stakeholders," this cluster reflects the growing emphasis on moral obligations and inclusive decision-making
- Cluster 4 (Reporting and Regulation): Featuring terms like "disclosure," "transparency," and "governance," this cluster captures the regulatory and institutional dimensions of ESG compliance.

Notably, "ESG" emerged across three of the four clusters, underscoring its role as a bridging concept within sustainability scholarship. The network suggests increasing interdisciplinary engagement, though gaps remain in areas like ESG standardization and model unification across industries.

6. DISCUSSION

Based on the extensive literature review, this study furnishes a broad analysis of ESG criteria and their association with corporate sustainability.

6.1. Key Takeaways from the Literature

Several emerging themes were identified in the reviewed literature. One such area is the impact of board-level gender diversity on ESG performance. Ouni et al. (2020) observed that greater female

representation on boards often enhances transparency and ethical focus, which in turn positively influences financial outcomes. However, the mechanisms through which women contribute to ESG performance—such as leadership style, stakeholder sensitivity, or risk aversion—require deeper exploration.

The methodologies used in ESG research are also diverse. Quantitative studies frequently rely on regression models, financial indicators, and ESG scorecard data to examine relationships between sustainability efforts and firm performance (Alkaraan et al., 2022; Mavlutova et al., 2022). In contrast, qualitative approaches often use interviews, case studies, and content analysis to understand organizational culture, stakeholder perceptions, and managerial behavior (Petavratzi et al., 2022).

A number of scholars have advocated for mixed-methods or integrative approaches that combine statistical robustness with narrative depth. For instance, Rehman et al. (2021) emphasized that a hybrid model enables a more holistic understanding of the complex interdependencies in ESG implementation—spanning environmental stewardship, ethical governance, and social equity.

6.2. Triple Bottom Line (TBL) and Business Sustainability

In order to establish the present research position, this study has reviewed and reassessed the idea of TBL in relation to sustainable construction and corporate sustainability. Adoption of TBL theory has been continuously growing over the past two decades in both developed and developing nations, which is consistent with an increased acknowledgement in the comprehension of sustainable development. It has been demonstrated that the essential ideas of sustainable construction and TBL have not altered. However, there has been a somewhat slow shift toward a more unified strategy in the adoption of sustainable practices across varied sectors. It is anticipated that TBL awareness and adoption will keep rising. However, in order for the TBL concept to be successfully implemented, all sustainability aspects must be balanced during the course of the project. Additionally, this study has offered valuable references to the current obstacles and motivations for implementing TBL.

While the Triple Bottom Line (TBL) has become a dominant framework in management literature, its broader relevance across disciplines such as ecology and the natural sciences has been questioned. Whiteman et al. (2013) observed limited overlap between sustainability discussions in top-tier management journals and those in interdisciplinary journals like Nature. Building on that concern, Isil and Hernke (2017) critiqued the TBL for resting on two problematic assumptions: (i) that sustainability can be achieved at the firm level, and (ii) that a win–win logic can resolve complex trade-offs. They argued that while TBL remains dominant in management literature, its theoretical underpinnings often fail to account for systemic ecological realities.

While the TBL remains influential in business literature, its conceptual assumptions have received criticism in recent scholarship. For instance, Isil and Hernke (2017) argue that the model rests on two problematic premises: First, that sustainability can be meaningfully achieved at the firm level, and second, that environmental, social, and economic interests can always be aligned through a "win–win" logic. These assumptions, though appealing, tend to obscure systemic ecological constraints and sociopolitical complexities.

The continued use of the TBL metaphor may risk oversimplifying sustainability challenges, especially if it is uncritically adopted in fields like information systems or AI ethics, where the assumptions may not hold. Alternative frameworks that integrate broader systems thinking and ecological resilience may be better suited for cross-disciplinary sustainability discussions (Isil and Hernke, 2017; Crane et al., 2016).

There still exist several unresolved issues within the substantial body of research on TBL and business sustainability; some of the key gaps include:

- Most of the exploratory studies centre around large organizations, with little consideration paid to TBL execution in Small and Medium Enterprises (SMEs) and new ventures. Future research should pertain to exploring the sustainability strategies undertaken by SME's with limited resources
- There aren't numerous structures that offer useful ways of estimating what TBL projects mean for corporate execution and its impact in the long run, considering the dynamic business environment. Future research calls for building of adaptive models that takes into consideration the changing economic and environmental conditions in the long run
- Current models constantly aren't sufficiently versatile to change as per quickly moving monetary and normal circumstances. Research occasionally stays segregated, passing up chances to join data from disciplines like public methodology, social monetary issues, and mechanical turn of events. Finishing off these gaps could essentially enhance TBL's flexibility and accommodation in accomplishing overall sustainability challenges.

7. CONCLUSION AND FUTURE DIRECTIONS

This review reaffirms the significance of the Triple Bottom Line (TBL) framework as a foundational model in corporate sustainability. Although widely cited and adopted since its introduction by Elkington (1994), its practical application has been inconsistent. Even Elkington (2018) later critiqued how the model was diluted in practice—often reduced to a checkbox exercise rather than a transformative business philosophy.

Moreover, theoretical critiques such as those by Isil and Hernke (2017) question the TBL's reliance on the assumptions that sustainability can be achieved at the firm level and that economic, social, and environmental goals can be harmonized without trade-offs. These critiques suggest a need to rethink how sustainability frameworks are structured, moving toward integrated systems-based approaches rather than firm-level metrics alone.

Despite these criticisms, the growth of ESG frameworks offers a more structured and potentially measurable path to sustainable business practices. However, challenges like inconsistent reporting standards, lack of stakeholder alignment, and fragmented adoption still hinder meaningful progress.

Future efforts must prioritize the development of standardized, adaptive ESG models, cross-sector collaboration, and greater stakeholder involvement. By doing so, organizations can move beyond symbolic adoption and begin to implement sustainability in ways that are accountable, scalable, and aligned with both ecological realities and social expectations.

As the literature matures, several promising directions for future research emerge. First, there is a pressing need to develop adaptive ESG frameworks that can flexibly respond to dynamic socio-environmental conditions and evolving regulatory landscapes. This includes the creation of standardized indicators for ESG performance that accommodate both quantitative financial metrics and qualitative social impacts (Chopra et al., 2024; Saxena et al., 2023).

Additionally, more emphasis must be placed on incorporating social bottom line integration—such as employee wellbeing, inclusive governance, and respect for human rights—into strategic business decisions (Chopra et al., 2024). Technology, particularly Artificial Intelligence (AI) and blockchain, holds potential for enhancing ESG transparency, reporting accuracy, and data-driven decision-making (Saxena et al., 2023; Riyath and Jariya, 2024).

Future research can also examine the indirect impacts of ESG policies on non-financial stakeholders such as communities and supply chain partners, and explore how ESG initiatives influence intangible aspects like customer loyalty, stakeholder trust, and brand reputation. As climate risks and geopolitical uncertainties rise, resilience-building and ESG-aligned risk management strategies are essential areas for empirical exploration (Riyath and Jariya, 2024).

Despite growing endorsement of the TBL approach, its implementation remains inconsistent across sectors. Several persistent obstacles have been identified. Internally, resistance from leadership or operational teams can hinder the integration of sustainability goals. Additionally, stakeholder priorities often conflict, making it difficult to align social, environmental, and economic objectives.

Another major challenge lies in the absence of universally accepted metrics or reporting standards for ESG performance, which complicates benchmarking and accountability efforts. These issues were flagged in earlier studies, where scholars emphasized the fragmented nature of sustainability practices and the limited institutional support for integrated frameworks (Montiel, 2008; Slaper and Hall, 2011). Addressing these barriers requires not only better tools, but also cultural change and strategic alignment at all organizational levels.

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