

ESG Adoption in SMEs: A Critical Reflection on Global Barriers, Enabling Strategies, and Theoretical Perspectives

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ABSTRACT

This review article critically examines the adoption of Environmental, Social, and Governance (ESG) practices in small and medium-sized enterprises (SMEs) by synthesizing the major theoretical perspectives, global barriers, and enabling strategies discussed in the literature. The study is grounded in stakeholder theory, the resource-based view, and institutional theory to explain how external pressures, internal capabilities, and regulatory environments shape ESG adoption in SMEs. The review finds that although ESG has become increasingly important for enhancing transparency, competitiveness, and long-term sustainability, SMEs continue to face significant obstacles in implementation. Key barriers include limited financial resources, lack of technical expertise, insufficient ESG knowledge, regulatory complexity, weak technological preparedness, short-term managerial orientation, and supply chain pressures. At the same time, the study highlights several enabling strategies that can facilitate ESG integration in SMEs, including access to green finance, sustainability-linked investments, capacity-building programs, peer learning, simplified ESG reporting frameworks, ethical leadership, digital transformation, and collaborative supply chain partnerships. The review further emphasizes that ESG adoption in SMEs is not shaped by a single factor but by the interaction of organizational, institutional, financial, and technological conditions. By bringing together fragmented insights from prior studies, this article offers a comprehensive understanding of how SMEs can overcome ESG adoption challenges and improve sustainability performance. The study contributes to the literature by providing an integrated conceptual perspective and practical insights for researchers, policymakers, and SME managers seeking to promote responsible and competitive business practices in a changing global environment

Keywords: ESG Adoption; Small and Medium-Sized Enterprises (SMEs); Sustainable Business Practices; ESG Barriers and Enablers; Sustainability Governance; Economic Growth..

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INTRODUCTION

The so-called Environmental, Social and Governance (ESG) principles have become one of the key models of sustainable and responsible business behaviour in the modern global economy. ESG incorporates environmental management, social responsibility and proper governance practises in corporate strategies that allow organisations to balance both economic growth and sustainability goals. The environmental aspect centres on the mitigation of climate change, efficiency of resources, use of energy, and protection of the environment whereas social aspect centres on labour standards, communal involvement, and human rights. Governance on its part is a concept describing transparency, accountability and ethical leadership in organisations. The increasing international consciousness of environmental, social, and corporate responsibility has stimulated companies to implement

ESG models to enhance transparency, risk management, and value creation in the long-term (Lawrence et al., 2025; Shalhoob and Hussainey, 2022; Gazi et al., 2025). Consequently, ESG has been receiving growing interest among policy makers, investors and regulatory bodies that have already stressed the need to ensure that organisations consider the idea of sustainability in their strategic and operational operations.

The role of small and medium-sized enterprises (SMEs) in world economy cannot be overestimated as they are commonly known as drivers of economic growth, creation of jobs, and innovations. SMEs are the largest proportion of the global businesses, and they play a great role in the national economic development and industrial output. This is because of their entrepreneurial focus, flexibility and adaptability that will enable them to react fast to changes in the market and to changes in technology.

Moreover, the SMEs play a critical role in the global supply chains by acting as suppliers, distributors, and service providers of the bigger corporations. Since they are prevalent in industries, SMEs, as a group, have a large impact on the sustainability of the environment, social welfare, and economic development (World Bank, 2022). Although significant, SMEs usually do not have that much money, technology, and experience, which can limit their capacity to adopt holistic sustainability plans (Adenan et al., 2024; Basit et al., 2024).

Over the last few years, there has been a growing demand on SMEs to embrace ESG practises due to the growing focus on sustainable development. Governments, financial institutions, investors, customers, and supply chain partners are all placing greater expectations on the levels of transparency, the environmental responsibility, and ethical governance of businesses of all sizes. Specifically, multinational corporations are urging their suppliers to comply with the sustainability criteria as a subset of responsibilities sourcing in the global supply chains (Sodhi & Tang, 2018). Therefore, SMEs are under increasing pressure to integrate ESG principles into the operational strategy and reporting structure of these organisations. Studies show that the pressure of stakeholders and close distance to social networks may greatly determine the readiness of SMEs to embrace corporate sustainability practises (Ernst et al., 2022).

ESG practises can be of various advantage to SMEs, such as improved reputation, increased trust of stakeholders, increased access to sustainable funding, and increased competitiveness on the international markets (Appiah-Kubi, 2025; Gjergji et al., 2021). Also, the theoretical concepts like the stakeholder theory underline the necessity to consider the requirements of the stakeholders and ensure responsible relations with other interest groups to achieve the organisational success in the long run (Freeman et al., 2021). Research has also indicated that ESG implementation can lead to competitive advantage as it can enhance efficiency of its operations, bolster its governance frameworks and enhance its financial performance over the long term (Greco, 2025).

Even though the concept of ESG adoption has become increasingly relevant, SMEs face considerable difficulties in trying to inculcate sustainability when doing their businesses. SMEs normally lack financial resources, access to advanced technologies, and the capacity of the manager to initiate sustainability strategies as compared to large corporations. The administrative and technical expertise of the SMEs can also be a problem since the complexity of the ESG reporting standards and regulatory framework can be burdensome. In addition, not all SMEs can easily determine the environmental and social performance

metrics necessary to succeed in ESG reporting and monitoring (Alayón et al., 2022; Madrid-Guijarro and Duréndez, 2024).

The other critical concern that has implications to the ESG adoption in SMEs is the institutional and organisational context that these companies have to work in. Governments, industry associations and social expectations are putting institutional pressures over organisations to embrace sustainable business practises. Nevertheless, SMEs can be too weak in meeting the requirements of the constantly changing sustainability standards because they lack awareness of the ESG systems and reporting standards. The studies focusing on the sustainability reporting practises of SMEs state that institutional support mechanisms, financial institutions, and cooperative frameworks are essential in achieving sustainability disclosure and reporting (Degregori et al., 2025).

Simultaneously, technological advancement and evidence-based sustainability are also gaining importance in facilitating the adoption of ESG. The development of digital technologies and sustainability analytics helps SMEs to cheque the environmental performance, streamline the use of resources, and adopt more successful sustainability strategies. Analytical tools and data-driven models can assist organisations in measuring their sustainability potential and finding a chance to enhance it in their operations (Bálint et al., 2025). Moreover, current studies state that the dynamics of sustainability practises development in SMEs and how organisational, institutional, and strategic conditions interact to influence the implementation of ESGs should be better understood (Caputo et al., 2024).

It is on this basis that the need to study the factors that affect the adoption of ESG in SMEs critically and to provide solutions that can enable the effective adoption of sustainability practises is being increasingly felt. Some of the barriers identified by the existing literature include limitations in finances, insufficient sustainability knowledge, inadequate technological skills, and regulatory issues. Simultaneously, a number of facilitating mechanisms, which include favourable policy frameworks, green financing prospects, technological innovation, and joint supply chain programmes, have been pointed to as possible agents of ESG implementation. Nevertheless, ESG adoption among SMEs is still a fragmented area where most studies have centred their interests on large firms as opposed to smaller enterprises.

Thus, this paper will focus on offering a critical review of the adoption of ESG in SMEs and the obstacles to its implementation, as well as propose the facilitating strategies to assist businesses in adopting ESG principles in their operations. In addition, the paper examines the main theoretical insights, which elucidate the motivation and limitation relating to

ESG implementation in SMEs. This review, by combining the conclusions drawn on the existing literature, helps gain a better idea of how multifaceted the relationship between organisational resources, stakeholder expectations, and institutional pressures is in relation to how the ESG adoption is formed in SMEs. The results of this paper can be of great use to the policymakers, researcher and business practitioners who may want to advance sustainable business activities and improve the contribution of SMEs to the global sustainability objective.

2. Theoretical Framework

The adoption of the Environmental, Social, and Governance (ESG) practises in the small and medium-sized enterprises (SMEs), should have a theoretical basis that can clarify the determinants of the organisational behaviour and the decisions of organisational sustainability. The factors that drive adoption of ESG include both internal organisational enablers as well as external stakeholder pressure, institution and business environment pressures. A number of theoretical orientations can be used to explain these dynamics; specifically, the stakeholder theory, the resource-based view (RBV), and the institutional theory. These frameworks are great sources of information about the way organisations react to the issues of sustainability and the way they incorporate ESG practises in their strategic and operational operations.

2.1 Stakeholder Theory

The stakeholder theory emphasises the need by organisations to identify and react to the expectations of different stakeholders who shape or are impacted by business operations. Some of the stakeholders are the customers, the employees, the investors, the regulators, the suppliers and the local communities. The organisations are thus supposed to strike a balance in the interest of these various groups and not just the shareholder value. Stakeholder expectations can be viewed as a significant force stimulating firms to initiate responsible environmental and social practises in case of the ESG adoption.

The growing awareness of stakeholders about sustainability has made organisations to increase transparency and accountability on their reporting. Companies are becoming more anticipated to report on environmental and social challenges and remain responsible in their governance systems. The stakeholder theory plus sustainability accounting can be used to explain how companies can align business strategies and the interests of their stakeholders to meet the long-term sustainability objectives (Hörisch et al., 2020). Moreover, the relationship between the stakeholders may play an important role in shaping the ESG disclosure policies, where organisations react to the expectations of the stakeholders to

increase the level of legitimacy and retain trust (Liu et al., 2022).

2.2 Resource-Based View (RBV)

Resource-Based View (RBV) is interested in internal resources and capabilities that help organisations to gain sustainable competitive advantage. To this school of thought, companies thrive when they are efficient in exploiting useful resources like knowledge, technology, managerial and organisational networks. Such resources enable the firms to come up with innovative solutions and be able to adapt to the changing market and regulatory environment.

Internal capabilities like the ability to innovate, share of knowledge, and the ability to orchestrate resources are significant in the context of the adoption of ESG, which facilitates sustainability efforts. The more successful SMEs are in their management and coordination of their internal resources, the higher chances of gaining green innovations and enhancing their sustainability performance (Xie et al., 2024). Nevertheless, the financial resources, technical know-how, and managerial skills, among other factors, of SMEs are usually limited and there is a possibility that this hinders their practise of ESGs. Thus, the lesson is that the success of adopting ESG is an item to enhance organisational capabilities and resources management.

2.3 Institutional Theory

The institutional theory describes the affair of the larger institutional context and the impact it has on organisational behaviour and decision-making. Companies tend to implement some of their practises because of external forces imposed by regulatory systems and companies in the industry and what the society demands. These forces keep pushing the companies to adhere to acceptable norms so as to receive legitimacy and remain competitive.

The pressure of the institutions connected to the sustainability reporting and ESG practises has grown greatly over the last few years. They are presented in regulatory frameworks, sustainability reporting standards, and government policies promoting transparent and responsible business practises in organisations. Institutional isomorphism, where similar practises are taken by organisations because of external pressures, is a significant element in the development of sustainability reporting and ESG disclosure in different industries (Posadas et al., 2023). Moreover, the institutional theory is also intertwined with stakeholder theory, since both these directions describe the impact of external demands on the corporate sustainability practises and reporting behaviour (Herold, 2018). Table 1 presents the key theoretical schools of thought that will be used to discuss ESG adoption among SMEs.

Table 1. Theoretical Perspectives Explaining ESG Adoption in SMEs

Theory	Key Idea	Relevance to ESG Adoption	Key References
Stakeholder Theory	Firms must consider the interests of multiple stakeholders	Explains stakeholder pressure driving ESG adoption	Freeman et al. (2021); Hörisch et al. (2020); Liu et al. (2022)
Resource-Based View	Competitive advantage arises from valuable internal resources	Highlights importance of capabilities and innovation in ESG implementation	Xie et al. (2024)
Institutional Theory	Organizations respond to regulatory and social pressures	Explains ESG adoption due to institutional and regulatory expectations	Posadas et al. (2023); Herold (2018)

2.4 Integration of Theoretical Perspectives

Although every theoretical framework can be used to give an individual explanation to the ESG adoption, combining the perspectives can be used to offer a more holistic explanation of the sustainability practises in SMEs. The stakeholder theory underlines the power and impact of stakeholder expectations and relations, the resource-based view underlines the significance of internal capabilities and organisational resources and finally the institutional theory underlines the impact of regulatory and societal pressures in the organisation behaviour.

The recent sustainability literature in the areas of SMEs highlights the significance of integrating these points of view to comprehend the nature of sustainability adoption and performance results. Reviewing reports on sustainability practises in SMEs, it is noted that the adoption of ESG is the

product of the relationship between the expectations of stakeholders, organisational resources, and institutional environments (Martins et al., 2022). Equally, the new studies in the field of ESG in SMEs also highlight the significance of combining theoretical concepts on why sustainability practises are such complex processes among small businesses (Seow, 2026).

A synthesis of these theoretical frames has the potential to give researchers a better insight into the way SMEs react to sustainability issues and adopt ESG measures. This is an integrated theoretical framework, thus, a solid basis of the analysis of barriers and enabling strategies related to the adoption of ESG in SMEs. The existence of a connexion between theoretical perspectives and ESG adoption among SMEs can be summed up by an integrated conceptual framework as shown in Figure 1.

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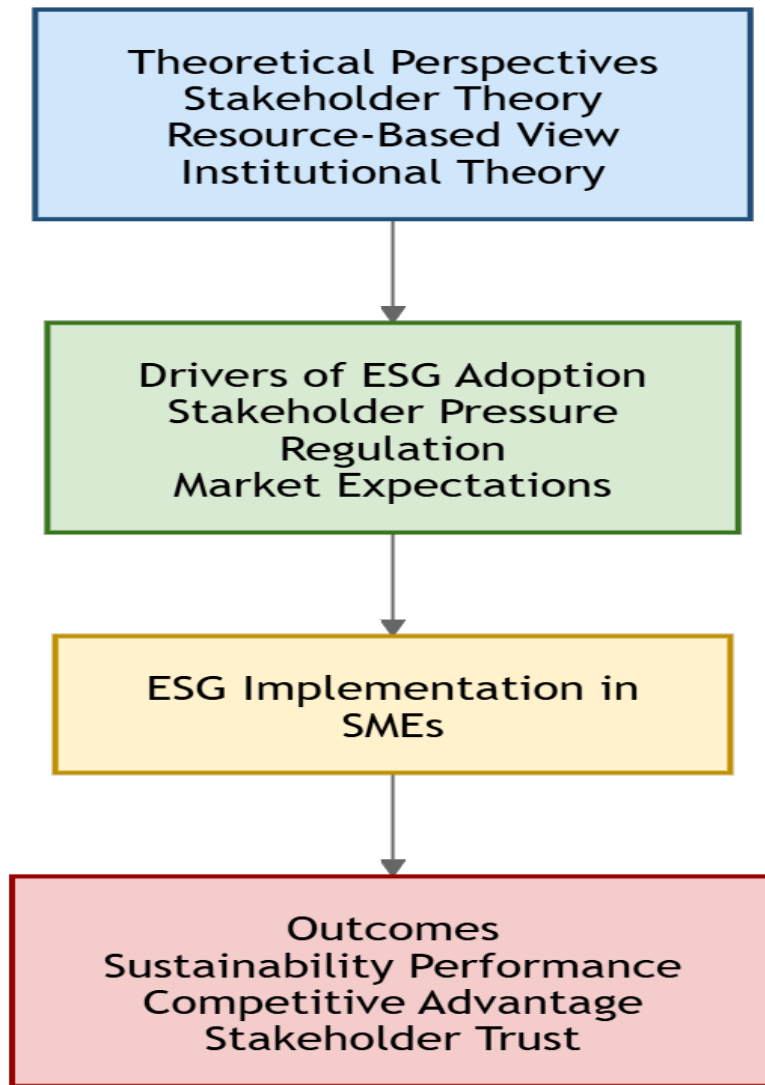


Figure 1. Conceptual Framework of ESG Adoption in SMEs

The theoretical frameworks explaining the adoption of ESG in SMEs in terms of the stakeholder theory, the resource-based view, and the institutional theory. These views bring forth the impacts of the stakeholder pressures, internal organisational resources, and institutional environments on sustainability practises. They both offer a broad paradigm of ESG adoption drivers in SMEs.

3. Global Barriers to ESG Adoption in SMEs

Environmental, social, and governance (ESG) practises are becoming increasingly significant in adopting those practises as businesses aim to make their operations more aligned with sustainability objectives and responsible governance practises.

Whereas the capacity of large corporations to carry out ESG initiatives is often supported by financial and institutional means, small and medium-sized enterprises (SMEs) are often highly challenged by the adoption of the practise. The barriers have been linked to financial constraints, the unavailability of expertise, the complexity of regulations, cultural aspects relevant to an organisation, technological preparedness, and pressures on supply chain. These issues are necessary to determine what structural and operation-related factors do not facilitate the implementation of ESG in SMEs (Durrani et al., 2024; Liou et al., 2023). The main studies reviewed in this review of the ESG adoption among SMEs are summarised in Table 2.

Table 2. Summary of Key Studies on ESG Adoption in SMEs

Author(s)	Year	Journal	Key Focus
Adenan et al.	2024	E3S Web of Conferences	ESG practices and sustainability perspectives in SMEs
Liou et al.	2023	Systems and Soft Computing	Key barriers to ESG adoption in enterprises

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Durrani et al.	2024	PLOS ONE	Barriers to environmental sustainability adoption in SMEs
Salvador et al.	2023	Journal of Cleaner Production	Sustainability innovation and maturity in SMEs
Setyaningsih et al.	2024	Cogent Business & Management	Challenges and opportunities in sustainability reporting for SMEs
Momtaz & Parra	2025	Small Business Economics	Relationship between ESG disclosure and financial performance
Chen & Wang	2024	Scientific Reports	Role of digital transformation in ESG performance in SMEs
Ong et al.	2025	International Journal of Ethics and Systems	Ethical leadership and ESG adoption in MSMEs

3.1 Insufficient Resources and Expertise

The insufficient financial resources and expertise to implement ESG in SMEs is among the most important obstacles to this practise. Most SMEs have a bare financial ability and focus on short term operation survival rather than investing in long term sustainability. Adopting ESGs can be financially binding in terms of environmentally friendly technologies, sustainable reporting systems, employee education, and compliance systems. In the case of small companies with limited finance, it may be especially difficult to finance such projects (Neto et al., 2022).

Besides financial constraints, SMEs often do not have specialised knowledge about sustainability management. SMEs usually have few employees who are left to handle various business operations compared to large corporations that may have sustainability experts working on their behalf. It may cause SMEs to struggle with the development and adoption of good ESG practises because of inadequate specialised knowledge and technical capacity (Kindström et al., 2024).

3.2 Insufficient Knowledge and Skills

Awareness, knowledge and technical skills associated with the sustainability practises are another barrier to the adoption of ESG in SMEs. A lot of SME managers might not be aware of the ESG frameworks, sustainability reporting standards as well as environmental management systems. Lack of adequate understanding of these practises means that organisations might not be able to incorporate the idea of ESG in their operations.

Literature has indicated that the lack of knowledge and the level of managerial awareness tend to diminish the desire of the SMEs to embrace sustainability programmes. The reason why organisations are reluctant to use ESG practises is that they are not sure of the possible benefits, costs, and implementation process (Durrani et al., 2024). Such ignorance may greatly prevent the practise of sustainability among the small businesses.

3.3 Regulatory Challenges

The complexity of regulations is also a major obstacle to SMEs that would like to embrace ESG practises. The sustainability reporting requirements and the environmental regulations tend to have complicated guidelines, professional language, and voluminous documentation forms. These requirements can turn into a challenging process when SMEs are characterised by a small administrative base.

Besides, the dynamic nature of sustainability policies may pose a challenge to SMEs that strive to adjust their operations to the new policy frameworks. Adherence to regulatory pressures can add to the costs and administrative overheads of undertaking formal ESG reporting, which puts off some SMEs (Liou et al., 2023).

3.4 Cultural, Organisational, and Short-Term Perspectives

The adoption of ESG practises in SMEs is also determined by the organisational culture and attitudes of the managers. Most of the SMEs work on short term financial stands and short-term operational priorities. This short-term orientation can reduce the readiness of managers to invest in the sustainability programmes which need the long-term commitment and long-term planning.

Financial decision-making can be largely influenced by short-termism which in turn impacts on the capacity of organisations to sustainability. Companies that focus more on short-term financial gains will view ESG investment as an expensive and not a strategic avenue of generating long-term value (Janicka et al., 2021). Because of it, the degree of commitment to the ESG adoption can be highly affected by the organisational culture and leadership priorities.

3.5 Digital Security and Technological Preparedness

Another factor that determines the capability of the SMEs to adopt ESG practises is technological readiness. Numerous sustainability projects are based on digital systems to monitor the environmental performance, gather sustainability data, and control ESG reporting. Nonetheless, SMEs can be deprived

of access to high-level technologies or digital infrastructure that can help them in such initiatives. Under the influence of the rapidly changing technological settings (like Industry 5.0), it is necessary that SMEs adjust to novel digital and sustainable production frameworks. Nevertheless, their capacity to adopt the high-tech sustainability solutions can be constrained by the scarcity of technological opportunities and digital transformation-related issues (Zare et al., 2025). SMEs might fail in their effective monitoring of ESG performance because of a lack of proper technological infrastructure.

3.6 Supply Chain Pressure and Power Imbalance

The supply chain dynamics also pose challenges to the SMEs that are trying to implement the ESG

practices. A large proportion of SMEs serve as suppliers in larger global value chains in which the multinational corporations operate. These bigger companies tend to have sustainability conditions and environmental social responsibility on their suppliers. Although these requirements can motivate better sustainability practices, there is a risk that it will impose extra burden on SMEs that might not have the resources required to uphold high-quality ESG practices. Supply chain organisations can thus affect the implementation of socially responsible behaviours by suppliers, especially the smaller companies with lesser bargaining power (Awaysheh and Klassen, 2010). Figure 2 outlines the major obstacles affecting the adoption of ESG among SMEs based on the literature.

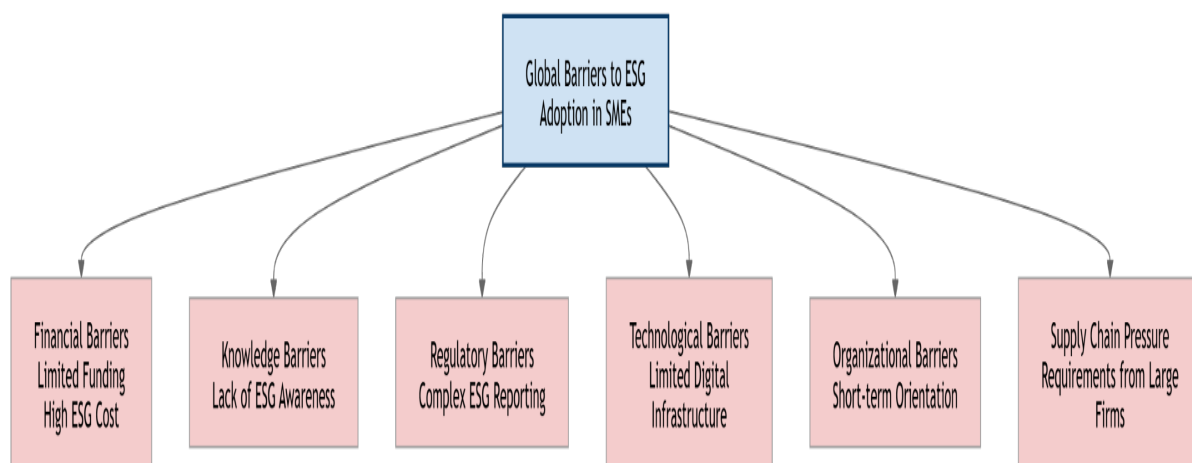


Figure 2. Global Barriers to ESG Adoption in SMEs

3.7 Synthesis of Barriers

The obstacles to the implementation of ESG among SMEs are mutually interacting and complement each other in many cases. Financial resources make it difficult to invest in sustainability technologies, whereas knowledge gaps decrease awareness of the positive outcomes of the ESG practices. The complexity in regulations raises administrative costs, and cultures of organisational thinking that concentrate on short-term financial results might be adversaries of sustainability investments. Moreover, the constraints of technology and pressure on the supply chain also make the process of ESG implementation even more complicated.

The use of management systems and integration of organisations is important in surmounting these challenges. Companies that effectively implement the concept of sustainability in their management practices would have better chances of devising effective strategies on how to manage the environmental and social responsibilities (Battaglia et al., 2016). Thus, to overcome the obstacles to ESG implementation, policymakers, industry participants, and business executives should work in synergy to

establish positive conditions that will help SMEs to adopt the concept of sustainability in their businesses.

4. Enabling Strategies for ESG Adoption in SMEs

Although the implementation of Environmental, Social, and Governance (ESG) practices can be cumbersome to small and medium-sized enterprises (SMEs), there are several facilitating strategies that could help successful implementation of sustainability principles in business operations. Such strategies comprise of financial support systems, capacity building programmes, streamlined reporting systems, executive dedication, technological advancement, and joint supply chain strategies. The strategies will enable SMEs to deal more effectively with sustainability risks, operational performance, and correlate their business operations with the higher order environmental and social objectives.

4.1 Financial Solutions and Risk Mitigation

Mechanisms of financial support are very important in empowering the SMEs to embrace ESG practices. Most of the sustainability programmes involve investing in green technologies, sustainable

production processes, and ESG tracking systems. SMEs are however limited in the capacity to carry out such initiatives due to the constraint of limited finances. Availability of green finance instruments can thus help a great deal in promoting the use of ESG on SMEs. Green investment schemes, sustainability-based loans, and blended finance typologies are financial instruments that can assist businesses to surmount financial limitations and promote sustainable investments (Taghizadeh-Hesary and Yoshino, 2019; Okeke et al., 2024).

Moreover, it has been indicated that companies that embrace the ESG tend to have better financial results and risk management performances. Companies that incorporate sustainability into their business approaches might increase their value creation in the long run and their competitiveness in the international markets (Friede et al., 2015; Momtaz and Parra, 2025). SMEs can thus be helped to shift their business models to more responsible and sustainable ones with the help of green investments and sustainable financing structures (Ye and Dela, 2023).

4.2 Capacity Building and Peer Learning

Another strategy to enhancing ESG adoption in SMEs is capacity building. Most SMEs are not equipped with the managerial skills and technical knowhow to execute the sustainability initiatives. The level of awareness on ESG principles can be enhanced by providing training programmes, workshops and platforms where knowledge can be shared to help organisations adopt the concept of sustainability in their strategic planning processes.

It is also possible that collaborative learning programmes and sustainability innovation programmes can improve the capacity of SMEs to institute ESG practises. Due to the involvement in such programmes, firms experience mutual participation, best practises, and innovative solutions to sustainability issues. Such collaborative strategies were found to enhance maturity and performance of sustainability in SMEs through enhancing organisational capabilities and promoting knowledge sharing (Salvador et al., 2023).

4.3 Simplified ESG Reporting Frameworks

The overwhelming nature of the sustainability reporting structures is also a key challenge faced by SMEs trying to implement the ESG practises. Most reporting standards currently in existence were formulated based on the large companies and perplexing indicators and documentation demands. Streamlining ESG reporting systems can thus be used as a significant tool to enhance membership by smaller companies.

Simple templates of sustainability indicators and the creation of SME-friendly reporting templates can serve to reduce administrative loads and allow firm to monitor their sustainability performance and report

about it in a more efficient way. Studies indicate that enhancing transparency and access to sustainability reporting is crucial to promote the use of ESG by more organisations (Chopra et al., 2024). Moreover, minimalized reporting models may offer SMEs the chance to show their sustainability practises and reinforce the accountability and trust of stakeholders (Setyaningsih et al., 2024).

4.4 Addressing Cultural and Organisational Barriers

SMEs organisational culture and leadership commitment are the key elements that contribute to the effective execution of ESG initiatives. Leadership is effective in facilitating sustainability-oriented decision making and the encouragement of responsible business practises. Organisational leaders who focus on delivering sustainability outcomes would build a culture that promotes innovation, ethical governance, and strategic planning over the long term.

Ethical leadership has also been classified as a crucial power behind the establishment of ESG, especially among the SMEs where management decision-making has a significant impact on the organisational strategies and operational priorities. Leadership commitment may thus be useful in applying ESG to corporate culture and business operations which enhances the overall sustainability performance of the organisation (Ong et al., 2025).

4.5 Digital Strategies for ESG Implementation

Digital transformation and technological innovation have a great potential to increase the capabilities of SMEs to adopt and track ESG practises. By utilising digital technologies, organisations can gather and process data on the sustainability-related issues, monitor the environmental performance metrics, and enhance the transparency of the reporting processes. Digital tools integration into the business processes can thus promote an efficient ESG management and decision-making.

Digital transformation can also help firms to create new sustainability solutions and enhance resource efficiency. Research demonstrates that digital potential and innovation-driven approaches can have a positive impact on the performance of ESG in SMEs because it allows organisations to track the sustainability performance more efficiently and optimise performance (Chen and Wang, 2024). Additionally, corporate sustainability performance and improvement of ESG ratings may be reinforced by technological innovation and green technology development in any industry (Wang et al., 2025).

4.6 Managing Supply Chain Pressures

Another strategy that can be used in aiding the adoption of ESG among SMEs is supply chain collaboration. Several SMEs act as suppliers in the

global value chains and could have to meet sustainability conditions that are enforced by the bigger companies. These requirements are not only imposed on SMEs as compliance measures, but also SMEs can use the opportunities of partnering with larger companies and benefiting through their assistance to enhance sustainability.

Knowledge sharing, joint sustainability projects and supplier development through programmes aimed at enhancing environmental and social performance within value chains may be part of collective supply chains efforts. The studies on ESG in the supply

chains emphasise strategic cooperation and cohesive sustainability actions between the supply chain partners to improve the overall performance and competitive edge in the long run (Truant et al., 2024). Also, companies with a greater sensitivity to the environment tend to be more sensitive to ESG because stakeholders and sustainability pressures are more intense (Garcia et al., 2017). Figure 3 provides the enabling strategies that facilitate adoption of ESG by the SMEs and how they affect sustainability outcomes.

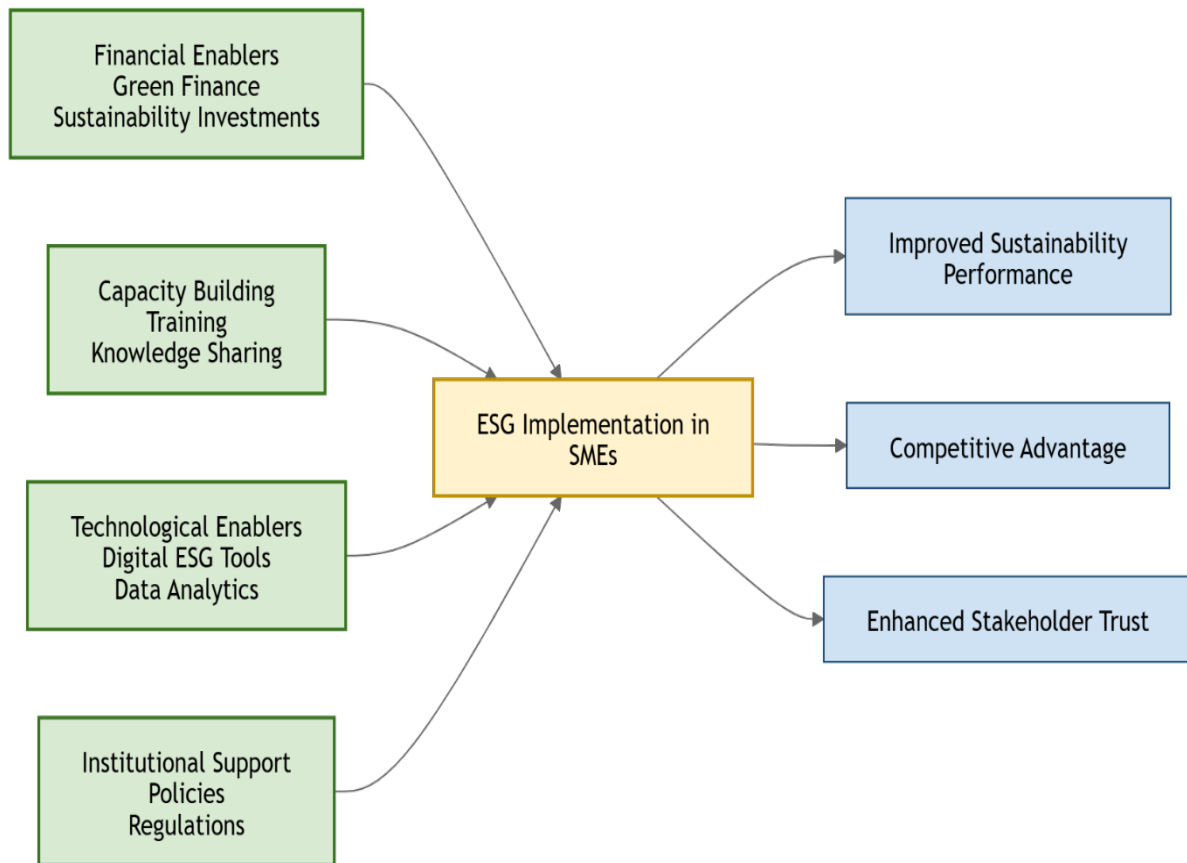


Figure 3. Enabling Strategies for ESG Adoption in SMEs

4.7 Critical Synthesis

The interaction is an effective enablement strategy to the adoption of ESG which is dependent on financial support, institutional framework, organisational leadership, and technological capabilities. Sustainability investments are based on the financial incentives whereas knowledge and managerial expertise are empowered by the capacity-building initiatives in the SMEs. Eased reporting models make the administrative aspects less complicated and digital technologies make firms more likely to track the sustainability performance.

Simultaneously, an effective commitment of leadership and joint supply chain relationships can enhance the pace of implementing ESG and enhance the

organisational sustainability performance. Moreover, a greater level of transparency and better governance systems can be used to avoid such practises like greenwashing and enhance confidence of stakeholders in sustainability reporting (Sneideriene & Legenzova, 2025). With the help of these strategies, SMEs will be able to deal with most of the obstacles related to the ESG implementation and consider the principles of sustainability in their business models better. Table 3 gives the summary of the key barriers and enabling strategies affecting the adoption of ESG in SMEs found in the literature.

Table 3. Barriers and Enabling Strategies for ESG Adoption in SMEs

Category	Key Barriers	Enabling Strategies	Key References
Financial	Limited financial resources for ESG investment	Green finance and sustainability-linked loans	Taghizadeh-Hesary & Yoshino (2019); Okeke et al. (2024); Ye & Dela (2023)
Knowledge	Lack of ESG awareness and technical expertise	Capacity-building programs and sustainability training	Basit et al. (2024); Salvador et al. (2023)
Regulatory	Complex ESG reporting standards and compliance requirements	Simplified ESG reporting frameworks	Chopra et al. (2024); Setyaningsih et al. (2024)
Technological	Limited digital infrastructure for ESG monitoring	Digital ESG tools and data analytics systems	Chen & Wang (2024); Wang et al. (2025)
Organizational	Lack of leadership commitment and short-term orientation	Ethical leadership and sustainability culture	Ong et al. (2025); Janicka et al. (2021)
Supply Chain	Pressure from multinational corporations	Collaborative supply chain sustainability initiatives	Truant et al. (2024); Garcia et al. (2017)

The most important enabler strategies in ESG adoption in SMEs, such as availability of green finance, capacity-building programmes, streamlined reporting systems, digital tools, and ethical leadership. It highlights that the institutional support, the technological innovation and partnerships in the supply chain are significant in resolving the implementation difficulties. All these strategies assist SMEs to enhance sustainability performance, competitiveness, and the trust it has among its stakeholders.

5. Conclusion

This study critically reviewed the adoption of Environmental, Social, and Governance (ESG) practices in small and medium-sized enterprises (SMEs) by examining the theoretical perspectives, barriers, and enabling strategies that influence sustainability integration in these organizations. The findings highlight that ESG adoption has become increasingly important in the contemporary business environment as stakeholders, policymakers, and investors emphasize responsible and transparent corporate practices. SMEs, despite their significant contribution to global economic development, often encounter several challenges in implementing ESG initiatives. Key barriers identified in the literature include limited financial resources, lack of technical expertise, regulatory complexity, insufficient sustainability knowledge, and organizational constraints. These challenges can restrict SMEs' capacity to integrate ESG principles effectively into their strategic and

operational activities. At the same time, the review demonstrates that several enabling strategies can support ESG adoption among SMEs. Financial incentives such as green financing mechanisms, government support programs, and sustainability-linked investments can reduce financial constraints and encourage sustainable practices. Capacity-building initiatives, training programs, and knowledge-sharing networks can enhance managerial awareness and technical capabilities related to ESG implementation. Furthermore, simplified sustainability reporting frameworks and digital technologies can help SMEs monitor environmental and social performance more effectively. Leadership commitment and organizational culture also play a crucial role in promoting sustainability-oriented decision-making within firms. In addition, collaborative supply chain relationships with larger corporations and industry partners can provide SMEs with access to resources, expertise, and technological support that facilitate ESG adoption. Overall, this study emphasizes that a comprehensive approach combining financial, institutional, technological, and organizational strategies is essential to overcome existing barriers and promote the successful integration of ESG practices in SMEs. Strengthening these mechanisms can enhance the sustainability performance and long-term competitiveness of SMEs while contributing to broader global sustainable development objectives.

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