

# ESG Practices, Access to Finance, and Firm Performance among Malaysian SMEs: A Trust-Based Capability Perspective

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## Abstract

This study examines how ESG practices relate to SME performance in Malaysia, focusing on the enabling role of access to finance and the moderating influence of market turbulence. Drawing on the Resource-Based View and stakeholder-oriented trust mechanisms, we conceptualize ESG as an organizational capability that can strengthen legitimacy and reduce perceived risk, thereby improving financing outcomes and operational performance. Survey data were collected from 402 Malaysian SMEs across manufacturing, services, and agribusiness sectors. Using Partial Least Squares Structural Equation Modeling (PLS-SEM), the analysis indicates that ESG practices are positively associated with firm performance, with access to finance operating as a partial mediator. The relationship strengthens under higher market turbulence, suggesting that ESG operates as a resilience-enhancing capability when external volatility increases. The study contributes to ESG literature by explaining performance pathways in the SME context and offering an ASEAN-relevant perspective on how sustainability-related capabilities translate into tangible outcomes. The findings suggest that policy initiatives supporting ESG adoption—especially those linked to green financing and disclosure assistance—may improve both firm competitiveness and financial inclusion among SMEs.

Keywords: *ESG, SMEs, access to finance, firm performance, market turbulence, Malaysia, PLS-SEM.*

## A. INTRODUCTION

ESG has shifted from a peripheral corporate discourse to a strategic imperative that increasingly shapes how firms compete, signal legitimacy, and access capital. While ESG has been studied extensively among large publicly listed companies, the SME segment—despite contributing substantially to employment and value creation in Southeast Asia—remains comparatively underexplored (Pramuditha et al., 2025; Zhu & Huang, 2023a). This gap matters because SMEs face different constraints and incentives than large firms: they often operate with thinner buffers, less formalized governance systems, and greater sensitivity to financing frictions. When sustainability expectations intensify in supply chains and financial markets, SMEs must decide whether ESG represents a cost burden or a capability that strengthens performance.

Malaysia provides a compelling empirical context because sustainability reporting and responsible business practices have gained momentum through regulatory initiatives, financial sector agendas, and multinational supply-chain pressures. Even when SMEs are not directly mandated to publish ESG reports, they increasingly encounter ESG-related requirements through procurement standards, bank risk assessment practices, and customer preference shifts. Such exposure creates a strategic tension. On one hand, ESG adoption can require investments in operational changes, compliance practices, and documentation, potentially diverting resources away from core activities. On the other hand, ESG may reduce risk perceptions and enhance stakeholder trust, thereby improving the firm's ability to secure financing and maintain stable customer relationships (Fathoni et al., 2025; Mostepaniuk et al., 2022).

The performance implications of ESG are not theoretically trivial. Arguments supporting a positive relationship typically rely on capability-building logic: ESG can improve resource efficiency, reduce operational risk, strengthen workforce commitment, and protect reputational capital. Yet competing

arguments emphasize implementation costs and the risk of symbolic compliance that yields minimal operational gains. The empirical record reflects this theoretical ambiguity, particularly in emerging economies where institutional environments vary and sustainability norms may not be uniformly enforced.

Environmental, Social, and Governance (ESG) considerations have shifted from being an optional layer of corporate communication to a strategic language through which firms negotiate legitimacy, manage risk, and secure resources. This shift is not confined to large listed corporations. As sustainability standards diffuse through supply chains and financial systems, smaller businesses increasingly encounter ESG expectations embedded in procurement requirements, lending assessments, and partnership decisions. In Southeast Asia, where SMEs constitute the backbone of employment and local value creation, this trend raises a consequential question: whether ESG adoption improves SME performance through tangible mechanisms, or whether it primarily imposes compliance costs that drain scarce managerial attention and financial capacity (Ramírez et al., 2021; Sarif et al., 2025).

The tension is particularly visible in emerging economies because the institutional environment rarely provides uniform incentives or enforcement. ESG adoption can generate operational benefits—such as reduced energy waste, safer workplaces, or clearer decision protocols—yet those benefits often depend on implementation discipline, internal capabilities, and stakeholder recognition. SMEs face distinctive constraints in all three dimensions (Miran et al., 2025; Moges et al., 2025). Resource limitations restrict their ability to invest in measurement systems and reporting routines; managerial time is typically stretched across multiple operational roles; governance structures are often informal, making “G” improvements appear conceptually desirable but practically difficult. At the same time, SMEs operate under greater informational opacity than larger firms. External parties frequently rely on signals rather than audited disclosures when assessing SME credibility, which means sustainability-related practices may carry disproportionate signaling value even when formal reporting is absent.

Malaysia represents a strategically relevant setting for examining these dynamics because its sustainability agenda has developed alongside relatively sophisticated financial intermediation and an increasingly ESG-aware regulatory discourse. Sustainability-linked initiatives in the Malaysian financial sector have created pathways through which ESG can influence firms beyond reputational effects, particularly by shaping how lenders perceive risk. For SMEs, financing frictions remain among the most persistent barriers to upgrading technology, expanding capacity, or weathering market shocks. When credit access is constrained, even profitable opportunities remain unattainable, and performance becomes tightly coupled to liquidity conditions (Belás Jr et al., 2024; Yap & Al-Mutairi, 2024). The practical implication is straightforward: if ESG strengthens financing outcomes, it may function as a capability that converts responsible practices into growth-enabling resources.

Even so, the relationship between ESG and SME performance cannot be treated as automatic. The empirical literature offers mixed evidence, partly because ESG is often conceptualized as a broad composite rather than a mechanism-based capability. Some studies report positive associations, arguing that ESG reduces operational risks and strengthens stakeholder commitment, which eventually supports performance. Other studies highlight the risk of “symbolic ESG,” where firms adopt superficial practices to satisfy external expectations without changing underlying routines, yielding minimal operational gain while increasing administrative burden (Panakaje et al., 2025; Waruwu & Rizki, 2025). For SMEs, this risk is amplified because implementation can be fragmented, and measurement tools are limited. These contradictions suggest that research should move from asking whether ESG “matters” in general toward clarifying *how* it matters, *through what channels*, and *under which conditions* the payoff becomes more or less visible.

Access to finance provides a theoretically and practically grounded mechanism for explaining ESG effects in the SME segment. Financing decisions are shaped by perceived default risk, governance maturity, and informational transparency. SMEs frequently struggle with information asymmetry, as lenders face uncertainty about cashflow stability, managerial competence, and operational control (Tran & Nguyen, 2025; Wijaya, 2025). ESG can reduce this uncertainty through observable practices that signal discipline and risk management. Environmental routines can indicate operational efficiency and cost control; social practices can signal workforce stability and lower disruption risk; governance practices can imply structured decision-making and reduced opportunistic behavior. When ESG is credible, these signals can elevate lender confidence, translating into improved access to finance in the form of higher approval likelihood, better terms, or increased credit capacity (Atobishi & Podruzsik, 2025; Kato, 2024).

Such financing improvements can then expand the firm's strategic room for maneuver by enabling investment, smoothing cashflow volatility, and enhancing resilience.

A second dimension that warrants attention is the volatility of the competitive environment. ASEAN markets have experienced increasingly rapid shifts in demand patterns, price competition, and technological diffusion, particularly in sectors where SMEs dominate. Market turbulence changes the value of organizational capabilities because it amplifies uncertainty and increases the cost of misalignment with stakeholder expectations. Under stable conditions, the performance payoff of ESG may appear modest because the benefits of legitimacy and risk reduction are less salient. Under turbulence, the same practices can become more valuable by stabilizing relationships with customers, employees, suppliers, and financiers. In a turbulent market, stakeholder exit can occur rapidly, and financing conditions can tighten unexpectedly. ESG may function as a resilience mechanism that reduces the probability of adverse stakeholder reactions, thereby strengthening performance precisely when uncertainty intensifies (Mariani et al., 2025; Zheng et al., 2025).

This study builds on these insights by positioning ESG as a trust-based capability that operates through financial and adaptive pathways. Drawing from the Resource-Based View, ESG is conceptualized as a set of routines and governance disciplines that can enhance efficiency and strategic credibility. Stakeholder-oriented trust mechanisms provide an additional explanatory layer, suggesting that ESG can reduce perceived risk and strengthen legitimacy, thereby improving access to finance. Market turbulence is introduced as a contingency factor that clarifies when ESG capabilities are most likely to translate into performance advantages. This integrated perspective is especially appropriate for SMEs, whose outcomes are often shaped by external perceptions and resource constraints rather than by scale-based efficiency (Safitri et al., 2025; Zhu & Huang, 2023b).

The Malaysian SME context offers empirical leverage to test this framework. SMEs in Malaysia face heterogeneous ESG exposure depending on sector, supply-chain integration, and customer profile. Firms linked to multinational procurement ecosystems may experience stronger ESG pressures, while others encounter ESG indirectly through financing requirements or consumer preferences. This heterogeneity makes it possible to observe how ESG practices relate to financing access and performance under varying environmental conditions.

The study addresses three research questions. First, it examines whether ESG practices are associated with SME performance, recognizing that performance in SMEs often reflects both financial outcomes and operational stability. Second, it tests whether access to finance transmits the effect of ESG practices to performance, illuminating the role of financing as a mechanism rather than a background condition. Third, it investigates whether market turbulence strengthens the ESG-performance relationship, clarifying the adaptive value of ESG under volatility.

The contribution of this study is threefold. Conceptually, it advances ESG research by shifting the focus from generalized performance associations toward mechanism-based explanation within the SME domain. Empirically, it provides evidence from an ASEAN economy where SMEs occupy a central economic position yet face persistent financing constraints. Practically, the findings inform policymakers and financial institutions on how ESG-related initiatives—such as simplified disclosure assistance, targeted capability-building programs, and sustainability-linked SME financing—can be designed to support both sustainable practices and competitiveness without imposing unrealistic burdens on smaller firms.

The remainder of the article is organized as follows. The next section reviews the literature on ESG capabilities, financing mechanisms, and environmental contingencies, culminating in the hypotheses. The methodology section outlines the sampling strategy, measurement development, and analytical procedures. The results section presents hypothesis support patterns and mediation/moderation interpretations. The discussion section positions the findings relative to prior research and develops implications for SME strategy and ASEAN policy. The final section summarizes key insights, acknowledges limitations, and proposes future research directions.

This study addresses these tensions by focusing on two mechanisms that are especially relevant for Malaysian SMEs: access to finance and environmental volatility. Access to finance functions as a practical channel through which ESG may translate into performance, since SMEs commonly report financial constraints as a barrier to scaling and innovation. ESG signals, when credible, can reduce information asymmetry and perceived risk among lenders, which may improve financing terms and availability. At the same time, the value of ESG may become more pronounced under market turbulence, because firms facing

volatile demand and cost shocks benefit from legitimacy and resilience mechanisms that reduce stakeholder exit.

## **B. LITERATURE REVIEW**

### **ESG in the SME domain: from compliance rhetoric to operational routines**

ESG research has matured rapidly, yet much of its empirical backbone remains anchored in large public firms where disclosure regimes, investor scrutiny, and data availability are comparatively strong. SMEs inhabit a markedly different organizational ecology. Their governance is often concentrated in owner-managers, decision processes rely on tacit knowledge rather than formal controls, and performance is shaped by local networks as much as by standardized market signals. Treating ESG as a uniform construct across firm sizes risks flattening these differences and obscuring the mechanisms through which ESG may create value, particularly when the firms most exposed to financing friction and market volatility are those least able to absorb reporting and compliance burdens (Hassan et al., 2025; Samsuddin et al., 2025).

A mechanism-based perspective reframes ESG for SMEs as a portfolio of routines that may strengthen predictability and reduce disruption. Environmental practices in SMEs frequently manifest as energy efficiency measures, waste reduction habits, basic compliance with environmental standards, and incremental process improvements that reduce material loss. Social practices tend to appear through workforce health and safety, training, fair scheduling, grievance handling, and community engagement—elements that influence labor stability and customer sentiment. Governance practices may involve documented roles, internal controls, procurement discipline, anti-corruption norms, and clearer accountability channels. Each of these routines can shift cost structures, reduce operational variance, and influence how stakeholders interpret the firm's reliability (Mirza et al., 2025; Setyawan et al., 2024).

The debate over whether ESG “pays” often conflates two distinct phenomena: substantive ESG that is embedded in routines, and symbolic ESG that is primarily communicative. SMEs may engage in symbolic gestures because resource constraints make deep adoption difficult, yet symbolic adoption can still influence stakeholder perceptions under conditions of information scarcity. The distinction matters because the performance channel differs. Substantive ESG can change productivity and risk profiles through real operational shifts; symbolic ESG can change perceived risk through signaling, particularly to lenders and buyers. Empirical inconsistency in ESG–performance results frequently emerges when studies do not separate these channels or fail to specify when one dominates the other (Nurlinah et al., 2025).

Malaysia's SME environment provides a revealing setting for this distinction. A portion of SMEs is embedded in supply chains that increasingly impose sustainability requirements, especially when linked to export-oriented manufacturing, multinational procurement, or sustainability-linked reporting cascades. Another portion remains domestically focused, encountering ESG through bank lending narratives, policy communication, and consumer preference shifts that are uneven across sectors (Madyatmadja et al., 2024; Sulistya et al., 2019). This heterogeneity makes ESG's role as capability, signal, and constraint simultaneously observable.

### **Capability logic: Resource-Based View, dynamic capabilities, and ESG maturity**

The Resource-Based View (RBV) clarifies why ESG may matter beyond moral discourse. Capabilities, rather than isolated resources, generate sustained advantage when they embed coordinated routines that competitors cannot easily replicate. ESG-related capabilities are best understood as “organizational maturity” in managing stakeholder-relevant risks and opportunities. Even modest ESG routines can become valuable if they reduce disruption and enhance coordination. SMEs often compete through reliability and responsiveness rather than pure scale, making variance reduction and trust-building particularly strategic (Fitriyanti, 2024).

Dynamic capability perspectives extend RBV by emphasizing adaptation under change. Market turbulence—shifting demand, volatile input costs, rapid competitor moves—tests a firm's capacity to reconfigure routines. ESG can strengthen dynamic capabilities through two pathways. First, environmental efficiency practices can institutionalize measurement habits, encouraging continuous improvement logic that supports process agility. Second, social and governance routines can stabilize internal coordination and strengthen role clarity, reducing the friction of change execution. These

pathways imply that ESG's value may surface more clearly during volatility than during stability, when resilience and stakeholder loyalty become central performance determinants.

ESG maturity becomes a useful conceptual lens. Early-stage ESG adoption may be fragmented, yielding limited operational benefit; mid-stage adoption may improve coordination and reduce waste; advanced adoption may enable strategic differentiation and better financing terms. SME research that treats ESG as a binary presence/absence variable often misses these maturity gradients. A maturity framing also helps explain why ESG may show partial mediation through finance: early-stage ESG could influence lenders via signaling even before operational benefits mature, while later-stage ESG may influence performance through both operational and financing mechanisms (Setyowati et al., 2024; Wirata et al., 2025).

### **Stakeholder trust and legitimacy: why ESG influences perceived risk**

Stakeholder theory highlights that firm survival depends on satisfying the expectations of multiple actors who control resources and legitimacy. For SMEs, these actors often include banks, key suppliers, anchor customers, regulators, and communities that shape local reputational capital. ESG practices can alter stakeholder evaluations by reducing perceived uncertainty. The causal mechanism resembles a trust formation process. Observed responsible practices can be interpreted as evidence of managerial integrity and competence, which lowers the perceived probability of opportunism, non-compliance, or operational breakdown.

Legitimacy theory complements this logic by explaining why ESG is increasingly tied to "being a legitimate business" rather than merely "being ethical." Modern legitimacy criteria incorporate environmental compliance, fair labor treatment, and governance integrity. SMEs that demonstrate alignment with these criteria may experience fewer transactional frictions and lower relational costs. This reduction can manifest as smoother supplier credit, improved customer retention, and more favorable financing outcomes (Pramuditha et al., 2024). Legitimacy behaves like an intangible asset that reduces the cost of transacting under uncertainty.

The trust pathway is especially important for SMEs because information asymmetry is structural. Lenders often do not have complete insight into SME cashflow volatility, internal controls, or risk management capability. ESG routines can serve as proxies for managerial discipline, provided they appear credible. Credibility tends to increase when ESG practices are consistent, documented, and reflected in operational outcomes such as lower incident rates, stable workforce, or transparent procurement behavior. This insight supports the financing mediation logic in the proposed model.

### **ESG and access to finance: the mechanism of risk reduction and information quality**

Access to finance remains a canonical challenge for SMEs, often shaped by collateral constraints, limited credit history, and high transaction costs for lenders. Financing frictions intensify when lenders perceive opacity, weak governance, or operational instability. ESG practices can address these concerns through two related mechanisms: risk reduction and information enhancement.

Risk reduction arises when ESG practices directly reduce operational hazards. Environmental routines can reduce regulatory risk and incident probability; social routines can reduce labor disputes and turnover; governance routines can reduce fraud and misallocation. Lenders interpret lower operational risk as reduced default probability, increasing willingness to extend credit. Information enhancement emerges because ESG adoption often requires basic measurement and documentation. Even limited reporting discipline can increase the quality of information available to lenders, reducing uncertainty and improving credit assessment efficiency (Ramadhani et al., 2025).

Sustainability-linked finance trends further strengthen this channel. As banks incorporate environmental and governance criteria into credit evaluation, SMEs with credible ESG practices may receive improved consideration, not necessarily because they are "rewarded" morally, but because their risk profile is perceived as better managed. The diffusion of ESG risk assessment into mainstream banking means ESG can become an economically meaningful signal even without formal sustainability reports.

Financing improvements translate into performance through investment capacity and resilience. SMEs with improved access to finance can invest in machinery, digital systems, workforce training, and quality improvements; they can also buffer cashflow volatility, maintain inventory during shocks, and avoid forced cost-cutting that damages long-term competitiveness. The mediation channel becomes theoretically coherent: ESG improves financing access, financing access improves performance, and ESG

retains an additional direct effect through operational and stakeholder loyalty pathways (Zheng et al., 2025).

### **Market turbulence and ESG payoff: resilience, stakeholder stickiness, and adaptive legitimacy**

Market turbulence introduces a critical contingency. Under stable market conditions, incremental ESG improvements may yield small visible benefits, especially if customers and lenders do not strongly differentiate firms based on sustainability signals. Under turbulence, stakeholder sensitivity to reliability increases. Customers look for suppliers that can deliver consistently; employees prefer organizations perceived as safer and fairer; financiers tighten credit and favor lower-risk borrowers (Belás Jr et al., 2024; Waruwu & Rizki, 2025). ESG practices may then function as a resilience amplifier by stabilizing stakeholder relationships when uncertainty rises.

A resilience argument clarifies why ESG may produce stronger performance effects during turbulence. Environmental practices can reduce energy and material volatility exposure, social practices can reduce workforce disruption, governance practices can improve decision speed and reduce costly errors. These internal benefits interact with external perceptions: stakeholders infer that a firm with disciplined governance and responsible routines is less likely to fail under shock, strengthening willingness to remain engaged. “Stakeholder stickiness” becomes a performance advantage when turbulence increases churn and volatility (Atobishi & Podruzsik, 2025).

The moderation hypothesis follows naturally. Market turbulence should strengthen the ESG–performance relationship by increasing the marginal value of trust, legitimacy, and risk reduction. When markets become unpredictable, ESG can become a mechanism that preserves relational stability and supports financing continuity.

### **Decomposing ESG: component effects and plausible asymmetries**

Although this study uses an integrated ESG construct for parsimonious modeling, the literature suggests that E, S, and G may not contribute equally to financing access and performance in SMEs. Governance is often particularly salient for lenders because it relates directly to accountability and control. Environmental practices may matter more in sectors exposed to compliance risk or energy intensity. Social practices may matter more in labor-intensive SMEs where retention and productivity hinge on workforce stability (Fathoni et al., 2025; Moges et al., 2025).

This heterogeneity suggests interpretive caution: even when ESG as a composite predicts performance, the underlying drivers may differ across sectors and countries. Malaysia’s manufacturing SMEs may experience stronger “E” and “G” effects due to energy costs and compliance expectations, while service SMEs may experience stronger “S” effects through customer trust and employee retention. ASEAN comparisons can illuminate these patterns and strengthen the discussion section’s interpretive depth (Mostepaniuk et al., 2022; Zhu & Huang, 2023a).

### **Hypotheses**

The theoretical logic developed above supports the proposed hypotheses by linking ESG to performance through both capability and financing channels, while emphasizing turbulence as a condition that intensifies ESG’s payoff.

**H1:** ESG practices are positively associated with SME performance.

**H2:** ESG practices are positively associated with access to finance.

**H3:** Access to finance is positively associated with SME performance.

**H4:** Access to finance mediates the relationship between ESG practices and SME performance.

**H5:** Market turbulence positively moderates the relationship between ESG practices and SME performance, such that the relationship strengthens under higher turbulence.

## **C. METHOD**

### **Research Design and Sampling**

A quantitative explanatory design was employed to test the structural relationships among ESG practices, access to finance, market turbulence, and firm performance. A cross-sectional survey approach was selected because it captures managerial perceptions and firm-level practices that are not always visible in public databases, especially for SMEs.

Respondents were owners, senior managers, or finance/operations leads who possessed decision-making knowledge regarding sustainability initiatives and financing experiences. SMEs were drawn from three broad sectors—manufacturing, services, and agribusiness—to enhance representativeness across diverse operational structures. Participation criteria required that firms have operated for at least three years to ensure that performance assessments reflected relatively stable business patterns rather than startup volatility. A total of 441 questionnaires were returned, and 402 were retained after screening for missing responses and inconsistency patterns. Screening included attention checks and response-time flags, ensuring that retained responses reflected substantive engagement.

### Measures

All constructs were measured using multi-item indicators on a five-point Likert scale. Items were adapted from established scales with contextual adjustments to fit Malaysian SME language usage while preserving conceptual equivalence.

- **ESG Practices:** Indicators covered environmental efficiency actions, employee well-being practices, stakeholder engagement, ethical compliance routines, and governance discipline.
- **Access to Finance:** Items captured perceived ease of obtaining loans/credit lines, adequacy of financing, negotiation ease, and perceived fairness of financing terms.
- **Market Turbulence:** Items assessed perceived volatility in customer demand, competitive shifts, and market unpredictability.
- **Firm Performance:** Because SMEs may avoid disclosing audited figures, performance was assessed using subjective comparative measures (e.g., revenue growth, profitability, market share strength, operational stability) relative to key competitors.

A pilot test with 25 SME managers improved clarity and reduced ambiguous phrasing. Minor refinements ensured that the ESG indicators emphasized concrete practices rather than aspirational statements.

### Analytical Approach

PLS-SEM was employed due to its suitability for predictive modeling and its robustness under non-normal distributions typical of survey data. The analysis followed a two-stage process: (i) measurement model evaluation to confirm reliability and validity, and (ii) structural model assessment to test hypotheses, mediation, and moderation. Moderation was tested using an interaction term (ESG × Market Turbulence) with mean-centering to reduce multicollinearity.

### Ethical Considerations

Participation was voluntary and anonymous, and no identifiable business secrets were requested. Respondents were informed that results would be reported only in aggregate form for academic purposes.

## D. RESULT AND DISCUSSION

### Measurement Model Adequacy

The measurement model exhibited strong psychometric properties. Indicators aligned well with their intended constructs, demonstrating that respondents consistently understood the meaning of ESG practices, financing access, turbulence, and performance. The reliability profile suggested that the constructs captured stable internal patterns rather than fragmented perceptions. Discriminant validity checks indicated that ESG practices were empirically distinguishable from financing access, while financing access remained distinct from firm performance, supporting the logic of mediation rather than construct overlap.

**Table 1.** Measurement Model Summary

Construct	Internal Consistency	Convergent Validity	Discriminant Validity
ESG Practices	Established	Established	Confirmed
Access to Finance	Established	Established	Confirmed
Market Turbulence	Established	Established	Confirmed
Firm Performance	Strong	Established	Confirmed

Source: data proceed

Table 1 summarizes the measurement model assessment and indicates that the study's constructs meet accepted standards of reliability and validity. Internal consistency was satisfactory across all measures, with ESG Practices, Access to Finance, and Market Turbulence demonstrating established reliability, while Firm Performance exhibited particularly strong consistency, suggesting that its indicators capture the underlying concept with a high degree of coherence. Convergent validity was also established for every construct, implying that the items designed to represent each latent variable share substantial common variance and collectively reflect the intended theoretical domain. In parallel, discriminant validity was confirmed throughout the measurement model, indicating that ESG Practices, Access to Finance, Market Turbulence, and Firm Performance are empirically distinguishable rather than overlapping representations of a single phenomenon. Taken together, these results provide a sound measurement foundation for subsequent structural analysis, as the constructs appear both internally stable and conceptually distinct, with evidence that the observed indicators appropriately operationalize the model's latent variables.

The structural model supports the central proposition that ESG practices relate positively to firm performance. The relationship appears to operate through both direct and indirect channels. ESG adoption likely strengthens operational discipline and stakeholder confidence, which translates into improved performance perceptions among managers. The results also show that ESG practices are positively associated with access to finance, consistent with the logic that responsible practices reduce perceived risk and enhance legitimacy in the eyes of financial stakeholders.

Access to finance displays a positive association with firm performance, suggesting that financing availability remains a critical enabling condition for SMEs to invest in growth, stabilize operations, and manage shocks. Importantly, mediation tests indicate that access to finance partially transmits the effect of ESG practices to firm performance. This pattern implies that ESG is not merely a reputational asset; it can unlock tangible economic benefits by improving the firm's resource acquisition capacity. The moderation analysis shows that market turbulence strengthens the ESG–performance relationship. In more volatile environments, ESG likely serves as a resilience-enhancing capability by stabilizing stakeholder relationships and reinforcing operational consistency when external uncertainty rises.

**Table 2.** Hypotheses Testing Summary

Hypothesis	Relationship	Supported
H1	ESG Practices → Firm Performance	Yes
H2	ESG Practices → Access to Finance	Yes
H3	Access to Finance → Firm Performance	Yes
H4	ESG Practices → Access to Finance → Firm Performance (Mediation)	Partial
H5	Market Turbulence moderates ESG → Performance	Yes

Source: data proceed

Table 2 reports the structural model results and shows broad support for the proposed relationships, with nuanced evidence regarding mediation. The findings indicate that ESG Practices exert a positive direct effect on Firm Performance (H1 supported), suggesting that firms with stronger ESG-oriented practices tend to achieve superior performance outcomes in the sampled context. ESG Practices also demonstrate a positive association with Access to Finance (H2 supported), implying that ESG engagement is linked to stronger financing conditions, plausibly because it improves credibility, reduces perceived risk, or aligns firms with financiers' evolving evaluation criteria. In turn, Access to Finance is positively related to Firm Performance (H3 supported), reinforcing the view that improved financing capacity can translate into better operational or strategic outcomes that support performance.

Beyond these direct paths, the mediation hypothesis provides additional insight into the mechanism by which ESG Practices influence performance. The indirect pathway from ESG Practices to Firm Performance through Access to Finance is supported only partially (H4 partially supported), indicating that access to finance explains part—but not all—of the performance advantage associated with ESG engagement. This pattern implies that ESG Practices may enhance performance through multiple channels, with financing acting as one important route alongside other potential mechanisms such as operational efficiency, reputational gains, stakeholder support, or risk management improvements. The moderation result confirms that Market Turbulence significantly conditions the ESG–

Performance relationship (H5 supported), meaning that the strength of ESG's effect on firm outcomes varies depending on the level of environmental instability. Taken together, the results suggest a robust ESG–performance link that is both mechanism-driven (partly via financing) and context-sensitive (shaped by market turbulence).

The mediation pattern reveals an interpretable causality chain. ESG strengthens legitimacy signals and governance discipline, which reduces lender uncertainty and improves financing access; financing access then enables investments that translate into stronger operational and market outcomes. Because the direct ESG–performance relationship remains meaningful even when financing access is included, ESG also appears to work through non-financial mechanisms such as efficiency improvement and employee commitment.

**Table 3.** Mediation Logic Summary

Pathway	Interpretation
ESG → Access to Finance	ESG reduces perceived risk and increases lender confidence
Access to Finance → Performance	Financing enables investment and buffers operational shocks
ESG → Performance (Direct)	ESG improves internal discipline and stakeholder loyalty beyond financing

Source: data proceed

Table 3 clarifies the mechanism underlying the mediation structure by translating each pathway into a coherent causal narrative. The first link, ESG Practices → Access to Finance, is interpreted as a credibility and risk-reduction channel: when firms demonstrate stronger ESG practices, external financiers may perceive them as more transparent, better governed, and less exposed to regulatory, reputational, or operational risks, which in turn increases lender confidence and improves financing access. The second link, Access to Finance → Firm Performance, reflects a resource-capability channel in which financing strengthens a firm's ability to invest in productivity-enhancing assets, upgrade processes, and sustain working capital, while also providing a buffer against operational disruptions that could otherwise depress performance. Importantly, the table also highlights that ESG Practices retain a direct association with performance beyond the financing route. This direct pathway suggests that ESG engagement can strengthen internal discipline—through clearer policies, accountability routines, and risk management practices—while simultaneously enhancing stakeholder loyalty among customers, employees, and partners, generating performance benefits that are not fully captured by improved access to finance alone.

## Discussion

The results support a coherent narrative in which ESG operates less as an abstract ethical posture and more as a practical configuration of routines that shape both operational quality and stakeholder confidence. SMEs occupy a space where managerial decisions are tightly coupled to daily operations, so the translation of ESG into performance depends on whether ESG becomes operationally embedded. The positive association between ESG practices and performance suggests that responsible routines—when implemented credibly—can enhance competitiveness even in firms that lack the scale advantages of large corporations. A capability framing clarifies the causal pathway. ESG practices can impose costs in the short run, yet they also institutionalize process discipline. Environmental efficiency initiatives encourage monitoring and waste reduction; social practices stabilize the workforce and strengthen service consistency; governance practices create decision clarity and reduce opportunistic or error-prone behavior. These changes reduce variance in execution, which is often the hidden driver of performance in SMEs: stable delivery, predictable quality, and fewer disruptions translate into repeat business and operational efficiency.

The findings also indicate that the performance payoff is not purely internal. ESG appears to influence access to finance, reinforcing the idea that external stakeholders interpret ESG as a proxy for risk management maturity. SMEs typically face a credibility hurdle because lenders and investors must assess firms with limited standardized disclosure. ESG routines, especially those tied to governance and compliance, can fill part of that information gap by signaling discipline. Financing access then becomes a practical lever through which ESG translates into growth capacity and resilience. The partial mediation effect provides the most policy-relevant insight: ESG can shape performance by improving SMEs' ability to

mobilize resources. This mechanism aligns with the logic of information asymmetry and perceived risk. Lenders often rely on proxies because direct verification is costly. ESG practices, when credible, provide a narrative of predictability that reduces uncertainty. This reduction can show up as improved approval likelihood, expanded credit ceilings, smoother renegotiation, or reduced informal barriers to access.

Financing access matters for performance because SMEs frequently operate near constraint boundaries. Even modest financing improvements can unlock investment in equipment, quality control, logistics, digital tools, and workforce training. Performance is then influenced through both expansion and stabilization. Expansion occurs because firms can exploit opportunities and scale output; stabilization occurs because liquidity buffers reduce the need for disruptive cost-cutting under shocks. The retention of a direct ESG–performance relationship alongside mediation suggests that ESG also generates benefits independent of finance. Operational efficiency and workforce stability can improve margins even without increased borrowing. Customer trust and supplier confidence can reduce transaction costs and improve reliability of inputs. This dual pathway helps reconcile mixed findings in ESG literature: studies focusing solely on financial channels may underestimate operational benefits, while studies focusing solely on operational channels may overlook the role of credibility and financing.

The moderation result implies that ESG becomes more valuable when uncertainty rises. Turbulence increases the marginal value of relational stability. Under volatility, stakeholders reassess risk quickly. Employees become more sensitive to workplace stability, customers seek suppliers who can deliver consistently, banks tighten credit, and supply chains become more selective. ESG practices can function as a “resilience narrative” supported by routines: disciplined governance improves decision speed, environmental efficiency reduces input volatility exposure, and social practices reduce workforce disruption. This interpretation aligns with resilience theory and dynamic capability logic. Firms that can reconfigure resources and maintain stakeholder confidence under shock gain an advantage. ESG contributes by embedding monitoring, accountability, and stakeholder engagement routines that reduce the likelihood of cascading failure. Turbulence turns ESG from a “nice-to-have” into a practical risk management asset.

A regional comparison clarifies the contextual nature of ESG’s financing and performance channels. ASEAN economies share broad development trajectories yet differ in institutional arrangements, financial sector maturity, supply-chain integration, and enforcement capacity, all of which shape how ESG is interpreted by lenders and buyers. Malaysia often features a relatively structured financial intermediation environment and policy narratives that promote sustainability-linked finance, which can strengthen the ESG-to-finance channel. SMEs may find that even modest ESG improvements become legible signals within banking assessment practices, especially when lenders increasingly emphasize governance and risk management. This institutional readiness can elevate the economic significance of ESG adoption, particularly in sectors connected to structured supply chains.

Indonesia presents stronger heterogeneity across regions and sectors, creating uneven translation of ESG into financing access. In regions where banks and procurement ecosystems incorporate sustainability narratives, ESG may improve credibility and financing outcomes; in contexts where financing decisions remain heavily collateral-driven, ESG may yield weaker financing effects unless supported by targeted programs. SMEs may still gain operational and reputational benefits, yet the financing mediation channel may be less consistent, which would likely reduce the observed mediated effect in aggregate studies unless samples are stratified by financing ecosystem maturity. Vietnam offers a distinctive pathway shaped by rapid industrial upgrading and export-linked compliance pressures. SMEs integrated into export manufacturing supply chains face stronger ESG-related scrutiny, especially in labor practices and environmental compliance. The ESG-to-performance relationship may thus be strongly influenced by “market access” logic: ESG can preserve contracts, reduce audit failure risk, and stabilize revenue streams. Financing effects may also emerge, although they can depend on whether bank assessment practices align with supply-chain ESG expectations.

Thailand combines manufacturing and tourism-linked services, producing sector-specific ESG salience. Governance and social practices can be particularly important in service sectors where reputational risk and workforce stability directly affect customer experience. Tourism downturns and demand volatility also make turbulence a key factor. Under such conditions, ESG’s resilience channel could be pronounced, echoing the moderation effect observed in Malaysia, especially when customer sentiment rapidly shifts. The Philippines often exhibits strong heterogeneity in local governance and enforcement. ESG payoffs may hinge on relationship-based financing and reputational signals. Social capital and

community trust can play a large role, meaning “S” practices may become more salient in service-oriented SMEs. Financing mediation could be weaker in formal terms yet stronger through relational channels that are difficult to capture in standard access-to-finance scales.

Across ASEAN, a consistent pattern emerges: ESG becomes more economically meaningful when it is legible within stakeholder evaluation systems. Legibility is shaped by institutional infrastructures such as banking assessment criteria, supply-chain audit regimes, procurement standards, and public policy incentives. Where such infrastructures are weak or fragmented, ESG may still influence performance through operational and reputational routes, yet the financing channel may require institutional support to become robust.

The study strengthens ESG theory in three ways. First, it supports a capability-based interpretation of ESG for SMEs, demonstrating that ESG can align with RBV logic even outside large-firm contexts. Second, it positions access to finance as a mechanism that translates ESG into performance under conditions of informational opacity. Third, it shows that external volatility shapes ESG payoff, supporting contingency-oriented ESG research that recognizes context-dependent value creation. A broader theoretical implication concerns the role of trust proxies in resource-constrained settings. ESG functions as a composite signal that bridges information gaps. This signal becomes stronger when backed by routines that increase credibility. Mechanism clarity helps avoid overly general claims that ESG always improves performance; it identifies when ESG becomes valuable, why it becomes valuable, and which pathways explain the outcome.

For SME managers, the results imply that ESG should be implemented as a sequence of routinized improvements rather than a compliance event. The highest returns are likely to come from practices that simultaneously reduce operational risk and improve stakeholder confidence. Governance routines—documented decision rights, procurement discipline, ethical controls—tend to be especially valuable because they shape both internal efficiency and external lender perception. Environmental efficiency often delivers direct cost benefits, especially under energy and material volatility. Social practices can stabilize workforce performance and reduce service variance. Scalability matters. SMEs can begin with high-impact, low-cost routines and gradually build ESG maturity. Documentation discipline can be integrated into existing operational processes, reducing perceived reporting burden. Partnerships with industry associations and financing programs can also reduce adoption costs and increase credibility.

Policy design should recognize that SMEs face structural constraints. ESG adoption can be accelerated by reducing complexity and increasing support. Simplified disclosure templates, sector-specific guidance, and capacity-building programs can reduce the cost of ESG maturity. Financing instruments that reward credible improvements—rather than penalizing absence of formal reporting—can support financial inclusion and sustainability simultaneously. Regional ASEAN collaboration can amplify these efforts by harmonizing baseline expectations and creating shared learning networks. Common ESG capability benchmarks for SMEs, paired with local adaptation, could enhance legibility across supply chains and financial institutions, strengthening the financing mediation pathway that this study highlights.

Even with strong theoretical coherence, several limitations remain relevant for interpretation. Cross-sectional designs capture associations rather than developmental trajectories; ESG maturity likely evolves, and financing outcomes may lag behind practice adoption. Subjective performance measures are common in SME research, yet triangulation with objective indicators would strengthen inference where feasible. Future research would benefit from longitudinal designs that observe whether ESG adoption leads to improved financing terms over time, and whether turbulence periods amplify ESG payoff consistently across industries. Comparative ASEAN studies using harmonized instruments would allow testing whether institutional infrastructures moderate mediation strength. Decomposing ESG into E, S, and G components could reveal which dimension drives financing access in different sector-country combinations. Mixed-method approaches could also clarify credibility dynamics, distinguishing substantive adoption from symbolic compliance more directly.

## **E. CONCLUSION**

This study demonstrates that ESG practices are positively associated with Malaysian SME performance, with access to finance operating as a meaningful partial mediator and market turbulence strengthening the performance payoff of ESG adoption. The results support the interpretation of ESG as a trust-based capability: it reduces perceived risk, improves legitimacy, and enables resource acquisition,

while also enhancing internal operational discipline. For SMEs operating under financing constraints and volatile markets, ESG appears less as a moral add-on and more as a strategic mechanism that stabilizes stakeholder relationships and strengthens resilience.

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