

The Mediating Role of Good Corporate Governance in the Relationship between ESG Performance and Financial Sustainability among MSMEs in Medan, Indonesia

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Abstract

This study examines the relationship between ESG Performance and Financial Sustainability among Micro, Small, and Medium Enterprises (MSMEs) by investigating the mediating role of Good Corporate Governance (GCG). While previous studies have predominantly examined the direct effects of ESG practices on organizational performance in large corporations, evidence on how governance mechanisms transmit ESG effects to financial sustainability among MSMEs in developing economies remains limited. This study addresses this gap by testing an ESG-GCG-Financial Sustainability framework among MSMEs in Medan, Indonesia. A quantitative cross-sectional design was employed using purposive sampling. Data were collected from 60 MSME owners and managers through a structured questionnaire using a five-point Likert scale and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The results show that ESG Performance has a positive and significant effect on GCG ($\beta = 0.864$, $p < 0.001$), while GCG positively and significantly affects Financial Sustainability ($\beta = 0.953$, $p < 0.001$). GCG also significantly mediates the relationship between ESG Performance and Financial Sustainability ($\beta = 0.823$, $p < 0.001$), indicating that governance mechanisms play an important role in translating ESG practices into sustainable financial outcomes. This study contributes empirical evidence from MSMEs in an emerging economy and highlights governance as a mechanism linking ESG practices with financial sustainability. The findings provide implications for MSME owners and policymakers seeking to strengthen sustainable business development through improved governance practices. The results should be interpreted cautiously due to the relatively small sample and single-city context.

KEYWORDS

good corporate governance; ESG performance; financial sustainability; MSMEs.

Introduction

Striving toward socio-ecological balance has become a dominant global agenda for governments, businesses, and society as organizations face increasing environmental challenges, technological disruption, and changing stakeholder expectations. Business success is no longer assessed solely through financial achievements; instead, greater attention is directed toward how firms manage their environmental impacts, social responsibilities, and internal governance practices. Consequently, the Environmental, Social, and Governance (ESG) framework has emerged as an important managerial framework that influences organizational legitimacy, investment attractiveness, and

long-term competitiveness (Eccles & Klimenko, 2023; Luo et al., 2024). The growing emphasis on ESG is evident in the expansion of sustainability reporting initiatives, responsible investment practices, and regulatory frameworks adopted across many countries. These developments indicate the incorporation of long-term viability dimensions into high-level business blueprints and day-to-day choices. As a result, organizations are increasingly expected to balance economic objectives with social responsibility and environmental stewardship while maintaining business performance and stakeholder confidence (Bindeeba et al., 2025; Chen & Wang, 2024).

In Indonesia, Micro, Small, and Medium Enterprises (MSMEs) constitute the backbone of the national economy. According to the Ministry of Cooperatives and SMEs, MSMEs account for more than 60% of Indonesia's Gross Domestic Product and absorb approximately 97% of the national workforce, representing more than 65 million business units nationwide. Their contribution extends beyond employment creation and income generation to supporting regional development and strengthening economic resilience. Within this context, Medan City represents one of the largest economic centers outside Java, characterized by a substantial concentration of trade, service, manufacturing, and culinary MSMEs. The economic significance of Medan makes it an appropriate setting for examining sustainability-oriented business practices and governance mechanisms among MSMEs operating in an emerging-market environment (Organisation for Economic Co-operation & Development, 2023).

An important issue facing MSMEs today concerns their ability to achieve financial sustainability. Financial sustainability reflects the capacity of a business to maintain stable financial performance, adapt to environmental and market changes, and preserve its operational continuity over time. For smaller enterprises, sustainable financial conditions are essential because limited resources often make them more vulnerable to economic uncertainty and competitive pressures. Therefore, identifying factors that strengthen long-term financial resilience has become increasingly relevant for both researchers and policymakers (Mahanta et al., 2024; Momtaz & Parra, 2025).

Recent literature suggests that ESG Performance may contribute to sustainable business performance by improving operational efficiency, strengthening stakeholder relationships, and enhancing organizational reputation. Enterprises that actively integrate environmental responsibility, social commitment, and sound governance practices are often better positioned to create long-term value and sustain competitive advantages. Nevertheless, the adoption of ESG principles among MSMEs remains uneven, particularly in developing economies where firms frequently encounter resource limitations, knowledge constraints, and managerial challenges (Abbas, Tufail, Latif, Iftikhar, et al., 2026; Agyabeng-mensah et al., 2020; Ali et al., 2026; Chen & Wang, 2024; Danish et al., 2025; Hwang et al., 2026; Luo et al., 2024).

Although previous studies have reported positive associations between ESG practices and organizational performance, several important gaps remain unresolved. First, existing research has predominantly examined direct relationships between ESG Performance and financial or market outcomes in large corporations and publicly listed firms (Luo et al., 2024; Momtaz & Parra, 2025). Limited attention has been given to the governance transmission mechanism through which ESG Performance influences Financial Sustainability in MSMEs. Second, from a theoretical perspective, prior studies have rarely integrated Stakeholder Theory and Agency Theory simultaneously to explain how governance mechanisms translate sustainability initiatives

into financial outcomes. Third, methodological limitations persist because many ESG studies rely on large-firm disclosure data, whereas MSMEs often operate with informal governance arrangements, limited disclosure practices, and resource constraints that require different measurement approaches (Khotimah et al., 2024; Ndoka et al., 2025). Finally, the Indonesian institutional context is characterized by heterogeneous governance quality, varying regulatory enforcement, and strong owner-manager dominance, creating sustainability and governance dynamics that may differ from those observed in developed economies. Consequently, evidence regarding the ESG-GCG-Financial Sustainability mechanism among Indonesian MSMEs remains limited. (Ranjan et al., 2026; Shari et al., 2026).

This study offers a more specific contribution than prior MSME sustainability research. Unlike previous studies that focused mainly on direct ESG-performance relationships or governance as an independent variable, the present study investigates Good Corporate Governance as a mediating mechanism linking ESG Performance and Financial Sustainability among MSMEs in Medan, Indonesia. The study further contributes by employing a PLS-SEM approach that is suitable for MSME survey data and by operationalizing governance through transparency, accountability, responsibility, independence, and fairness dimensions. Theoretically, GCG is positioned as a necessary governance capability that enables sustainability-oriented practices to be translated into accountable managerial actions and financially sustainable business outcomes.

Based on the preceding arguments, this study aims (1) to examine the effect of ESG Performance on Good Corporate Governance, (2) to examine the effect of Good Corporate Governance on Financial Sustainability, (3) to examine the direct effect of ESG Performance on Financial Sustainability, and (4) to test the mediating role of Good Corporate Governance in the relationship between ESG Performance and Financial Sustainability among MSMEs in Medan, Indonesia.

Although ESG Performance includes a governance dimension, the governance component in ESG Performance in this study refers to sustainability-oriented governance practices associated with ESG Performance, such as ethical conduct, stakeholder responsibility, and sustainability-related managerial commitments. In contrast, Good Corporate Governance (GCG) is conceptualized as a broader organizational governance system encompassing transparency, accountability, responsibility, independence, and fairness. Accordingly, ESG governance represents sustainability-oriented governance behavior, whereas GCG reflects the overall quality of organizational governance structures and processes. This distinction is intended to minimize conceptual overlap and improve construct discrimination.

Accordingly, the proposed conceptual framework positions ESG Performance as the antecedent variable, Good Corporate Governance as both an endogenous and mediating variable, and Financial Sustainability as the outcome variable.

ESG Performance and Good Corporate Governance

Stakeholder Theory suggests that organizations adopting sustainability-oriented practices are encouraged to strengthen governance mechanisms in order to maintain legitimacy, stakeholder trust, and organizational accountability (Freeman et al., 2020). Nevertheless, ESG adoption may not always improve governance quality because some firms may implement sustainability practices symbolically without substantial governance reform, particularly in resource-constrained MSMEs. Given the expectation that substantive ESG practices are associated with stronger governance practices, the following hypothesis is proposed: (Khelifi et al., 2026; Shari et al., 2026)

H1: ESG Performance positively affects Good Corporate Governance.

Good Corporate Governance and Financial Sustainability

Agency Theory argues that effective governance mechanisms improve monitoring, reduce information asymmetry, and enhance resource allocation efficiency, thereby supporting long-term financial sustainability (Jensen & Meckling, 1976). However, governance mechanisms may also impose administrative and compliance costs that could reduce short-term financial performance in small enterprises. Because sound governance is expected to enhance financial discipline and organizational resilience over time, the following hypothesis is proposed: (Ardiansyah et al., 2025; Jahja et al., 2026; Pilla et al., 2026; Zarefar et al., 2026).

H2: Good Corporate Governance positively affects Financial Sustainability.

ESG Performance and Financial Sustainability

ESG-oriented practices may enhance operational efficiency, stakeholder relationships, organizational reputation, and long-term business resilience, thereby strengthening Financial Sustainability. Based on this argument, the following direct relationship is proposed: (Agyabeng-mensah et al., 2020; Ali, 2025; Oluwagbade et al., 2026).

H3: ESG Performance positively affects Financial Sustainability.

The Mediating Role of Good Corporate Governance

Governance mechanisms are expected to translate ESG-oriented practices into accountable managerial processes, financial discipline, and sustainable business outcomes. Therefore, Good Corporate Governance is expected to mediate the relationship between ESG Performance and Financial Sustainability. (Ben Salah & Kammoun, 2026); (Gezgin et al., 2024).

H4: Good Corporate Governance mediates the relationship between ESG Performance and Financial Sustainability.

Methods

This study employed a quantitative explanatory research design to examine the relationships among ESG Performance, Good Corporate Governance (GCG), and Financial Sustainability of Micro, Small, and Medium Enterprises (MSMEs). A cross-sectional survey approach was used, in which data were collected at a single point in time from MSME owners and managers. Accordingly, the analysis was intended to explain statistical associations and mediation relationships among constructs rather than to establish definitive causal effects.

The research was conducted in Medan City, Indonesia, which represents one of the largest economic centers outside Java Island. The city was selected because of its substantial MSME population and its strategic contribution to regional economic development. Focusing on MSMEs in this setting provides an opportunity to examine how sustainability-oriented practices and governance mechanisms are associated with business continuity in a developing-market environment.

The target population consisted of MSME owners and business managers operating in Medan. Respondents were selected through purposive sampling because the study required individuals with adequate knowledge of sustainability practices, governance implementation, and business financial conditions. The inclusion criteria were: (1) the business was classified as a micro, small, or medium enterprise according to Indonesian MSME criteria; (2) the business had operated for at least two years; (3) the

respondent was the owner, founder, manager, or individual directly responsible for managerial and financial decision making; and (4) the business was actively operating during the data collection period. Businesses that had operated for less than two years or respondents without managerial authority were excluded from the study.

A total of 75 questionnaires were distributed to eligible MSMEs. Of these, 64 questionnaires were returned, and 60 questionnaires were complete and suitable for analysis, resulting in a usable response rate of 80.0%. The respondents were recruited from the accessible MSME population registered in local MSME community networks, business associations, entrepreneurship training participants, and MSME assistance programs coordinated through district-level business development activities in Medan City. Purposive selection was applied to MSMEs that met the inclusion criteria and were accessible during the data collection period. Table 1 presents the profile of the participating MSMEs.

The adequacy of the sample size was evaluated using the

Table 1. Profile of Participating MSMEs (n = 60)

Characteristic	Frequency	Percentage (%)
Business sector		
Trade	18	30.0
Services	16	26.7
Manufacturing	12	20.0
Culinary	14	23.3
Total	60	100.0
Business age		
2–5 years	24	40.0
6–10 years	21	35.0
10 years	15	25.0
Total	60	100.0
Business scale		
Micro	32	53.3
Small	20	33.3
Medium	8	13.4
Total	60	100.0

Table 2. Operational Definitions and Measurement of Variables

Variable	Indicator	Code
ESG Performance (X) (Chen & Wang, 2024; Eccles & Klimenko, 2023; Luo et al., 2024)	Environmental responsibility practices	ESG1
	Efficient utilization of resources and energy	ESG2
	Employee welfare and social responsibility	ESG3
	Compliance with ethical business standards	ESG4
	Sustainability-oriented business policies	ESG5
Good Corporate Governance (Z) (Organisation for Economic Co-operation & Development, 2023)	Transparency	GCG1
	Accountability	GCG2
	Responsibility	GCG3
	Independence	GCG4
	Fairness	GCG5
Financial Sustainability (Y) (Mahanta et al., 2024; Momtaz & Parra, 2025)	Revenue growth sustainability	FS1
	Ability to maintain profitability	FS2
	Financial resilience and liquidity	FS3
	Long-term business continuity	FS4

10-times rule in PLS-SEM. The most complex endogenous construct in the proposed model received two incoming structural paths, resulting in a minimum sample requirement of

20 observations. In addition, an a priori power assessment using conventional assumptions ($\alpha = 0.05$, power = 0.80, two predictors, medium effect size $f^2 = 0.15$) indicates a minimum sample of approximately 55 respondents. Therefore, the final sample of 60 respondents exceeded both the minimum PLS-SEM requirement and the minimum sample required for detecting medium-sized effects. Nevertheless, the relatively small sample drawn from a single city may limit external generalizability and increase the risk of model overfitting; consequently, the findings should be interpreted cautiously.

Data Collection Procedure

Data were collected through a structured questionnaire administered directly to respondents. The instrument consisted of closed-ended statements measured using a five-point Likert scale, ranging from 1 = strongly disagree to 5 = strongly agree. The questionnaire items were adapted from established literature on ESG Performance, Good Corporate Governance, and Financial Sustainability and were modified to reflect the characteristics of MSMEs. (De Silva et al., 2025).

The questionnaire was prepared in English, translated into Indonesian, and reviewed by two academics in accounting and management to ensure semantic equivalence and content validity. A pilot test involving 15 MSME owners was conducted before the main survey to evaluate item clarity, wording, and completion time. Minor revisions were made based on respondent feedback, and pilot responses were excluded from the final analysis. Participation was voluntary, respondents were informed about the purpose of the study, confidentiality was assured, and informed consent was obtained before questionnaire administration.

ESG Performance, Good Corporate Governance, and Financial Sustainability were specified as reflective constructs because their indicators were conceptualized as manifestations of the underlying latent variables and were expected to covary. The reflective specification supports the use of PLS-SEM for estimating measurement and structural relationships in the proposed model.

Common Method Bias

Because all variables were measured using self-reported questionnaires from a single respondent in each firm, potential common method bias was assessed using full collinearity variance inflation factors (VIFs). As shown in Table 7, all VIF values were below the recommended threshold of 3.3, indicating that common method bias was unlikely to threaten the validity of the findings.

Data Analysis Method

The proposed research framework was analyzed using a variance-based structural equation modeling approach implemented in SmartPLS software. This technique was selected because of its capability to estimate complex structural relationships, assess mediation effects, and generate reliable predictive estimates even when sample sizes are relatively modest. Furthermore, PLS-SEM is widely recognized as an appropriate analytical methodology for examining hypothesized relationships among latent constructs, prediction-oriented analysis, and model development in studies using cross-sectional survey data. (Ji et al., 2026).

The analytical process was divided into two interconnected steps: evaluating the construct indicators (outer model) followed by examining the hypothesized structural relationships among constructs (inner model).

Measurement Model Evaluation

The primary objective of verifying the outer configuration was to certify that each questionnaire item truly mirrored its designated hidden variable. The evaluation focused on

validity and reliability requirements commonly recommended in PLS-SEM studies.

Convergent Validity

- Indicator loading coefficients should exceed 0.70.
- Average Variance Extracted (AVE) should be higher than 0.50.

Discriminant Validity

- Evaluation based on the Fornell–Larcker criterion.
- Examination of the Heterotrait–Monotrait Ratio (HTMT).

Internal Consistency Reliability

- Cronbach's Alpha should be greater than 0.70.
- Composite Reliability should exceed 0.70.

These assessment procedures were performed to confirm that each measurement item appropriately reflected the intended construct and exhibited satisfactory consistency.

Structural Relationship Evaluation

Once the validity profiles of the variables were established, the analysis proceeded to the evaluation of the structural relationships in order to assess the explanatory and predictive capability of the proposed framework. Several indicators were employed to evaluate model performance, including:

1. Coefficient of Determination (R^2)
2. Effect Size (f^2)
3. Predictive Relevance (Q^2)
4. Path Coefficients
5. Bootstrapping Analysis

Hypothesis testing was conducted using a significance level of 5 percent. A proposed relationship was considered statistically supported when the bootstrapping output generated a t-statistic exceeding 1.96 and a probability value lower than 0.05.

In addition, mediation analysis was undertaken to examine whether Good Corporate Governance functioned as an intervening construct in the relationship between ESG Performance and Financial Sustainability. Evidence of a statistically significant indirect effect indicates that governance quality acts as a transmission channel through which ESG-related practices contribute to sustainable financial outcomes among MSMEs.

Result and Discussion

Measurement Model Assessment

Convergent Validity

The adequacy of indicator convergence was examined through the outer loading coefficients generated by the PLS algorithm. Following commonly accepted SEM-PLS guidelines, indicators are considered to exhibit satisfactory convergent validity when loading coefficients surpass the universally standard cutoff value of 0.70 (Hair et al., 2022).

The results displayed in Table 2 reveal that all observed indicators achieved loading coefficients above the recommended benchmark, with values ranging between 0.741 and 0.923. These values indicate that each indicator contributes strongly to the measurement of its intended construct. Consequently, the observed variables demonstrate a satisfactory level of association with their corresponding latent variables.

Following the initial validity assessment, indicators showing substantial conceptual and empirical overlap were reviewed, and the measurement model was refined before the discriminant validity assessment was finalized. This refinement was conducted to improve construct distinctiveness and to ensure that each indicator represented its intended latent construct more clearly.

The findings further indicate that all retained indicators satisfied the recommended outer-loading criteria and demonstrated sufficient explanatory power in representing their respective latent constructs after the measurement model refinement (Table 3).

Discriminant Validity

Discriminant validity was reassessed after reviewing the conceptual definitions and empirical overlap among the indicators of ESG Performance, Good Corporate Governance, and Financial Sustainability, as presented in Table 4. The measurement model was refined through indicator evaluation and construct re-specification, and the model was subsequently re-estimated using SmartPLS.

Discriminant validity was further examined using the Heterotrait–Monotrait Ratio (HTMT). All HTMT values were below the recommended threshold of 0.90, confirming that the constructs were empirically distinct.

The revised Fornell–Larcker results show that the square root of the AVE for each construct exceeded its correlations with the other constructs, indicating adequate discriminant validity. Discriminant validity was further examined using the Heterotrait–Monotrait Ratio (HTMT), presented in Table 5 and all HTMT values were below the recommended threshold of 0.90. These findings confirm that ESG Performance, Good Corporate Governance, and Financial Sustainability are empirically distinct constructs after the measurement model refinement. Therefore, the subsequent structural analysis was interpreted based on a measurement model that demonstrated acceptable construct distinctiveness.

Reliability Assessment

Internal consistency reliability was evaluated through Cronbach's Alpha and Composite Reliability (CR), while AVE values were reported as supporting evidence of convergent validity.

The statistical results demonstrate that all latent variables satisfy the recommended reliability standards. Cronbach's Alpha coefficients exceeded the minimum acceptable level of 0.70, indicating satisfactory internal consistency among the indicators. Similarly, Composite Reliability values were above the recommended threshold, confirming the stability and consistency of the measurement scales, as shown in Table 6.

Furthermore, AVE values exceeded 0.50 for all constructs, indicating that each latent variable explained more than half of the variance of its indicators. Taken together, these findings confirm the adequacy of the measurement model in terms of reliability and convergent validity. All reliability statistics remained above the recommended thresholds after the measurement model refinement, indicating that the refinement process did not reduce the internal consistency of the constructs.

Common Method Bias and Collinearity Diagnostics

Because all variables were measured using self-reported questionnaires from a single respondent in each firm, common method bias was assessed using full collinearity variance inflation factors (VIFs).

All VIF values were below the recommended threshold of 3.3, indicating that common method bias was unlikely to pose a serious threat to the validity of the findings. Inner VIF values

were also below 5.0, suggesting that severe multicollinearity was not present in the structural model.

Structural Model Assessment

The statistical pathways connecting each latent construct within this conceptual framework are visually mapped out in Figure 1. In order to verify the hypotheses and measure how well the model accounts for the variations in the variables, a comprehensive inner model assessment was executed.

The structural relationships were evaluated only after the refined measurement model demonstrated acceptable convergent validity, reliability, and discriminant validity.

Coefficient of Determination (R^2)

The predictive capability of the structural framework was assessed using the coefficient of determination (R^2). Based on the structural evaluation presented in Table 8, Good Corporate Governance yielded an R^2 score of 0.747. This metric implies that around 74.7% of the fluctuations observed

Table 3. Outer Loading Results

	Good Corporate Governance (Z)	Financial Sustainability (Y)	ESG Performance (X)
GCG1	0.823		
GCG2	0.799		
GCG3	0.868		
GCG4	0.764		
GCG5	0.798		
FS1		0.797	
FS2		0.875	
FS3		0.859	
FS4		0.830	
ESG1			0.794
ESG2			0.741
ESG3			0.775
ESG4			0.804
ESG5			0.787

Table 4. Fornell–Larcker Criterion

Construct	ESG Performance	Good Corporate Governance	Financial Sustainability
ESG Performance	0.811		
Good Corporate Governance	0.742	0.841	
Financial Sustainability	0.768	0.794	0.852

Table 5. HTMT Matrix

Construct	ESG	GCG	FS
ESG Performance		0.872	0.884
Good Corporate Governance	0.872		0.889
Financial Sustainability	0.884	0.889	

Table 6. Composite Reliability

	Cronbach's alpha	rho_A	Composite Reliability	AVE
Good Corporate Governance (Z)	0.870	0.875	0.906	0.658
Financial Sustainability (Y)	0.861	0.864	0.906	0.707
ESG Performance (X)	0.839	0.842	0.886	0.609

in MSME governance structures can be traced back directly to their ESG Performance. Consequently, the remaining 25.3% of the variance is dictated by external factors outside the boundaries of this framework.

Simultaneously, the R^2 output for Financial Sustainability establishes that the integrated predictors capture a highly substantial amount of variance, indicating that the model explains a substantial proportion of the variance in Financial Sustainability; however, this value should be interpreted cautiously given the potential conceptual overlap among constructs and the relatively small sample size.

In addition, because the data were obtained from MSME owners evaluating their own governance and sustainability practices, social desirability bias may have contributed to systematically positive responses and inflated inter-construct correlations.

Hypothesis Testing

Direct Effects

The proposed hypotheses were evaluated through the bootstrapping procedure available in SmartPLS. Statistical significance was determined based on t-statistics greater than 1.96 and probability values below the 0.05 significance level.

As shown in Table 9, the results indicate that ESG Performance has a positive and significant effect on Good Corporate Governance and Financial Sustainability, while

Good Corporate Governance also has a positive and significant effect on Financial Sustainability. Accordingly, H1, H2, and H3 are supported.

Mediation Analysis

Indirect Effect

To examine the mediating mechanism proposed in this study, the indirect pathway linking ESG Performance and Financial Sustainability through Good Corporate Governance was analyzed.

As shown in Table 10, the indirect effect was positive and statistically significant based on the bootstrapping results ($\beta = 0.823$, $t = 48.969$, $p < 0.001$). The 95% bootstrapped

Table 7. Full Collinearity VIF

Construct	VIF
ESG Performance	2.84
Good Corporate Governance	3.07
Financial Sustainability	3.12

Table 8. R-Square and Adjusted R-square

	R-square	Adjusted R-square
Good Corporate Governance (Z)	0.747	0.742
Financial Sustainability (Y)	0.908	0.906

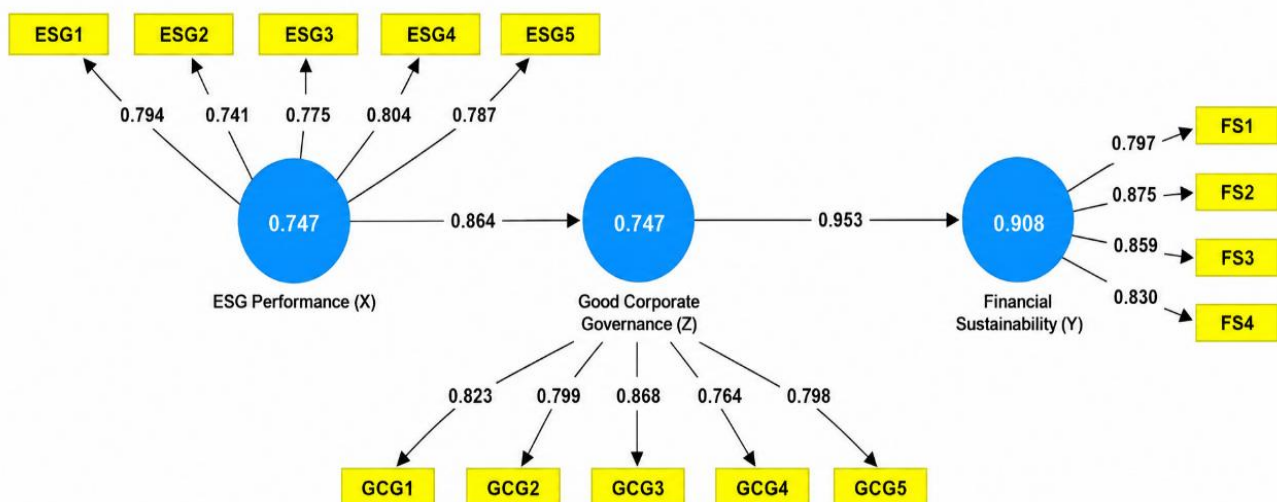


Figure 1. Structural Model Results

Table 9. Direct Effects Results

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics	P Values
ESG Performance → Good Corporate Governance	0.864	0.870	0.015	58.898	0.000
Good Corporate Governance → Financial Sustainability	0.953	0.955	0.009	108.302	0.000
ESG Performance → Financial Sustainability	0.214	0.219	0.099	2.167	0.031

Table 10. Indirect Effect Results

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics	P Values	95% Bootstrapped CI
ESG Performance (X) → Good Corporate Governance (Z) → Financial Sustainability (Y)	0.823	0.830	0.017	48.969	0.000	0.789, 0.856

confidence interval for the indirect effect ranged from 0.789 to 0.856, and because this interval did not include zero, the indirect effect was considered statistically significant. In addition, the direct effect of ESG Performance on Financial Sustainability remained significant after the inclusion of Good Corporate Governance in the model ($\beta = 0.214$, $p = 0.031$). Therefore, Good Corporate Governance was classified as a partial mediator in the relationship between ESG Performance and Financial Sustainability.

The Variance Accounted For (VAF) was calculated as follows:

$$\text{VAF} = 0.823 / (0.823 + 0.214) = 79.4\%$$

A VAF value of 79.4% indicates that a substantial proportion of the effect of ESG Performance on Financial Sustainability operates through Good Corporate Governance, supporting the importance of governance mechanisms in translating sustainability-oriented practices into financial outcomes.

Effect Size (f^2)

The substantive weight and power of every independent variable was further examined using effect size (f^2) statistics.

As shown in Table 11, the effect sizes for ESG Performance $\rightarrow$ Good Corporate Governance and Good Corporate Governance $\rightarrow$ Financial Sustainability were exceptionally high and substantially exceeded conventional benchmarks for large effects ($f^2 = 0.35$). These unusually large values may reflect the very high correlations among constructs, the limited sample size, and the possibility of conceptual overlap between governance and financial sustainability measures. Therefore, the effect sizes should not be interpreted as evidence of universally strong substantive effects, and future studies with larger and more diverse samples are recommended to verify the stability of these estimates.

ESG Performance and Good Corporate Governance

The empirical findings indicate that sustainability-oriented business practices are positively associated with the quality of governance systems adopted by MSMEs. Enterprises that integrate environmental responsibility, social engagement, and ethical managerial practices tend to report stronger governance arrangements characterized by clearer procedures, greater accountability, and improved internal oversight. (Abbas, Tufail, Latif, & Iftikhar, 2026; Danish et al., 2025; Khilifi et al., 2026; Shari et al., 2026).

This finding can be interpreted through Stakeholder Theory, which emphasizes that organizational survival depends on the ability to respond effectively to stakeholder expectations (Freeman et al., 2020). In the context of MSMEs, sustainability practices may strengthen stakeholder trust and encourage business owners to improve governance processes in order to maintain legitimacy and business continuity. However, the positive relationship observed in this study should not be interpreted as universally applicable. Previous studies have reported insignificant or context-dependent relationships between ESG practices and organizational performance, particularly among small firms with limited managerial capacity and financial resources (Atif et al., 2025; Demers et al., 2021; Velte, 2024). The positive association observed in this study may therefore reflect the specific institutional and managerial characteristics of MSMEs in Medan, where owner commitment, customer trust, and local business reputation are closely connected to day-to-day business operations. (Hwang et al., 2026; Shari et al., 2026).

In addition, the Medan context provides an important explanation for the governance findings. Many MSMEs in Medan are owner-managed businesses in which managerial authority is concentrated in a small number of individuals.

Under such conditions, sustainability-oriented practices may be implemented more directly through owner decisions, resulting in relatively rapid changes in transparency, accountability, and operational discipline. Consequently, ESG practices and governance quality may evolve simultaneously rather than through formal governance reforms commonly observed in large corporations.

Although the refined measurement model satisfied the discriminant validity criteria, the relationships among ESG Performance, Good Corporate Governance, and Financial Sustainability remained relatively strong. This finding suggests that sustainability-oriented practices, governance quality, and financial sustainability are closely related managerial dimensions within the participating MSMEs.

Good Corporate Governance and Financial Sustainability

The analysis further indicates that governance quality is positively associated with the financial sustainability of MSMEs. Enterprises with stronger governance systems appear better positioned to maintain financial stability, manage business risks, and preserve operational continuity. Effective governance may support more disciplined resource allocation, strengthen financial oversight, and improve managerial decision-making.

Agency Theory suggests that governance mechanisms reduce inefficiencies arising from information asymmetry and conflicting interests among organizational actors (Jensen & Meckling, 1976). In owner-managed MSMEs, governance practices such as record-keeping, financial monitoring, and accountability procedures may directly influence cash-flow management and business resilience. The finding is therefore consistent with studies reporting positive associations between governance quality and organizational sustainability (Ardiansyah et al., 2025; Jahja et al., 2026; Khotimah et al., 2024; Luo et al., 2024; Pilla et al., 2026; Yusliza et al., 2023; Zarefar et al., 2026).

However, the very high coefficient observed in this study should again be interpreted cautiously. The overlap between governance and financial sustainability indicators may partially explain the strength of the relationship. MSME owners may perceive financially sustainable businesses as businesses that are also well governed, which can inflate the observed association in self-reported survey data.

ESG Performance and Financial Sustainability

The empirical results indicate that ESG Performance has a positive and significant association with Financial Sustainability among MSMEs in Medan. This finding suggests that enterprises adopting sustainability-oriented practices tend to demonstrate stronger financial resilience, greater operational continuity, and better capacity to adapt to market and environmental changes. Environmental responsibility, social engagement, and ethical managerial practices may contribute to more efficient resource utilization, stronger customer relationships, and enhanced business reputation, which collectively support long-term financial sustainability.

This finding is consistent with Stakeholder Theory, which argues that organizations creating value for a broader range of stakeholders are more likely to obtain continued support, legitimacy, and access to resources necessary for sustainable performance (Freeman et al., 2020). MSMEs that maintain responsible relationships with customers, employees, suppliers, and local communities may experience stronger

Table 11. Effect Size (f^2)

	f^2
ESG Performance $\rightarrow$ Good Corporate Governance	2.950
Good Corporate Governance $\rightarrow$ Financial Sustainability	9.823
ESG Performance $\rightarrow$ Financial Sustainability	0.081

stakeholder loyalty and reduced business uncertainty, thereby improving their financial sustainability.

The result also supports previous studies reporting positive relationships between ESG practices and long-term business performance, operational efficiency, and organizational resilience (Chen & Wang, 2024; Luo et al., 2024; Momtaz & Parra, 2025). In the context of Medan MSMEs, sustainability-oriented practices may strengthen customer trust and local market reputation, both of which are particularly important for small businesses operating in highly competitive and relationship-based markets. (Agyabeng-mensah et al., 2020; Ali, 2025; Oluwagbade et al., 2026).

Nevertheless, the positive relationship should be interpreted cautiously. The cross-sectional design of the study does not permit strong causal inference, and financially stronger MSMEs may also possess greater capacity to implement ESG-related activities. In addition, the use of self-reported measures may increase the possibility of common method bias and socially desirable responses, potentially strengthening the observed relationship.

The finding that ESG Performance remains significant even after Good Corporate Governance is included in the model indicates that governance does not fully explain the ESG–Financial Sustainability relationship. Sustainability-oriented practices may influence financial outcomes through additional pathways, including cost efficiency, customer retention, innovation capability (Yun et al., 2026), employee commitment, and market differentiation. Consequently, ESG Performance appears to function not only as a governance-related practice but also as a broader strategic capability that contributes directly to the financial sustainability of MSMEs.

The Mediating Role of Good Corporate Governance

The mediation analysis demonstrates that Good Corporate Governance functions as an important mechanism through which ESG Performance is associated with Financial Sustainability. The results suggest that sustainability-oriented practices are more likely to contribute to financial sustainability when they are translated into managerial procedures, monitoring activities, accountability systems, and financial control practices. (Ben Salah et al., 2026; Fatma & Chouaibi, 2024; Gezgin et al., 2024)

However, governance may not mediate this relationship under all circumstances. In MSMEs characterized by weak bookkeeping systems, limited managerial capability, minimal stakeholder monitoring, or highly informal business operations, ESG practices may remain symbolic and may not substantially influence governance quality or financial outcomes. The mediating role of governance is therefore likely to depend on the presence of minimum organizational capabilities and managerial commitment.

The partial mediation result also indicates that ESG Performance retains a direct association with Financial Sustainability after governance is included in the model. This finding suggests that sustainability-oriented practices may influence financial outcomes through additional mechanisms beyond governance, such as operational efficiency, customer loyalty, market reputation, and stakeholder support.

The structural model explained 74.7% of the variance in Good Corporate Governance, leaving 25.3% unexplained. This remaining variance may be associated with factors not included in the model, including owner education, managerial competence, financial literacy, digital capability, business age, access to external finance, family ownership structure, and institutional support. Future studies should incorporate these variables to provide a more comprehensive explanation of governance quality among MSMEs. (Lubis et al., 2024; Manurung & Ningsi, 2023; Ningsi & Hastalona, 2026).

From a theoretical perspective, the findings provide support for both Stakeholder Theory and Agency Theory.

Stakeholder Theory explains how responsiveness to stakeholder expectations can encourage sustainability-oriented managerial behavior, whereas Agency Theory highlights the role of governance systems in aligning managerial actions with organizational objectives. The integration of these perspectives helps explain why governance strengthens the relationship between ESG Performance and Financial Sustainability in the MSME context.

This study contributes to the sustainability and governance literature by extending ESG research to MSMEs in an emerging-economy setting and by demonstrating that governance acts as a significant transmission mechanism between ESG Performance and Financial Sustainability. At the same time, the findings highlight the importance of methodological caution when interpreting very strong statistical relationships in studies using small samples and self-reported survey data. Accordingly, the findings should be interpreted as evidence of statistical association within the Medan MSME context rather than as definitive causal effects.

From a practical perspective, the findings suggest that MSME owners may benefit from integrating governance development into sustainability initiatives. Strengthening transparency, accountability, financial monitoring, and decision-making procedures may increase the likelihood that sustainability-oriented practices contribute to long-term financial resilience. Policymakers and business support institutions may also consider governance capability development as an important complement to MSME sustainability programs. (De Silva et al., 2025; Ningsi & Hastalona, 2026).

Conclusion

This study examined the relationships among ESG Performance, Good Corporate Governance (GCG), and Financial Sustainability within Micro, Small, and Medium Enterprises (MSMEs) in Medan City, Indonesia. The empirical results indicate that ESG Performance is positively associated with Good Corporate Governance and Financial Sustainability, while Good Corporate Governance is positively associated with Financial Sustainability among the participating MSMEs.

The mediation analysis further indicates that Good Corporate Governance partially mediates the relationship between ESG Performance and Financial Sustainability within the observed MSME sample. These findings suggest that sustainability-oriented business practices are associated with stronger governance arrangements and more favorable financial sustainability perceptions among the participating enterprises.

The findings should be interpreted as evidence of statistical associations within the Medan MSME context rather than as definitive causal relationships. The results are consistent with Stakeholder Theory and Agency Theory, which propose that responsiveness to stakeholder expectations and governance alignment mechanisms are associated with sustainability-oriented managerial behavior and financial sustainability outcomes. However, the findings do not imply that similar relationships will necessarily be observed across all MSME contexts.

From a practical perspective, the results suggest that strengthening transparency, accountability, financial monitoring, and decision-making procedures may increase the likelihood that sustainability-oriented practices are associated with long-term financial resilience among the participating MSMEs. Policymakers and MSME support institutions may also consider governance capability development as a complementary component of sustainability programs, particularly for owner-managed enterprises.

Several limitations should be acknowledged. First, the study was based on a relatively small sample of 60 MSMEs from a

single city, which limits the external generalizability of the findings. Second, purposive sampling may have introduced selection bias because respondents were selected based on specific managerial characteristics. Third, all variables were measured using self-reported questionnaires, which may be affected by social desirability bias and common method variance. Fourth, the cross-sectional research design does not permit strong causal inference. The measurement model was refined to improve construct distinctiveness before the structural analysis was conducted; however, the relationships among the constructs remained relatively strong within the participating MSMEs.

Future research is encouraged to address these limitations by employing larger and multi-region MSME samples in order to improve external validity and examine whether the observed

relationships differ across institutional and cultural contexts. Longitudinal research designs are needed to evaluate whether changes in ESG practices are followed by changes in governance quality and financial sustainability over time. Future studies are also encouraged to incorporate objective financial indicators, multiple respondents within each firm, and more refined governance measurements to reduce self-report bias and strengthen construct validity. In addition, examining contextual factors such as managerial competence, financial literacy, digital capability, business age, access to external finance, and institutional support may help explain the remaining variance in governance quality and identify the conditions under which governance is more likely to mediate the relationship between ESG Performance and Financial Sustainability.

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