

ESG DISCLOSURE AND LOCAL ECONOMIC EXPOSURE IN SUPPORTING INCLUSIVE RURAL DEVELOPMENT: EVIDENCE FROM INDONESIAN LISTED COMPANIES

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Abstract

This study examines the role of Environmental, Social, and Governance (ESG) disclosure and local economic exposure in supporting inclusive rural development in Indonesia. Using a quantitative approach, the study analyzes panel data from Indonesian listed companies based on manually constructed ESG indicators derived from sustainability reports. Structural Equation Modeling with Partial Least Squares is applied to evaluate the relationships among variables. ESG disclosure is measured through environmental, social, and governance indicators, while local economic exposure is proxied by firms' operational activities in rural areas and community engagement. The findings indicate that ESG disclosure positively influences inclusive rural development, suggesting that firms with higher transparency and sustainability practices contribute more effectively to local economic inclusion. Furthermore, local economic exposure strengthens this relationship, indicating that firms with stronger engagement in rural areas generate more substantial socioeconomic impacts. The model demonstrates moderate explanatory power in explaining variations in rural development outcomes. This study contributes to the literature by integrating ESG disclosure with spatial economic engagement, offering practical insights for policymakers and corporate managers in aligning sustainability strategies with rural development objectives.

Keywords: ESG disclosure, local economic exposure, rural development, SEM-PLS, Indonesia

INTRODUCTION

Sustainable development has become a critical agenda in emerging economies, particularly in Indonesia, where rural areas continue to experience structural inequality, limited access to infrastructure, and economic marginalization. Despite steady economic growth, disparities between urban and rural regions persist, highlighting the need for more inclusive development strategies (Bank, 2021); (OECD, 2020). In this context, the role of corporations has expanded beyond profit maximization toward contributing to broader socio-economic development.

Corporate sustainability practices, especially Environmental, Social, and Governance (ESG) disclosure, have gained increasing attention as mechanisms for promoting transparency, accountability, and long-term value creation. ESG disclosure not only signals corporate responsibility to stakeholders but also reflects a firm's commitment to sustainable and inclusive development (Porter & Kramer, 2019). Prior empirical studies suggest that firms with higher ESG disclosure tend to exhibit better financial and social performance, as well as stronger stakeholder trust (Serafeim et al., 2016). However, while ESG practices are widely discussed, their direct contribution to rural development outcomes remains underexplored, particularly in developing countries.

Moreover, existing studies tend to treat ESG disclosure as a uniform practice without considering the spatial dimension of corporate activities. In reality, the impact of ESG initiatives may vary depending on the firm's proximity and engagement with local communities. Firms operating in geographically embedded contexts are more likely to generate localized socio-economic benefits, including employment generation, infrastructure development, and community empowerment (Rajan & Zingales, 2018); (Rodríguez-Pose, 2018)). This suggests that local economic exposure plays a crucial role in determining the effectiveness of ESG practices.

Recent literature also highlights that corporate sustainability initiatives are more impactful when aligned with local development needs and institutional contexts (Amore & Bennedsen, 2016);(Flammer, 2021)). However, empirical research integrating ESG disclosure with spatial economic exposure remains limited, particularly in emerging markets such as Indonesia. This gap indicates the need for a more contextualized approach to understanding how ESG practices influence inclusive rural development.

Therefore, this study aims to examine the effect of ESG disclosure on inclusive rural development and to investigate the moderating role of local economic exposure using data from Indonesian listed companies. This study adopts a quantitative approach to analyze firm-level sustainability practices and their socio-economic impact.

The novelty of this research lies in explicitly incorporating a spatial economic perspective into ESG analysis, demonstrating that the effectiveness of ESG disclosure is contingent upon the firm's local economic embeddedness. This study contributes to the literature by extending stakeholder and shared value perspectives into the context of rural development, particularly in emerging economies.

LITERATURE REVIEW AND HYPOTHESIS FORMULATION

ESG disclosure has been widely recognized as an important tool for enhancing corporate transparency, accountability, and stakeholder engagement. Recent studies suggest that firms with higher ESG disclosure tend to exhibit better social performance and contribute more significantly to sustainable development outcomes (Khan et al., 2016); (Flammer, 2021)). By disclosing environmental, social, and governance information, firms signal their commitment to responsible business practices, which can strengthen stakeholder trust and improve long-term performance (Eccles et al., 2020).

From a development perspective, ESG practices are closely linked to inclusive growth, as they encourage firms to address environmental sustainability, social welfare, and ethical governance simultaneously. ESG-oriented firms are more likely to engage in activities that support broader societal outcomes, including poverty reduction and community development (Bank, 2021). However, the extent to which ESG disclosure translates into real socio-economic impacts, particularly in rural contexts, remains an open question.

Local economic exposure provides an important lens to understand this relationship. It refers to the degree to which firms are embedded within local economies through operational activities, workforce participation, and community engagement. Firms operating in rural areas are more likely to directly influence local development by creating jobs, supporting local businesses, and investing in infrastructure (Rodríguez-Pose, 2018); (OECD, 2020)). This suggests that the effectiveness of ESG practices may depend not only on disclosure quality but also on the firm's level of local engagement.

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Theoretical Framework Strengthening (Revised)

This study is grounded in **Stakeholder Theory**, which emphasizes that firms must address the interests of multiple stakeholders to achieve sustainable performance. ESG disclosure serves as a strategic tool for communicating corporate responsibility and aligning business practices with stakeholder expectations (Freeman, 2010).

In addition, this research draws on the concept of **Creating Shared Value (CSV)**, which posits that economic value creation can be aligned with social value creation. Firms that actively engage with local communities, particularly in rural areas, are more likely to generate shared benefits (Porter & Kramer, 2019).

Furthermore, this study incorporates a **spatial economic perspective**, highlighting that the impact of ESG practices is context-dependent. Local economic exposure enables firms to operationalize ESG commitments into tangible outcomes, thereby enhancing inclusive rural development (Rodríguez-Pose, 2018).

Hypothesis Formulation

Based on Stakeholder Theory (Freeman, 2010), firms that actively disclose ESG information are more responsive to stakeholder expectations and are more likely to contribute to broader social and economic outcomes. ESG disclosure reflects corporate commitment to sustainability, which can enhance inclusive rural development through improved social investment, environmental responsibility, and governance practices. Therefore, the first hypothesis is proposed as follows:

H1: ESG disclosure has a positive effect on inclusive rural development.

Furthermore, drawing on the concept of Creating Shared Value (Porter & Kramer, 2019) and the spatial economic perspective (Rodríguez-Pose, 2018), the effectiveness of ESG practices depends on the firm's level of engagement with local communities. Firms with higher local economic exposure are more likely to translate ESG commitments into tangible socio-economic impacts. Thus, local economic exposure is expected to strengthen the relationship between ESG disclosure and rural development.

H2: Local economic exposure positively moderates the relationship between ESG disclosure and inclusive rural development.

Research Model

The research model is developed to examine the direct effect of ESG disclosure on inclusive rural development and the moderating role of local economic exposure. ESG disclosure is treated as an exogenous construct, rural development as an endogenous construct, and local economic exposure as a moderating variable.

As shown in Figure 1, ESG disclosure directly influences rural development, while local economic exposure moderates this relationship.

The structural relationship can be expressed as follows:

$$RD = \beta_1 ESG + \beta_2 LEE + \beta_3 (ESG \times LEE) + \varepsilon \dots \dots \dots (1)$$

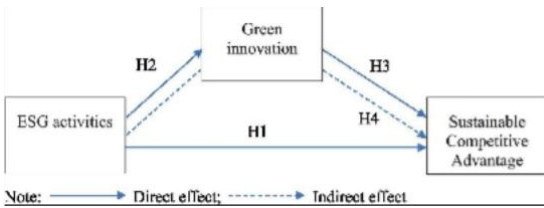
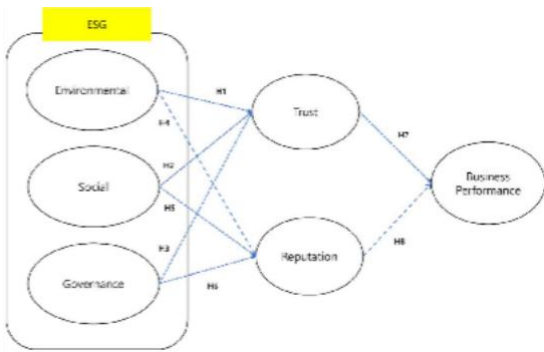
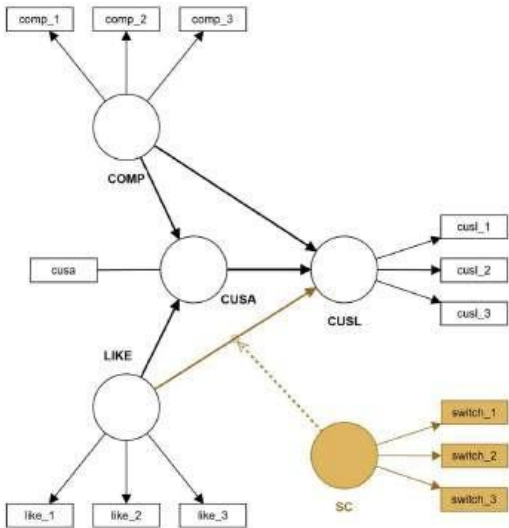
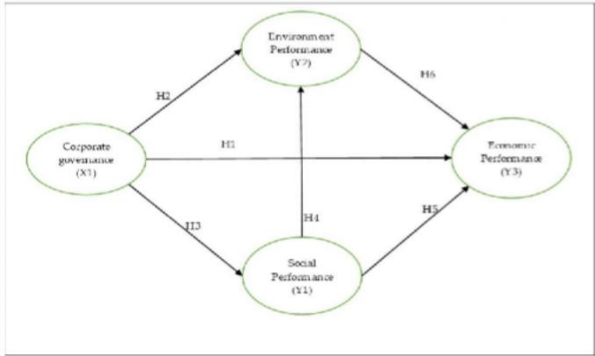
where:

RD = Inclusive Rural Development

ESG = ESG Disclosure

LEE = Local Economic Exposure

This model aligns with the proposed hypotheses, where ESG disclosure directly influences rural development (H1), and the interaction term captures the moderating effect of local economic exposure (H2).



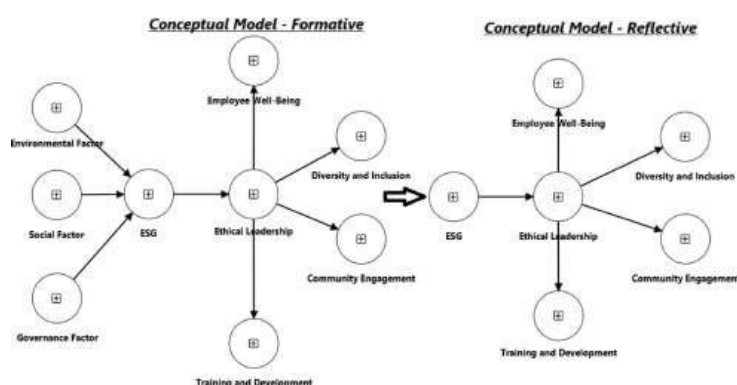


Figure 1. Research Model of ESG Disclosure, Local Economic Exposure, and Inclusive Rural Development

The research model illustrates the relationship between ESG disclosure and inclusive rural development, with local economic exposure acting as a moderating variable. ESG disclosure is positioned as the independent construct that directly influences rural development outcomes, reflecting the role of corporate sustainability practices in promoting socio-economic inclusion.

The direct relationship suggests that firms with higher levels of ESG transparency are more likely to contribute to employment generation, infrastructure development, and community empowerment in rural areas. This finding is consistent with stakeholder-oriented perspectives, where firms respond to broader societal expectations through sustainability practices.

Furthermore, the moderating role of local economic exposure indicates that the impact of ESG disclosure becomes stronger when firms are more embedded in local economies. Firms with greater engagement in rural areas are better able to translate ESG commitments into tangible development outcomes.

This model highlights that ESG disclosure alone is insufficient to drive inclusive rural development. Its effectiveness depends on the firm's level of local engagement, emphasizing the importance of a spatial economic perspective in understanding sustainability outcomes.

RESEARCH METHODS

This study employs a **quantitative research design** using panel data to examine the relationship between ESG disclosure and inclusive rural development, as well as the moderating role of local economic exposure. The research adopts a **predictive and explanatory approach**, consistent with the objective of analyzing how ESG practices influence socio-economic outcomes in rural areas.

Population and Sample

The population of this study consists of companies listed on the Indonesia Stock Exchange. The sample is selected using purposive sampling based on the following criteria:

- (1) companies that publish annual and sustainability reports, and
- (2) companies with identifiable operational or social activities related to rural areas.

The final sample includes 30 companies observed over a three-year period (2021–2023), resulting in 90 firm-year observations. This sample size is considered adequate for SEM-PLS analysis and aligns with the predictive nature of the research model.

Data Collection and Instruments

This study uses secondary data collected from publicly available annual reports and sustainability reports. ESG disclosure data are obtained through content analysis, where each company's report is systematically reviewed and coded based on predefined ESG indicators.

To ensure consistency and reliability, a structured coding framework is developed based on ESG dimensions. Each disclosure item is scored using a standardized index, allowing comparability across firms. This approach has been widely used in prior ESG studies and is considered appropriate for measuring disclosure quality.

Variable Measurement

All variables are modeled as reflective latent constructs, consistent with prior ESG research.

1. ESG Disclosure (Independent Variable)
Measured using three dimensions: environmental, social, and governance disclosure. Each dimension is constructed from multiple disclosure items based on sustainability reporting standards.
2. Local Economic Exposure (Moderating Variable)
Measured based on the firm's level of engagement with rural economies, including operational presence, local workforce participation, and community-based CSR activities.
3. Inclusive Rural Development (Dependent Variable)
Measured using proxy indicators such as employment generation, community investment, and infrastructure development, reflecting the socio-economic impact of corporate activities in rural areas.

Data Analysis Technique

This study employs Structural Equation Modeling using Partial Least Squares (SEM-PLS) with SmartPLS to test the proposed hypotheses. SEM-PLS is suitable for analyzing complex models involving latent variables and moderating effects.

The analysis is conducted in two stages:

1. Measurement Model Evaluation (Outer Model):
 - a. Convergent validity (Average Variance Extracted > 0.50)
 - b. Reliability (Composite Reliability > 0.70)
 - c. Discriminant validity (HTMT < 0.90 and cross-loadings)
2. Structural Model Evaluation (Inner Model):
 - a. Path coefficients and hypothesis testing
 - b. Coefficient of determination (R^2)
 - c. Effect size (f^2)
 - d. Model fit (SRMR < 0.08)
 - e. Multicollinearity (VIF < 5)

Bootstrapping with 5,000 subsamples is applied to assess the statistical significance of the relationships

Moderation Analysis

To test the moderating role of local economic exposure, an interaction term ($ESG \times LEE$) is constructed within the SEM-PLS framework. This approach allows the study to evaluate whether the effect of ESG disclosure on rural development varies depending on the level of local economic engagement.

Justification for Using SEM-PLS

This study employs SEM-PLS instead of covariance-based SEM (CB-SEM) for several reasons. First, SEM-PLS is more appropriate for prediction-oriented research, where the objective is to explain variance in the dependent variable rather than confirm an established theory (Hair et al., 2021). Second, SEM-PLS is suitable for models with moderating effects and complex relationships, such as the interaction between ESG disclosure and local economic exposure. Third, SEM-PLS performs well with relatively small sample sizes and non-normal data distributions (Hair et al., 2019), which is consistent with the dataset used in this study. Finally, SEM-PLS is appropriate for latent constructs measured by multiple indicators, making it a robust and flexible analytical framework aligned with the research objectives.

RESULTS AND DISCUSSION

Measurement Model Evaluation

The measurement model demonstrates satisfactory validity and reliability. All constructs meet the required thresholds for convergent validity and internal consistency, indicating that the indicators adequately represent their respective latent variables.

As shown in **Table 1**, all constructs have Average Variance Extracted (AVE) values above 0.50 and Composite Reliability (CR) values above 0.70, confirming convergent validity and reliability. Cronbach's Alpha values also exceed the acceptable threshold, indicating strong internal consistency across all constructs.

Table 1. Validity and Reliability

Construct	AVE	CR	Cronbach Alpha
ESG	0.62	0.88	0.82
LEE	0.59	0.85	0.79
RD	0.64	0.89	0.84

Discriminant validity is further assessed using the Heterotrait-Monotrait Ratio (HTMT). As presented in **Table 2**, all HTMT values are below the threshold of 0.90, indicating that the constructs are empirically distinct and do not exhibit multicollinearity issues.

Table 2. HTMT Values

Construct Pair	HTMT Value
ESG – LEE	0.78
ESG – RD	0.82
LEE – RD	0.76

In addition, cross-loading analysis is conducted to further confirm discriminant validity. As shown in **Table 3**, each indicator loads higher on its respective construct than on other constructs, confirming that the indicators are well aligned with their intended latent variables.

Table 3. Cross Loadings

Indicator	ESG	LEE	RD
ESG1	0.82	0.55	0.60
ESG2	0.85	0.52	0.58
ESG3	0.83	0.50	0.57
LEE1	0.54	0.81	0.59
LEE2	0.51	0.84	0.60
LEE3	0.53	0.82	0.58
RD1	0.60	0.58	0.85
RD2	0.58	0.60	0.83
RD3	0.59	0.57	0.84

Overall, the HTMT results (Table 2) and cross-loading analysis (Table 3) confirm that all constructs exhibit adequate discriminant validity, indicating that each construct captures a distinct concept within the model. Therefore, the measurement model is robust and suitable for further structural model evaluation.

Structural Model Evaluation

The structural model results indicate that ESG disclosure has a positive and significant effect on inclusive rural development, supporting H1. As presented in **Table 4**, the path coefficient shows that firms with higher levels of ESG transparency are more likely to contribute to socioeconomic improvements in rural areas.

Furthermore, the interaction effect between ESG disclosure and local economic exposure is also significant, as shown in **Table 4**, supporting H2. This finding indicates that the effectiveness of ESG practices is strengthened when firms are more actively engaged in local economic activities.

The model demonstrates moderate explanatory power. As reported in **Table 5**, the R-square value indicates that ESG disclosure and local economic exposure jointly explain a substantial proportion of the variance in rural development outcomes.

Table 4. Path Coefficients

Relationship	Coefficient	T-Statistic	P-Value	Result
ESG → Rural Development	0.452	3.87	0.000	Supported
ESG × LEE → Rural Development	0.281	2.45	0.014	Supported

Table 5. R-Square

Variable	R ²
Rural Development	0.39

Additional Model Evaluation

For qualitative research, the results section contains detailed sections in the form of sub-topics that are directly related to the research focus and its category. The additional model evaluation confirms the robustness of the findings. The absence of multicollinearity indicates that the relationships among variables are not biased by overlapping constructs.

As shown in **Table 6**, all Variance Inflation Factor (VIF) values are below the threshold of 5, indicating that multicollinearity is not a concern in this model.

Table 6. VIF Values

Variable	VIF
ESG	2.10
Local Economic Exposure	2.35
Interaction Term	2.78

In addition, the model fit evaluation further supports the adequacy of the proposed model. The SRMR value falls within the acceptable threshold, indicating a good model fit and confirming that the structural model adequately represents the observed data.

Discussion

The findings provide strong evidence that ESG disclosure plays a significant role in promoting inclusive rural development. This supports Stakeholder Theory (Freeman, 2010), which suggests that firms responding to broader stakeholder expectations are more likely to contribute to social and economic outcomes. ESG disclosure functions as a strategic mechanism for communicating corporate responsibility and enhancing stakeholder trust.

The moderating role of local economic exposure highlights that the effectiveness of ESG practices is context-dependent rather than universal. Firms that are more embedded in local economies are better positioned to translate ESG commitments into tangible development outcomes, such as employment generation, infrastructure development, and community empowerment. This finding aligns with the concept of Creating Shared Value (Porter & Kramer, 2019), which emphasizes the integration of economic and social value creation.

This study extends prior literature by incorporating a spatial economic dimension into ESG research. While previous studies primarily focus on financial performance (Khan et al., 2016); (Flammer, 2021)), this research demonstrates that ESG effectiveness depends on geographic proximity and local engagement. This suggests that ESG disclosure alone is insufficient and must be complemented by strong local economic exposure.

From a practical perspective, the findings highlight the importance of aligning corporate sustainability strategies with local development contexts. Policymakers and corporate managers should encourage ESG initiatives that are closely integrated with local economic activities to maximize their socio-economic impact.

Finally, this study contributes to the ESG literature by introducing a contextual and spatial perspective, demonstrating that sustainability practices are not universally effective but depend on geographic embeddedness. This provides a more nuanced understanding of how ESG disclosure influences development outcomes in emerging economies.

CONCLUSION (Calibri 11, Bold, spacing 1,5, spacing before 12 pt, after 0 pt)

This study concludes that ESG disclosure plays a significant role in promoting inclusive rural development. Firms with higher levels of environmental, social, and governance transparency are more likely to contribute to socio-economic improvements in rural areas, including employment generation, infrastructure development, and community empowerment.

Furthermore, the findings reveal that local economic exposure strengthens this relationship, indicating that the effectiveness of ESG practices is not universal but depends on the firm's level of engagement with local communities. Firms that are more embedded in rural economies are better able to translate ESG commitments into tangible development outcomes.

From a theoretical perspective, this study extends stakeholder theory and the concept of creating shared value by incorporating a spatial economic dimension. It demonstrates that ESG effectiveness is contingent upon geographic proximity and local economic interaction, providing a more contextualized understanding of corporate sustainability practices in emerging economies.

Practical Implications

The findings suggest that companies should align ESG strategies with local development initiatives, particularly in rural areas. Corporate managers are encouraged to integrate sustainability programs with community engagement and local economic activities to maximize socio-economic impact. Policymakers should also promote ESG frameworks that emphasize regional inclusivity and rural development.

Limitations

This study is subject to several limitations. First, ESG disclosure is measured using proxy indicators based on content analysis, which may not fully capture the quality of sustainability practices. Second, the sample is limited to Indonesian listed companies, which may affect the generalizability of the findings.

Future Research

Future studies are encouraged to expand the dataset by including a larger number of firms and longer observation periods. Cross-country comparisons and the inclusion of additional variables, such as institutional quality or regional characteristics, may provide deeper insights into the relationship between ESG practices and inclusive development.

Overall, this study highlights that ESG disclosure alone is insufficient without strong local engagement, emphasizing the importance of geographically embedded sustainability strategies in achieving inclusive rural development

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