Environmental Driven CSR and Business Sustainability in Ethiopia: Community Development as a Mediator

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Abstract: This study examines the impact of Environmental Corporate Social Responsibility on Business Sustainability, with a focus on the mediating role of Community Development within designated industrial parks in Amhara Regional State, Ethiopia. Guided by the triple bottom line paradigm (Social, Environmental, and Economic). While the broader impacts of CSR have been thoroughly investigated, there is a dearth of research in emerging nations on how environmental initiatives yield sustainable business results through community involvement.The research employed a quantitative technique with a survey design, utilizing proportional stratified random and purposive sampling to collect data from 351 participants, including employees of the industrial park and residents of the nearby community. Partial Least Squares Structural Equation Modelingwas employed to analyze the interconnections among constructs. The results demonstrate that CD has a significant and positive influence on BS, while E-CSR has a strong effect on CD, albeit an indirect one, impacting BS through CD. The findings contribute to the theoretical discourse on CSR in developing nations, offer practical guidance for industrial park administrators in harmonizing CSR regulations with community needs, and highlight the importance of integrated social-environmental strategies for sustainable development.

Keywords: Environmental-Oriented CSR, Community Development, Business Sustainability, Industrial Parks, PLS-SEM, Ethiopia

1. Introduction

In Ethiopia, as in many developing countries, industries are increasingly recognizing the importance of corporate social responsibility (CSR) in addressing critical social and environmental challenges. Companies involved in Environmental corporate social

responsibility (E-CSR) are increasingly acknowledged for their efforts to reduce ecological impact through sustainable practices, which strategically strengthen local communities and improve business resilience. The direct impact of E-CSR on Business Sustainability (BS) within Ethiopia's unique socio-economic and regulatory context remains underexplored.

In addition to Ethiopia, industries across Africa face similar challenges, with CDacting as a crucial link between environmental initiatives and business performance. Research across the continent underscores the crucial role of community-oriented strategies in promoting sustainable development, particularly in light of infrastructural constraints and socio-political challenges (Adewale & Adekoya, 2024; Nguyen et al., 2023).

The interconnection between E-CSR, Community Development, and BShas been thoroughly examined, with a growing consensus that integrated strategies yield the most sustainable outcomes (Dyllick & Hockerts, 2022; Fatoki, 2021). The dynamics of this relationship in underdeveloped contexts, such as Ethiopia and the broader African continent, require further examination to formulate tailored CSR strategies that effectively balance economic, social, and environmental objectives.

This study examines the relationship between environmental CSR, community development, and BS in developing countries. The findings show that CD significantly improves BS and mediates E-CSR and company sustainability. However, numerous crucial research gaps demand more study.

Environmental activities in undeveloped countries have a greater indirect effect on economic success than in developed countries. Without community development, environmental activities may not directly lead to sustainable corporate success. Future research should examine the legal frameworks, resource availability, infrastructural constraints, and socio-cultural variables that may limit the direct efficacy of E-CSR efforts.

This study urges further investigation of CDfactors, such as health, education, culture, infrastructure, and local economic empowerment, that best support this relationship. Finding effective community-focused techniques can help practitioners create tailored solutions that improve social and business outcomes.

Underdeveloped countries' industries have unique obstacles that may hinder CSR initiatives. Financial constraints, stakeholder participation, and institutional backing may be factors. Customized conceptual frameworks or models for contextual specificities are lacking.

This paper presents potential research avenues to enhance CSR practices and foster sustainable business development in underdeveloped economies.

The study sought to tackle the identified gaps by pursuing the following objectives:

- To analyze the impact of E-CSRon CD within designated industrial parks.
- To examine how E-CSRinfluences overall BS in specific industrial parks.
- To evaluate the mediating role of CDin the relationship between E-CSR and BS within the selected industrial parks.

2. Theories and Hypotheses

E-CSRand CD, BS

E-CSR encompasses a business's green efforts that help the environment and local communities. In developing nations, E-CSR is gaining traction rapidly as a tool for both short-term and long-term corporate success.

H1.CD has a significant positive influence on Business Sustainability

CD significantly improves corporate sustainability by fostering an environment favorable to business success. Corporate investment in community development, encompassing improvements to local infrastructure, education, and social welfare, fosters trust and goodwill among local stakeholders. This social capital enhances reputation, fosters client loyalty, and provides access to local resources, all of which are crucial for sustained company success. Research by Porter and Kramer (2011) highlights that companies involved in CD are more adept at generating shared value, benefiting both the community and the company's sustained performance. Lozano (2013) demonstrates that sustainable corporate practices, which involve community engagement, lead to improved financial performance and greater resilience to social risks. Thus, CD acts as a crucial foundation for corporate sustainability.

H2.E-CSRhas a significant positive influence on Business Sustainability

E-CSR makes a significant difference in improving the sustainability of businesses by encouraging people to act in ways that are beneficial to the earth and cause less harm. When businesses engage in E-CSR activities, such as reducing carbon emissions, proper recycling, and protecting natural resources, they typically experience improvements in their operational efficiency, compliance with regulations, and brand recognition. All of these things work together to help a business stay competitive and successful in the long run. According to a study by Dyllick and Hockerts (2002), developing environmentally responsible business plans provides companies with long-term competitive advantages.

Additionally, a study by Russo and Fouts (1997) demonstrates that proactive environmental efforts are positively correlated with financial success. This illustrates the importance of E-CSR in achieving economic sustainability.

H3.**E-CSR has a significant positive influence on CD**

E-CSR programs help communities grow by promoting environmentally friendly actions that are sustainable and improve the quality of life for people and their health. Businesses contribute to making communities healthier and more resilient by taking steps such as reducing pollution, conserving resources, and educating their employees and the public about environmental issues. McWilliams and Siegel's (2001) study demonstrates that companies participating in environmental CSR projects often develop stronger community ties and social capital. Frynas' 2005 study also shows that environmental responsibility programs improve community health by addressing important environmental issues, which in turn helps society grow and thrive.

H4.**CD mediates the association between E-CSR and Business Sustainability**

Environmental CSR activities often help communities thrive by enhancing the environment and improving the health of residents. CDefforts make social capital, stakeholder connections, and local economic conditions better, which are all important for business sustainability. E-CSR helps businesses thrive by supporting community growth. Jamali et al. (2017) and Mair & Marti (2006) discovered that CD facilitates the transformation of corporate environmental initiatives into sustainable business results.

3. Research Design and Methodology

Explanatory research design with a quantitative approach was adopted to identify trends and examine causal relationships among E-CSR, CD, and BS. A survey method was employed due to its efficiency in collecting standardized data and analyzing organizational and community dynamics.

The study targeted employees and residents surrounding four industrial parks in the Amhara Regional State of Ethiopia: Bahir Dar, Kombolcha, Debre Birhan, and Bure Integrated Agro-Processing. Employee respondents were selected using proportional stratified random samplingbased on park location, while purposive sampling identified community participants most affected by industrial activities within a 360° radius of each park.

- For the community (infinite population), $n = \frac{Z^2pq}{e^2}$ $1.96^2 * 0.5 * 0.5/0.05^2 = 3.8416 * 0.5 * 0.5/0.0025$, yielding 385 respondents.
- For employees (finite population, N = 32,000), the formula $n = \frac{N}{1+N(e^2)}$= $n = \frac{32000}{1+32000(0.05^2)} = \frac{32000}{1+32000(0.0025)} = \frac{32000}{1+80} = \frac{32000}{81}$=395.0617 ≈396 respondents.

Two validated questionnaires were used, and 351 valid responses from each were recorded for analysis. The employee survey measured E-CSR and BS using the triple bottom line dimensions—people, planet, and profit. The community survey assessed CD through indicators of health, education, infrastructure, and culture. Reliability was confirmed with Cronbach's alpha values ranging from 0.70 to 0.97, indicating high internal consistency.

Data analysis was conducted using SmartPLS 4.1.1.4 for model evaluation. PLS-SEM was chosen for its suitability in analyzing complex latent constructs and its robustness with moderate sample sizes.

4. Results of the Model

In recent years, the heightened emphasis on sustainability has rendered the environmental dimension of corporate social responsibility a crucial strategy for firms seeking to generate long-term value. The environmental activities of CSR, including energy efficiency, waste management, and ecological conservation, are increasingly recognized as vital elements of CD and business sustainability. Within this approach, the environmental CSR factor illustrates an organization's commitment to reducing its ecological footprint while fostering social cohesion and economic stability in the communities it serves.

Following the validation of the measurement model, the Structural Model is utilized to evaluate the proposed links among constructs. This setting evaluates the influence of E-CSRon CD and other aspects of business sustainability. The direct and mediated effects are often analyzed using path coefficients, t-statistics, and confidence intervals, facilitating the validation or refutation of ideas concerning these causal linkages.

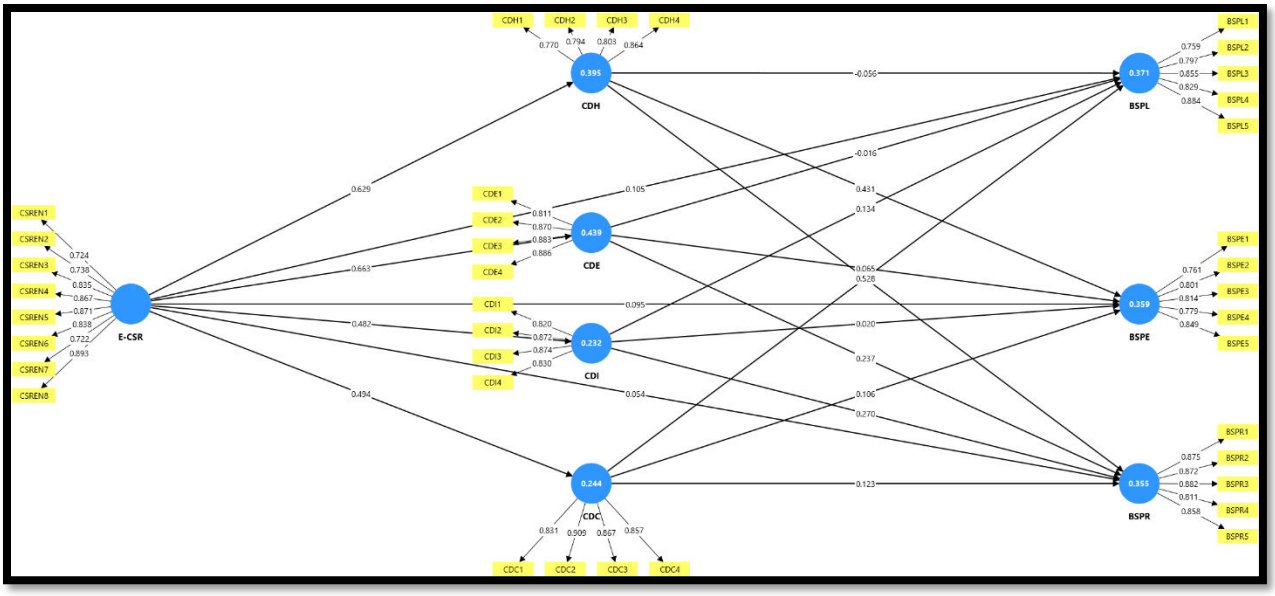

Figure 1: LOC PLS-SEM Graphics

The assessment of the measurement model illustrated in Figure 1, utilizing factor loadings of the LOCs, provides strong evidence for construct reliability and indicator validity. The factor loadings for all observed variables within the LOCs of E-CSR, CD, and BS dimensions exceed the recommended threshold of 0.70, indicating a robust alignment between the items and their respective latent constructs (Hair et al., 2017).
The E-CSR construct exhibits individual item loadings ranging from 0.722 to 0.893, signifying substantial convergence. This underscores the significance of economic responsibility factors in shaping the overall perception of E-CSR. The loadings are robust and acceptable, highlighting the internal consistency of the E-CSR measurement model.

The four LOCs within the CDsecond-order construct demonstrate the following loadings: The factor loadings for CDH (Health) items range from 0.770 to 0.864, CDE (Education) loadings span from 0.811 to 0.886, CDI (Infrastructure) items consistently range from 0.820 to 0.874, and CDC (Culture) item loadings vary between 0.831 and 0.909, demonstrating robust factor loadings for their respective observed indicators.

The loadings for the three dimensions within the framework of business sustainability, considered as a third-order construct, are as follows: BSPL (Planet) ranges from 0.759 to 0.884, BSPE (People) ranges from 0.761 to 0.849, and BSPR (Profit) ranges from 0.811 to 0.882.

The consistently high factor loadings support the assumption of the reflective measurement model and confirm that each LOC reliably represents its higher-order construct. This validates the hierarchical model structure, where CDH, CDE, CDI, and

CDC converge into the CDHOC, BSPL, BSPE, and BSPR converge to BS, and environmental CSR items converge into the E-CSR construct.

5. Path Coefficients and Hypothesis Testing

After validating the measurement model, the next step in PLS-SEM involves evaluating the structural model through the analysis of path coefficients and hypothesis testing. Path coefficients represent the strength and direction of relationships between latent constructs, while t-statistics and p-values evaluate the statistical significance of these relationships (Hair et al., 2017).

A path is considered statistically significant if the t-value exceeds 1.96 and the p-value is less than 0.05 in a two-tailed test, which is the standard criterion when directionality is not specified. In cases where a one-tailed test is appropriate (i.e., when the hypothesis direction is explicitly defined), the critical t-value is set at 1.645 for the 5% significance level (Sarstedt et al., 2022).

This assessment examines the proposed relationships and provides insights into the practical implications of CSR activities on environmental and social outcomes, encompassing both sustainability and development. This analysis enables theory-driven conclusions and practical recommendations for corporate social responsibility and sustainability strategies.

Table 1: Path Coefficients

	Path coefficient	Standard deviation	T-statistics	P-values	95% Confidence Interval
CD -> BS	0.664	0.058	11.368	0.000	(0.567; 0.762)
E-CSR -> BS	0.087	0.064	1.358	0.087	(-0.021; 0.193)
E-CSR -> CD	0.755	0.027	28.426	0.000	(0.709; 0.797)

Source: Smart PLS Results; Survey,2025

The structural model analysis examined the links between E-CSR, CD, and BS. The findings reveal the direct and indirect impacts of CSR on sustainability. CD → BS (Path Coefficient = 0.664, t = 11.368, p < 0.001). This statistically significant pattern suggests that CD enhances company sustainability. CD improves BS in people, planet, and profit, according to a path coefficient of 0.664.

This confirms Porter & Kramer (2011), who found that social infrastructure and satisfying societal needs offer businesses an edge. Amaeshi et al. (2006) argue that CSR's local responsiveness promotes long-term sustainability in developing countries.

E-CSR → CD (Path Coefficient = 0.755, t = 28.426, p < 0.001). The relationship between environmental CSR and CDis is huge. With a correlation of 0.755, E-CSR measures, including pollution control, energy efficiency, and environmental stewardship, increase public health, environmental quality, and local engagement. Islam & Deegan (2008) found that ecologically conscious companies in developing nations use CSR to improve communities. It follows Elkington's (1997) triple bottom line, which links environmental, social, and economic sustainability.

E-CSR → BS (Path Coefficient = 0.087, t = 1.358, p = 0.087). This path is positive, but it is not statistically significant at the 0.05 level, indicating that Environmental CSR alone may not be sufficient to promote company sustainability. E-CSR's indirect impact on CD may be greater due to its many CD channels. CSR affects sustainability outcomes through intermediary social mechanisms, not firm earnings, according to Montiel (2008) and Husted & Allen (2007). Improving community well-being moderates the impact of E-CSR on business sustainability.

In PLS-SEM, the coefficient of determination (R^2), effect size (f^2), and predictive relevance (Q^2) are key indicators of model performance. The R^2 value reflects the proportion of variance in the dependent variable explained by its predictors and indicates the model's explanatory power. According to Cohen (1988), values of 0.26 or higher denote substantial explanatory power, 0.13–0.25 indicate moderate power, and 0.02–0.12 represent weak explanatory strength. The f^2 statistic assesses the relative impact of each exogenous construct on an endogenous construct by comparing changes in R^2 when predictors are added or removed. Effect sizes of 0.02, 0.15, and 0.35 correspond to small, medium, and large effects, respectively (Cohen, 1988). The Q^2 value, obtained through the blindfolding procedure, evaluates the model's predictive capability beyond parameter estimation. A Q^2 greater than zero confirms predictive relevance, with 0.02–0.15 indicating small, 0.15–0.35 moderate, and above 0.35 strong predictive power (Stone &Geisser, 1974; Hair et al., 2021). Together, these measures provide a comprehensive assessment of the explanatory strength, magnitude of effect, and predictive accuracy of the structural model.

Table 2: Model Explanatory Power and Predictive Relevance

Predictors	Outcome/s	R-Square (R^2)	f-Square (f^2)	Q-Square (Q^2)	RMSE	MAE
CD	BS	0.536	0.409	0.337	0.821	0.631
E-CSR			0.007			
E-CSR	CD	0.569	1.323	0.564	0.665	0.515

Source: Smart PLS Results; Survey,2025

The coefficient of determination, R^2 = 0.536, suggests that Community Development can explain 53.6% of the variance in BScan. This suggests that corporate diversity has a significant influence on business sustainability, aligning with the findings of Husted & Allen (2007) and Ali et al. (2023), which emphasize the role of community engagement initiatives in sustaining long-term business performance. f^2 = 0.409. The effect size is significant, indicating that CD has a considerable influence on BS; therefore, excluding CD from the model would significantly reduce predictive accuracy. Q^2 = 0.337 falls within the medium predictive relevance range (0.15–0.35), nearing the high threshold. The CD explains BS and exhibits a robust predictive capability, aligning with Stone and Geisser's theory of predictive relevance. The Root Mean Square Error (RMSE) is 0.821, and the Mean Absolute Error (MAE) is 0.631. Both error metrics indicate a minimal prediction error for BS, thus affirming the reliability of CD's predictive function.

E-CSR to BS: f^2 = 0.007. The effect size is minimal, suggesting that Environmental CSR (E-CSR) has a limited direct impact on BS within the study model. While this may seem similar, empirical research (Saeidi et al., 2015) suggests that the benefits of CSR often emerge indirectly through mediators, such as community trust or stakeholder engagement, rather than having a direct effect on business sustainability.

The relationship between E-CSR and CD is represented by R^2 = 0.569, indicating that E-CSR accounts for 56.9% of the variance in CD. This evidence demonstrates that E-CSR is a significant factor affecting CD outcomes. This is consistent with the findings of Carroll and Shabana (2010), who emphasized that environmental initiatives contribute to the well-being of local communities. f^2 = 1.323.

The effect size is considerable, demonstrating that E-CSR has a significant impact on CD. Removing E-CSR from the model would significantly reduce its explanatory capacity. Q^2 is equal to 0.564. The predictive relevance is significantly elevated (>0.35), suggesting that E-CSR is capable of effectively forecasting CD outcomes. The findings of Ali et al. (2023) indicate that environmental CSR significantly predicts social and community benefits.

The Root Mean Square Error (RMSE) is 0.665, and the Mean Absolute Error (MAE) is 0.515. Decreased prediction errors indicate reliable prediction accuracy.

E-CSR significantly predicts CD, which in turn robustly predicts BS. This establishes a mediated relationship where CSR's environmental initiatives primarily enhance BS through community development.

6. Results And Discussion

The study's results provide a clearer understanding of the structural relationships between BS, CD, and E-CSR. The study examined both the measurement and structural models of PLS-SEM to assess the validity, reliability, and utility of the proposed structure for making predictions. The results indicate that E-CSR has a significant and positive effect on CD, which in turn has a significant and positive effect on BS. The fact that E-CSR had almost no direct effect on BS is interesting. This suggests that community-focused outcomes primarily serve as a liaison between environmental efforts and sustainable business performance.

The following section discusses the implications of the results for managers and lawmakers who aim to incorporate CSR into environmentally friendly business plans. It also compares the results to those of other studies and explains them in terms of current theories of sustainability.

6.1.Hypotheses Testing and Discussions

Hypothesis testing in structural equation modeling is crucial for evaluating the theoretical relationships suggested among constructs. This research examined each hypothesis using path coefficient estimates, corresponding t-statistics, and p-values derived from a bootstrapping procedure in PLS-SEM. The significance of each path was assessed at the 5% and 1% confidence levels, ensuring robust statistical validation.

The testing results clarify the direct and indirect effects of E-CSR on BS, mediated by CD. The discussion aligns with prior research (Hair et al., 2021; Ali et al., 2023), examining both statistically significant and non-significant paths through the perspectives of stakeholder theory and the triple bottom line framework. This dual focus delineates the strength and direction of relationships, while also highlighting potential mediating mechanisms, context-specific dynamics, and managerial implications.

Table 3: Structural Model Path Coefficients and Significance Testing

	Path Coefficients	Standard deviation	T-statistics	P-values	95% Confidence Interval
Direct Effect					
CD -> BS	0.664	0.058	11.368	0.000	(0.567;0.762)
E-CSR -> BS	0.087	0.064	1.358	0.087	(-0.021; 0.193)
E-CSR -> CD	0.755	0.027	28.426	0.000	(0.709; 0.797)
Indirect Effect					
E-CSR -> CD -> BS	0.501	0.051	9.731	0.000	(0.419;0.588)
Total Effect					
CD -> BS	0.664	0.058	11.368	0.000	(0.567;0.762)
E-CSR -> BS	0.588	0.039	15.084	0.000	(0.523;0.652)
E-CSR -> CD	0.755	0.027	28.426	0.000	(0.709;0.797)

Source: Smart PLS Results; Survey,2025

The results of the structural model demonstrate three major patterns that are interconnected: The direct effect from CD to BS is $\beta = 0.664$, $p < 0.001$. CD has a significant and positive impact on a business's ability to remain in operation for an extended period. This shows that corporations improve their overall sustainability performance when they work on CD projects that improve health, education, culture, and infrastructure in the area. This finding is consistent with previous empirical research, which demonstrates that socially responsible community participation enhances the social and environmental aspects of the triple bottom line, thereby promoting long-term corporate sustainability (Ali et al., 2023; Carroll & Shabana, 2010).

E-CSR→BS ($p = 0.087$, Non-Significant, Direct Effect: $\beta = 0.087$). There is a positive, albeit not statistically significant, direct link between E-CSR and BS. This means that environmental measures will not immediately benefit the company's long-term health unless they are also accompanied by social inclusion. Similar findings have been documented in other studies, suggesting that the advantages of environmental initiatives often require prolonged periods to materialize or are only realized in conjunction with opportune social investments (Yusliza et al., 2020; Gerged et al., 2021). In other words, environmental CSR programs may improve a company's reputation or position, but if CSR is not actively pursued, the short-term benefits for sustainability are reduced.

The direct effect of E-CSR→CD is $\beta = 0.755$ and $p < 0.001$. Companies that prioritize environmental sustainability also tend to allocate more resources to community

programs. This is evidenced by the substantial positive effect that E-CSR has on CD. This demonstrates the interconnectedness of CSR, as practices of social responsibility frequently align with environmental stewardship (Maignan & Ferrell, 2004; Islam & Deegan, 2008).

(Indirect Effect: $\beta = 0.501$, $p < 0.001$) E-CSR causes CD, which in turn causes BS. The significant indirect effect indicates that E-CSR has a substantial impact on BS, but only through CD. This conclusion corresponds with full mediation, characterized by a significant indirect pathway via a mediator, whereas the direct effect remains inconsequential (Zhao et al., 2010). This pattern is supported by empirical research: CD activities, especially those focused on environmental issues, frequently strengthen stakeholder connections and trust, resulting in better sustainability outcomes (Ali et al., 2017; Martínez-Conesa et al., 2017).

(Total Effect: $\beta = 0.588$, $p < 0.001$) E-CSR→BS. Combining the direct and indirect paths yields a significant overall effect that is worth highlighting. This illustrates that E-CSR has a significant impact on BS in terms of supporting community growth. A global CSR study (Fatma & Rahman, 2015; Khan et al., 2022) suggests that indirect paths through social dimensions are crucial for transforming environmental activities into enhanced corporate success. The observed mediation effect demonstrates that active community participation is the primary mechanism by which E-CSR initiatives substantially impact business sustainability. This notion is corroborated by Stakeholder Theory (Freeman, 1984). It claims that for businesses to be successful and remain compliant over time, they must pay attention to the requirements of all stakeholders, particularly those related to social and environmental issues. The Triple Bottom Line technique (Elkington, 1997) explains how the environment, society, and the economy interact and influence one another. This is why E-CSR, by itself, would not have a significant impact on business unless it were linked to social projects, such as community development.

6.2. Interpretation of Hypotheses Relationships

Examining the relationships presented in the SEM framework necessitates a thorough evaluation of the strength, direction, and statistical significance of the suggested connections among constructs. This process evaluates the validity of the proposed associations and elucidates the theoretical mechanisms underlying the relationships between the variables. The analysis of path coefficients, t-statistics, p-values, and confidence intervals enables the determination of relationship characteristics, including positivity or negativity, significance or non-significance, and the presence of mediating or moderating effects (Hair et al., 2022).

H1. CD has a significant positive influence on BS
H2.E-CSR has a significant positive influence on BS
H3. E-CSR has a significant positive influence on CD
H4. CD mediates the association between E-CSR and BS

Table 4: Hypotheses, Relationships Summary Table

Hypothesis	Path	Significance (p-value)	Mediation Type	Decision
H1	CD → BS	0.000 (**p**< 0.01)	–	Supported
H2	E-CSR → BS	0.087 (**p**> 0.05)	–	Not Supported
H3	E-CSR → CD	0.000 (**p**< 0.01)	–	Supported
H4	E-CSR → CD → BS	0.000 (**p**< 0.01)	Full Mediation	Supported

Source: Smart PLS Results; Survey,2025

This aligns with mediation literature (Zhao et al., 2010), suggesting that an insignificant direct effect coupled with a significant indirect effect indicates complete mediation. Empirical research in the contexts of CSR and sustainability (Henseler et al., 2015; Hair et al., 2022) demonstrates that CDoften acts as a link between CSR initiatives and sustainable long-term outcomes.

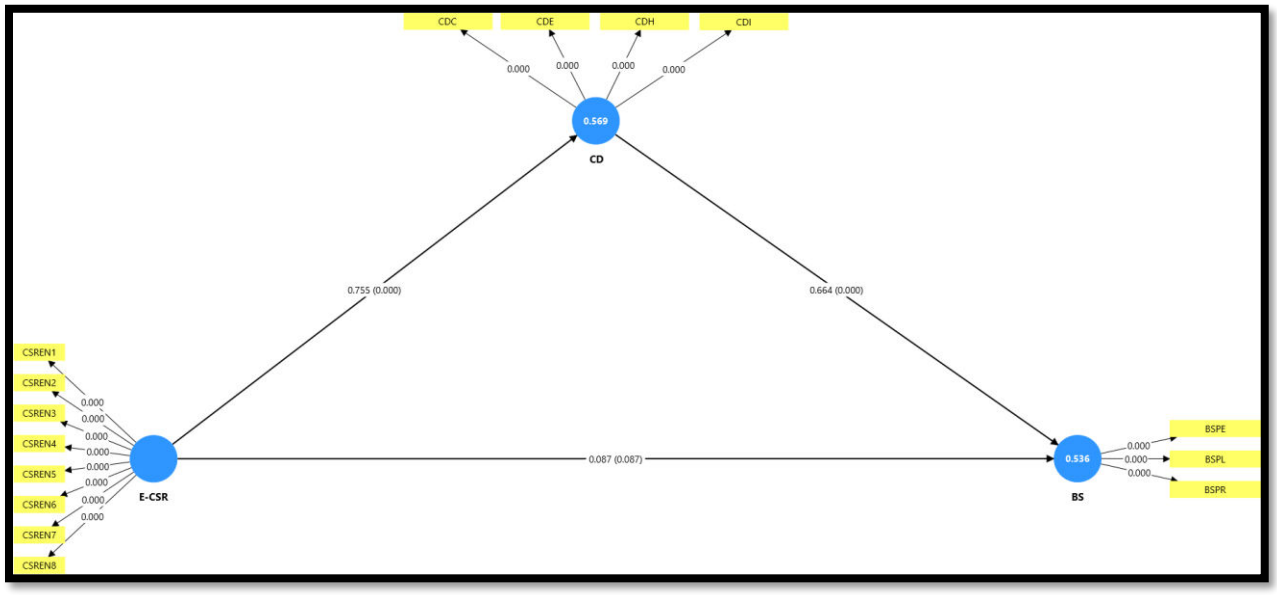

Figure 2: Size and Significance of Path Relationships among Variables

BS, CD, and E-CSR are the three interrelated concepts in this study. The model used to represent these linkages visually also displays the lower-order indicators associated with these links. Research on corporate social responsibility (CSR) has shown that social or community initiatives often serve as the connection between environmental CSR and sustainable outcomes in the long run. This finding aligns with the previous findings.

7. Conclusions

The numbers show that E-CSR does make a difference in the long-term success of companies. However, it does this primarily by making communities better, rather than directly helping businesses. For this reason, companies that prioritize environmental sustainability often experience improved healthcare, education, infrastructure, and cultural awareness in the areas where they operate. This is good for their own long-term success. Therefore, businesses in industrial parks cannot simply rely on E-CSR to make them more environmentally friendly; these tools must be utilized in conjunction with actual CD projects.

8. Theoretical and Practical Suggestions

Administrators of industrial parks ought to prioritize community-based corporate social responsibility initiatives due to their impact on business sustainability. Industrial parks ought to collaborate with local stakeholders to incorporate sustainability into CD initiatives, including green health care, cultural bazaars, infrastructure, environmental education, and pollution control.

Policymakers and business leaders must develop E-CSR strategies that are inclusive of the community to guarantee compliance-oriented, community-focused environmental initiatives.

Companies can transform CSR from a compliance-oriented task into a strategic catalyst for sustainable development that serves both societal and environmental interests by aligning environmental strategies with community requirements.

CD must be regarded as a primary outcome metric within CSR frameworks, rather than a peripheral advantage.

Future research should investigate additional mediators, such as stakeholder participation and environmental activities, to enhance the relationship between E-CSR and sustainability in other developing countries. Analyze the variations in community-based sustainability impacts of E-CSR across different industries.

9. Limitations

The present study examined numerous E-CSR connections related to sustainability gaps and community development, notwithstanding certain constraints. The study's

geographic scope was limited to specific industrial parks in Ethiopia's Amhara region, thereby constraining the applicability of the findings to other locations. The cross-sectional nature of the research design complicates the assessment of lag effects of variables and the identification of initiatives across time. Ultimately, only employees and community members were regarded as stakeholders; the perspectives of policymakers, who may hold divergent views on CSR and sustainability dynamics, were excluded.

10. References

1. Adewale, O., & Adekoya, A. (2024). The role of CDin enhancing the sustainability outcomes of environmental CSR initiatives in sub-Saharan Africa. Corporate Social Responsibility and Environmental Management, 31(2), 425–439.
2. Ali, W., Frynas, J. G., & Mahmood, Z. (2023). CSR and sustainable community development: Empirical insights. Journal of Cleaner Production, 398, 136851.
3. Ali, W., Frynas, J.G., & Mahmood, Z. (2017). Determinants of Corporate Social Responsibility (CSR) Disclosure in Developed and Developing Countries: A Literature Review. Corporate Social Responsibility and Environmental Management, 24(4), 273–294.
4. Amaeshi, K. M., Adi, B. C., Ogbechie, C., & Amao, O. O. (2006). Corporate Social Responsibility in Nigeria: Western mimicry or indigenous influences? Journal of Corporate Citizenship, (24), 83–99.
5. Ameer, R., & Othman, R. (2012). Sustainability practices and corporate financial performance: A study based on the top global corporations. Journal of Cleaner Production, 36, 1–16.
6. Becker, J.-M., Klein, K., & Wetzels, M. (2012). Hierarchical latent variable models in PLS-SEM: Guidelines for using reflective-formative type models. Long Range Planning, 45(5–6), 359–394.
7. Carroll, A.B., & Shabana, K.M. (2010). The Business Case for Corporate Social Responsibility: A Review of Concepts, Research and Practice. International Journal of Management Reviews, 12(1), 85–105.
8. Chin, W. W. (1998). The partial least squares approach to structural equation modeling. In G. A. Marcoulides (Ed.), Modern Methods for Business Research (pp. 295–336). Lawrence Erlbaum Associates.
9. Clark, L. A., & Watson, D. (2019). Constructing validity: Basic issues in objective scale development. Psychological Assessment, 31(12), 1412–1423.
10. Cohen, J. (1988). Statistical Power Analysis for the Behavioral Sciences (2nd Ed.). Lawrence Erlbaum Associates.

11. Diamantopoulos, A., & Siguaw, J. A. (2006). Formative versus reflective indicators in organizational measure development: A comparison and empirical illustration. British Journal of Management, 17(4), 263–282.
12. Dyllick, T., & Hockerts, K. (2002). Beyond the business case for corporate sustainability. Business Strategy and the Environment, 11(2), 130–141.
13. Dyllick, T., & Hockerts, K. (2022). Corporate sustainability and business models: A comprehensive review and framework. Journal of Cleaner Production, 375, 134107.
14. Efron, B., & Tibshirani, R. J. (1993). An Introduction to the Bootstrap. Chapman & Hall/CRC.
15. Elkington, J. (1997). Cannibals with Forks: The Triple Bottom Line of 21st Century Business. Capstone Publishing.
16. Fatma, M., & Rahman, Z. (2015). Consumer perspective on CSR literature review and future research agenda. Management Research Review, 38(2), 195–216.
17. Fatoki, O. (2021). The influence of environmental CSR on business performance in emerging economies. Sustainability, 13(15), 8432.
18. Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. Journal of Marketing Research, 18(1), 39–50.
19. Franke, G., & Sarstedt, M. (2019). Heuristics versus statistics in discriminant validity testing: A comparison of four procedures. Internet Research, 29(3), 430–447.
20. Freeman, R. E. (1984). Strategic management: A stakeholder approach. Pitman.
21. Frynas, J. G. (2005). The false developmental promise of Corporate Social Responsibility: Evidence from multinational oil companies. International Affairs, 81(3), 581–598. Geisser, S. (1974). A predictive approach to the random effect model. Biometrika, 61(1), 101–107.
22. Gerged, A.M., Al-Haddad, L.M., & Al-Hajri, M.O. (2021). Is corporate environmental disclosure associated with firm performance? Business Strategy and the Environment, 30(1), 756–774.
23. Hair, J. F. Jr., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2021). An introduction to structural equation modeling. In A Primer on PLS-SEM(pp 1–18). Springer.
24. Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). A Primer on PLS-SEM(2nd ed.). SAGE Publications.
25. Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2021). A Primer on PLS-SEM(PLS-SEM). SAGE Publications.
26. Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2024). A Primer on PLS-SEM: Updated Theory and Practice. SAGE Publications.

27. Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. Journal of the Academy of Marketing Science, 43(1), 115–135.
28. Henseler, J., Ringle, C. M., & Sarstedt, M. (2016). Testing measurement invariance of composites using partial least squares. International Marketing Review, 33(3), 405–431.
29. Husted, B. W., & Allen, D. B. (2007). Strategic corporate social responsibility and value creation among large firms: Lessons from the Spanish experience. Long Range Planning, 40(6), 594–610.
30. Husted, B. W., & Allen, D. B. (2007). Strategic corporate social responsibility and value creation. Management International Review, 47(6), 781–799.
31. Islam, M. A., & Deegan, C. (2008). Motivations for an organization within a developing country to report social responsibility information. Accounting, Auditing & Accountability Journal, 21(6), 850–874.
32. Jamali, D., Karam, C., & Blowfield, M. (2017). Development-oriented corporate social responsibility: Organizing for impact. Journal of Business Ethics, 140(3), 371–385.
33. Khan, M., Lockhart, J., & Bathurst, R. (2022). CSR, sustainability, and firm performance: A stakeholder approach. Sustainability, 14(4), 2105.
34. Lozano, R. (2013). A holistic perspective on corporate sustainability drivers. Corporate Social Responsibility and Environmental Management, 20(4), 267–281.
35. Mair, J., & Martí, I. (2006). Social entrepreneurship research: A source of explanation, prediction, and delight. Journal of World Business, 41(1), 36–44.
36. McWilliams, A., & Siegel, D. (2001). Corporate social responsibility: A theory of the firm perspective. Academy of Management Review, 26(1), 117–127.
37. Montiel, I. (2008). Corporate Social Responsibility and Corporate Sustainability: Separate Pasts, Common Futures. Organization & Environment, 21(3), 245–269.
38. Mzembe, A. N., & Meaton, J. (2014). Corporate social responsibility and sustainability in developing countries: A case study of Malawi. Journal of Cleaner Production, 64, 159–170.
39. Nguyen, T. H., Le, H. T., & Tran, Q. P. (2023). CD as a mediator between CSR and BS in developing countries. Journal of Business Ethics, 182(4), 759–774.
40. Nunnally, J. C., & Bernstein, I. H. (1994). Psychometric Theory (3rd Ed.). McGraw-Hill.
41. Porter, M. E., & Kramer, M. R. (2011). Creating shared value: How to reinvent capitalism—and unleash a wave of innovation and growth. Harvard Business Review, 89(1-2), 62–77.

42. Porter, M. E., & van der Linde, C. (1995). Green and competitive: Ending the stalemate. Harvard Business Review, 73(5), 120–134.
43. Rasoolimanesh, S. M., Roldan, J. L., & Barroso, C. (2022). Discriminant validity assessment: A practical guideline and comparison of PLS-SEM criteria with CB-SEM-based tests. Data Analytics for Psychology Journal, 3(2), 10–31.
44. Ringle, C. M., Wende, S., and Becker, J.-M. 2024. "SmartPLS 4." Bönningstedt: SmartPLS, www.smartpls.com.
45. Russo, M. V., & Fouts, P. A. (1997). A resource-based perspective on corporate environmental performance and profitability. Academy of Management Journal, 40(3), 534–559.
46. Saeidi, S. P., Sofian, S., Saeidi, P., Saeidi, S. P., & Saaeidi, S. A. (2015). How does corporate social responsibility contribute to firm financial performance? Journal of Business Research, 68(2), 341–350.
47. Sarstedt, M., Hair, J. F. Jr., & Cheah, J. H. (2019). How to specify, estimate, and validate higher-order constructs in PLS-SEM. Australasian Marketing Journal, 27(3), 197–211.
48. Sarstedt, M., Ringle, C. M., & Hair, J. F. (2022). Partial least squares structural equation modeling. In Handbook of Market Research (pp. 1–40). Springer.
49. Stone, M. (1974). Cross-validatory choice and assessment of statistical predictions. Journal of the Royal Statistical Society: Series B (Methodological), 36(2), 111–147.
50. Visser, W. (2008). Corporate social responsibility in developing countries. In A. Crane, A. McWilliams, D. Matten, J. Moon, & D. S. Siegel (Eds.), The Oxford Handbook of Corporate Social Responsibility (pp. 473–479). Oxford University Press.
51. Yusliza, M.Y., et al. (2020). Examining the mediating role of green human resource management on the relationship between green intellectual capital and sustainable performance. Journal of Cleaner Production, 258, 120031.
52. Zhang, J., Oo, B. L., Lim, B. T. H., & Li, Z. (2018). Drivers, motivations, and barriers to the implementation of corporate social responsibility practices by construction enterprises: A review. Journal of Cleaner Production, 196, 299–314.
53. Zhao, X., Lynch Jr, J. G., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and truths about mediation analysis. Journal of Consumer Research, 37(2), 197–206.