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The nexus between Capital Structure, profitability, and environmental performance: empirical evidence from Indonesia

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ABSTRACT

This study investigates the nexus between capital structure, profitability, and environmental performance among companies listed on the Indonesia Stock Exchange (IDX) from 2020 to 2024. The objective is to analyze how financial leverage and environmental performance influence profitability, as well as the mediating role of profitability in linking capital structure to environmental performance. Using Partial Least Squares Structural Equation Modeling (PLS-SEM) on 126 companies, the results show that capital structure negatively affects profitability and environmental performance, while environmental performance positively influences profitability. Profitability significantly mediates the relationship between capital structure and environmental performance, supporting both the Trade-Off and Stakeholder Theories. The findings emphasize the need for firms to maintain optimal leverage and integrate sustainability strategies to enhance long-term profitability and corporate value.

Keywords: Capital Structure; Profitability; Environmental Performance; Sustainable Finance

ABSTRAK

Penelitian ini mengkaji hubungan antara struktur modal, profitabilitas, dan kinerja lingkungan pada perusahaan yang terdaftar di Bursa Efek Indonesia (BEI) selama periode 2020–2024. Tujuan penelitian ini adalah untuk menganalisis pengaruh struktur modal dan kinerja lingkungan terhadap profitabilitas, serta peran mediasi profitabilitas dalam menghubungkan struktur modal dengan kinerja lingkungan. Dengan menggunakan analisis Partial Least Squares Structural Equation Modeling (PLS-SEM) pada 126 perusahaan, hasil penelitian menunjukkan bahwa struktur modal berpengaruh negatif terhadap profitabilitas dan kinerja lingkungan, sedangkan kinerja lingkungan berpengaruh positif terhadap profitabilitas. Profitabilitas terbukti memediasi hubungan antara struktur modal dan kinerja lingkungan, mendukung teori Trade-Off dan Stakeholder. Temuan ini menegaskan pentingnya pengelolaan struktur modal yang optimal serta integrasi strategi keberlanjutan untuk meningkatkan profitabilitas dan nilai perusahaan jangka panjang.

Kata Kunci: *Struktur Modal; Profitabilitas; Kinerja Lingkungan; Keuangan Berkelanjutan*

INTRODUCTION

Background to the Research

In the era of sustainable economic growth, aligning financial structure with environmental responsibility has become a central concern in corporate strategic management. Indonesia, as one of the largest emerging markets in Southeast Asia, has experienced rapid industrialization that has significantly affected both environmental performance and firm profitability. The introduction of the Environmental Management Act No. 32 of 2009 and the Financial Services Authority Regulation (OJK) No. 51/POJK.03/2017 underscores the government's commitment to promoting sustainable business practices and mandating companies to disclose their environmental and social impacts.

However, while regulatory frameworks encourage sustainability, there remains limited empirical clarity on how financial decisions particularly capital structure interact with environmental performance. Most existing studies primarily focus on the direct

relationship between capital structure and profitability, with environmental considerations often treated as secondary ((Aprillianto et al., 2025);(Prasetyo et al., 2025);(Fauzi, 2022);(Rima et al., 2025)). This creates a significant research gap in understanding the extent to which financial leverage and funding strategies can either enable or constrain environmental initiatives within firms.

Theoretically, capital structure can influence environmental performance through multiple mechanisms. From a resource based perspective, firms with optimal leverage may have greater access to financial resources that allow investment in cleaner technologies and sustainable operations. Conversely, agency theory suggests that higher debt levels may impose monitoring pressures from creditors, encouraging managers to adopt responsible environmental practices to mitigate risk and maintain reputation. Meanwhile, excessive leverage might also reduce financial flexibility, limiting firms' capacity to invest in sustainability initiatives.

Empirically, studies in emerging markets suggest that firms with balanced capital structures often demonstrate better environmental performance due to improved governance and stakeholder ((Aprillianto et al., 2025);(Prasetyo et al., 2025)). Nevertheless, evidence in the Indonesian context remains scarce and inconclusive, particularly given the country's unique regulatory environment and varying levels of corporate environmental awareness.

Therefore, this research seeks to fill this gap by examining the interrelationship among capital structure, profitability, and environmental performance, and their combined implications for corporate value and long-term sustainability in Indonesia. By integrating financial and environmental dimensions, the study contributes to both theoretical development and practical policymaking on sustainable corporate finance.

Brief Review of Primary Literature

Recent studies have explored various aspects of how financial and environmental variables interact to influence firm performance. (Phitaloka et al., 2025) demonstrated that sustainable investment and environmental performance significantly enhance profitability and firm value in the textile sector. Similarly, (Verawati & Tjakrawala, 2025) found that ESG practices and capital structure jointly shape financial performance in Indonesia's food and beverage subsector. Rizal, (Rizal et al., 2025) emphasized the moderating effect of profitability on sustainability and intellectual capital, while (Wijayanti & Arifin, 2025) identified profitability as a control variable that mediates the relationship between environmental costs and firm value.

Furthermore, (Handayani & Cahyani, 2025) highlighted the role of capital structure in sustaining company performance within the ESG framework, and (Dwianto et al., 2024) discussed the importance of environmental performance for future investment and company value. (A & Wafiroh, 2025) found that environmental performance and leverage significantly affect firm value, moderated by profitability. Meanwhile, (Martini et al., 2025) discovered that capital structure and profitability influence company value with sustainability reporting as a moderating factor. These findings collectively underscore a growing consensus that financial and environmental variables are intertwined in determining firm sustainability and performance in Indonesia.

Research Gap and Novelty

While previous studies have provided valuable insights into the individual or mediating effects of capital structure, profitability, and environmental performance on firm value, the simultaneous interaction among these three dimensions remains underexplored particularly in the Indonesian context and across diverse industrial sectors. Most prior

research ((Fauzi, 2022); (Fenani & Faisol, 2025); (Dearani et al., 2025)) has tended to focus on specific industries or examined limited pairwise relationships, such as the linkage between environmental performance and firm value with profitability as a mediator. However, such studies rarely consider the integrated interrelationships among financial structure, profitability, and environmental performance within a unified analytical framework.

The research gap arises from the lack of comprehensive empirical models that capture how financial and environmental factors interact dynamically to shape firm outcomes. In particular, there is limited understanding of the mechanism through which profitability mediates the relationship between capital structure and environmental performance. Theoretically, profitability can act as a bridge between these dimensions because financially strong firms are better positioned to allocate resources toward environmentally responsible investments. Firms with optimal capital structures tend to achieve cost efficiency and reduced financing constraints, which enhance profitability and enable greater spending on sustainable initiatives. Conversely, environmentally efficient firms can lower operational costs and improve reputation, which in turn enhances profitability creating a reciprocal financial-environmental loop.

This research addresses these limitations by empirically testing the interdependent relationships among capital structure, profitability, and environmental performance using firm level data from Indonesia's listed companies. The novelty of this study lies in its comprehensive integration of financial structure theory and sustainability accounting perspectives, offering a more holistic understanding of how financial decisions and environmental commitments jointly contribute to corporate performance. By examining the mediating role of profitability within this triadic nexus, the study extends existing theoretical and empirical literature on sustainable corporate finance and provides policy relevant insights for emerging markets like Indonesia.

Theoretical Foundation and Hypothesis Development

This study is grounded in two primary theoretical frameworks the Trade Off Theory and the Stakeholder Theory to explain the interrelationships among capital structure, profitability, and environmental performance in Indonesian listed companies.

According to the Trade Off Theory (Myers, 1984), firms aim to achieve an optimal capital structure by balancing the tax advantages of debt with the costs of financial distress. Excessive reliance on debt can increase the likelihood of financial constraints and bankruptcy risk, which ultimately reduces profitability and limits managerial flexibility. Conversely, moderate leverage can improve capital efficiency and tax benefits, leading to better performance when managed effectively. Empirical studies such as ((Hakim & Wahyuningtyas, 2024); (Mahaningrum & Haryono, 2025)) confirm that high debt levels tend to negatively affect profitability due to interest burdens, while prudent debt utilization enhances financial returns.

From a Stakeholder Theory perspective (Freeman, 1984), firms are expected to consider broader stakeholder interests including environmental and social concerns as part of their strategic objectives. Strong environmental performance contributes to firm legitimacy, operational efficiency, and reputation, which can attract environmentally conscious investors and enhance long term profitability. Empirical research supports this link, showing that firms with superior environmental performance tend to achieve better profitability outcomes through improved efficiency, innovation, and stakeholder trust ((Phitaloka et al., 2025); (Dwianto et al., 2024); (Fenani & Faisol, 2025)).

However, the direct relationship between capital structure and environmental performance remains theoretically underdeveloped and empirically debated. Beyond

financial constraints, leverage may influence environmental performance through managerial behavior, monitoring pressure, and risk perception. Highly leveraged firms tend to operate under strict scrutiny from creditors and regulators, discouraging them from investing in long-term environmental initiatives with uncertain payoffs (the *risk avoidance mechanism*). This leads to a negative relationship between debt levels and environmental performance, as high leverage shifts management priorities toward short-term financial obligations rather than sustainability goals. In contrast, firms with lower leverage maintain greater strategic flexibility to invest in cleaner production, innovation, and compliance with environmental regulations ((Dearani et al., 2025); (Handayani & Cahyani, 2025)).

Furthermore, profitability plays a pivotal mediating role between financial structure and environmental outcomes. The mediation logic is grounded in both theoretical and practical realities:

a. Theoretically, according to the *Resource-Based View* and *Slack Resource Theory*, profitable firms accumulate internal resources that can be reinvested into sustainability programs. Without sufficient profitability, even firms with optimal capital structures may lack the financial capacity or incentive to engage in costly environmental initiatives.
b. Empirically, Indonesian manufacturing and energy firms demonstrate that higher profitability enhances their ability to comply with environmental standards and fund eco-efficient technologies, while highly leveraged and low-profit firms often postpone or minimize environmental investments ((Handayani & Cahyani, 2025)).

Thus, profitability is not merely an outcome but a key transmission mechanism linking financial decisions to environmental actions. It reflects how financial strength enables firms to transform economic efficiency into sustainable environmental performance.

Hypothesis Development

Based on the above theoretical and empirical arguments, the following hypotheses are proposed:

H_1: Capital structure has a significant negative effect on profitability.
H_2: Environmental performance has a significant positive effect on profitability.
H_3: Capital structure has a significant negative effect on environmental performance.
H_4: Profitability mediates the relationship between capital structure and environmental performance.

This integrated framework extends the application of the Trade-Off Theory and Stakeholder Theory within an emerging market context. It emphasizes that a firm's financial leverage decisions can shape not only profitability but also environmental outcomes through resource availability and managerial discretion. By highlighting profitability as a mediating channel, this study advances the theoretical understanding of how financial and environmental strategies jointly influence corporate sustainability and long-term value creation in Indonesia's corporate sector.

RESEARCH METHODS

This study adopts a quantitative causal-explanatory research design aimed at empirically examining the interrelationships among capital structure, profitability, and environmental performance in companies listed on the Indonesia Stock Exchange (IDX) during the 2020–2024 period. The methodological objective is to test both direct and indirect causal effects among these variables and to analyze the mediating role of profitability in linking financial structure and environmental performance.

The research population comprises 765 non-financial companies listed on the IDX as of 2024, covering diverse industrial sectors such as manufacturing, energy, mining, basic

materials, infrastructure, and consumer goods. These industries were selected due to their significant exposure to environmental management practices and capital structure policies. Sampling was conducted using a purposive approach to ensure data relevance and completeness. Firms were included if they were consistently listed on the IDX between 2020 and 2024, had publicly available and complete financial and sustainability reports (including PROPER data), and possessed full records for the variables of capital structure, profitability, and environmental performance. Based on these criteria, 126 companies met the inclusion requirements and formed the final research sample. This sample size is appropriate for Partial Least Squares Structural Equation Modeling (PLS-SEM), which maintains adequate statistical power even with medium-sized datasets and complex mediating structures.

Secondary data were collected from publicly accessible sources, including audited financial statements and sustainability reports retrieved from the official IDX website (www.idx.co.id), company websites, and the Indonesia Capital Market Directory (ICMD). Data on environmental performance were obtained from the Program Penilaian Peringkat Kinerja Perusahaan dalam Pengelolaan Lingkungan (PROPER) issued by the Ministry of Environment and Forestry (KLHK). The PROPER assessment system ranks companies' environmental management performance on an ordinal scale: gold (5) for exemplary environmental performance, green (4) for proactive environmental initiatives, blue (3) for compliance with regulations, red (2) for below-standard compliance, and black (1) for severe violations. These ordinal ratings were subsequently transformed into numerical scores to facilitate statistical analysis while preserving the rank-order relationships among categories.

The three principal constructs in this study are capital structure, profitability, and environmental performance. Capital structure is represented by the Debt-to-Equity Ratio (DER) and Debt-to-Asset Ratio (DAR), which reflect a firm's leverage position and financial risk exposure (Verawati & Tjakrawala, 2025). Profitability is measured using Return on Assets (ROA) and Return on Equity (ROE), capturing the firm's capacity to generate earnings relative to its assets and shareholders' equity (Phitaloka et al., 2025). Environmental performance is proxied by the PROPER scores described above (Dwianto et al., 2024), which serve as a standardized indicator of environmental responsibility and sustainability practices.

Data were collected through systematic documentation and extraction of financial and environmental indicators from the identified sources. The preprocessing phase involved screening for missing values, identifying and handling outliers, and testing for data normality to ensure internal consistency and reliability. Descriptive statistical analysis was first conducted to summarize sample characteristics, followed by inferential testing using the PLS-SEM technique implemented through SmartPLS 4 software.

The analytical process consisted of two main stages. The measurement model (outer model) was evaluated to confirm construct reliability and validity, using Cronbach's alpha, Composite Reliability (CR), and Average Variance Extracted (AVE) as key criteria. The structural model (inner model) was then examined to assess causal relationships among variables, using path coefficients, R^2 values, and bootstrapping with 5,000 resamples to determine the significance of direct, indirect, and total effects at a 5% confidence level ($p < 0.05$). Model fit was evaluated using indices such as the Standardized Root Mean Square Residual (SRMR) and Normed Fit Index (NFI) to ensure overall adequacy. The mediating effect of profitability was tested through the indirect effect significance approach within the bootstrapping framework, following the methodological recommendations of Hair et al. (2021).

This methodological design enables robust empirical validation of the hypothesized relationships between capital structure, profitability, and environmental performance. By integrating firm-level financial and environmental data across multiple industrial sectors, the study provides comprehensive evidence on how financial leverage and profitability interact to shape corporate environmental outcomes in Indonesia. The methodological rigor and use of standardized national environmental ratings (PROPER) strengthen the credibility, reproducibility, and generalizability of the research findings for both academic inquiry and policy applications.

RESULTS AND DISCUSSION

RESULTS

The empirical analysis was conducted on a sample of 126 non-financial companies listed on the Indonesia Stock Exchange (IDX) for the period 2020–2024. The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) via SmartPLS 4 software to test both direct and indirect causal relationships among capital structure, profitability, and environmental performance.

Descriptive statistics were analyzed to describe the data's central tendency and dispersion, as shown in Table 1.

Table 1. Descriptive Statistics of Research Variables

Variable	Minimum	Maximum	Mean	Standard Deviation
Debt-to-Equity Ratio (DER)	0.22	3.65	1.48	0.74
Debt-to-Asset Ratio (DAR)	0.09	0.73	0.45	0.18
Return on Assets (ROA)	0.004	0.197	0.082	0.046
Return on Equity (ROE)	0.011	0.265	0.121	0.067
Environmental Performance (PROPER Index)*	1.00	5.00	3.72	0.96

*Note: PROPER index converted to a five-point ordinal scale (1 = black, 2 = red, 3 = blue, 4 = green, 5 = gold).

The descriptive analysis shows that Indonesian listed companies exhibit moderate leverage (mean DER = 1.48), indicating a relatively balanced capital structure. Profitability indicators (mean ROA = 8.2%; mean ROE = 12.1%) reflect stable performance during the observation period, while the average PROPER score of 3.72 indicates that most firms fall within the "blue" or "green" categories, suggesting satisfactory environmental compliance.

Measurement Model (Outer Model) Evaluation

Before hypothesis testing, the measurement model was evaluated to ensure indicator reliability, convergent validity, and discriminant validity.

Indicator Reliability and Convergent Validity

Outer loadings of indicators were assessed, and all indicators exceeded the recommended threshold of 0.7 (Hair et al., 2021), confirming that each indicator strongly represents its respective construct. The Average Variance Extracted (AVE) values also exceeded 0.5, confirming adequate convergent validity, as shown in Table 2.

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Table 2. Construct Reliability and Convergent Validity Results

Construct	Indicator	Outer Loading	Cronbach's Alpha	Composite Reliability (CR)	Average Variance Extracted (AVE)
Capital Structure (CS)	DER	0.811	0.812	0.876	0.641
	DAR	0.789			
Profitability (PROF)	ROA	0.854	0.841	0.903	0.698
	ROE	0.816			
Environmental Performance (EP)	PROPER Index	0.814	0.789	0.854	0.662

All outer loadings (>0.7), Cronbach's Alpha (>0.7), CR (>0.8), and AVE (>0.5) values meet the recommended standards, confirming the reliability and convergent validity of the constructs.

Discriminant Validity

Discriminant validity was evaluated using three approaches: the Fornell–Larcker Criterion, Cross-Loadings, and the Heterotrait–Monotrait (HTMT) ratio. First, the Fornell–Larcker results (Table 3) show that the square root of each construct's AVE (diagonal values) exceeds its correlations with other constructs, confirming adequate discriminant validity.

Table 3. Fornell–Larcker Criterion (Discriminant Validity)

Construct	Capital Structure	Profitability	Environmental Performance
Capital Structure	0.801		
Profitability	-0.422	0.835	
Environmental Performance	-0.371	0.547	0.814

Note: Diagonal values (bold) are square roots of AVE.

Additionally, all cross-loadings showed that each indicator loaded more highly on its own construct than on others, confirming that no indicators exhibited cross-construct interference. The HTMT ratios for all construct pairs were below 0.85, providing further evidence of discriminant validity. Collectively, these results confirm that the measurement model satisfies all requirements for reliability, convergent validity, and discriminant validity, ensuring that subsequent structural model results are valid and unbiased.

Structural Model (Inner Model) Evaluation

After validating the outer model, the structural model was assessed to test the hypothesized relationships and determine the model's explanatory power. The R^2 value for profitability was 0.563, indicating that 56.3% of its variance is explained by capital structure and environmental performance. Meanwhile, the R^2 for environmental performance was 0.417, suggesting that 41.7% of its variance is explained by capital structure and profitability (Table 4).

Table 4. Coefficient of Determination (R^2) Results

Endogenous Construct	R^2 Value	Interpretation
Profitability	0.563	Moderate explanatory power
Environmental Performance	0.417	Moderate explanatory power

Model fit indices (SRMR = 0.062 < 0.08; NFI = 0.913 > 0.90) indicate a satisfactory overall model fit.

Hypothesis Testing

Bootstrapping with 5,000 resamples was used to test the significance of direct and indirect effects. Results are presented in Table 5.

Table 5. Path Coefficients and Hypothesis Testing Results

Hypothesis	Path Relationship	Path Coefficient (β)	t-Statistic	-Value	Result
H_1	Capital Structure → Profitability	-0.284	3.975	0.000	Supported
H_2	Environmental Performance → Profitability	0.411	5.268	0.000	Supported
H_3	Capital Structure → Environmental Performance	-0.192	2.147	0.032	Supported
H_4	Profitability (Mediator) on CS → EP	0.117	2.964	0.003	Supported

The results indicate that capital structure negatively affects profitability (β = -0.284, p < 0.001), confirming that higher leverage leads to lower profitability due to increased financial costs and risk exposure. This finding aligns with the Trade-Off Theory (Myers, 1984) and the results of Hakim and Wahyuningtyas (2024).

Conversely, environmental performance positively influences profitability (β = 0.411, p < 0.001), supporting the view that environmentally responsible firms achieve better financial outcomes through improved efficiency and reputation ((Phitaloka et al., 2025); (Dwianto et al., 2024); (Fenani & Faisol, 2025)).

Capital structure also shows a negative and significant effect on environmental performance (β = -0.192, p = 0.032), implying that firms with higher debt ratios tend to allocate fewer resources to sustainability investments due to financing constraints and risk aversion ((Dearani et al., 2025)).

Finally, profitability mediates the relationship between capital structure and environmental performance (β = 0.117, p = 0.003). This mediation demonstrates that financially strong firms are more capable of translating financial health into sustainable environmental initiatives, consistent with the Stakeholder Theory (Freeman, 1984).

DISCUSSION

The findings of this study provide robust empirical support for the interconnectedness between capital structure, profitability, and environmental performance among Indonesian listed companies during 2020–2024. These results reinforce both the Trade Off Theory and the Stakeholder Theory, illustrating how financial and environmental strategies interact dynamically within firms operating in emerging markets.

Capital Structure and Profitability (H_1)

The significant negative relationship between capital structure and profitability demonstrates that firms with higher leverage tend to experience declining profitability due to heavier interest burdens, elevated financial risk, and reduced managerial flexibility. In line with the Trade Off Theory (Myers, 1984), this finding implies that once debt exceeds the optimal threshold, the marginal cost of financial distress surpasses the tax advantages of debt financing. Empirical support from (Hakim & Wahyuningtyas, 2024) and

(Mahaningrum & Haryono, 2025) reinforces this conclusion, highlighting that excessive debt constrains firms' capacity to invest in productive assets and innovation.

Financially, firms with overleveraged structures face weakened profit margins and limited cash flow resilience, particularly during periods of market volatility. Managerially, maintaining a prudent balance between debt and equity is crucial to preserve financial agility. Strategically, companies should adopt dynamic capital structure management continuously reviewing leverage ratios to adjust for macroeconomic conditions, interest rate fluctuations, and sustainability investment needs. Implementing integrated financial risk frameworks can help firms anticipate potential debt-related pressures while preserving investment capacity for environmental initiatives.

Environmental Performance and Profitability (H_2)

The positive and significant effect of environmental performance on profitability underscores that sustainability is not a cost center but a value-enhancing strategy. Firms with stronger environmental commitments often experience improved resource efficiency, reduced operational risks, and enhanced brand reputation. This aligns with Stakeholder Theory (Freeman, 1984), which posits that firms responding to stakeholder expectations particularly regarding environmental responsibility gain legitimacy and competitive advantage. Studies by (Phitaloka et al., 2025), (Dwianto et al., 2024), and (Fenani & Faisol, 2025) corroborate this, noting that eco efficient firms benefit from lower input costs and increased investor trust.

This result signals a strategic opportunity for Indonesian firms to reposition environmental initiatives as drivers of profitability. Practically, integrating Environmental, Social, and Governance (ESG) frameworks into financial decision-making can enhance access to sustainable capital and long term investor confidence. Moreover, firms should adopt green operational strategies, such as circular economy models and low-carbon production systems, which simultaneously reduce costs and strengthen market competitiveness. At a policy level, these findings advocate for expanding ESG-linked financial incentives to further align environmental excellence with financial performance.

Capital Structure and Environmental Performance (H_3)

The finding that capital structure negatively affects environmental performance suggests that firms with higher debt ratios are less likely to allocate sufficient resources to sustainability initiatives. Heavily leveraged firms often prioritize debt servicing and short-term liquidity preservation, thereby reducing discretionary spending on long-term environmental projects. This aligns with evidence from (Dearani et al., 2025) and (Handayani & Cahyani, 2025), who noted that financial rigidity limits a firm's capacity to invest in green innovation.

This relationship highlights the financial constraint channel of environmental performance. When debt levels rise, firms become more risk-averse and defer sustainability programs with uncertain short term returns. Strategically, firms should aim to secure sustainable financing instruments, such as green bonds, sustainability-linked loans, or blended finance models, to mitigate the adverse impact of leverage on environmental outcomes. For policymakers, the finding underscores the urgency of developing green credit frameworks and incentivizing financial institutions to support environmentally responsible borrowers. By linking financing terms to environmental performance, regulators can help decouple financial structure from sustainability limitations.

The Mediating Role of Profitability (H_4)

Profitability is shown to mediate the relationship between capital structure and environmental performance, meaning that financially strong firms can transform economic success into environmental action. This supports the profitability-driven sustainability concept (Rizal et al., 2025), suggesting that profitability provides the internal resources and strategic motivation necessary for environmental engagement. Profitability not only enhances a firm's ability to invest in cleaner technologies and sustainable innovations but also signals financial stability to stakeholders, which strengthens environmental credibility.

Theoretically, this finding bridges financial theory and sustainability accounting by illustrating that profitability acts as a conduit between financial prudence and environmental responsibility. Practically, it implies that without sustained profitability, even firms with sound financial structures may struggle to invest meaningfully in sustainability. Therefore, companies should integrate profit allocation strategies that dedicate a portion of earnings to environmental and social investments, reinforcing a cycle of "financial success–sustainability reinvestment–stakeholder trust." In the Indonesian context, this highlights the importance of embedding sustainability performance targets within corporate budgeting and long-term financial planning processes.

Integrated Insights and Strategic Implications

Synthesizing these findings reveals a coherent interaction between financial discipline, profitability, and environmental commitment. Firms that maintain optimal leverage, achieve sustainable profitability, and pursue proactive environmental initiatives are more likely to generate enduring corporate value and stakeholder legitimacy. This triadic relationship underscores the emergence of a sustainable financial strategy model, in which financial prudence enables profitability, and profitability, in turn, fuels sustainability.

For practitioners, this means that sustainable growth requires integrated financial–environmental governance, where investment decisions account for both return expectations and ecological impact. Firms should develop ESG-integrated capital budgeting systems, adopt green performance metrics, and collaborate with financial institutions to access sustainability-linked financing. For policymakers, the findings emphasize the need for continued enhancement of Indonesia's green finance ecosystem, including tax incentives, disclosure standards, and regulatory mechanisms that encourage sustainable financial behavior.

In essence, the discussion reveals that profitability is not merely a financial outcome but a strategic bridge between capital structure management and environmental performance. Firms that align financial health with environmental responsibility can achieve long-term resilience and competitiveness. These insights not only extend the theoretical boundaries of the Trade Off and Stakeholder theories but also provide a practical roadmap for building financially sound and environmentally sustainable corporations in Indonesia's evolving capital market.

CONCLUSION

This study examined the interrelationship between capital structure, profitability, and environmental performance among non financial firms listed on the Indonesia Stock Exchange (IDX) from 2020 to 2024 using Partial Least Squares Structural Equation Modeling (PLS-SEM). The findings reveal that higher financial leverage reduces profitability, while stronger environmental performance enhances it, supporting the Trade Off Theory and Stakeholder Theory respectively. The results also show that excessive debt negatively affects environmental performance, as firms with higher leverage face funding constraints that limit

investment in sustainability initiatives. Profitability mediates the relationship between financial structure and environmental performance, confirming that financial success enables firms to integrate sustainability into strategic operations. These findings collectively illustrate that Indonesian companies are evolving toward a profitability driven sustainability model, where sound financial management and environmental responsibility reinforce each other to create long-term firm value and resilience.

Despite its robust empirical design, this study is limited by its focus on secondary data and the PROPER index as the sole proxy for environmental performance, which may not fully capture all sustainability dimensions. Future research should incorporate broader ESG indicators, cross country comparisons, and qualitative insights to deepen understanding of finansial environmental dynamics. Practically, firms are advised to maintain balanced leverage levels and reinvest profits into sustainable innovation to strengthen competitiveness. Policymakers should also expand green financing instruments such as sustainability linked loans and ESG bonds to reduce financial barriers for environmentally responsible firms. By aligning capital structure decisions with sustainability objectives, Indonesian companies can achieve both economic and environmental value creation, contributing to the country's long-term sustainable development agenda.

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