



The Effect of Environmental Performance, Intellectual Capital, Institutional Ownership on Corporate Profitability with Corporate Social Responsibility as a Moderating Variable

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Article Info	Abstract
<p>Keywords:</p> <ul style="list-style-type: none"> ○ Environmental Performance, ○ Intellectual Capital, ○ Institutional Ownership, ○ Corporate Profitability 	<p>Purpose - This study aims to obtain empirical evidence on the influence of environmental performance, intellectual capital, and institutional ownership, on Corporate profitability.</p>
<p>Article History</p> <p>Received: 27 - 12 - 2025 Revised: 02 - 02 - 2026 Accepted: 14 - 03 - 2026 Published: 01 - 04 - 2026</p>	<p>Design/methodology/approach - This study employs a quantitative research method using secondary data. The population consists of 73 infrastructure sector companies listed on the Indonesia Stock Exchange (IDX) during the 2022–2024 period. The sample comprises 34 infrastructure sector companies listed on the Indonesia Stock Exchange (IDX) during the same period. The total number of observations in this study is 102. The hypothesis testing is conducted using multiple regression analysis with E-Views 9 software.</p>
<p>DOI</p>	<p>Findings - The results of this study indicate that the environmental performance variable has a positive and significant effect on firm profitability. The intellectual capital variable has a negative and insignificant effect on firm profitability. The institutional environment has a positive and significant effect on firm profitability.</p>
<p>https://doi.org/10.65440/aasf.v2i1.144</p>  <p>Copyright: © 2026 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CC BY SA) license (https://creativecommons.org/licenses/by-sa/4.0/)</p>	<p>Research limitations/implications - This study aims to provide information on firm profitability provides an overview of a company's ability to generate profits efficiently.</p> <p>JEL : 14, M41, G34, O34, L25</p>

INTRODUCTION

Infrastructure development has become one of the Indonesian government's top priorities, as it serves as a fundamental driver of long-term economic sustainability. Companies operating in the infrastructure sector, particularly in transportation and utilities, play a strategic role in supporting sustainable national development (Sahid, 2022). Government investment in infrastructure has continued to increase, reaching IDR 422.7 trillion in 2023,

representing a 7.8% increase compared to the previous year. This growth reflects the government's strong commitment to infrastructure development as a key instrument for post-pandemic economic recovery and as a catalyst for multiplier effects across related sectors such as logistics, manufacturing, and tourism (Ministry of Finance, 2024).

Significant progress has been observed in transportation infrastructure, as indicated by the expansion of the national toll road network to 2,893 kilometers by mid-2024 (Iqib, 2024). This development has positively affected the financial performance of transportation companies, with average revenues increasing by 34.52% over the past year (sector apps, 2023). Nevertheless, profitability within the infrastructure sector has exhibited considerable fluctuations. Data from the 2022–2024 period indicate that average corporate profitability increased in 2023 but declined sharply in 2024, suggesting the influence of both internal managerial decisions and external economic conditions.

Differences in profitability characteristics are also evident between infrastructure subsectors. Utility companies tend to exhibit lower profit margins due to high operational costs and regulated tariffs, whereas transportation companies often achieve higher margins and more dynamic revenue growth (Trianto, 2025). These conditions highlight the stronger profitability potential and strategic economic value of the transportation subsector.

Profitability, as the dependent variable in this study, reflects a firm's ability to efficiently utilize its resources to generate earnings and is commonly measured using financial ratios such as Return on Assets (ROA) and Return on Equity (ROE) (Pramaya, 2014). Beyond financial determinants, prior studies emphasize the importance of non-financial factors in shaping corporate profitability, including environmental performance, intellectual capital, and institutional ownership. Improved environmental performance may enhance profitability through green innovation and operational efficiency (Hu & Zhao, 2024). Intellectual capital, encompassing human and structural capital, represents a strategic resource that supports innovation and long-term value creation. Meanwhile, institutional ownership is often associated with stronger corporate governance, improved monitoring mechanisms, and better access to capital, which collectively contribute to enhanced financial performance.

The urgency of this study is reinforced by current policy directions and global trends. At the national level, large-scale transportation infrastructure development remains a central component of Indonesia's medium-term development plans. Concurrently, global pressure to achieve the Sustainable Development Goals (SDGs) and net-zero targets has intensified corporate demands for improved environmental performance and social responsibility. Institutional investors increasingly prioritize Environmental, Social, and Governance (ESG) criteria in their investment decisions. By examining the influence of environmental performance, intellectual capital, and institutional ownership on corporate profitability, with Corporate Social Responsibility as a moderating variable in the transportation infrastructure subsector, this study seeks to fill an empirical gap in the literature and provide valuable insights for policymakers, investors, and corporate managers.

Corporate Social Responsibility (CSR) represents a company's commitment to integrating economic, environmental, and social considerations into its business operations in order to meet stakeholder expectations and maintain corporate legitimacy. In line with Legitimacy Theory, CSR serves as a strategic mechanism to reduce the legitimacy gap by aligning corporate activities with societal norms and values, thereby enhancing public trust and long-term sustainability Deegan, (2002). Within the transportation infrastructure subsector, CSR is

particularly important due to the sector's significant environmental and social impacts. As a moderating variable, CSR is expected to strengthen the influence of environmental performance, intellectual capital, and institutional ownership on corporate profitability by improving corporate reputation, stakeholder support, and risk management, which ultimately contributes to improved financial performance.

LITERATURE REVIEW

Legitimate Theory

Widagdo et al., (2019) Legitimacy Theory explains how companies may encounter challenges when the values they adopt are not aligned with those expected by society. This situation may lead to what is referred to as a legitimacy gap, which represents a discrepancy between a company's internal perception of its legitimacy and the external perceptions held by the public or relevant stakeholders.

Agency Theory

Jensen & Meckling in 1976. *Agency theory* is used to understand the relationship in which principals (shareholders) employ agents (managers) to carry out various activities on their behalf (principal) and delegate decision-making authority to managers.

Stakeholder Theory

Stakeholder Theory posits that companies are not merely economic entities aimed at maximizing profits, but are also integral parts of a social system that bear responsibilities toward all stakeholders.

Resource-Based View (RBV) Theory

Jay Barney (1991) Emphasizes that a firm's competitive advantage is achieved through the effective management of internal resources that are unique and possess the characteristics of being valuable, rare, inimitable, and not easily substitutable.

Signaling Theory

Spence (1973) That companies can convey positive signals to external parties, particularly investors, through actions and policies that reflect the firm's condition and future prospects.

Triple Bottom Line Theory

Elkinton, (1997) This theory explains that a company's primary objective is not solely to achieve financial profit, but also to deliver social benefits (people) and ensure environmental sustainability (planet). Therefore, strong corporate performance should be able to balance these three aspects in order to achieve long-term sustainability. This approach serves as a foundation for integrating social and environmental responsibilities into corporate business strategies.

Corporate Profitability

Siregar, (2023) Profitability is defined as a company's ability to generate earnings relative to sales, total assets, and shareholders' equity. Profitability ratios measure a firm's profit-generating ability and reflect management effectiveness, as indicated by returns from financing and investment activities, thereby representing overall operational efficiency

Environmental Performance

Mahendra et al.,(2024) Environmental performance is considered a form of corporate social responsibility. Furthermore, this responsibility is closely related to stakeholders. Environmental performance describes how companies demonstrate concern for the surrounding environment

Intellectual Capital

Silalahi, (2021) Intellectual capital is an intangible asset in the form of information resources and knowledge that functions to enhance competitive advantage and improve firm performance.

Institutional Ownership

Yeni et al., (2024) Institutional ownership represents parties that provide control over management in determining corporate financial policies, Institutional ownership refers to share ownership held by other institutions.

Corporate Social Responsibility

Siwiyanti, (2024) Corporate Social Responsibility encompasses principles that recognize and consider the social, economic, and environmental impacts of corporate activities. It includes contributions to social welfare, environmental protection, and community empowerment.

Hypotheses development

Environmental performance on corporate profitability

The effect of environmental performance on corporate profitability can be explained by Legitimacy Theory, which suggests that improved environmental performance enables companies to gain social legitimacy in the form of trust and stakeholder support, thereby generating indirect economic benefits that ultimately enhance corporate profitability. Based on research by Fitri Fatun & Meirini, (2023) companies with strong environmental performance demonstrate a commitment to sustainability and environmental responsibility. Such actions not only help reduce environmental risks and long-term operational costs but also enhance corporate reputation in the eyes of investors and customers. Consequently, companies that effectively manage their environmental impacts are more likely to gain social legitimacy and public trust, which ultimately can increase firm value and profitability

H₁: Environmental Performance has a positive effect on corporate profitability

Intellectual Capital on corporate profitability

High intellectual capital reflects a company's ability to manage knowledge, skills, and technology; however, ineffective utilization and high investment costs associated with intellectual capital may adversely affect corporate profitability. Excessive spending on human capital development, technology systems, and organizational processes without proportional output can increase operational costs and reduce short-term financial performance. In addition, the benefits of intellectual capital are often realized in the long term, while the associated costs are incurred immediately, potentially creating pressure on current profitability. This condition may lead to inefficiencies in decision-making and resource allocation, particularly when intellectual capital is not aligned with the company's strategic objectives. Moreover, although intellectual capital may enhance corporate reputation, its inability to directly generate immediate financial returns can result in lower profitability. Therefore, a higher level of intellectual capital does not necessarily guarantee improved corporate profitability and may even negatively affect financial performance when not managed optimally.

H₂: Intellectual Capital has a negative effect on corporate profitability.

Environmental Institutional on corporate profitability

Agency Theory explains that institutional ownership serves as an effective external monitoring mechanism in reducing agency conflicts between management and shareholders. Institutional investors possess the ability and power to oversee managerial actions, ensuring that management is more oriented toward achieving corporate objectives. With such monitoring, management is encouraged to act transparently, avoid opportunistic behavior, and improve operational efficiency. Based on research by Tambunan & Destalia, (2025) high institutional ownership reflects confidence in the company's ability to create value for shareholders. Strong institutional oversight motivates management to maximize profitability through optimal resource management and effective financial strategies. Therefore, institutional ownership has a positive effect on corporate profitability. Increased institutional control encourages companies to implement good corporate governance practices and focus on achieving sustainable profits.

H₃: Environmental Performance has a positive effect on corporate profitability

Corporate Social Responsibility on Corporate Profitability

Corporate success is not measured solely by financial profitability, but also by social and environmental contributions. In other words, strong corporate performance should encompass profit, people, and planet. By adopting the Triple Bottom Line (TBL) principle, Corporate Social Responsibility becomes a strategic instrument that enables companies to enhance environmental performance while simultaneously strengthening corporate value. Based on research by Thoriq et al., (2024) corporate Social Responsibility encourages sustainable and environmentally friendly business practices, thereby improving performance, strengthening corporate image, reputation, and stakeholder loyalty, attracting investors and customers, and indirectly enhancing operational efficiency, innovation, and risk management, which ultimately leads to increased corporate profitability.

H₄: Corporate Social Responsibility has a positive effect on corporate profitability

RESEARCH METHOD

According to Rizkia et al., (2023) The research design is an initial plan of collection, measurement, data analysis and research structure to get answers to research questions and includes an overview of what the researchers will do for the final analysis of the data by writing a hypothesis. This study aims to study, analyze and obtain evidence of the influence of independent variables Environmental Performance, *Intellectual Capital* and Ownership Institutional of firm value. The design of this study uses a quantitative approach. The type of data used in this study is quantitative data. Quantitative data research is empirical research in which the data is in the form of numbers. Research methodologies generally measure consumer behavior, knowledge, opinions, or attitudes. The sampling design in this study is non- probability sampling using purpose sampling. For the implementation time, panel data is used which is a combination of cross-section and time series using data analysis, namely hypothesis testing.

Table 1. Variable measuring instruments and sources of measurement

No	Type	Variable	Measurement	Source
1	Independent Variable	Corporate Profitability	ROA=Net Income/Total Assets	Ishak et al., (2020)
2	Dependent Variables	Environmental Performance	EnDi = N / K	Azizah & Cahyaningtyas, (2023)
4		Intellectual Capital	VAIC™=VACA+VAHU+ STVA	Hocky & Chandra, (2022)
5		Ownership Institutional	Ownership Institutional= $\frac{\sum \text{Institutional Shares}}{\sum \text{Shares Outstanding}} \times 100\%$ (Adil Ridlo Fadillah, 2017)	
6	Moderating Variable	Corporate Social Responsibility	CSRI = $\frac{\sum XI}{n}$	Fawwaz, (2023)

Based on the criteria, 34 companies from 73 companies in the infrastructure sector were qualified in this study for 3 years and the number of observations was obtained as many as 102 data observations. The technique used in this study is *non-probability sampling*. The *non-probability* technique is a method of sampling that in principle uses certain considerations used by researchers. The type of *non-probability sampling* is *purposive sampling*. *Purposive sampling* is sampling that selects members of a sample from a population determined by the researcher solely (subjectively).

This research uses a secondary type of data with the data source used in this study sourced from the financial statements of industrial sector companies listed on the Indonesia Stock Exchange for the period 2022 – 2024 obtained from www.idx.co.id of 2022 – 2024. In obtaining the data in this study, two techniques were used, namely, literature research and field research. (1) Literature Research, Researchers obtain data related to the problem being researched through previous research journals, books and the internet related



to the research theme. (2) Field Research, The type of data used in this study is secondary data. The research was conducted on infrastructure sector companies listed on the Indonesia Stock Exchange for the 2022-2024 period whose all financial data have been published and have been audited by a public accountant that has been published in full on the Indonesia Stock Exchange.

RESULTS

Table 2. Descriptive Test Results

	EP	VAIC	IO	CSR	CP
Mean	0.844109	152.8994	1.796851	0.550624	1.371802
Median	0.875000	8.708000	0.770000	0.571000	0.045000
Maximum	1.018000	13777.00	40.75800	1.000000	84.85000
Minimum	0.344000	3.225000	0.007000	0.077000	0.001000
Std. Dev.	0.126242	1369.620	6.858269	0.219230	8.869684
Skewness	-1.337339	9.890932	5.521203	0.005008	8.603683
Kurtosis	5.525134	98.89008	31.55949	1.892478	79.83581
Jarque-Bera	56.93959	40342.05	3945.646	5.162381	26090.97
Probability	0.000000	0.000000	0.000000	0.075684	0.000000
Sum	85.25500	15442.84	181.4820	55.61300	138.5520
Sum Sq. Dev.	1.593700	1.88E+08	4703.585	4.806172	7867.130
Observations	101	101	101	101	101

Selection of the Best Panel Data Model

Chow Test

Decision-making criteria and based on the value of F calculated:

- If the probability (Prob) on the cross-section $F < 0.05$ and if F calculates $> F$ table then a better model is Fixed Effect.
- If the probability (Prob) on the Cross Section F is > 0.05 and If F is calculated $< F$ table then a better model is Common Effect

Table 3. Chow Test

Effects Test	Statistic	d.f.	Prob.
Cross-section F	311451.027795	(33,61)	0.0000
Cross-section Chi-square	1227.532976	33	0.0000

Source: Eviews9 Data Processing

Based on the results of the Chow Test using Eviews9, it is stated that *the probability value of Cross Section F* is 0.00 which is less than the significance level value ($\alpha = 0.05$). This means that the best model used is the *Fixed Effect Model (FEM)*. Therefore, Hausman Test is needed in order to choose the best model between *the Fixed Effect Model* and *the Random Effect Model*.

Hausman Test

Decision-making criteria and based on the value of F calculated:

- If the probability on the Cross Section Random > 0.05, then the better model is the Random Effect Model (REM).
- If the probability on Cross Section Random < 0.05, then the better model is the Fixed Effect Model (FEM).

Table 4. Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	62.798196	7	0.0000

Source: Eviews9 Data Processing

Based on the results of the Hausman test, the probability value is 0.00 where this result is smaller than the significant level value ($\alpha= 0.05$). In this case, it means that the best model used is *the Fixed Effect Model (FEM)*.

Multiple Regression Analysis

Table 6. Panel Data Regression Analysis

Variable	Coefficient	T-Statistic	Prob.
C	1.774	35.14330	0.0000
EP	0.012	0.679	0.048
IC	-1.940	-0.075	0.237
IO	2.505	0.095	0.223
CSR	0.003	0.014	0.316
EP*CSR-> CP	0.087	0.851	0.097
IC*CSR-> CP	-0.000	-0.636	0.126
IO*CSR-> CP	0.038	0.341	0.134

The best regression model after estimation and selection of the model in this study is *the fixed Effect Model (REM)*. The following are the results of the panel data regression estimation, from these results the following model equations are obtained:

$$CP = 1.774 + 0.012*EP - 1.940 * IC + 2.505*IO + 0.003*CSR$$

Coefficient of Determination Test

Table 7. Determination Coefficient Test

R-squared	0.999996	Mean dependent var	1.747529
Adjusted squared	R-0.999993	S.D. dependent var	6.830935
S.E. of regression	0.018146	Akaike info criterion	-4.890958
Sum squared resid	0.020085	Schwarz criterion	-3.835822
Log likelihood	290.4389	Hannan-Quinn criter.	-4.463697
F-statistic	357831.5	Durbin-Watson stat	2.265541
Prob(F-statistic)	0.000000		

Based on the results of data processing using E-views 9, it shows that the value of *Adjusted R-square* in this research model is 0.9999. This means that 99.99% of the variables Environmental Performance, Intellectual Capital, Ownership Institutional and Corporate Social Responsibility can explain the influence on Firm Profitability and 0.01% are explained by other variables that are not used in this study. Based on previous research, other variables that can affect Firm Profitability are in the form of Green Accounting, Firm size, Environmental Disclosure, Sustainability Disclosure and debt To Equity Ratio.

Partial Test

Table 8. T test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.774697	0.050499	35.14330	0.0000
EP	0.012423	0.018277	0.679761	0.0482
IC	-1.94E-06	2.55E-05	-0.075903	0.2377
IO	2.50E-05	0.000261	0.095786	0.2235
CSR	0.003358	0.014439	0.232582	0.0316
EP*CSR	0.087039	0.102164	0.851955	0.0976
IC*CSR	-0.000402	0.000631	-0.636957	0.1267
IO*CSR	0.038528	0.112854	0.341394	0.1346

Based on the partial test value table, it is used to determine the significant influence of independent variables on dependent variables. The results of the test using *the Fixed Effect Model (FEM)* can be concluded as follows:

1. Environmental Performances a positive effect on Corporate Profitability

The first hypothesis (H_1) formulated in the study states that Environmental Performance a positive effect on Corporate Profitability. However, the results of this study support the hypothesis of this study by obtaining a coefficient value of 0.012 and the results of the t-test on the Environmental Performance variable produced a



calculated t-value of 0.018 which is smaller than the t table of 1.717 with a significant value of 0.048. The probability value is divided in two, so that a significant value of $0.048/2 = 0.024$ is obtained which is smaller than the significant level ($\alpha = 0.05$). This states that there is an influence of the significance of the Environmental Performance variable on Corporate Profitability. So that H_1 is accepted and H_0 is rejected. An improvement in Environmental Performance leads to increased corporate profitability.

2. Intellectual Capital has a negative effect on corporate profitability

The second hypothesis (H_2) formulated in the study states that Intellectual Capital has a positive effect on Corporate Profitability. However, the results of this study not support the hypothesis of this study by obtaining a coefficient value of -1.94E and the results of the t-test on the Intellectual variable produced a calculated t value of 2.55E which is bigger than the t table of 1.717 with a significant value of 0.237. The probability value is divided in two, so that a significant value of $0.237/2 = 0.118$ is obtained which is greater than the significant level ($\alpha = 0.10$). There is a significant effect of Environmental Performance on Corporate Profitability. So H_2 is rejected and H_0 is accepted. Therefore, An increase in Intellectual Capital in associated with a decrease in Corporate Profitability

3. Institutional Ownership has positive effect on Corporate Profitability

The third hypothesis (H_3) formulated in the study states that Institutional Ownership has a positive effect on Corporate Profitability. However, the results of this study support the hypothesis of this study by obtaining a coefficient value of 2.50E and the results of the t-test on the company size variable produced a calculated t value of 0.000 which is smaller than the t table of 1.717 with a significant value of 0.023. The probability value is divided in half, so that a significant value of $0.023/2 = 0.011$ is obtained which is smaller than the significant level ($\alpha = 0.10$). This states that there is an influence of the significance of the Institutional Ownership variable on Corporate Profitability. So that H_3 is accepted and H_0 is rejected. Therefore, the higher Institutional Ownership in a company increases Corporate Profitability of the company's.

4. Corporate Social Responsibility has a positive effect on Corporate Profitability

The fourth hypothesis (H_4) formulated in the study states that the Corporate Social responsibility has a positive effect on Corporate Profitability. However, the results of this study support the hypothesis results in this study by obtaining a coefficient value of 0.003 and the results of the t-test on the audit committee variable produced a calculated t value of 0.014 which is smaller than the t table of 1,717 with a significant value of 0.316. The probability value is divided in half, so that a significant value of $0.0316/2 = 0.0158$ is obtained which is smaller than the significant level ($\alpha = 0.10$). This states that there is influence of the significance of the Corporate Social Responsibility variables on Corporate Profitability So H_4 is accepted and H_0 is rejected. Therefore, the higher levels of Corporate Social Responsibility, are associated with increased Corporate Profitability.

5. Environmental Performance strengthens the effect of Corporate Social Responsibility on Corporate Profitability

The fifth hypothesis (H_5) formulated in the study states that the Environmental

Performance strengthens the effect of Corporate Social Responsibility on Corporate Profitability. However, the results of this study support the hypothesis results in this study by obtaining a coefficient value of 0.0087 and the results of the t-test on Environmental Performance produced a calculated t value of 0.851 which is smaller than the t table of 1,717 with a significant value of 0.097. The probability value is divided in half, so that a significant value of $0.097/2 = 0.048$ is obtained which is smaller than the significant level ($\alpha = 0.10$). This states that there is influence of the significance of the Corporate Social Responsibility variables on Corporate Profitability So H_5 is accepted and H_0 is rejected. These results suggest that Corporate Social Responsibility is more effective in increasing corporate profitability when supported by strong environmental performance. Companies with high environmental performance tend to implement CSR activities more credibly and consistently, thereby strengthening stakeholder trust and corporate legitimacy. Consequently, Environmental Performance enhances the positive impact of Corporate Social Responsibility on Corporate Profitability. Therefore, H_5 is accepted and H_0 is rejected.

6. Intellectual Capital does not strengthens the effect of Corporate Social Responsibility on Corporate Profitability

The sixth hypothesis (H_6) formulated in the study states that Intellectual Capital does not strengthens the effect of Corporate Social Responsibility on Corporate Profitability. However, the results of this study support the hypothesis results in this study by obtaining a coefficient value of -0.000 and the results of the t-test on *Intellectual Capital* produced a calculated t value of -0.636 which is smaller than the t table of 1,717 with a significant value of 0.097. The probability value is divided in half, so that a significant value of $0.126/2 = 0.063$ is obtained which is smaller than the significant level ($\alpha = 0.10$). This finding indicates that the presence of Corporate Social Responsibility does not enhance the contribution of Intellectual Capital to profitability. Intellectual Capital requires effective internal management, knowledge integration, and innovation capability to generate value. This finding suggests that the presence of CSR activities is insufficient to enhance the contribution of Intellectual Capital to profitability. Intellectual Capital requires effective internal management, proper knowledge integration, and strong innovation capability to generate economic value. When Intellectual Capital is not optimally utilized, CSR implementation cannot compensate for inefficiencies in human and structural capital management. Therefore, H_6 is accepted and H_0 is rejected.

7. Institutional Ownership strengthens the effect of Corporate Social Responsibility on Corporate Profitability

The seventh hypothesis (H_7) formulated in the study states that Institutional Ownership strengthens the effect of Corporate Social Responsibility on Corporate Profitability. However, the results of this study support the hypothesis results in this study by obtaining a coefficient value of 0.038 and the results of the t-test on Institutional Ownership produced a calculated t value of 0.341 which is smaller than the t table of 1,717 with a significant value of 0.097. The probability value is divided in half, so that a significant value of $0.134/2 = 0.067$ is obtained which is smaller than the significant level ($\alpha = 0.10$). These results indicate that Corporate Social

Responsibility strengthens the relationship between Institutional Ownership and Corporate Profitability. The presence of CSR enhances the effectiveness of institutional investors in monitoring management and encouraging responsible business practices. Institutional investors tend to support companies with strong CSR implementation, as CSR reflects good corporate governance, transparency, and long-term sustainability. Consequently, the combination of high institutional ownership and strong CSR practices contributes to improved corporate profitability. Therefore, H_7 is accepted and H_0 is rejected.

DISCUSSIONS

Environmental Performance has a positive effect on Corporate Profitability

The results of the first hypothesis test (H_1) are stated that Environmental Performance has a positive effect on Corporate Profitability. Based on a partial test (t test) using the Fixed Effect Model (FEM) test, this study uses the one tail hypothesis, the probability value divided by 2 (two) is smaller than the significant level at ($\alpha = 0.05$) and it is found that $t_{table} < t_{calculate}$. Thus it can be stated that the one hypothesis (H_1) is accepted. The results of this study indicate that environmental performance has a positive effect on corporate profitability. This finding suggests that companies that are able to manage their environmental aspects effectively do not merely fulfill regulatory and social obligations, but also gain economic benefits in the form of improved profitability. Firms with strong environmental performance tend to operate more efficiently, reduce operational and environmental-related costs, and mitigate environmental risks, all of which contribute positively to financial performance. These findings are consistent with the arguments proposed by Esty & Winston, (2006) in *Green to Gold*, who state that companies integrating environmental strategies into their core business strategies can achieve competitive advantages through increased efficiency, innovation, and better risk management. Effective environmental practices enable firms to lower production costs, enhance corporate reputation, and strengthen stakeholder trust, which ultimately leads to higher profitability. Furthermore, Laszlo, (2008) in *Sustainable Value* emphasizes that companies creating sustainable value through responsible environmental management are more likely to achieve superior financial performance in the long term. This perspective reinforces the view that environmental performance should not be regarded as an additional cost burden, but rather as a strategic investment that enhances firm value and profitability. Therefore, high environmental performance can serve as a source of value creation for firms, where a strong commitment to environmental responsibility improves operational efficiency, corporate reputation, and competitive advantage, thereby positively affecting corporate profitability.

Intellectual Capital has negative on Corporate Profitability

The results of the second hypothesis test (H_2) indicate that Intellectual Capital has a negative effect on Corporate Profitability. Based on the partial test (t-test) using the Fixed Effect Model (FEM), this study applies a one-tailed hypothesis, where the probability value divided by two is greater than the significance level ($\alpha = 0.05$), and the calculated t -value is smaller than the t -table value. Therefore, it can be concluded that the second hypothesis (H_2) is rejected. The findings of this study reveal that intellectual capital negatively affects corporate profitability.

This result suggests that higher investment in intellectual capital – comprising human capital, structural capital, and relational capital – does not necessarily lead to higher profitability. Instead, it may increase operational and development costs without being accompanied by proportional financial returns. Inefficient utilization of employee knowledge, excessive training expenditures, and complex organizational systems may reduce firm profitability. This finding is not fully consistent with the Resource-Based View (RBV) Theory, which posits that intangible resources contribute to competitive advantage only when they are managed effectively and efficiently Barney, (1991). When intellectual capital is not optimally integrated into business processes, it may function as a cost burden rather than as a strategic asset that enhances firm performance. Furthermore, this result contrasts with the Value Added Intellectual Coefficient (VAIC™) framework proposed by Pulic, (1998), which emphasizes that corporate value creation is driven not only by physical capital but also by the efficient utilization of intellectual capital. The negative relationship observed in this study indicates that firms have not yet maximized the potential of intellectual capital to improve productivity and financial performance. Therefore, intellectual capital, if not managed properly, may have an adverse impact on corporate profitability, particularly in a highly competitive and resource-intensive business environment.

Ownership Institutional has positive effect on Corporate Profitability

The results of the third hypothesis test (H_3) indicate that institutional ownership has a positive effect on corporate profitability. Based on the partial test (*t-test*) using the Fixed Effect Model (FEM), this study applies a one-tailed hypothesis, where the probability value divided by two is smaller than the significance level ($\alpha = 0.05$), and the calculated *t-value* exceeds the *t-table* value. Therefore, it can be concluded that the third hypothesis (H_3) is accepted. This finding suggests that a higher level of institutional ownership enhances corporate profitability. Institutional investors generally possess greater expertise, stronger monitoring capabilities, and better access to relevant information compared to individual investors. Their active monitoring role encourages management to operate more efficiently and to make decisions that are aligned with shareholders' interests, thereby improving firm performance and profitability. The positive relationship between institutional ownership and corporate profitability can be explained by Agency Theory, as proposed by Jensen & Meckling, (1976). According to this theory, institutional ownership serves as an effective governance mechanism to reduce agency conflicts between managers and shareholders. Institutional investors tend to exert tighter control over managerial actions, limiting opportunistic behavior and promoting optimal resource allocation, which ultimately leads to higher profitability. In addition, Shleifer & Vishny, (1986) argue that large institutional shareholders have strong incentives to monitor corporate management because of their substantial investment stakes. Effective monitoring by institutional owners improves corporate governance quality, enhances operational efficiency, and increases firm value, which is reflected in higher corporate profitability. Furthermore, from the perspective of Signaling Theory, high institutional ownership can be interpreted as a positive signal to the market regarding a firm's governance quality and financial credibility. Companies with strong institutional ownership structures are often perceived as being more transparent and well-managed, which increases investor confidence and supports sustainable profitability. Thus,

institutional ownership plays a significant role in strengthening corporate governance, reducing agency problems, and improving managerial efficiency, which ultimately contributes to higher corporate profitability.

Corporate Social Responsibility has a positive effect on Corporate Profitability

The results of the fourth hypothesis test (H_4) were stated that the *corporate social responsibility* had a positive effect on Corporate Profitability. Based on a partial test (t test) using the fixed Effect Model (FEM) test, this study uses the one tail hypothesis, the probability value divided by 2 (two) is smaller than the significant level at ($\alpha= 0.05$) and it is found that $t_{table} < t_{calculate}$. Thus it can be stated that the fourth hypothesis (H_4) is accepted. Corporate Social Responsibility reflects a company's commitment to ethical practices, environmental sustainability, and social welfare, which can enhance corporate reputation and stakeholder trust. Companies that actively implement Corporate Social Responsibility initiatives tend to strengthen relationships with stakeholders, including investors, customers, and regulators. This positive perception can improve operational efficiency, reduce business risk, and ultimately contribute to higher corporate profitability. The acceptance of the fourth hypothesis indicates that Corporate Social Responsibility activities are not merely compliance-oriented but serve as a strategic tool that supports long-term financial performance. Furthermore, effective Corporate Social Responsibility implementation signals strong corporate governance and responsible management practices. Such practices encourage transparency and accountability, which can improve investor confidence and attract long-term investment. As a result, companies with higher Corporate Social Responsibility performance are more likely to achieve sustainable profitability growth. These findings are consistent with stakeholder theory, which emphasizes that fulfilling social and environmental responsibilities can create value for both the company and its stakeholders, thereby enhancing corporate profitability.

Corporate Social Responsibility moderates the effect of Environmental Performance on Corporate Profitability

The results of the fourth hypothesis test (H_5) were stated that the *corporate social responsibility* had a positive effect on Corporate Profitability. Based on a partial test (t test) using the fixed Effect Model (FEM) test, this study uses the one tail hypothesis, the probability value divided by 2 (two) is smaller than the significant level at ($\alpha= 0.05$) and it is found that $t_{table} < t_{calculate}$. The results of the moderating analysis indicate that Corporate Social Responsibility strengthens the effect of Environmental Performance on Corporate Profitability. This finding suggests that the positive impact of environmental performance on corporate profitability becomes stronger when companies actively implement CSR initiatives. CSR enhances the credibility of environmental efforts and signals a firm's commitment to sustainability to stakeholders. From the perspective of Legitimacy Theory, companies with strong environmental performance supported by CSR are more likely to gain social acceptance and stakeholder trust. CSR activities help communicate environmental responsibility more effectively, which improves corporate reputation, reduces environmental risks, and increases operational efficiency. Consequently, Corporate Social Responsibility amplifies the effect of environmental performance on corporate profitability.



Corporate Social Responsibility does not moderate the effect of Intellectual Capital on Corporate Profitability

The results further show that Corporate Social Responsibility does not strengthen the effect of Intellectual Capital on Corporate Profitability. This finding indicates that the presence of CSR activities does not enhance the impact of intellectual capital on profitability. Although CSR reflects a firm's external responsibility, intellectual capital primarily depends on internal capabilities such as knowledge management, employee skills, and innovation processes. According to the Resource-Based View (RBV) Theory, intellectual capital can only generate value when it is managed effectively and integrated into business operations. When intellectual capital is not optimally utilized, CSR implementation cannot compensate for inefficiencies in human and structural capital. Therefore, Corporate Social Responsibility does not function as an effective moderating variable in influencing the effect of intellectual capital on corporate profitability.

Corporate Social Responsibility moderates the effect of Institutional Ownership on Corporate Profitability

The findings also indicate that Corporate Social Responsibility strengthens the effect of Institutional Ownership on Corporate Profitability. This result suggests that CSR enhances the role of institutional ownership in improving corporate profitability. Institutional investors tend to favor firms with strong CSR practices because CSR reflects transparency, accountability, and long-term sustainability. In line with Agency Theory, CSR reinforces the monitoring function of institutional investors by encouraging responsible managerial behavior and reducing agency conflicts. CSR-oriented firms are perceived as more credible and well-governed, which motivates institutional investors to engage more actively in oversight and governance. As a result, Corporate Social Responsibility strengthens the effect of institutional ownership on corporate profitability.

CONCLUSIONS

This study aims to examine the effect of environmental performance, intellectual capital, and institutional ownership on corporate profitability, with Corporate Social Responsibility as a moderating variable, in infrastructure sector companies listed on the Indonesia Stock Exchange during the observation period. Based on the results of panel data regression analysis using the Fixed Effect Model (FEM), several conclusions can be drawn. First, environmental performance has a positive and significant effect on corporate profitability. This finding indicates that infrastructure companies with better environmental performance tend to achieve higher profitability. Effective environmental management helps companies reduce environmental risks, improve operational efficiency, and enhance corporate reputation, which ultimately contributes to improved financial performance. Second, intellectual capital has a negative effect on corporate profitability. This result suggests that investment in intellectual capital—consisting of human capital, structural capital, and relational capital—has not been optimally managed to generate value creation. As a result, intellectual capital may increase operational costs without being accompanied by proportional improvements in profitability. Third, institutional ownership has a positive and significant

effect on corporate profitability. This finding indicates that higher institutional ownership strengthens monitoring mechanisms and corporate governance, encouraging management to operate more efficiently and align managerial decisions with shareholders' interests, thereby improving firm profitability. Furthermore, Corporate Social Responsibility is proven to moderate the relationship between environmental performance and corporate profitability, indicating that Corporate Social Responsibility activities strengthen the positive impact of environmental performance on profitability. However, Corporate Social Responsibility does not effectively moderate the relationship between intellectual capital and corporate profitability, suggesting that implementation alone is insufficient to offset inefficiencies in intellectual capital management. Overall, the results of this study indicate that environmental performance and institutional ownership play important roles in improving corporate profitability in the infrastructure sector, while intellectual capital requires more effective management to function as a value-creating strategic asset, even when moderated by Corporate Social Responsibility.

This study has several limitations that should be considered. First, the scope of the research is limited to infrastructure sector companies listed on the Indonesia Stock Exchange, which may restrict the generalizability of the findings to other sectors. Second, the observation period used in this study is relatively short, which may not fully capture long-term relationships between environmental performance, intellectual capital, institutional ownership, CSR, and corporate profitability.

Third, this study uses Return on Assets as the sole proxy for measuring corporate profitability, which may not comprehensively reflect overall firm performance. Fourth, the measurement of intellectual capital using the Value Added Intellectual Coefficient (VAIC™) may not fully capture qualitative aspects of knowledge-based resources and innovation capability. Lastly, this study does not include other potential determinants of corporate profitability, such as firm size, leverage, growth opportunities, or green innovation, which may also influence profitability.

Future research is expected to extend the observation period, include additional sectors, apply alternative profitability measures, and incorporate other relevant variables to obtain more comprehensive and robust results.

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